

BID DOCUMENTS AND SPECIFICATIONS FOR
YCA BILLET SHOWER RENOVATION, HILO, OAHU, STATE OF
HAWAII, DEPARTMENT OF DEFENSE, HIENG,
JOB NO. CA-1605-C1.

ISSUED BY:
STATE OF HAWAI'I
DEPARTMENT OF DEFENSE
3949 DIAMOND HEAD ROAD,
HONOLULU, HAWAI'I 96816-4495
TELEPHONE: (808) 369-3567

February 2024

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STATE OF HAWAII
DEPARTMENT OF DEFENSE
OFFICE OF THE ADJUTANT GENERAL
3949 DIAMOND HEAD ROAD
HONOLULU, HAWAII 96816-4495

NOTICE TO BIDDERS

SEALED BIDS for furnishing labor, materials, tools and equipment for "YCA HILO BILLET, SHOWER RENOVATION, STATE OF HAWAII, DEPARTMENT OF DEFENSE, JOB NO. CA-1605-C1" will be received in the Engineering Office, State of Hawaii, Department of Defense, located in Building 306-A, Room 228, 3949 Diamond Head Road, Honolulu, Hawaii, up to **2:00 P.M. on March 28, 2024** and will then and there be publicly opened and read aloud. Bids may also be mailed to State of Hawaii, Department of Defense, 3949 Diamond Head Road, Honolulu, HI, 96816-4495, **ATTN: HIENG, Room 228**. Bids must be received in the Engineering Office, Room 228, prior to the time and date fixed for opening to be considered. All bids received in the Engineering Office after the time and date fixed for opening will not be considered.

Bidders are advised that the Department of Defense facility at 3949 Diamond Head Road is a secure facility. In order to access the property, Bidders and/or their authorized personnel shall present a current driver's license or other form of official identification (with photograph) to the security personnel at the entry gate, and shall inform the security personnel of the building and room number they require access to (State Contracting Section 369-3491). Lack of official identification or knowledge of the building and room to which access is needed are grounds for denial of access onto the property.

Bidders should be aware and allow for security screening and random vehicle inspections. The state will not be responsible for late bids due to the afore mentioned reasons.

Proposed work consists of, but not limited to the following: Renovation of Boy's and Girl's Shower Rooms at the YCA Hilo Billet and other project related work.

The estimated cost is between \$250,000 and \$500,000.

A Site Visit will be held on **March 14, 2024 at 2:30pm**. The Pre-Bid meeting/Site Visit will be held YCA Hilo; contractors are to meet Mr. Jim Barbour at 1046 Leilani St (Keaukaha Military Reservation), Hilo, HI 96720. Please call Jim Barbour at 808-369-3492 before **4:30 PM on March 12, 2024** to register for the site visit. If no response, please leave message giving information of company name, name of all individuals that will attend, and contact phone number. All interested bidders and sub-contractors are welcome, but not required to attend.

Bona fide bidders may obtain copies of applicable specifications and bidding documents at the above-named office. Documents may also be downloaded from the State Procurement Office website at <http://spo.hawaii.gov/> and at the State Department of Defense website at <http://dod.hawaii.gov/hieng/>. If prospective bidders obtain copies of the bid documents from sources other than the Contracting and Engineering Office address listed above, then bidders are responsible to register by sending their company name, address, telephone and facsimile number, and email address via email to cathy.a.siu@hawaii.gov.

All requests for substitution, clarification of bidding documents and/or specifications must be received in the office listed above, via email, prior to **March 15, 2024, 4:30 pm**. Questions shall be emailed to jesper.h.andersen@hawaii.gov.

Late submittals for this solicitation will not be reviewed by this agency.

An Intent to Bid is NOT required to be submitted for this project.

Bidders are required to register on the Hawaii Compliance Express web site for all tax clearances by going to <http://spo.hawaii.gov/> click on "HCE" and registering there.

Bidders are responsible for checking for any addenda for this project. The addenda will be posted on the State Procurement Office web site under the project name at <http://spo.hawaii.gov/>

The Hawaii Products preference pursuant to ACT 175, SLH 2009 may be applicable for numerous items throughout this solicitation. Persons wishing to certify and qualify a product not currently listed as a Hawaii Product shall submit a Certification for Hawaii Product Preference (form SPO-38) by e-mail to jesper.h.andersen@hawaii.gov prior to **4:30pm 15 days prior to the bid opening** date for this project. View the current Hawaii Products List on the State Procurement office (SPO) website at <http://hawaii.gov/spo>.

For each product, one form shall be completed and submitted (i.e. 3 products should have 3 separate forms completed). The form is available on the SPO webpage at <http://hawaii.gov/spo>.

CAMPAIGN CONTRIBUTIONS BY STATE AND COUNTY CONTRACTORS PROHIBITED. If awarded a contract in response to this solicitation, offeror agrees to comply with HRS §11-355, which states that campaign contributions are prohibited from a State and County government contractor during the term of the contract if the contractor is paid with funds appropriated by the legislative body between the execution of the contract through the completion of the contract.

REQUIREMENT FOR CONTRACTORS LICENSING CLASSIFICATIONS

Due to the nature of the work contemplated bidder must possess a valid State of Hawai'i Contractor's license classification(s) B.

General Engineering Contractors holding an 'A' license and General Building Contractors holding a 'B' license are reminded that due to the Hawaii Supreme Court's January 28, 2002 decision in Okada Trucking Co., Ltd. v. Board of Water Supply, et al., 97 Haw. 450 (2002), they are prohibited from undertaking any work, solely or as part of a larger project, which would require the General Contractor to act as a specialty Contractor in any area in which the General Contractor has no license.

Bidders are solely responsible to review the project requirements, determine the appropriate licenses required, and ensure that they possess and that the Subcontractor(s) listed in their OFFER FORM possess the necessary specialty licenses to perform the work for this project.

Kenneth S. Hara
Major General
Adjutant General

Posted on: February 28, 2024

**YCA Hilo Billet Shower Renovation
State of Hawai'i, Department of Defense,
Job No. CA-1605-C1**

Adjutant General
State Department of Defense
3949 Diamond Head Road
Honolulu, Hawaii 96816-4495

Dear Sir/Ms,

The undersigned has carefully read and understands the terms and conditions specified in the Specifications, and all documents attached hereto, and hereby submits the following offer to perform the work specified herein, all in accordance with the true intent and meaning thereof. The undersigned further understands and agrees that by submitting this offer, 1) he/she is declaring his/her offer is not in violation of Chapter 84, Hawaii Revised Statutes, concerning prohibited State contracts, and 2) he/she is certifying that the price(s) submitted was (were) independently arrived at without collusion.

The undersigned represents: **(Check one only)**

- A **Hawaii business** incorporated or organized under the laws of the State of Hawaii; **OR**
 A **Compliant Non-Hawaii business** not incorporated or organized under the laws of the State of Hawaii. Business shall be registered prior to award at the State of Hawaii Department of Commerce and Consumer Affairs Business Registration Division to do business in the State of Hawaii. State of incorporation: _____

Offeror is:

- Sole Proprietor Partnership Corporation Joint Venture
 Other _____

Federal I.D. No.: _____

Hawaii General Excise Tax License I.D. No.: _____

Payment address (other than street address below): _____
City, State, Zip Code: _____

Business address (street address): _____
City, State, Zip Code: _____

Respectfully submitted:

(x) _____
Authorized (Original) Signature (*1)

Date: _____

Telephone No.: _____

Name and Title (Please Type or Print)

Fax No.: _____

* _____
Exact Legal Name of Company (Offeror) (*2)

E-mail Address: _____

(*2) If Offeror is a "dba" or a "division" of a corporation, furnish the exact legal name of the corporation under which the awarded contract will be executed:

(*1)

Original signature in ink. If unsigned or the affixed signature is a facsimile or a photocopy, the offer shall be automatically rejected unless accompanied by other material, containing an original signature, indicating the Offeror's intent to be bound.

The undersigned has carefully examined the attached plans and specifications and hereby proposes to furnish at his own expense all labor, materials, tools and equipment necessary to construct all work as shown and called for, in strict accordance with the specifications, schedules and drawings pertaining thereto, all for the LUMP SUM of:

_____ DOLLARS (\$_____).

(Including the cost of delivery, unloading, freight charges, all applicable taxes, and other cost involved) and will fully complete all the work under this contract within **120 consecutive calendar** days from the date of commencement specified by the written order of the Adjutant General including the date of said order.

NOTE:

1. This project does not fall under the requirement of the "Buy American Act".
2. Davis-Bacon Act prevailing wage rate or State wage rates apply to this contract.
3. Contract will be awarded based on the total lump sum bid.
4. A Pre-Bid meeting/Site Visit will be held at YCA Hilo on **March 14, 2024 at 2:30 PM**. Contractors are to meet Mr. Jim Barbour at 1046 Leilani St (Keaukaha Military Reservation), Hilo, HI 96720. Please call Mr. Barbour at 808-369-3492 before **4:30 PM on March 12, 2024**, to register for the site visit. All interested bidders and subcontractors are welcome. Site visit is recommended but not mandatory.

All requests for substitution, clarification of bidding documents and/or specifications must be received by email at jesper.h.andersen@hawaii.gov prior to **4:30 PM on March 15, 2024**.

5. The State reserves the right to determine the extent of the contract by selecting and/or omitting bid items (not necessarily in sequence) to the extent required to come within the funds available for the project. The award of the contract shall be made to the responsible bidder whose total bid is the lowest.
6. **CAMPAIGN CONTRIBUTIONS BY STATE AND COUNTY CONTRACTORS PROHIBITED**. If awarded a contract in response to this solicitation, offeror agrees to comply with HRS §11-355, which states that campaign contributions are prohibited from a State and County government contractor during the term of the contract if the contractor is paid with funds appropriated by the legislative body between the execution of the contract through the completion of the contract.
7. The Surety shall not be held liable beyond two (2) years of the project acceptance date.

HAWAII PRODUCTS PREFERENCE

In accordance with ACT 175, SLH 2009 the Hawaii Products preference is applicable to this solicitation. Hawaii products may be available for those items noted on the offer form. The Hawaii Products List is available on the State Procurement Office (SPO) website at <http://spo.hawaii.gov/> search for "Hawaii Product Preferences".

Offeror offering a Hawaii Product (HP) shall identify the HP on the solicitation offer pages. Any person desiring a Hawaii product preference shall have the product(s) certified and qualified if not currently on the Hawaii Products list, prior to the deadline for receipt of offer(s) specified in the procurement notice and solicitation. The responsibility for certification and qualification shall rest upon the person requesting the preference.

Persons desiring to qualify their product(s) not currently on the Hawaii Product list shall complete form SPO-38, *Certification for Hawaii Product Preference*, and submit to the Department of Defense, Contracting Officer, and provide all additional information required by the Contracting Officer no later than **4:30pm, fifteen (15) calendar days** prior to the bid opening date. For each product, one form shall be completed and submitted (i.e. 3 products should have 3 separate forms completed). The form is available on the SPO webpage at <http://spo.hawaii.gov/> search for "Forms" and select form SPO-38.

Late submittals for this project will not be reviewed by the Department.

Change in Availability of Hawaii Product

In the event of any change that materially alters the offeror's ability to supply Hawaii Products, the offeror shall immediately notify the Contracting Officer in writing and the parties shall enter into discussions for the purposes of revising the contract or terminating the contract for convenience.

Offerors shall indicate in the Hawaii Product Schedule below whether the pre-approved Hawaii Products are offered. Offerors offering a Hawaii Product shall fill-in the quantity, unit measure, unit price and total price for the Hawaii Product they desire to be considered for preference. Products not pre-approved shall not be considered. Hawaii Products not meeting the requirements of the specification shall not be considered.

Offerors selecting the Hawaii Product preference may be required to submit additional information on the cost basis of their selected Hawaii Product preference items when requested after the bid opening to verify cost of the Hawaii Products, including the computations for the estimated quantities, manufacturer's or supplier's quotations, and delivered material cost Free on Board (FOB) at the jobsite. The Hawaii Product Cost shall not include installation costs.

Hawaii Products available for this project are as follows:

| Product Description | Class I, II or III | Manufacturer | Cost |
|---------------------|--------------------|--------------|------|
| | | | \$ |
| | | | \$ |
| | | | \$ |
| | | | \$ |
| | | | \$ |
| | | | \$ |
| | | | \$ |

APPRENTICESHIP AGREEMENT PREFERENCE

The estimated value of the public works contract is \$250,000 or more and the apprenticeship agreement preference pursuant to Hawaii Revised Statutes §103-55.6 (Act 17, SLH 2009) **shall apply**.

1. If applicable to this project, any bidder seeking the preference must be a party to an apprenticeship agreement registered with the State Department of Labor and Industrial Relations (DLIR) at the time the bid is submitted for each apprenticeable trade the bidder will employ to construct the project. “Employ” means the employment of a person in an employer-employee relationship.
 - a. The apprenticeship agreement shall be registered with the DLIR and conform to the requirements of Hawaii Revised Statutes Chapter 372.
 - b. Subcontractors do not have to be a party to an apprenticeship agreement for the bidder to obtain the preference.
 - c. The bidder is not required to have apprentices in its employ at the time the bid is submitted to qualify for the preference.

2. A bidder seeking the preference must state the apprenticeable trade the bidder will employ for each trade to be employed to perform the work by submitting a completed **signed original** *Certification of Bidder’s Participation – Form 1* verifying participation in an apprenticeship program registered with the DLIR. “Apprenticeable trade” shall have the same meaning as “apprenticeable occupation” pursuant to Hawaii Administrative Rules (HAR) §12-30-5.
 - a. The *Certification of Bidder’s Participation – Form 1* shall be authorized by an apprenticeship sponsor listed on the DLIR list of registered apprenticeship programs. “Sponsor” means an operator of an apprenticeship program and in

whose name the program is approved and registered with the DLIR pursuant to HAR §12-30-1.

- b. The authorization shall be an original signature by an authorized official of the apprenticeship sponsor.
 - c. The completed *Certification of Bidder's Participation – Form 1* for each trade must be submitted with the bid. A facsimile or copy is acceptable to be submitted with the bid, however the signed original must be submitted within five (5) working days of the bid open date. If the signed original is not received within this timeframe, the preference may be denied. Previous certifications shall not apply.
 - d. When filling out the *Certification of Bidder's Participation – Form 1*, the name of Apprenticeable Trade and Apprenticeship Sponsor must be the same as recorded in the List of Construction Trades in Registered Apprenticeship Programs that is posted on the State Department of Labor and Industrial Relations website. "Registered apprenticeship program" means a construction trade program approved by and registered with the DLIR pursuant to HAR § 12-30-1 and §12-30-4.
 - e. The *Certification of Bidder's Participation – Form 1* and the List of Construction Trades in Registered Apprenticeship Programs is available on the DLIR website at: <http://hawaii.gov/labor/wdd>
3. Upon receiving the *Certification of Bidder's participation – Form 1*, the Procurement Officer will verify that the apprenticeship program is on the List of Construction Trades in Registered Apprenticeship Programs and that the form is signed by an authorized official of the Apprenticeship Program Sponsor. If the programs and signature are not confirmed by the DLIR, the bidder will not qualify for the preference.
 4. If the bidder is certified to participate in an apprenticeship program for each trade which will be employed by the bidder for the project, a preference will be applied to decrease the bidder's bid amount by five (5) percent for evaluation purposes.
 5. Should the bidder qualify for other preferences (for example, Hawaii Products), all applicable preference shall be applied to the bid price.
 6. If the winning bidder has submitted Form 1 with his bid packet, the Form 2 will be required the first week of each month for the prior month beginning with the month of the start of work.

CHARACTER OF WORKERS OR EQUIPMENT

The Contractor shall perform with his own organization, work amounting to not less than twenty percent (20%) of the total contract cost. The Engineer may require the Contractor to verify the percentage of work he will be providing with his own organization by furnishing pertinent information such as all of the actual subcontractor(s)' quotations he received for the bid. If requested, the Contractor shall provide such verification within 5 working days of the request.

CERTIFICATION FOR SAFETY AND HEALTH PROGRAM FOR BIDS IN EXCESS OF \$100,000

In accordance with HRS 396-18, by submitting this proposal, the undersigned certifies that his company will have a written safety and health plan for this project that will be available and implemented by the Notice to Proceed date of this project. Details of the requirements of this plan may be obtained from the Department of Labor and Industrial Relations, Occupational Safety and Health Division (HIOSH).

TAX CLEARANCES FROM THE STATE DIRECTOR OF TAXATION AND INTERNAL REVENUE SERVICE

Contractors are required to provide a state and federal tax clearance as a prerequisite to entering into a public contract of \$2,500 or more. To meet this requirement, all bidders shall submit valid tax clearances with their bid proposals when the bid is \$2,500 or more.

Failure to submit the required tax clearance may be sufficient grounds for the State to refuse to receive or consider the prospective bidder's proposal.

In accordance with Act 190 Amendment to HRS 103D-310(c), required as a prerequisite to entering into a contract, the contractor shall register on the Hawaii Compliance Express web site for all tax clearances by going to <http://vendors.ehawaii.gov> and registering there.

A Certificate of Vendor Compliance generated from this website should be included with their bid proposal. A Compliant status is required prior to awarding the contract.

LICENSE

Due to the nature of the work contemplated, bidder must possess a valid State of Hawaii Contractor's license in the appropriate classification.

1. The Adjutant General or his designated representative reserves the right to reject any and/or all bids and waive any defects when, in his opinion, such rejection or waiver will be in the best interest of the State.
2. The award of the contract shall be conditioned upon funds being made available for these projects and further upon the right of the Adjutant General or his designated representative to hold all bids received for a period of ninety (90) days from the date of the opening thereof, unless otherwise required by law, during which time no bid may be withdrawn.

ALL JOINT CONTRACTORS & SUBCONTRACTORS TO ENGAGE ON THIS PROJECT

The bidder certifies that the following is a complete listing of all joint contractors or subcontractors covered under Chapter 444, Hawaii Revised Statutes, who will be engaged by the bidder on this project to perform the nature and scope of work indicated pursuant to Section 103D-302, Hawaii Revised Statutes, and understands that failure to comply with this requirement shall be just cause for rejection of the bid.

The bidder further certifies that only those joint contractors or subcontractors listed shall be allowed to perform work on this project and that all other work necessary shall be performed by the bidder with his own employees. If no joint contractor or subcontractor is listed, it shall be construed that all of the work shall be performed by the bidder with his own employees.

All bidders must be sure that they possess and that the subcontractors listed in the proposal possess all the necessary specialty licenses needed to perform the work for this project. The bidder shall be solely responsible for assuring that all of the specialty licenses required to perform the work is covered in his bid.

The bidder shall include the license number of the joint contractors or subcontractors listed below. Failure to provide the correct names and license numbers as registered with the Contractor's Licensing Board may cause rejection of the bid submitted.

| Complete Firm Name of Joint Contractor or Subcontractor for Lump Sum Bid | License Number | Nature and Scope of Work to be performed |
|--------------------------------------------------------------------------|----------------|------------------------------------------|
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |

Enclosed herewith as required by law:

- Surety Bond
 - Certificate of Deposit
 - Certified Check
 - Cashier's Check
 - Share Certificate
 - Legal Tender
- (Cross Out Those Not Applicable)

_____ DOLLARS (\$ _____).

*Signature _____ HAWAII GENERAL EXCISE TAX
Title _____ I.D. NO. _____

Name of Company _____

Address _____
_____ LICENSE CLASSIFICATION
_____ AND/OR SUBCLASSIFICATION
_____ NO.

Telephone _____

Date _____

(CORPORATE SEAL)

*Please attach to this page evidence of the authority of this officer to submit bids on behalf of the Company, and also the names and residence addresses of all officers of the Company.

NOTE: Fill in all blank spaces with the information asked for or bid may be invalidated.
PROPOSAL PAGES MUST BE INTACT; MISSING PAGES MAY INVALIDATE YOUR BID.

FORM 1

CERTIFICATION OF BIDDER'S PARTICIPATION IN APPROVED APPRENTICESHIP PROGRAM UNDER ACT 17

| | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| I. Bidder's Identifying Information | | | |
| A. Legal Business Name: _____ | | | |
| B. Project Bid Title & Reference No.: _____ | | | |
| C. Contact Person's Name: _____ | | | |
| 1. Phone No.: | | 2. E-Mail: | |
| II. Apprenticiable Trades To Be Employed* | | B. Apprenticeship Sponsor* | |
| A. (List) | | (One Sponsor Per Form) | |
| 1. | | C. No. Enrolled | D. No. Completed |
| | | <small>(# of apprentices currently enrolled as of bidder's request date)</small> | <small>(# of apprentices who completed the apprenticeship program in the 12 months prior to request date)</small> |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| III. Bidder's Certification | | | |
| I certify that the above information is accurate to the best of my knowledge. I understand that my willful misstatement of facts may cause forfeiture of the preference under Act 17 and may result in criminal action. I give permission for outside sources to be contacted and for them to disclose any information necessary to verify the bidder's preference. | | | |
| A. Name (Type) _____ | | B. Title _____ | |
| C. Signature (original signature required) _____ | | D. Date _____ | |
| IV. Apprenticeship Sponsor's Contact Information | | | |
| A. Training Coordinator's Name: _____ | | | |
| B. Address: _____ | | | |
| C. Phone No.: _____ | | D. E-Mail: _____ | |
| E. Fax No.: _____ | | | |
| V. Apprenticeship Program Sponsor's Certification | | | |
| I certify that the above information is accurate to the best of my knowledge. I understand that my willful misstatement of facts may cause forfeiture of the bidder's preference and may result in criminal action. I give permission for outside sources to be contacted and for them to disclose any information necessary to verify the bidder's preference under Act 17. | | | |
| A. Name of Authorized Official _____ | | B. Title _____ | |
| C. Signature (original signature required) _____ | | D. Date _____ | |

* Name of Apprenticiable Trade and Apprenticeship Sponsor must be the same as recorded in the List of Construction Trades in Registered Apprenticeship Programs that is posted on the State Department of Labor and Industrial Relations website.

(Name of Corporation)
Corporate Resolution

I, _____, Secretary of _____
Corporation,
a _____ Corporation, do hereby certify that the following is a full, true
and correct copy of a resolution duly adopted by the Board of Directors of said corporation, at its
meeting duly called and held at the office of the Corporation _____
Street, _____, on the _____ day of _____, 20__, at
which a quorum was present and acting throughout, and that said resolution has not been
modified, amended or rescinded and continues in full force and effect:

“RESOLVED that any individual at the time holding the position of President, Vice
President, Secretary or Treasurer be, and each of them hereby is, authorized to execute on behalf
of the Corporation any bid, proposal or contract for the sale or rental of the products of the
Corporation or for services to be performed by the Corporation, and to execute any bond
required by any such bid, proposal or contract with the United States Government or the State of
Hawaii or the City and County of Honolulu, or any County or Municipal Government of said
State, or any department or subdivision of any of them.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the corporate seal of said
_____ Corporation this _____ day of
_____, 20__.

Secretary

(Names and Address of:)

President:

Vice President:

Secretary:

Treasurer:

SPECIAL NOTICE TO BIDDERS - CONSTRUCTION

QUALIFICATIONS OF BIDDERS - Prospective bidders must be capable of performing the work for which bids are being called.

The Department of Defense no longer requires a submittal of "INTENTION TO BID" unless otherwise stated in the notice to bidders.

If two (2) or more prospective bidders desire to bid jointly as a joint venture on a single project, they must file an affidavit of joint venture with their notice of intention to bid or if no intent to bid is required, shall submit an affidavit of joint venture prior to bid opening. Such affidavit of joint venture will be valid only for the specific project for which it is filed. No further license is required when all parties to the joint venture possess current and appropriate contractor's licenses. Joint venture are required to be licensed in accordance with Chapter 444 of the Hawaii Revised Statutes, as amended, and the rules and regulations of the Contractor's License Board when any party to the joint venture agreement does not hold a current or appropriate contractor's license.

The Adjutant General or his designated representative may, in accordance with Section 103D-310, Hawaii Revised Statutes, require the prospective bidder to submit answers to questions in the "Standard Questionnaire and Financial Statement for Bidders," on the form provided by the Department, properly executed and notarized, setting forth a complete statement of the experience of such prospective bidder and his organization in performing similar work and a statement of the equipment proposed to be used, together with adequate proof of the availability of such equipment, at least forty-eight (48) hours prior to the time advertised for the opening of bids. If the information in the questionnaire proves satisfactory, the bidder's proposal will be received. All information contained in the answers to the questionnaire shall be kept confidential. The questionnaire will be returned to the bidder after it has served its purpose.

If upon review of the Questionnaire, or otherwise, the bidder appears not fully qualified or able to perform the intended work, the Adjutant General or his designated representative shall, after affording the bidder an opportunity to be heard and if still of the opinion that the bidder is not fully qualified to perform the work, refuse to receive or to consider any bid offered by the prospective bidder.

Failure to complete the prequalification questionnaire, (IF SENT TO YOU), will be sufficient cause for the Department to disqualify a prospective bidder.

INTERPRETATION OF QUANTITIES IN BID SCHEDULE - When quantities for individual items of work are listed in the bid form for which respective unit prices are asked, said quantities are to be considered as approximate and are to be used by the Department only for the purpose of comparing on a uniform basis bids offered for the work. The Department does not, expressly or by implication, agree that the actual

quantity of work will correspond therewith. The undersigned agrees that his is satisfied with and will at no time dispute said estimated quantities as a means of comparing the bids.

After determining the low bidder by comparison of bids submitted in accordance with the proposal form, the Adjutant General or his designated representative reserves the right to increase or decrease the scope of the improvement.

On unit price bids, payment will be made only for the actual number of units incorporated into the finished project at the unit price bid.

It is understood and agreed that the contractor will make no claim for anticipated profit or loss of profit due to the Department's right to eliminate entirely portions of the work or to increase or decrease any or all of the quantities shown in the proposal form and/or scope of work.

CONTENTS OF CONTRACT FORMS – The Statement of Work will provide the location, description, and the contract time of the work contemplated for which a lump sum bid price is asked or containing a schedule of items, together with estimated quantities of work to be performed and materials to be furnished, for which unit bid prices and/or lump sum bid prices are asked.

Proposal forms will include a listing of joint contractor and/or subcontractors asking the name of each person or firm to be engaged on the project as a joint contractor or subcontractor.

All papers bound with or attached to the offer form shall be considered a part thereof and shall not be detached or altered when the bid is submitted.

The plans, specifications and other documents designated in the bid document package, will also be considered a part thereof whether attached or not.

BIDDERS RESPONSIBILITY FOR EXAMINATION OF PLANS, SPECIFICATIONS, SITE OF WORK, ETC. - The bidder shall examine carefully the site work contemplated and the proposal, plans, specifications, supplemental specifications, special provisions and contract and bond forms therefore. The submission of a bid shall be considered as a warranty that the bidder has made such examination and is satisfied with the conditions to be encountered in performing the work and with the requirements of the plans, specifications, supplemental specifications, special provisions, contract and bond.

No extra compensation will be given by reason of the Contractor's misunderstanding or lack of knowledge of the requirements of the work to be accomplished or the conditions to be encountered in performing the project.

Where an investigation of subsurface conditions has been made by the Department in respect to foundation or other design, the bidders may inspect the records of the Department as to such investigation, including examination of samples, if any. It is understood, however, that any such information furnished is for the bidders' convenience only and no assurance is given that conditions found at the time of subsurface investigation, such as the presence or absence of water, will be conditions that prevail at the time of construction.

When the contract plan includes a log of test borings showing a record of the data obtained by the Department's investigation of subsurface conditions, said log represents only the opinion of the Department as to the character of material encountered by it in its test borings and there is no warranty, either expressed implied, that the conditions indicated are representative of those existing throughout the work or any part of it, or that unforeseen developments may not occur.

Information regarding the site of work given on the drawings or specifications has been obtained by the Department and is believed to be reasonably correct, however, it is the responsibility of the bidder to verify all such information. Any utilities that the Contractor encounters during the progress of the work, such as telephone ducts, electric ducts, water lines, sewer lines, electric lines and drainage pipes, whether shown or not on the contract plans, shall not be disturbed or damaged unless otherwise instructed in the plans and specifications.

In the event the utilities are damaged or disturbed by the Contractor, the Contractor shall be held liable for the damage or disturbed utilities which were:

- A. Shown on the plan.
- B. Located and exposed on the job as it progressed.
- C. Pointed out to the Contractor in the field.

The Contractor shall repair the damaged or disturbed utilities to the existing condition at no cost to the Department or the project. Any damage claims due to the disruption of service caused by the utilities being damaged shall be paid by the Contractor who shall save harmless the Department from all suits, actions, or claims of any character brought on account of such damages.

In the event utilities which were not shown on the plans and specifications are damaged or disturbed by the Contractor, the Contractor shall not be held liable but shall notify the Engineer. Upon instruction from the Engineer, the Contractor shall repair all damages which shall be considered to be additional work.

Utilities which must be relocated due to construction and not so indicated in the plans and specifications shall also be considered to be additional work. The Contractor shall not in any case, if he encounters underground utilities, proceed with any work until he has notified the Engineer.

No information derived from such inspection of records of subsurface investigations made by the Department or from the Engineer or from his authorized representative or from maps, plans, specifications or drawings will in any way relieve the Contractor from any risk or from properly fulfilling all the terms of the contract. The log tests borings if included in the plans are only for the convenience of the bidder and do not constitute a part of the contract. The Contractor is solely responsible for all assumptions, deductions, or conclusions he may make or derive from the subsurface records furnished.

ADDENDA AND INTERPRETATIONS - Discrepancies, omissions, or doubts as to the meaning of drawings and specifications should be communicated via email as directed in the Notice to Bidders and must be received by the Engineering Office, Department of Defense, no later than the date stated in the Notice to Bidders for submittal of questions. Any interpretation, if made, and any supplemental instructions will be in the form of written addenda. All addenda will be posted on the State Procurement Office website <http://spo.hawaii.gov> . Failure of any bidder to receive any such addendum or interpretations shall not relieve such bidder from any obligation under his bid as submitted. All addenda so issued shall become part of the contract documents.

PREPARATION OF PROPOSAL - The bidder's proposal must be submitted on the proposal form furnished by the Department. The proposal must be prepared in full accordance with the instructions therein. The bidder must state, both in words and numerals, the lump sum price at which the work contemplated is proposed to be done. These prices must be written in ink or typed. Prices written in pencil are not acceptable. In case of a discrepancy between the prices written in words and those written in figures, the words shall govern over the figures. The bidder shall sign the proposal in the spaces provided with ink.

If the proposal is made by an individual, his name and post office address must be shown in the space provided. If made by a partnership, the name and post office address of each member of the partnership must be shown and the proposal signed by all partners or evidence in the form of a partnership agreement must be submitted showing the authority of the partner to enter, on behalf of said partnership, into contract with the State. If made by a corporation, the proposal must show the name, titles, and business address of the president, secretary and treasurer and also evidence in the form of a corporate resolution must be submitted showing the authority of the particular corporate representative to enter on behalf of said corporation into contract with the State. (See sample). If made by a joint venture the name and post office address of each member of the individual form, partnership or corporation comprising the joint venture must be shown with other pertinent information required of individuals, partnerships or corporations as the case may be. The proposal must be signed by all parties to the joint venture or evidence in the form of a Joint Venture Agreement must be submitted showing the authority of the Joint Venture's representative to enter on behalf of said Joint Venture into contract with the State.

Pursuant to the requirements of Section 103D-302, Hawaii Revised Statutes, each bidder shall include in his bid the name of each person or firm to be engaged by the bidder on the project as joint contractor or subcontractor indicating also the nature and scope of work to be performed by such joint contractor and/or subcontractor.

BID SECURITY - No proposal totaling \$25,000 or more will be considered unless accompanied by one of the following forms of bidder's security:

A. Surety bond underwritten by a company licensed to issue bonds in this State.

B. Legal Tender.

C. Certificate of Deposit; share certificate; or cashier's, treasurer's, tellers or official check drawn by, or certified check accepted by, and payable on demand to the State by a bank, a savings institution, or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration.

(1) These instruments may be utilized only to a maximum of \$100,000.

(2) If the required security amount totals over \$100,000, more than one instrument not exceeding \$100,000 each and issued by different financial institutions shall be accepted.

THE BID SECURITY SHALL BE AT LEAST FIVE (5) PERCENT OF THE BID AMOUNT.

If the bidder is a corporation, evidence in the form of a corporate resolution, authorizing the corporate representative to execute the bond must be submitted with the proposal. If the bidder is a partnership, all partners must sign the bond or evidence in the form of a partnership agreement must be submitted showing the authority of the partner.

If the bidder is a joint venture, all parties to the joint venture must sign the bond or evidence in the form of a joint venture agreement must be submitted showing the authority of the bidder to sign the bond on behalf of the joint venture.

In the case where the award will be made on a group or item basis, the amount of proposal guaranty shall be based on the total bid for all groups or items submitted.

Bidders are cautioned that surety bid bonds which place a limit in value to the difference between the bid amount and the next acceptable bid, such value not to exceed the purported amount of the bond, are acceptable. Also, surety bid bonds which place a time limit on the right of the State to make claim other than allowed by statutes or these General Conditions are not acceptable. Bidders are hereby notified that a surety bid bond containing such limitation(s) is not acceptable and a bidder's bid accompanied by such surety bid bond will be automatically rejected.

DELIVERY OF PROPOSALS - The entire proposal shall be placed together with the bid security, in a sealed envelope so marked as to indicate the identity of the project, the project number, the date of bid opening and the name and address of the bidder and then delivered as indicated in the Notice to Bidders. Bids which do not comply with this requirement may not be considered. Proposals will be received up to the time fixed in the public notice for opening of bids and must by that time be in the hands of the officials indicated. The words 'SEALED BID' must be clearly written or typed on the face of the sealed envelope containing the proposal guaranty.

WITHDRAWAL OR REVISION OF PROPOSALS - Any bid may be withdrawn or revised at any time prior to, but not after, the time fixed in the public notice for the opening of bids, provided that a request in writing, executed by the bidder or his duly authorized representative, for the withdrawal or revision of such bid is filed with the Adjutant General before the time set for the opening of bids. The withdrawal of a bid shall not prejudice the right of a bidder to file a new bid. Whether or not bids are opened exactly at the time fixed in the public notice for opening bids, a bid will not be received after that time, nor may any bid be withdrawn after the time fixed in the public notice for the opening of bids.

PUBLIC OPENING OF PROPOSALS - Proposals will be opened and read publicly at the time and place indicated in the Notice to Bidders. Bidders, their authorized agents, and other interested parties are invited to be present.

DISQUALIFICATION OF BIDDERS - Any one or more of the following cause will be considered as sufficient for the disqualification of a bidder and the rejection of his proposal or proposals:

- A. Non-compliance with "QUALIFICATION OF BIDDERS".
- B. Evidence of collusion among bidders.
- C. Lack of responsibility and cooperation as shown by past work.
- D. Being in arrears on existing contracts with the State of Hawaii or having defaulted on a previous contract.
- E. Lack of proper equipment and/or sufficient experience to perform the work contemplated as revealed by the Standard Questionnaire and Financial Statement for Bidders.
- F. No contractor's license or a contractor's license which does not cover type of work contemplated.
- G. More than one proposal for the same work from an individual, firm, partnership, corporation, or joint venture under the same or different name.

H. Delivery of bids after the deadline specified in the advertisement calling for bids.

I. Failure to pay, or satisfactorily settle, all bids overdue for labor and material on former contracts in force at the time of issuance of proposal forms.

CONSIDERATION OF PROPOSALS - After the proposals are opened and read, the figures will be extended and/or totaled in accordance with the bid prices of the acceptable proposals and the totals will be compared and the results of such comparison shall immediately be made public. In the comparison of bids, words written in the proposals will govern over figures and unit prices will govern over totals. Until the award of the contract, however, the right will be reserved to reject any and all proposals and to waive any defects or technicalities as may be deemed best for the interest of the State.

IRREGULAR PROPOSALS - Proposals will be considered irregular and may be rejected for the following reasons:

A. If the proposal is unsigned.

B. Bid security not in accordance with paragraph "BID SECURITY".

C. If proposal is on a form other than that furnished by the Department or if the form is altered or any part thereof detached.

D. If the proposal shows any non-compliance with applicable law, alteration of form, additions not called, conditional bids, incomplete bids, uninitiated erasures, other defects, or if the prices are obviously unbalanced, or if sufficient funds are not available to prosecute the work.

E. If the bidder adds any provisions reserving the right to accept or reject an award, or to enter into a contract pursuant to an award.

This does not exclude a proposal limiting the maximum gross amount of awards acceptable to any one bidder at any one bid letting, provided that any selection of awards will be made by the Department.

F. When a proposal is signed by an officer or officers of a corporation and a currently certified corporate resolution authorizing such signer(s) to submit such proposal is not submitted with the proposal or when the proposal is signed by an agent other than the officer or officers of a corporation or a member of a partnership and a Power of Attorney is not submitted with the proposal.

G. Where there is an incomplete or ambiguous listing of joint contractors and/or subcontractors the proposal may be rejected. All work which is not listed as being performed by joint contractor and/or subcontractors must be performed by the bidder

with his own employees. Additions to the list of joint contractors or subcontractors will not be allowed. Whenever there is a doubt as to the completeness of the list, the bidder will be required to submit within five (5) working days, written confirmation that the work in question will be performed with his own force. Whenever there is more than one joint contractor and/or subcontractor listed for the same item of work, the bidder will be required to either confirm in writing within five (5) working days that all joint contractors or subcontractors listed will actually be engaged on the project or obtain with five (5) working days, written releases from those joint contractor and/or subcontractors who will not be engaged.

AWARD OF CONTRACT - The award of contract, if it be awarded, will be made within ninety (90) consecutive calendar days after the opening of the proposals to the lowest responsible and responsive bidder (including the alternate or alternates which may be selected by the Adjutant General in the case of alternate bids) whose proposal complies with all the requirements prescribed, but in no case will an award be made until all necessary investigations are made. The successful bidder will be notified, by letter mailed to the address shown on the proposal that his bid has been accepted and that he has been awarded the contract.

No contract will be awarded to any person or firm suspended under the provisions of Chapter 104 and Chapter 444, Hawaii Revised Statutes, as amended.

CANCELLATION OF AWARD - The Adjutant General or his designated representative reserves the right to cancel the award of any contract at any time before the execution of said contract by all parties without any liability to the awardee and to any other bidder.

RETURN OF BID SECURITY (excluding bid bonds) - All bid securities, except those of the four (4) lowest bidders, will be returned immediately following the opening and checking of the proposals. The retained bid securities of the remaining two (2) lowest bidders will be returned within five (5) working days following the execution of contract. The successful bidder's bid security may be returned after a satisfactory contract bond has been furnished and the contract has been executed.

RETURN OF BID BONDS – The bid bonds will be returned only after receipt of a written request from the contractor.

REQUIREMENT OF PERFORMANCE AND PAYMENT BONDS - Performance and Payment Bonds shall be required for contracts exceeding \$50,000. At the time of the execution of the contract, the successful bidder shall file a good and sufficient performance and payment bonds on the form furnished by the Department or the contractors Surety, each in an amount equal to one hundred percent (100%) of the amount of the contract price unless otherwise stated in the solicitation of bids. Acceptable performance and payment bonds shall be limited to the following:

- A. Surety bond underwritten by a company licensed to issue bonds in this State; or

B. Legal Tender; or

C. A certificate of deposit; share certificate; or cashier's, treasurer's, teller's or official check drawn by, or a certified check accepted by, and payable on demand to the State by a bank, a savings institution, or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration.

(1) These instruments may be utilized only to a maximum of \$100,000.

(2) If the required security or bond amount totals over \$100,000, more than one instrument not exceeding \$100,000 each and issued by different financial institutions shall be acceptable.

If the contractor fails to deliver the required performance and payment bonds, the contractor's award shall be canceled, its bid security enforced, and award of the contract shall be made to the next lowest bidders.

EXECUTION OF THE CONTRACT - The contract shall be signed by the successful bidder and returned, together with a satisfactory performance and payment bonds, within ten (10) consecutive calendar days, after the bidder has received his contract for execution or within such further time as the Adjutant General or his designated representative may allow. No proposal or contract shall be considered binding upon the State until the contract has been fully and properly executed by all parties thereto and the Adjutant General or his designated representative has endorsed therein his certificate, as required by Section 103D-309, Hawaii Revised Statutes, that there is an available unexpended appropriation or balance of an appropriation over and above all outstanding contracts sufficient to cover the State's amount required by such contract.

On any individual award totaling less than \$50,000, the State reserves the right to execute the contract by the issuance of a State Purchase Order. Acceptance shall result in a binding contract between the parties without further action by the State. Executing the contract by Purchase Order shall not be deemed a waiver of these specification requirements.

FAILURE TO EXECUTE THE CONTRACT - If the bidder to whom a contract is awarded shall fail or neglect to enter into the contract and to furnish satisfactory security within ten (10) consecutive calendar days after such award or within such further time as the Adjutant General or his designated representative may allow, the award shall be canceled and the bid security shall be declared forfeited. The bid security shall thereupon become a realization of the State, not as a penalty, but in liquidation of the damages sustained. The Adjutant General may thereupon award the contract to the next lowest responsible bidder or may call for new bids, whichever method he may deem is to the best interest of the State.

NOTICE TO PROCEED - After the contract is fully executed, the Contractor will be sent a formal "Notice to Proceed" advising the Contractor of the date on which he may proceed with the work. The Contractor shall be allowed ten (10) consecutive working days from said date to begin his work. In the event that the Contractor refuses or neglects to start the work, the Adjutant General or his designated representative may terminate the contract.

SPECIAL PROVISIONS FOR CONSTRUCTION CONTRACTS

RESPONSIBILITY OF OFFERORS

Offeror shall furnish proof of compliance in accordance with Act 190 Amendment to HRS 103D-310(c)

Required as a prerequisite to entering into a contract, the contractor shall register on the Hawaii Compliance Express web site for all tax clearances by going to <http://vendors.ehawaii.gov> and registering there.

A Certificate of Vendor Compliance generated from this website should be included with their bid proposal. A Compliant status is required prior to awarding the contract.

COMPREHENSIVE ANNUAL FINANCIAL REPORTING

For any project that involves work on multiple structures, including non-building structures, whether it be new work or renovation work, or when the project involves both site improvements and a structure, the Contractor shall provide the following information to the Project Manager for fixed asset allocation purposes:

1. **Within 30 calendar days** of award as applicable to the project, the following shall be submitted:
 - a. The total cost of each individual structure.
 - b. The total cost of on-site improvement work; and
 - c. The total cost of off-site improvement work.

2. After all work, including all change order work has been completed, and prior to a request for final payment, the following shall be submitted:
 - a. The total cost of each individual structure including any related change order cost.
 - b. The total cost of on-site improvement work including any related change order cost; and
 - c. The total cost of off-site improvement work including any related change order cost.

3. The sum total cost of each category noted above shall total to the contract amount awarded, plus all change order work issued.
 - a. The cost of each individual structure includes the cost of the structure and any work within five (5) feet of the structure or building line which may include, but is not limited to its foundation, foundation earthwork, and utility improvements within and immediately below the building line.
 - b. The on-site improvement cost includes all site improvement work from five (5) feet and beyond the building line and up to the project's property line, which may include but is not limited to clearing and grubbing, grading,

drainage system, site utility, walkway, parking lot, and landscape improvements.

- c. The off-site improvement cost includes all off-site improvement work outside of the project's property line, which may include but is not limited to walkway, landscape, drainage, utility, and roadway improvements.

LIABILITY INSURANCE

The Contractor shall not commence any work until it obtains, at its own expense, all required liability insurance. Such insurance must have the approval of the State as to limit form and amount and must be maintained with a company acceptable to the State. Such insurance must be maintained for the full period of the contract and shall provide protection from claims arising out of or resulting from the Contractor's operations under the Contract itself Subcontractor or by anyone directly or indirectly employed by any of them or by anyone for whose acts any of them may be liable.

The contractor shall take out and maintain during the life of this contract broad form public liability (Bodily Injury) and broad form property damage liability insurance in a combined single limit not less than \$1,000,000 and not less than \$2,000,000 in the aggregate to protect such contractor and all his subcontractors from claims for damages for personal injury, accidental death and property damage which may arise from operations under this contract, whether such operations be by himself or anyone directly or indirectly employed by either of them and to include automotive liability, workers compensation and employers liability.

The insurance described herein will be maintained by the Contractor for the full period of the Contract and in no event will be terminated or otherwise allowed to lapse prior to final acceptance of the work by the State.

A certificate of insurance acceptable to the State shall be filed with the State prior to commencement of the work. Such certificate shall contain a provision that coverage afforded under the policy will not be canceled or changed until at least thirty days written notice has been given to the State by registered mail at the address denominated for the State in the Contract for official communications to it should any policy be canceled before final acceptance by the State, and the Contractor fails to immediately procure replacement insurance as specified, the State reserves the right to procure such insurance and to deduct the cost thereof from any sum due the Contractor.

BID PREPARATION

Offer Form, Page Of-1. Offeror is requested to submit its offer using Offeror's exact legal name as registered with the Department of Commerce and Consumer Affairs, if applicable; and to indicate exact legal name in the appropriate space on Offer Form, page OF-1. Failure to do so may delay proper execution of the contract.

The authorized signature on the first page of the Offer Form shall be an original signature in ink. If unsigned or the affixed signature is a facsimile or a photocopy, the offer shall be automatically rejected unless accompanied by other material, containing an original signature, indicating the Offeror's intent to be bound.

Hawaii Business. A business entity referred to as a "Hawaii business", is registered and incorporated or organized under the laws of the State of Hawaii.

Compliant non-Hawaii business. A business entity referred to as a "compliant non-Hawaii business," is not incorporated or organized under the laws of the State of Hawaii but is registered to do business in the State.

Tax Liability. Work to be performed under this solicitation is a business activity taxable under Chapter 237, Hawaii Revised Statutes (HRS), and vendors are advised that they are liable for the Hawaii GET at the current rate.

4.712% tax rate. All businesses located on Oahu are required to pay the ½% County Surcharge tax on all Oahu transactions for which they pay the 4% GE tax. Neighbor island and out-of-state businesses that deliver goods or services to Oahu and have a 'physical presence' on Oahu, must pay the new ½% County Surcharge tax on their Oahu transactions.

4% tax rate. Neighbor island and out-of-state businesses that do not deliver any goods or services to Oahu are not subject to the new ½% County Surcharge tax.

If, however, an Offeror is a person exempt by the HRS from paying the GET and therefore not liable for the taxes on this solicitation, Offeror shall state its tax-exempt status and cite the HRS chapter or section allowing the exemption.

Taxpayer Preference. For evaluation purposes, pursuant to §103D-1008, HRS, the Bidder's tax-exempt price offer submitted in response to an IFB shall be increased by the applicable retail rate of general excise tax and the applicable use tax. Under no circumstance shall the dollar amount of the award include the aforementioned adjustment.

AWARD OF CONTRACT

Method of Award. Award, if made, shall be to the responsive, responsible offeror submitting the lowest Lump Sum Bid unless otherwise noted in the bid documents.

Responsibility of Lowest Responsive Bidder. Reference Responsibility of Offerors in §3-122-112, HAR. If compliance documents have not been submitted to the State Department of Defense prior to award, the lowest responsive offeror shall produce documents to the procurement officer to demonstrate compliance with this section.

HRS Chapter 237 tax clearance requirement for award and final payment.

Instructions are as follows:

In accordance with Act 190 Amendment to HRS 103D-310(c)

Required as a prerequisite to entering into a contract, the contractor shall register on the Hawaii Compliance Express web site for all tax clearances by going to <http://vendors.ehawaii.gov> and registering there.

A Certificate of Vendor Compliance generated from this website should be included with their bid proposal. A Compliant status is required prior to awarding the contract.

A current Certificate of Vendor Compliance must accompany the invoice for final payment on the contract.

HRS Chapters 383 (Unemployment Insurance), 386 (Workers' Compensation), 392 (Temporary Disability Insurance), and 393 (Prepaid Health Care) requirements for award. Instructions are as follows:

Pursuant to §103D-310(c), HRS, The Certificate of Vendor Compliance must have a "Compliant" rating with the DLIR.

Compliance with Section 103D-310(c)(1) and (2), HRS.

Contractors are required to provide a state and federal tax clearance as a prerequisite to entering into a public contract of \$2,500 or more. To meet this requirement, all bidders shall submit valid tax clearances with their bid proposals when the bid is \$2,500 or more.

In accordance with Act 190 Amendment to HRS 103D-310(c), required as a prerequisite to entering into a contract, the contractor shall register on the Hawaii Compliance Express web site for all tax clearances by going to <http://vendors.ehawaii.gov> and registering there.

A Certificate of Vendor Compliance generated from this website shall be included with their bid proposal. A Compliant status is required prior to awarding the contract.

Failure to submit the required tax clearance will be sufficient grounds for the State to refuse to receive or consider the prospective bidder's proposal.

The Certificate of Vendor Compliance should be applied for as soon as possible. If a valid certificate is not submitted on a timely basis for award of a contract, an offer otherwise responsive and responsible may not receive the award.

Final Payment Requirements. A current Certificate of Vendor Compliance will be required for final payment.

SPECIAL PROVISIONS for Act 68, SLH 2010, CONSTRUCTION CONTRACTS

DEFINITIONS FOR TERMS USED IN ACT 68, SLH 2010:

- a. "Contract" means contracts for construction under 103D, HRS.
- b. "Contractor" has the same meaning as in section 103D-104, HRS, provided that "contractor" includes a Subcontractor where applicable.
- c. "Construction" has the same meaning as in section 103D-104, HRS.
- d. "Procurement Officer" has the same meaning as in section 103D-104, HRS.
- e. "Resident" means a person who is physically present in the State of Hawaii at the time the person claims to have established the person's domicile in the State of Hawaii and shows the person's intent is to make Hawaii the person's primary residence.
- f. "Shortage trade" means a construction trade in which there is a shortage of Hawaii residents qualified to work in the trade as determined by the Department of Labor and Industrial Relations.

EMPLOYMENT OF STATE RESIDENTS REQUIREMENTS – ACT 68, SLH 2010:

- a. A Contractor awarded a contract shall ensure that Hawaii residents compose not less than eighty percent of the workforce employed to perform the contract work on the project. The eighty percent requirement shall be determined by dividing the total number of hours worked on the contract by Hawaii residents, by the total number of hours worked on the contract by all employees of the contractor in the performance of the contract. The hours worked by any Subcontractor of the Contractor shall count towards the calculation for this section. The hours worked by employees within shortage trades, as determined by the Department of Labor and Industrial Relations (DLIR), shall not be included in the calculation for this section.
- b. Prior to starting any construction work, the Contractor shall submit the subcontract dollar amount for each of its Subcontractors.
- c. The requirements of this section shall apply to any subcontract of \$50,000 or more in connection with the Contractor, that is, such Subcontractors must also ensure that Hawaii residents compose not less than eighty percent of the Subcontractors workforce used to perform the subcontract.

- d. The Contractor and any Subcontractor whose subcontract is \$50,000 or more shall comply with the requirements of Act 68 for the entire duration of the contract.
1. Certification of Compliance for Employment of State Residents (attached) shall be made prior to submittal of the final invoice.
 2. The Certification of Compliance for Employment of State Residents shall be made under oath by an officer of the company by completing a Certification of Compliance for Employment of State Residents form and executing the Certificate before a licensed notary public.
 3. In addition to the certification as required above, the Contractor and Subcontractors shall maintain records such as certified payrolls for laborers and mechanics who performed work at the site and time sheets for all other employees who performed work on the project. These records shall include the names, addresses and number of hours worked on the project by all employees of the Contractor and Subcontractor who performed work on the project to validate compliance with Act 68. The Contractor and Subcontractors shall retain these records and provide access to the State for a minimum period of four (4) years after the final payment, except that if any litigation, claim, negotiation, investigation, audit or other action involving the records has been started before the expiration of the four (4) year period, the Contractor and Subcontractors shall retain the records until completion of the action and resolution of all issues that arise from it, or until the end of the four (4) year period, whichever occurs later. Furthermore, it shall be the Contractor's responsibility to enforce compliance with this provision by any Subcontractor.
- e. A Contractor who fails to comply with this section shall be subject to any of the following sanctions:
1. Temporary suspension of work on the project until the Contractor or its Subcontractor complies with Act 68.
 2. Withholding of payment on the contract until the Contractor or its Subcontractor complies with Act 68.
 3. Permanent termination of the Contractor or Subcontractor from any further work on the project.
 4. Recovery by the State, as applicable, of any moneys expended on the contract or subcontract as applicable; or
 5. Proceedings for debarment or suspension of the Contractor or Subcontractor under Hawaii Revised Statutes §103D-702.

Conflict with Federal Law:

This section shall not apply if the application of this section is in conflict with any federal law, or if the application of this section will disqualify the State from receiving Federal funds or aid.

Davis-Bacon Act:

Davis-Bacon Act prevailing wage rates apply to all State of Hawaii Construction contracts over \$2,000.00.

**CERTIFICATION OF COMPLIANCE
FOR
EMPLOYMENT OF STATE RESIDENTS
HRS CHAPTER 103B, AS AMENDED BY ACT 192, SLH 2011**

Project Title: _____

Agency Project No: _____

Contract No.: _____

As required by Hawai'i Revised Statutes Chapter 103B, as amended by Act 192, Session Laws of Hawaii 2011-Employment of State Residents on Construction Procurement Contracts, I hereby certify under oath, that I am an officer of _____ and
(Name of Contractor or Subcontractor Company)
for the Project Contract indicated above, _____ was in
(Name of Contractor or Subcontractor Company)
compliance with HRS Chapter 103B, as amended by Act 192, SLH 2011, by employing a workforce of which not less than eighty percent are Hawai'i residents, as calculated according to the formula in the solicitation, to perform this Contract.

I am an officer of the **Contractor** for this contract.

I am an officer of the **Subcontractor** for this contract.

CORPORATE SEAL

(Name of Company)

(Signature)

(Print Name)

(Print Title)

Subscribed and sworn to me before this
_____ day of _____, 2011.

Doc. Date: _____ # of Pages _____ 1st Circuit

Notary Name: _____

Doc. Description: _____

Notary Public, 1st Circuit, State of Hawai'i
My commission expires: _____

Notary Signature Date

NOTARY CERTIFICATION

SURETY BID BOND

Bond No.

KNOW TO ALL BY THESE PRESENTS:

That we, _____

[Full name or legal title of bidder]

as Offeror, hereinafter called Principal, and _____

[Bonding Company]

_____,
as Surety, hereinafter called Surety, a corporation authorized to transact business as a Surety in the State of Hawaii,
are held and firmly bound unto the State of Hawaii, Department of Defense, as Owner, hereinafter called owner, in
the penal sum of _____

_____ Dollars (\$_____),

[Required amount of bid security]

lawful money of the United States of America, for the payment of which sum well and truly to be made, the said
Principal and the said Surety bind ourselves, our heirs, executors, administrators, successors and assigns, jointly
and severally, firmly by these presents.

WHEREAS:

The Principal has submitted an offer for _____

[Project number and Title]

NOW, THEREFORE:

The condition of this obligation is such that if the Owner shall reject said offer, or in the alternate, accept
the offer of the Principal and the Principal shall enter into a Contract with the Owner in accordance with the terms
of such offer, and give such bond or bonds as may be specified in the solicitation or Contract Documents with good
and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material
furnished in the prosecution thereof as specified in the solicitation then this obligation shall be null and void,
otherwise to remain in full force and effect.

Signed this _____ day of _____, 20____.

(Seal)

Name of Principal

Signature

Title _____

(Seal)

Name of Surety

Signature

Title _____

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SAMPLE FORMS

Request for Substitution
Name of Corporation
Weekly Quality Control Report Form

ARTICLE 1 - Definitions

Whenever the following terms or pronouns are used in these Bidding and Execution of Contract Requirements, and General Conditions, or in any contract documents or instruments where these Bidding and Execution of Contract Requirements, and General Conditions govern, the intent and meaning shall be interpreted as follows

- 1.1_ ADDENDUM (plural - Addenda) A written or graphic document, including Drawings and Specifications, issued by the Engineer during the bidding period which modify or interpret the bidding documents, by additions, deletions, clarifications or corrections which shall be considered and made a part of the bid proposal and the contract when executed.
- 1.2_ ADDITION (to the contract sum) Amount added to the contract Sum by Change Order.
- 1.3_ ADMINISTRATIVE RULES - Hawaii Administrative Rules for Chapter 103-D of the Hawaii Revised Statutes.
- 1.4_ ADMINISTRATOR - The Public Works Administrator, Department of Accounting and General Services
- 1.5_ ADVERTISEMENT - A public announcement soliciting bids or offers.
- 1.6_ AMENDMENT - A written document properly executed by the Contractor and DOD issued to amend the existing contract between the State and the Contractor.
- 1.7_ BAD WEATHER DAY - When weather or other conditions prevent a minimum of four hours of work with the Contractor's normal work force on controlling items of work at the site.
- 1.8_ BENEFICIAL OCCUPANCY - The point of project completion when the State can use the constructed facility in whole or in part for its intended purpose even though substantial completion may not be achieved.
- 1.9_ BID See OFFER
- 1.10_ BID SECURITY - The security furnished by the bidder from which the State may recover its damages in the event the bidder breaches its promise to enter into a contract with the State and fails to execute the required bonds covering the work contemplated, if its proposal is accepted.
- 1.11_ BIDDER - See Offeror
- 1.12_ BIDDING DOCUMENTS (or SOLICITATION DOCUMENTS) - The advertisement solicitation notice and instructions, Offer requirements, Offer forms, and the proposed contract documents including all addenda, and clarifications issued prior to receipt of the Offer.
- 1.13_ BULLETIN - A written notice to the Contractor requesting a price and / or time proposal for contemplated changes preparatory to the issuance of a field order or change order.
- 1.14_ BY OR TO THE ENGINEER - To avoid cumbersome and confusing repetition of expressions in these General Conditions, it is provided that whenever the following words or words of like import are used, they shall be understood as if they were followed by the words "by the Engineer" or "to the Engineer", unless the context clearly indicates another meaning: contemplated, required, determined, directed, specified, authorized, ordered, given, designated, indicated, considered necessary, deemed necessary, permitted, reserved, suspended, established, approval, approved, disapproved, acceptable, unacceptable, suitable, accepted, satisfactory, unsatisfactory, sufficient, insufficient, rejected or condemned.
- 1.15_ CALENDAR DAY - Any day shown on the calendar beginning at midnight and ending at midnight the following day. If no designation of calendar or working day is made, "day" shall mean calendar day.
- 1.16_ CHANGE ORDER - A written order signed by the Engineer that establishes the full payment and final settlement of all claims for direct, indirect and consequential costs, including

- costs of delays, and establishes any adjustments to contract time related to the work covered and affected by one or more field orders, or for change work done or agreed to be done without issuance of a separate field order. A change order signed by all the parties to the contract constitutes a supplemental agreement.
- 1.17_ COMPLETION - See SUBSTANTIAL COMPLETION and FINAL COMPLETION.
- 1.18_ COMPTROLLER - The Comptroller of the State of Hawaii, Department of Accounting and General Services.
- 1.19_ CONSULTANT - A person, firm or corporation having a contract with the State to furnish services with respect to the project
- 1.20_ CONTRACT - The written agreement between the Contractor and the State of Hawaii by its Adjutant General, by which the Contractor is bound to furnish all labor, equipment, and materials and to perform the specified work within the contract time stipulated, and by which the State of Hawaii is obligated to compensate the Contractor therefore at the prices set forth therein. The contract shall include the Contract Documents and also any and all amendments and change orders which are required to complete the construction in an acceptable manner.
- 1.21_ CONTRACT COMPLETION DATE - The calendar day on which all work on the project, required by the contract, must be completed. See CONTRACT TIME and FINAL COMPLETION.
- 1.22_ CONTRACT DOCUMENTS - The Contract, Addenda (which pertain to the Contract Documents, Contractor's Proposal (including Wage Schedule, List of Subcontractors and other documentation accompanying the Bid and any post bid documentation submitted prior to the Notice of Award) when attached as an exhibit to the Contract, the Notice to Proceed, the Bonds, these GENERAL CONDITIONS, the SPECIAL CONDITIONS, the Specifications and the Drawings as the same are more specifically identified in the Contract together with all written Amendments, Change Orders, Field Orders, a written order for minor changes in the work and Engineer's written interpretations and clarifications issued on or after the effective date of the Contract.
- 1.23_ CONTRACT PRICE - The amount designated on the face of the contract for the performance of work including allowances for extra if any.
- 1.24_ CONTRACT TIME (or CONTRACT DURATION) - The number of calendar (or working) days provided for completion of the contract, inclusive of authorized time extensions. The number of days shall begin running on the effective date in the Notice to Proceed. If in lieu of providing a number of calendar (or working) days, the contract requires completion by a certain date, the work shall be completed by that date.
- 1.25_ CONTRACTOR - Any individual, partnership, firm, corporation, joint venture, or other legal entity undertaking the execution of the work under the terms of the contract with the State of Hawaii, and acting directly or through its agents, or employees.
- 1.26_ DEPARTMENT - The Department of Defense, State of Hawaii (abbreviated DOD).
- 1.27_ DRAWINGS (or Plans) - The contract drawings in graphic or pictorial form, which show the design, location, character, dimensions and details of the Work to be done and which shall be a part of the Contract Documents.
- 1.28_ ENGINEER - The Department of Defense Engineer, or the authorized person to act in the Engineer's behalf.
- 1.29_ EQUAL OR APPROVED EQUAL - Whenever this term is used in the drawings or specifications, it shall be interpreted to mean a brand or article, prequalified in accordance with Section 6.3 SUBSTITUTION OF MATERIALS AND EQUIPMENT, that may be used in place of the one specified.

- 1.30_ FIELD ORDER - A written order issued by the Engineer or the Engineer's authorized representative to the Contractor requiring the contract work to be performed in accordance with a change or changes in the work. A field order may (1) establish a price adjustment and/or time adjustment in an amount the Engineer believes is reasonable for the change; or (2) may declare that the Engineer does not intend to adjust contract time or price for the work; or (3) may request the Contractor to submit a proposal for an adjustment to the contract time and/or price by a certain date.
- 1.31_ FINAL COMPLETION - The date set by the Engineer that all work required by the contract and any amendments or changes thereto is in full compliance with the contract.
- 1.32_ FORCE ACCOUNT - Term used when Work is ordered to be done without prior agreements as to lump sum or unit price cost thereof and is to be billed for at cost of labor, materials and equipment, insurances, taxes, etc., plus an agreed percentage for overhead and profit.
- 1.33_ GUARANTEE - Legally enforceable assurance of the duration of satisfactory performance of quality of a product or Work
- 1.34_ GOODS - Materials. §103D-104
- 1.35_ HAZARDOUS MATERIALS - Any and all radioactive materials, asbestos, polychlorinated biphenyls, petroleum, crude oil, chemicals known to cause cancer or reproductive toxicity, pollutants, contaminants, toxic substances or materials cited in Hazardous Material Laws. Abandoned motor vehicles or parts thereof are not hazardous material.
- 1.36_ HOLIDAYS - The days of each year which are set apart and established as State holidays pursuant to Chapter 8, Hawaii Revised Statutes.
- 1.37_ INSPECTOR - The person assigned by the Engineer to make detailed inspections of contract performance and materials supplied for the work.
- 1.38_ LAWS - All Federal, State, City and County Laws, ordinances, rules and regulations, and standard specifications including any amendments thereto effective as of the date of the call for sealed bids.
- 1.39_ PERFORMANCE LIQUIDATED DAMAGES - The amount prescribed in the General Conditions, Section 7.26 FAILURE TO COMPLETE THE WORK ON TIME to be paid to the State or to be deducted from any payments due or to become due the Contractor for each working day or calendar day (as applicable) delay in completing the whole or any specified portion of the work beyond the Contract Time.
- 1.40_ LETTER OF AWARD - A written notice from the Engineer to the successful bidder(s) stating that its proposal has been accepted by the State.
- 1.41_ MAJOR UNIT PRICE ITEM - A unit price item which, when extended on its estimated quantities in the proposal form, exceeds five percent (5%) of the total base bid proposal less any allowance and contingent items included in the proposal.
- 1.42_ NON-CONFORMING WORK - Work that does not fulfill the requirements of the Contract Documents.
- 1.43_ NOTICE TO CONTRACTORS - See Solicitation.
- 1.44_ NOTICE TO PROCEED - A written notice from the Contracting Officer to the Contractor advising it of the date on which it is to begin the prosecution of the Work, which date shall also be the beginning of Contract Time.
- 1.45_ POST CONTRACT DRAWINGS - Drawings issued after the award of the contract for the purpose of clarification and / or changes to the work indicated in the original drawings and which may be made a part of the contract.
- 1.46_ PROJECT ACCEPTANCE DATE - The calendar day on which the Engineer accepts the project as sufficiently completed in compliance with the contract so that the State can occupy or

- utilize the Work for its intended use. See SUBSTANTIAL COMPLETION.
- 1.47_ PROJECT CONTRACT LIMITS (or Contract Zone) - The portion of the site as delineated on the drawings which define the Contractor's primary area of operation for the prosecution of the work. It does not define the exact limits of all construction that may be required under the contract.
- 1.48_ PROJECT GUARANTEE - A guarantee issued by the Contractor to the State. See GUARANTEE.
- 1.49_ PROPOSAL (Bid) – See Offer (or Bid).
- 1.50_ PROPOSAL FORM – See Offer Form (or Bid Form).
- 1.51_ PUNCH LIST - A list compiled by the Engineer (or Contractor) stating work yet to be completed or corrected by the Contractor in order to substantially complete or finally complete the contract requirements.
- 1.52_ QUESTIONNAIRE - The specified forms on which the bidder shall furnish required information as to its ability to perform and finance the work.
- 1.53_ SHOP DRAWINGS - All drawings, diagrams illustrations, schedules and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.
- 1.54_ SPECIAL CONDITIONS - Supplements or modifies the standard clauses of the GENERAL CONDITIONS setting forth conditions or requirements peculiar to the individual project under consideration, which are not thoroughly or satisfactorily covered, described or explained in these GENERAL CONDITIONS.
- 1.55_ SPECIFICATIONS - That portion of the Contract Documents consisting of written descriptions for materials, equipment, construction systems, standards, workmanship, directions, provisions and requirements that
- pertain to the method and manner of performing the work and certain administrative requirements applicable thereto.
- 1.56_ STATE - The State of Hawaii acting through its authorized representative.
- 1.57_ SUBCONTRACT - Any written agreement between the Contractor and its subcontractors which contains the conditions under which the subcontractor is to perform a portion of the work for the Contractor.
- 1.58_ SUBCONTRACTOR - An individual, partnership, firm, corporation, joint venture or other legal entity, as covered in Chapter 444, Hawaii Revised Statutes, which enters into an agreement with the Contractor to perform a portion of the work for the Contractor.
- 1.59_ SUBSTANTIAL COMPLETION - The status of the project when the Contractor has completed all the work and 1) all utilities and services are connected and working, 2) all equipment is in acceptable working condition, 3) additional activity by the Contractor to correct punch list items as described herein will not prevent or disrupt use of the work or the facility in which the work is located, and 4) the building, structure, improvement or facility can be used for its intended purpose.
- 1.60_ SUPERINTENDENT - The employee of the Contractor who is charged with the responsibility of all the Work.
- 1.61_ SURETY - The qualified individual, firm or corporation other than the Contractor, which executes a bond with and for the Contractor to insure its acceptable performance of the contract.
- 1.62_ UNUSUALLY SEVERE WEATHER - Uncommonly harsh weather including but not limited to hurricanes, tornados, tropical storms and tropical depressions, or as otherwise defined in the SPECIAL CONDITIONS.
- 1.63_ WORK - The furnishing of all labor, materials, equipment, and other incidentals necessary or convenient for the successful completion of the

project and the execution of all the duties and obligations imposed by the contract.

IRS Internal Revenue Service

1.64_ WORKING DAY - A calendar day, exclusive of Saturdays, Sundays and State-recognized legal holidays for the month in question.

1.65_ OFFER (or Bid) – The executed document submitted by an Offeror in response to a solicitation request, to perform the work required by the proposed contract documents, for the price quoted and within the time allotted.

1.66_ OFFEROR (or BIDDER) – Any individual, partnership, firm, corporation, joint venture or other legal entity submitting directly or through a duly authorized representative or agent, an Offer for the work or construction contemplated.

1.67_ OFFER FORM (or BID FORM) – The form prepared by the Department on which the Offeror submits the written offer or bid. By submitting an offer or bid, the Offeror adopt the language on the form as its own.

1.68_ PROJECT START DATE – The date established in the Notice to Proceed when the Contractor shall begin prosecution of the work and the start of contract time.

1.69_ SOLICITATION – An Invitation to Bid or Request for Proposals or any other document issued by the Department to solicit bids or offers to perform a contract. The solicitation may indicate the time and place to receive the bids or offers and the location, nature and character of the work, construction or materials to be provided.

BIDDING AND EXECUTION OF CONTRACT REQUIREMENTS

ARTICLE 2 - Proposal Requirements and Conditions

2.1 QUALIFICATION OF BIDDERS
Prospective bidders must be capable of performing the work for which bids are invited, and must be capable of entering into a public contract of \$25,000 or more.

2.1.1 Notice of Intention to Bid

2.1.1.1 In accordance with Section 103D-310, Hawaii Revised Statutes, and Section 3-122-111, Hawaii Administrative Rules, a written notice of intention to bid need not be filed for construction of any public building or public work. A written notice of intention to bid need not be filed for mere furnishing and installing of furniture, equipment, appliances, material and any combination of these items when a Contractor’s license is not required under Chapter 444 of the Hawaii Revised Statutes, as amended, and the rules and regulations of the Contractor’s License Board.

2.1.1.2 If two (2) or more prospective bidders desire to bid jointly as a joint venture on a single project, they must file an affidavit of joint venture. Such affidavit of joint venture will be valid only for the specific project for which it is filed. No further license is required when all parties to the joint venture possess current and appropriate contractor’s licenses. Joint ventures are required to be licensed in accordance with Chapter 444 of the Hawaii Revised Statutes, as amended, and the rules and regulations of the Contractor’s License Board when any party to the joint venture agreement does not hold a current or appropriate contractor's license. The joint venture must register with the office of the Director of Commerce and Consumer Affairs in accordance with Chapter 425 of the Hawaii Revised Statutes, as amended.

2.1.1.3 No persons, firm or corporation may bid where (1) the person, firm, or corporation, or (2) a corporation owned substantially by the person, firm, or corporation, or (3) a substantial stockholder or an officer of the

ABBREVIATIONS

- HAR Hawaii Administrative Rules
- HRS Hawaii Revised Statutes
- VECP Value Engineering cost Proposal
- DOTAX State Department of Taxation

corporation, or (4) a partner or substantial investor in the firm is in arrears in any payment owed to the State of Hawaii or any of its political subdivisions or is in default of any obligation to the State of Hawaii or to all or to any of its political subdivisions, including default as a surety or failure to perform faithfully and diligently any previous contract with the Department.

2.1.1.4 The Engineer may, in accordance with Section 103D-310 Hawaii Revised Statutes, require the prospective Bidder to submit answers to questions contained in the STANDARD QUALIFICATION QUESTIONNAIRE FOR PROSPECTIVE BIDDERS ON PUBLIC WORKS CONTRACTS, on the form provided by the Department, properly executed and notarized, setting forth a complete statement of the experience of such prospective Bidder and its organization in performing similar work and a statement of the equipment proposed to be used, together with adequate proof of the availability of such equipment, at least two (2) working days prior to the time advertised for the opening of bids. If the information in the questionnaire proves satisfactory, the Bidder's proposal will be received. All information contained in the answers to the questionnaire shall be kept confidential. The questionnaire will be returned to the Bidder after it has served its purpose.

2.1.1.5 If upon review of the Questionnaire, or otherwise, the Bidder appears not fully qualified or able to perform the intended work, the Engineer shall, after affording the Bidder an opportunity to be heard and if still of the opinion that the Bidder is not fully qualified to perform the work, refuse to receive or to consider any bid offered by the prospective Bidder.

2.1.1.6 Failure to complete and submit the prequalification questionnaire by the designated deadline will be sufficient cause for the Department to disqualify a prospective Bidder.

2.1.2 Compliance Certificate § 103D -310(c) HRS)

2.1.2.1 Contractors are required to provide proof of compliance in order to receive a contract of \$25,000 or more. To meet this requirement, Offerors may apply and register at the "Hawaii Compliance Express" website: <http://vendors.chawaii.gov/hce/splash/welcome/html>

2.1.2.2 Tax clearances may be obtained by completing the Tax Clearance Application (Form A-6) and

submitting it to the Hawaii State Department of Taxation (DOTAX) or the Internal Revenue Service (IRS). The application may be obtained from the DOTAX, or the IRS. The application may be mailed in or walked in to either the DOTAX or the IRS. Both tax agencies encourage the use of their mail-in process, which should be completed within twenty-one (21) calendar days. Tax clearance certificates will be issued to the applicant upon determination that the applicant has filed all tax returns due, and has paid all amounts owing on such returns, including penalty and interest.

2.1.2.3 Only original tax clearance certificates or certified copies will be accepted for this purpose. Failure to submit the required tax clearance certificates may be sufficient grounds for the Department to refuse to receive or consider the prospective bidder's proposal.

2.1.2.4 Tax clearance certificates are valid for six (6) months. The six-month period will begin with the later approval date stamped on the tax clearance. An original copy of a tax clearance that bears an original green certified copy stamp will be accepted by the Department for final payment. The period of validity is two months.

2.1.2.5 The tax clearances submitted with the bid proposals must be valid on the solicitation's first legal advertisement date or any date thereafter up to the bid opening date. Valid tax clearances submitted with the proposal will remain valid for the contract award and encumbrance.

2.1.2.6 Any person, firm or corporation that is not presently doing business in the State of Hawaii and submits a Notice of Intention to Bid must submit along with said Notice of Intention to Bid a certified letter stating that said person, firm or corporation is not doing business in the State of Hawaii and is not in default of any obligations due to the State or any of its political subdivisions.

2.1.2.7 If a business cannot obtain a tax clearance certificate because of tax delinquencies, it may submit a "special letter" from DOTAX and/or the IRS. The "special letter" may only be obtained if (1) the business has an existing installment agreement with the tax agency, or (2) the delinquency is the subject of an administrative or judicial appeal. The bidder is cautioned that the "special letter" from the IRS must be certified by DOTAX. All conditions applied to tax clearance certificates for this purpose are applicable to

these “special letters”. Instructions to obtain the “special letter” are available from each respective tax agency.

2.1.2.8 Various combinations of tax clearance certificates and “special letters” are acceptable for this purpose as follows: Tax clearance certificate signed by both tax agencies;

- (a) Individual tax clearance certificates from each tax agency, respectively;
- (b) Tax clearance certificate from one tax agency and a “special letter” from the other tax agency;
- (c) “Special letters” from both tax agencies.

2.1.3 Wrongful Refusal to Accept a Bid - In the event the Engineer, for any reason, wrongfully refuses to accept what would otherwise be a responsive and responsible lowest bid, the exclusive remedy for such lowest bidder shall be the recovery of the reasonable actual costs of preparing the bid. No other bidder shall have any claim for damages. Refer to 2.13 PROTEST.

2.2 INTERPRETATION OF QUANTITIES IN BID SCHEDULE

2.2.1 When quantities for individual items of work are listed in the proposal form for which respective unit prices are asked, said quantities are estimated or approximate and are to be used by the Department only for the purpose of comparing on a uniform basis bids offered for the work. The Department does not, expressly or by implication, agree that the actual quantity of work will correspond therewith.

2.2.2 After determining the low bidder by comparison of bids submitted in accordance with the proposal form and Section 3.1 CONSIDERATION OF PROPOSALS; CANCELLATION in these specifications, the quantities of unit price items of work may increase or decrease.

2.2.3 On unit price bids, payment will be made only for the actual number of units incorporated into the finished project at the unit price bid, subject to Section 4.7 VARIATIONS IN ESTIMATED QUANTITIES.

2.3 CONTENTS OF PROPOSAL FORMS

2.3.1 Prospective bidders will be furnished with proposal forms giving the location, description, and the contract time of the work contemplated for which a lump sum bid price is asked or containing a schedule of items, together with estimated quantities of work to be performed and materials to be furnished, for which unit bid prices and/or lump sum bid prices are asked.

2.3.2 All papers bound with or attached to the proposal form shall be considered a part thereof and shall not be detached or altered when the proposal is submitted.

2.3.3 The drawings, specifications and other documents designated in the proposal form, will also be considered a part thereof whether attached or not.

2.3.4 By submitting a bid on the proposal form, a bidder accepts the language therein as its own.

2.4 THE SITE AND PROPOSED CONTRACT DOCUMENTS

2.4.1 The Bidder shall examine carefully the Project Site contemplated and the proposal, drawings, specifications, supplemental specifications, SPECIAL CONDITIONS, and any documents or items referenced therein and contract and bond forms therefore. The submission of a bid shall be considered as a warranty that the Bidder has made such examination and is informed of the conditions to be encountered in performing the Work and of the requirements of the drawings, specifications, supplemental specifications, SPECIAL CONDITIONS and any documents and items referenced therein, and contract and bonds.

2.5 ADDENDA AND BID CLARIFICATIONS

2.5.1 The terms and requirements of the bid documents (i.e. drawings, specifications and other bid and contract documents) cannot be changed prior to the bid opening except by a duly issued addenda or bid clarification.

2.5.2 The Department may alter, increase or decrease the scope of the work or the contract time, provisions and conditions by issuing a written addendum which sets forth such alterations, increase or decrease.

2.5.3 Bid Discrepancy - If a bidder discovers what it considers to be a discrepancy, ambiguity, omission or

doubt as to the meaning of drawings, specifications and any other bid or contract documents, the bidder shall request in writing no later than 14 days before the bids are opened.

2.5.4 Addenda to the bid documents will be provided to all prospective bidders at the respective offices furnished for such purposes. Each addendum shall be an addition to the Contract Documents.

2.5.5 Upon providing an addenda, all bidders shall be deemed to be on notice of the information therein whether or not the addendum or bid clarification is actually received. All addenda and bid clarifications so issued shall become part of the Contract Documents.

2.5.6 No claim for additional compensation and/or time for performance will be allowed if the Contractor discovered, or in the exercise of reasonable care, should have discovered a discrepancy, ambiguity, omission or doubt for which an interpretation was not requested.

2.6 SUBSTITUTION OF MATERIALS AND EQUIPMENT BEFORE BID OPENING

2.6.1 Brand names of materials or equipment are specified or shown on the drawings to indicate a quality, style, appearance or performance and not to limit competition. The Bidder shall base its bid on one of the specified brand names unless alternate brands are qualified as equal or better in an addendum. Qualifications of such proposed alternate brands shall be submitted in writing and addressed to the Engineer. The face of the envelope containing the request must be clearly marked "SUBSTITUTION REQUEST". The request may be hand carried to the Department of Defense, State of Hawaii, 3949 Diamond Head Road, Honolulu, HI 96816-4495, or mailed. In either case, the written request must be received no later than the time and date specified in the NOTICE TO BIDDERS. The written request will be time stamped by the Department. For the purpose of this section, the time designated by the time stamping device in the Engineering Office shall be official. If the written request is hand carried, the bearer is responsible to ensure that the request is time stamped by the Engineering Office.

2.6.2 Submit three (3) sets of the written request, technical brochures, and a statement of variances. Refer

to the Appendix for the Sample "Request for Substitution."

2.6.3 Statement of Variances - The statement of variances must list all features of the proposed substitution which differ from the drawings, specifications and / or product(s) specified and must further certify that the substitution has no other variant features. The brochure and information submitted shall be clearly marked showing make, model, size, options, etc., and must include sufficient evidence to evaluate each feature listed as a variance. A request will be denied if submitted without sufficient evidence. If after installing the substituted product, an unlisted variance is discovered, Contractor shall immediately replace the product with a specified product all at no cost to the State

2.6.4 Substitution Denial - Any substitution request not complying with the above requirements will be denied. Substitution requests sent to other agencies and received by the Engineering Office after the deadline above will be denied.

2.6.5 An addendum shall be issued to inform all prospective bidders of any accepted substitution in accordance with Section 2.5 ADDENDA AND BID CLARIFICATIONS.

2.6.6 For substitutions of materials and equipment after issuance of the Letter of Award, refer to Section 6.3 SUBSTITUTION OF MATERIALS AND EQUIPMENT AFTER BID OPENING.

2.7 PREPARATION OF PROPOSAL

2.7.1 The Bidder's proposal must be submitted on the proposal form furnished by the Department. The proposal must be prepared in full accordance with the instructions thereon. The Bidder must state, both in words and numerals, the lump sum price or total sum bid at which the work contemplated is proposed to be done. These prices must be written in ink or typed. In case of a discrepancy between the prices written in words and those written in figures, the words shall govern over the figures. The Bidder shall sign the proposal in the spaces provided with ink. By submitting a bid, the Bidder adopts the language of the proposal as its own.

2.7.2 If the proposal is made by an individual, the person's name and post office address must be shown in the space provided. If made by a partnership the name

and post office address of each member of the partnership must be shown and the proposal signed by all partners or evidence in the form of a partnership agreement must be submitted showing the authority of the partner to enter, on behalf of said partnership, into contract with the State. If made by a corporation the proposal must show the name, titles, and business address of the president, secretary and treasurer and also evidence in the form of a corporate resolution must be submitted showing the authority of the particular corporate representative to enter on behalf of said corporation into contract with the State. If made by a joint venture the name and post office address of each member of the individual firm, partnership or corporation comprising the joint-venture must be shown with other pertinent information required of individuals, partnerships or corporations as the case may be. The proposal must be signed by all parties to the joint-venture or evidence in the form of a Joint-Venture Agreement must be submitted showing the authority of the joint-venture's representative to enter on behalf of said joint-venture into contract with the State.

2.7.3 Pursuant to the requirements of Section 103D-302, HRS, each Bidder shall include in its bid the name of each person or firm to be engaged by the Bidder on the project as joint contractor or subcontractor indicating also the nature and scope of work to be performed by such joint contractor and/or subcontractor and their respective contractor's license number. If the Bidder fails to list a joint contractor or subcontractor, the State may accept the bid if it is in the State's best interest and the value of the work to be performed by the joint contractor or subcontractor is equal to or less than one percent of the total bid amount. The Bidder shall be solely responsible for verifying that their joint contractor or subcontractor has the proper license at the time of the submitted bid.

2.8 BID SECURITY §3-122-223(d) HAR

2.8.1 Subject to the exceptions in Section 3-122-223(d) HAR, all lump sum bids of \$25,000 and higher, or lump sum base bids including alternates of \$25,000 and higher, that are not accompanied by bid security are non-responsive. Bid security shall be one of the following: §3-122-222(a) HAR

2.8.1.1 Surety bid bond underwritten by a company licensed to issue bonds in this State which shall be

substantially in the form of the Surety Bid Bond form in the Appendix; or

2.8.1.2 Legal Tender; or

2.8.1.3 Certificate of Deposit; Credit Union share certificate; or cashier's, treasurer's, teller's or official check drawn by, or a certified check accepted by, and payable on demand to the State by a bank, a savings institution, or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration.

- (a) These instruments may be utilized only to a maximum of \$100,000.
- (b) If the required security or bond amount totals over \$100,000, more than one instrument not exceeding \$100,000 each and issued by different financial institutions shall be accepted.
- (c) **CAUTION** - Bidders are cautioned that certificates of deposit or share certificates with an early withdrawal penalty must have a face value sufficient to cover the maximum penalty amount in addition to the proposal guaranty requirement. If the certificate is made out to two names, the certificate must be assigned unconditionally to the Department of Defense.

2.8.2 Unless otherwise stated, the bid security shall be in an amount equal to at least five percent (5%) of the lump sum bid or lump sum base bid including alternates or in an amount required by the terms of the federal funding, where applicable.

2.8.3 If the Bidder is a corporation, evidence in the form of a corporate resolution, authorizing the corporate representative to execute the bond must be submitted with the proposal. (See sample in Appendix.) If the Bidder is a partnership, all partners must sign the bond or evidence in the form of a partnership agreement must be submitted showing the authority of the partner.

2.8.4 If the Bidder is a joint -venture, all parties to the joint venture must sign the bond; provided, that one party to the joint-venture may sign on behalf of the joint-venture if evidence in the form of a joint-venture agreement or power of attorney, is submitted showing the authority of the signatory to sign the bond on behalf of the joint-venture.

2.8.5 In the case where the award will be made on a group or item basis, the amount of bid security shall be based on the total bid for all groups or items submitted.

2.8.6 Bidders are cautioned that surety bid bonds which place a limit in value to the difference between the bid amount and the next acceptable bid, such value not to exceed the purported amount of the bond, are not acceptable. Also, surety bid bonds which place a time limit on the right of the State to make claim other than allowed by statutes or these GENERAL CONDITIONS are not acceptable. Bidders are hereby notified that a surety bid bond containing such limitation(s) is not acceptable and a bid accompanied by such surety bid bond will be automatically rejected.

2.9 DELIVERY OF PROPOSALS - The entire proposal shall be placed together with the bid security, in a sealed envelope so marked as to indicate the identity of the project, the project number, the date of bid opening and the name and address of the bidder and then delivered as indicated in the Notice to Contractors. Bids which do not comply with this requirement may not be considered. Proposals will be received up to the time fixed in the public notice for opening of bids and must be in the hands of the official by the time indicated. The words "SEALED BID" must be clearly written or typed on the face of the sealed envelope containing the proposal and bid security.

2.10 WITHDRAWAL OR REVISION OF PROPOSAL - may be modified prior to the deadline to submit the offers by any of the following documents.

2.10.1 Withdrawal of Proposals:

2.10.1.1 A signed, written notice received in the office designated in the solicitation; or

2.10.1.2 A written notice faxed to the office designated in the solicitation; or

2.10.1.3 A telegraphic message received by telephone by the office designated in the solicitation from the receiving telegraph company office, provided the telegraph company confirms the telephone message by sending a written copy of the telegram showing that the message was received at such office prior to the time and date set for the opening.

2.10.2 Modification of Proposals:

2.10.2.1 A written notice received in the office designated in the solicitation, stating that a modification to the offer is submitted; and

2.10.2.2 The actual modification sealed securely in a separate envelope or container, accompanying the written notice.

2.11 PUBLIC OPENING OF PROPOSALS - Proposals will be opened and read publicly at the time and place indicated in the Notice to Contractors. Bidders, their authorized agents and other interested parties are invited to be present.

2.12 DISQUALIFICATION OF BIDDERS - Any one or more of the following causes will be considered as sufficient for the disqualification of a Bidder and the rejection of its proposal or proposals:

2.12.1 Non-compliance with Section 2.1
QUALIFICATION OF BIDDERS.

2.12.2 Evidence of collusion among bidders.

2.12.3 Lack of responsibility and cooperation as shown by past work such as failing to complete all of the requirements to close the project within a reasonable time or engaging in a pattern of unreasonable or frivolous claims for extra compensation.

2.12.4 Being in arrears on existing contracts with the State of Hawaii, or having defaulted on a previous contract with the State of Hawaii.

2.12.5 Lack of proper equipment and/or sufficient experience to perform the work contemplated, as revealed by the Standard Questionnaire and Financial Statement for Bidders.

2.12.6 No contractor's license or a contractor's license which does not cover type of work contemplated.

2.12.7 More than one proposal for the same work from an individual, firm, partnership, corporation or joint venture under the same or different name.

2.12.8 Delivery of bids after the deadline specified in the advertisement calling for bids.

2.12.9 Failure to pay, or satisfactorily settle, all bills overdue for labor and materials of former contracts in force at the time of issuance of proposal forms.

2.12.10 Debarment or suspension pursuant to the provisions of Chapters 103D, 104 and 444, Hawaii Revised Statutes, as amended.

2.13 PROTEST

2.13.1 Protests shall be adjudicated in accordance with §103D-701, HRS and as amended.

2.13.2 No Protest based upon the contents of the solicitation shall be considered unless it is submitted in writing to the Engineer, prior to the date set for the receipt of proposals.

2.13.3 A protest of an award or proposed award pursuant to §103D-302 or §103D-303, HRS, shall be submitted in writing to the Engineer within five (5) working days after the posting of the award of the Contract.

2.13.4 In addition to any other relief, when a protest is sustained and the protestor should have been awarded the contract under the solicitation but is not, then the protestor shall be entitled to the actual costs reasonably incurred in connection with the solicitation, including bid or proposal preparation costs but not attorney's fees.

ARTICLE 3 - Award and Execution of Contract

3.1 CONSIDERATION OF PROPOSALS; CANCELLATION - After the proposals are opened and read, the figures will be extended and/or totaled in accordance with the bid prices of the acceptable proposals and the totals will be compared and the results of such comparison shall be made public. In the event of a tie bid, the low bidder shall be determined by lot. In the comparison of bids, words written in the proposals will govern over figures and unit prices will govern over totals. Until the award of the contract, the Department may cancel the solicitation, reject any and all proposals in whole or part and may waive any defects or technicalities whenever such action is deemed to be in the best interest of the State.

3.2 IRREGULAR PROPOSALS - Proposals will be considered irregular and may be rejected for the following reasons:

3.2.1 If the proposal is unsigned.

3.2.2 If bid security is not in accordance with Section 2.8 BID SECURITY.

3.2.3 If proposal is on a form other than that furnished by the Department; or if the form is altered or any part thereof detached.

3.2.4 If the proposal shows any non-compliance with applicable law, alteration of form, additions not called, conditional bids, incomplete bids, non initialed erasures, other defects, or if the prices are obviously unbalanced.

3.2.5 If the Bidder adds any provisions reserving the right to accept or reject an award.

3.2.6 If the Bidder adds any provisions reserving the right to enter into a contract pursuant to an award.

3.2.7 When a proposal is signed by an officer or officers of a corporation and a currently certified corporate resolution authorizing such signer(s) to submit such proposal is not submitted with the proposal or when the proposal is signed by an agent other than the officer or officers of a corporation or a member of a partnership and a power of attorney is not submitted with the proposal.

3.2.8 Where there is an incomplete or ambiguous listing of joint contractors and/or subcontractors the proposal may be rejected. All work which is not listed as being performed by joint contractors and/or subcontractors must be performed by the bidder with its own employees. Additions to the list of joint contractors or subcontractors will not be allowed. Whenever there is a doubt as to the completeness of the list, the Bidder will be required to submit within five (5) working days, a written confirmation that the work in question will be performed with its own work force. Whenever there is more than one joint contractor and/or subcontractor listed for the same item of work, the Bidder will be required to either confirm in writing within five (5) working days that all joint contractors or subcontractors listed will actually be engaged on the project or obtain within five (5) working days written releases from those joint contractors and/or subcontractors who will not be engaged.

3.2.9 If in the opinion of the Engineer, the Bidder and its listed subcontractors do not have the contractor's licenses or combination of contractor's licenses necessary to complete all of the work.

3.3 CORRECTION OF BIDS AND WITHDRAWAL OF BIDS §3-122-31 HAR

3.3.1 Corrections to bids after bid openings but prior to award may be made under the following conditions:

3.3.1.1 If the mistake is attributable to an arithmetical error, the Engineer shall so correct the mistake. In case of error in extension of bid price, the unit price shall govern.

3.3.1.2 If the mistake is a minor informality which shall not affect price, quantity, quality, delivery, or contractual conditions, the Bidder shall request correction by submitting proof of evidentiary value which demonstrates that a mistake was made. The Engineer shall prepare a written approval or denial in response to this request. Examples of such mistakes include:

- (a) Typographical errors;
- (b) Transposition errors;
- (c) Failure of a Bidder to sign the bid, but only if the unsigned bid is accompanied by other material indicating the Bidder's intent to be bound.

3.3.1.3 For reasons not allowable under paragraphs 3.3.1.1 and 3.3.1.2 when the Engineer determines that the correction or waiver of an obvious mistake is in the best interest of the Department or is warranted for the fair treatment of other bidders.

3.3.2 Withdrawal of bids after bid opening but prior to award may be made when the bid contains a mistake attributable to an obvious error which affects price, quantity, quality, delivery, or contractual conditions, and the bidder requests withdrawal by submitting proof of evidentiary value which demonstrates that a mistake was made. The Contracting Officer shall prepare a written approval or denial in response to this request.

3.3.3 Correction or withdrawal of bids after award is not permissible except in response to a written withdrawal or correction request by the Contractor, and the Engineer makes a written determination that the

Department's procurement practices and policies would not be materially affected by such correction or withdrawal.

3.4 AWARD OF CONTRACT

3.4.1 The award of contract, if it be awarded, will be made within ninety (90) consecutive calendar days after the opening of the proposals to the lowest responsible and responsive Bidder (including the alternate or alternates which may be selected by the Engineer in the case of alternate bids) whose proposal complies with all the requirements prescribed, but in no case will an award be made until all necessary investigations are made. The successful Bidder will be notified, by letter mailed to the address shown on the proposal, that its bid has been accepted and that it has been awarded the contract.

3.4.2 If the contract is not awarded within the ninety (90) days noted in paragraph 3.4.1 above, the Department may request the successful Bidder to extend the time for the acceptance of its bid. The Bidder may reject such a request without penalty; and in such case, the Department may at its sole discretion make a similar offer to the next lowest responsive and responsible bidder and so on until a bid is duly accepted or until the Department elects to stop making such requests.

3.4.3 No contract will be awarded to any person or firm suspended or debarred under the provisions of Chapters 103D, 104 and Chapter 444, Hawaii Revised Statutes as amended.

3.4.4 The contract will be drawn on the forms furnished by the Comptroller. The contract will not be binding upon the Department until all required signatures have been affixed thereto and written certification that funds are available for the work has been made.

3.5 CANCELLATION OF AWARD - The Department reserves the right to cancel the award of any contract at any time before the execution of said contract by all parties. The exclusive remedy to the awardee for such cancellation shall be payment of the reasonable bid preparation costs and the reimbursement of any direct expenses incurred as directed in the Notice of Award. Such cancellation will not incur any liability by the Department to any other Bidder.

3.6 RETURN OF BID SECURITY - All bid securities, except those of the four (4) lowest Bidders, will be returned following the opening and checking of the proposals. The retained bid securities of the four lowest Bidders will be returned within five (5) working days following the complete execution of the contract.

3.7 REQUIREMENT OF PERFORMANCE AND PAYMENT BONDS

3.7.1 Performance and Payment Bonds shall be required for contracts \$25,000 and higher. At the time of the execution of the contract, the successful Bidder shall file good and sufficient performance and payment bonds on the form furnished by the Department (see Appendix), each in an amount equal to one hundred percent (100%) of the amount of the contract price unless otherwise stated in the solicitation of bids. Acceptable performance and payment bonds shall be limited to the following:

3.7.1.2 Surety bonds underwritten by a company licensed to issue bonds in this State; or

3.7.1.3 A certificate of deposit; credit union share certificate; or cashier's, treasurer's, teller's or official check drawn by, or a certified check accepted by, and payable on demand to the State by a bank, a savings institution, or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration.

- (a) These instruments may be utilized only a maximum of \$100,000.
- (b) If the required security or bond amount totals over \$100,000, more than one instrument not exceeding \$100,000 each and issued by different financial institutions shall be acceptable.

3.7.2 If the Contractor fails to deliver the required performance and payment bonds, the contractor's award shall be canceled, the Department shall have the remedies provided under Section 3.9 FAILURE TO EXECUTE THE CONTRACT and award of the contract shall be made to the next lowest responsible and responsive bidder.

3.8 CAMPAIGN CONTRIBUTIONS BY STATE AND COUNTY CONTRACTORS

Contractors are hereby notified of the applicability of Section 11-205.5, HRS, which states that campaign contributions are prohibited from specified State or County government contractors during the term of the contract if the contractors are paid with funds appropriated by a legislative body.

3.9 EXECUTION OF THE CONTRACT

3.9.1 Upon acceptance of the successful bidder's offer by the Contracting Officer, the Contractor shall provide satisfactory performance and payments bonds within ten (10) calendar days after the award of the contract or within such further time as granted by the Contracting Officer. No proposal or contract shall be considered binding upon the State until the contract has been fully and properly executed by all parties thereto and the Comptroller has endorsed thereon its certificate, as required by Section 103D-309, HRS, that there is an available unexpended appropriation or balance of an appropriation over and above all outstanding contracts sufficient to cover the State's amount required by such contract.

3.9.2 On any individual award totaling less than \$25,000, the State reserves the right to execute the contract by the issuance of a State Purchase Order. Issuance of a State Purchase Order shall result in a binding contract between the parties without further action by the State. The issuance of a Purchase Order shall not be deemed a waiver of these General Conditions and Contract Document requirements.

3.10 FAILURE TO EXECUTE THE CONTRACT

3.10.1 Before the Award - If a low Bidder without legal justification withdraws its bid after the opening of bids but before the award of the contract, the State shall be entitled to retain as liquidated damages the amount established as bid security, and may take all appropriate actions to recover the performance liquidated damages sum from the property or third-party obligations deposited as bid security.

3.10.2 After the Award - If the Bidder to whom a contract is awarded shall fail or neglect to furnish security within ten (10) calendar days after such award or within such further time as the Contracting Officer may allow, the State shall be entitled to recover from such Bidder its actual damages, including but not limited

to the difference between the bid and the next lowest responsive bid, as well as personnel and administrative costs, consulting and legal fees and other expenses incurred in arranging a contract with the next low responsive bidder or calling for new bids. The State may apply all or part of the amount of the bid security to reduce its damages. If upon determination by the State of the amount of its damages the bid security exceeds that amount, it shall release or return the excess to the person who provided same.

3.10.3 Engineer's Options - Upon a withdrawal of the lowest responsive bid, or upon a refusal or failure of the lowest Bidder to execute the contract, the Engineer may thereupon award the contract to the next lowest responsible and responsive Bidder or may call for new bids, whichever method the Engineer may deem to be in the best interests of the State.

3.11 NOTICE TO PROCEED

3.11.1 After the contract is fully executed and signed by the Department of Defense, the Contractor will be sent a formal Notice to Proceed letter advising the Contractor of the date on which it may proceed with the work. The Contractor shall be allowed ten (10) consecutive working days from said date to begin its work. In the event that the Contractor refuses or neglects to start the work, the Engineer may terminate the contract in accordance with Section 7.27 TERMINATION OF CONTRACT FOR CAUSE.

3.11.2 The Contractor may commence its operations strictly at its own risk prior to receipt of the formal notice to proceed, provided it makes a written request and has received approval from the Engineer in writing. All work performed shall be conducted in accordance with Section 7.1 PROSECUTION OF THE WORK.

3.11.3 In certain cases, the State, with agreement of the Contractor, may issue a Notice to Proceed before full execution of the contract by the Engineer and it may further issue a Notice to Proceed concurrently with the Notice of Award.

3.11.4 In the event the Notice to Proceed is not issued within one hundred and eighty (180) days after the date of the award of contract the Contractor may submit a claim for increased labor and material costs (but not overhead costs) which are directly attributable to the delay beyond the first 180 days. Such claims shall be

accompanied with the necessary documentation to justify the claim. No payment will be made for escalation costs that are not fully justified.

GENERAL CONDITIONS ARTICLE 4 - Scope of Work

4.1 INTENT OF CONTRACT, DUTY OF CONTRACTOR - The intent of the Contract is to provide for the construction, complete in every detail, of the Work described at the accepted bid price and within the time established by the contract. The Contractor has the duty to furnish all labor, materials, equipment, tools, transportation, incidentals and supplies and to determine the means, methods and schedules required to complete the work in accordance with the drawings, specifications and terms of the contract.

4.2 CHANGES - The Engineer may at any time, during the progress of the work, by written order, and without notice to the sureties, make changes in the work as may be found to be necessary or desirable. Such changes shall not invalidate the Contract nor release the Surety, and the Contractor will perform the work as changed, as though it had been a part of the original Contract.

4.2.1 Minor Changes - Minor changes in the work may be directed by the Engineer with no change in contract price or time of performance. Minor changes are consistent with the intent of the Contract Documents and do not substantially alter the type of work to be performed or involve any adjustment to the contract sum or extension of the contract time.

4.2.2 Oral Orders

4.2.2.1 Any oral order, direction, instruction, interpretation or determination from the Engineer or any other person which in the opinion of the Contractor causes any change, shall be considered as a change only if the Contractor gives the Engineer written notice of its intent to treat such oral order, direction, instruction, interpretation or determination as a change directive. Such written notice must be delivered to the Engineer before the Contractor acts in conformity with the oral order, direction, instruction, interpretation or determination, but not more than five (5) days after delivery of the oral order to the Contractor. The written notice shall state the date, circumstances, whether a time extension will be requested, and source of the order that

the Contractor regards as a change. Such written notice may not be waived and shall be a condition precedent to the filing of any claim by the Contractor. Unless the Contractor acts in accordance with this procedure, any such oral order shall not be treated as a change for which the Contractor may make a claim for an increase in the contract time or contract price related to such work.

4.2.2.2 No more than five (5) days after receipt of the written notice from the Contractor, a Field Order shall be issued for the subject work if the State agrees that it constitutes a change. If no Field Order is issued in the time established, it shall be deemed a rejection of Contractor's claim for a change. If the Contractor objects to the failure to issue a Field Order, it shall file a written protest with the Engineer within thirty (30) days after delivery to the Engineer of the Contractor's written notice of its intention to treat the oral order as a change. In all cases, the Contractor shall proceed with the work. The protest shall be determined as provided in Section 7.25 DISPUTES AND CLAIMS.

4.2.3 Field Orders – Upon receipt of a Field Order, the Contractor shall proceed with the changes as ordered. If the Contractor does not agree with any of the terms or conditions or in the adjustment or non-adjustment to the contract time and / or contract price, Contractor shall file a notice of intent to claim within thirty (30) calendar days after receipt of the written Field Order that was not agreed upon by both parties. Failure to file such protest within the time specified shall constitute agreement on the part of the Contractor with the terms, conditions, amounts and adjustment or non-adjustment to contract price and / or contract time set forth in the Field Order. The requirement for timely written notice shall be a condition precedent to the assertion of a claim.

4.2.4 Change Orders

4.2.4.1 The Department will issue sequentially numbered Change Orders at times it deems appropriate during the contract period. A Change Order may contain the adjustment in contract price and / or time for a number of Field Orders. The Change Order will be issued in the format attached (refer to the Appendix). No payment for any change will be made until the change order is issued.

4.2.4.2 The penal sum of the Surety Performance and Payment Bonds will be adjusted by the amount of each and every Change Order.

4.2.4.3 Upon receipt of a change order, that the Contractor does not agree with any of the terms or conditions or the adjustments or non adjustments of the contract price or contract time; the Contractor shall not execute or sign the change order, but shall return the unsigned change order, along with a written notification of the conditions or items that are in dispute.

4.2.4.4 If the Contractor signs or executes the change order, this constitutes an agreement on the part of the Contractor with the terms and conditions of the change order. A change order that is mutually agreed to and signed by the parties of the contract constitutes a contract modification.

4.2.5 Claim Notification – The Contractor shall file a notice of intent to claim for a disputed change order within 30 calendar days after receipt of the written order. Failure to file the protest within the time specified constitutes an agreement on the part of the Contractor within the terms, conditions, amounts and adjustment or non-adjustment to contract price or contract time set forth in the dispute change order. The requirement for timely written notice shall be a condition precedent to the assertion of a claim.

4.2.6 Proceeding with Directed Work – Upon receipt of a contract modification, change order, or field order, the Contractor shall proceed with the directed changes and instructions. The Contractor's right to make a claim for additional compensation or an extension of time for completion is not affected by proceeding with the changes and instructions described in a change order and field order.

4.2.7 Pricing or Negotiating Costs Not Allowed – The Contractor's cost of responding to requests for price or time adjustments is included in the contract price. No additional compensation will be allowed unless authorized by the Contracting Officer.

4.3 DUTY OF CONTRACTOR TO PROVIDE PROPOSAL FOR CHANGES

4.3.1 A Field Order may request the Contractor to supply the Department with a proposal for an adjustment to the contract time or contract price for the work described therein. Any such request for a proposal shall not affect the duty of the Contractor to proceed as ordered with the work described in the Field Order.

4.3.2 The Engineer from time to time may issue a Bulletin to the Contractor requesting price and / or time adjustment proposals for contemplated changes in the work. A Bulletin is not a directive for the Contractor to perform the work described therein.

4.3.3 Within fifteen (15) days after receipt of a Bulletin or Field Order containing a request for proposal, the Contractor shall submit to the Engineer a detailed written statement in a format similar to the one shown in the Appendix to these General Conditions setting forth all charges the Contractor proposes for the change and the proposed adjustment of the contract time, all properly itemized and supported by sufficient substantiating data to permit evaluation. No time extension will be granted for delays caused by late Contractor pricing of changes or proposed changes. If the project is delayed because Contractor failed to submit the cost proposal within the fifteen (15) days, or as allowed by the Engineer, performance liquidated damages will be assessed in accordance with Section 7.26 FAILURE TO COMPLETE THE WORK ON TIME.

4.3.4 No payment shall be allowed to the Contractor for pricing or negotiating proposed or actual changes.

4.4 PRICE ADJUSTMENT HRS 103D-501

4.4.1 A fully executed change order or other document permitting billing for the adjustment in price under any method listed in paragraphs (4.4.1.1) through (4.4.1.5) shall be issued within ten days after agreement on the price adjustment. Any adjustment in the contract price pursuant to a change or claim in this contract shall be made in one or more of the following ways:

4.4.1.1 By agreement on a fixed price adjustment before commencement of the pertinent performance;

4.4.1.2 By unit prices specified in the contract or subsequently agreed upon before commencement of the pertinent performance;

4.4.1.3 Whenever there is a variation in quantity for any work covered by any line item in the schedule of costs submitted as required by Section 7.2 COMMENCEMENT REQUIREMENTS, by the Department at its discretion, adjusting the lump sum price proportionately;

4.4.1.4 Force Account Method. At the sole option of the Contracting Officer, by the costs attributable to the

event or situation covered by the change, plus appropriate profit or fee, all as specified in Section 4.5 ALLOWANCES FOR OVERHEAD AND PROFIT and the force account provision of Section 8.3 PAYMENT FOR ADDITIONAL WORK before commencement of the pertinent performance;

4.4.1.5 In such other manner as the parties may mutually agree upon before commencement of the pertinent performance; or

4.4.1.6 In the absence of an agreement between the two parties:

4.4.1.6.a For change orders with value not exceeding \$50,000 by documented actual costs of the work, allowing for overhead and profit as set forth in Section 4.5 ALLOWANCES FOR OVERHEAD AND PROFIT. A change order shall be issued within fifteen days of submission by the contractor of proper documentation of completed force account work, whether periodic (conforming to the applicable billing cycle) or final. The procurement officer shall return any documentation that is defective to the contractor within fifteen days after receipt, with a statement identifying the defect; or

4.4.1.6.b For change orders with value exceeding \$50,000 by a unilateral determination by the Contracting Officer of the reasonable and necessary costs attributable to the event or situation covered by the change, plus appropriate profit or fee, all as computed by the Contracting Officer in accordance with applicable sections of Chapters 3-123 and 3-126 of the Hawaii Administrative Rules, and Section 4.5 ALLOWANCES FOR OVERHEAD AND PROFIT. When a unilateral determination has been made, a unilateral change order shall be issued within ten days. Upon receipt of the unilateral change order, if the contractor does not agree with any of the terms or conditions, or the adjustment of non-adjustment of the contract time or contract price, the contractor shall file a notice of intent to claim within thirty days after the receipt of the written unilateral change order. Failure to file a protest within the time specified shall constitute agreement on the part of the contractor with the terms, conditions, amounts, and adjustment or non-adjustment of the contract time or the contract price set forth in the unilateral change order.

4.4.1.7 In such other manner as the parties may mutually agree;

4.4.1.8 At the sole option of the Engineer, by the costs attributable to the event or situation covered by the change, plus appropriate profit or fee, all as specified in Section 4.5 ALLOWANCES FOR OVERHEAD AND PROFIT and the force account provision of Section 8.3 PAYMENT FOR ADDITIONAL WORK; or

4.4.1.9 In the absence of an agreement between the two parties, by a unilateral determination by the Engineer of the reasonable and necessary costs attributable to the event or situation covered by the change, plus appropriate profit or fee, all as computed by the Engineer in accordance with applicable sections of Chapters 3-123 and 3-126 of the Hawaii Administrative Rules and Regulations, and Section 4.5 ALLOWANCES FOR OVERHEAD AND PROFIT.

4.4.2 Cost or Pricing Data – Contractor shall provide and certify cost or pricing data for any price adjustment to a contract involving aggregate increases and decreases in costs plus applicable profits expected to exceed \$100,000. The certified cost or pricing data shall be subject to the provisions of HAR chapter 3-122, subchapter 15.

4.5 ALLOWANCES FOR OVERHEAD AND PROFIT HRS103D-501

4.5.1 In determining the cost or credit to the Department resulting from a change, the allowances for all overhead, including, extended overhead resulting from adjustments to contract time (including home office, branch office and field overhead, and related delay impact costs) and profit combined, shall not exceed the percentages set forth below:

4.5.1.1 For the Contractor, for any work performed by its own labor forces, twenty percent (20%) of the direct cost;

4.5.1.2 For each subcontractor involved, for any work performed by its own forces, twenty percent (20%) of the direct cost;

4.5.1.3 For the Contractor or any subcontractor, for work performed by their subcontractors, ten percent (10%) of the amount due the performing subcontractor.

4.5.2 Not more than three markup allowance line item additions not exceeding the maximum percentage

shown above will be allowed for profit and overhead, regardless of the number of tier subcontractors.

4.5.3 The allowance percentages will be applied to all credits and to the net increase of direct costs where work is added and deleted by the changes.

4.6 PAYMENT FOR DELETED MATERIAL

4.6.1 Cancelled Orders - If acceptable material was ordered by the Contractor for any item deleted by an ordered change in the work prior to the date of notification of such deletion by the Engineer, the Contractor shall use its best efforts to cancel the order. The Department shall pay reasonable cancellation charges required by the supplier excluding any markup for overhead and profit to the Contractor.

4.6.2 Returned Materials - If acceptable deleted material is in the possession of the Contractor or is ultimately received by the Contractor, if such material is returnable to the supplier and the Engineer so directs, the material shall be returned and the Contractor will be paid for the reasonable charges made by the supplier for the return of the material, excluding any markup for overhead and profit to the Contractor. The cost to the Contractor for handling the returned material will be paid for as provided in Section 4.4 PRICE ADJUSTMENT.

4.6.3 Uncancelled Materials - If orders for acceptable deleted material cannot be canceled at a reasonable cost, it will be paid for at the actual cost to the Contractor including an appropriate markup for overhead and profit as set forth in Section 4.5 ALLOWANCES FOR OVERHEAD AND PROFIT. In such case, the material paid for shall become the property of the State and the cost of further storage and handling shall be paid for as provided in Section 4.4 PRICE ADJUSTMENT.

4.7 VARIATIONS IN ESTIMATED QUANTITIES §3-125-10 HAR

4.7.1 Where the quantity of a major unit price item in this contract is estimated on the proposal form and where the actual quantity of such pay item varies more than fifteen percent (15%) above or below the estimated quantity stated in this contract, an adjustment in the contract price shall be made upon demand of either party. The adjustment shall be based upon any increase or decrease in costs due solely to the variation above one hundred fifteen percent (115%) or below eighty-five

percent (85%) of the estimated quantity. The adjustment shall be subject to Section 4.4 PRICE ADJUSTMENT and Section 4.5 ALLOWANCES FOR OVERHEAD AND PROFIT. If the quantity variation is such as to cause an increase in the time necessary for completion, the Engineer shall, upon receipt of a written request for an extension of time within thirty (30) days of the item's completion, ascertain the facts and make such adjustment to the completion date as the Engineer finds justified.

4.8 VARIATIONS IN BOTTOM ELEVATIONS The Contractor shall plan and construct to the bottom elevations of footings, piles, drilled shafts, or cofferdams as shown on the drawings. When the bottom of a pile, drilled shaft, or cofferdam is shown as an estimated or approximate elevation, the Contractor shall plan and construct to that elevation or to any deeper elevation required by the drawings or direction of the Engineer. In the event the bottom elevation is lowered, the Contractor shall be entitled to additional payment in accordance with Sections 4.4 PRICE ADJUSTMENT and 4.5 ALLOWANCES FOR OVERHEAD AND PROFIT. In the event the bottom elevation is raised, the State shall be entitled to a credit in accordance with Sections 4.2 CHANGES, 4.4 PRICE ADJUSTMENT and 4.5 ALLOWANCES FOR OVERHEAD AND PROFIT.

4.9 DIFFERING SITE CONDITIONS
§3-125-11 HAR

4.9.1 During the progress of the work, if the Contractor encounters conditions at the site differing materially from those shown in the drawings and specifications, Contractor shall promptly, and before any such conditions are disturbed or damaged (except in an emergency as required by subsection 7.17.8), notify the Engineer in writing of:

4.9.1.1 Subsurface or latent physical conditions at the site differing materially from those indicated in the contract; or

4.9.1.2 Unknown physical conditions at the site, of an unusual nature differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this contract.

4.9.2 After receipt of written notice, the Engineer shall promptly investigate the site, and if it is found that

such conditions do materially differ and cause an increase in the Contractor's cost of, or the time required to, perform any part of the Work, whether or not changed as a result of such conditions, an adjustment shall be made and the contract modified accordingly. Any adjustment in contract price made pursuant to this Section 4.9 shall be determined in accordance with Sections 4.4 PRICE ADJUSTMENT and 7.25 DISPUTES AND CLAIMS.

4.9.3 Nothing contained in this Section 4.9 shall be grounds for an adjustment in compensation if the Contractor had actual knowledge or should have known of the existence of such conditions prior to the submission of bids.

4.10 UTILITIES AND SERVICES

4.10.1 The cost of all the following will be included in the contract price and the Contractor shall be fully responsible for:

4.10.1.1 Reviewing and checking all such information and data,

4.10.1.2 Locating all underground and overhead utilities shown or indicated in the contract documents,

4.10.1.3 Coordination of the Work with the Owners of such underground and overhead utilities during construction, and

4.10.1.4 The safety and protection of all such underground and overhead utilities as provided in Section 7.17 PROTECTION OF PERSONS AND PROPERTY and repairing any damage thereto resulting from the work.

4.10.2 Unknown Utilities - During the progress of the work, if an underground utility is uncovered or revealed at or contiguous to the site which was not shown or indicated in the Contract Documents, or found at a location that is substantially different than shown or indicated in the Contract Documents, Contractor shall promptly, and before any such conditions are disturbed or damaged (except in an emergency as required by subsection 7.17.8), notify the Engineer. Contractor shall be responsible for the safety and protection of the underground utility as provided in Section 7.17 PROTECTION OF PERSONS AND PROPERTY. Refer to subsections 4.9.2 and 4.9.3.

4.10.3 If the Engineer determines a change in the Contract Documents is required, a Field Order or Change Order will be issued. Upon issuance of a duly authorized Field Order or Change Order regarding the disposition of a newly discovered utility, Contractor shall be responsible for damages to the utility, including any damage claims due to the disruption of service caused by the utility being damaged.

4.10.4 Restoration of Damaged Utilities - The Contractor shall repair and restore to pre-damaged condition any utilities or any other property it damaged. The Contractor shall be liable for any resulting damages, to the Work or to the utility owner or property owner and shall pay any claim due to the disruption of service caused by the utilities being damaged. Contractor shall defend and save harmless the State from all suits, actions or claims of any character brought on account of such damages, whether or not the State may have been partially at fault. Contractor shall obtain public liability and property damage insurance pursuant to Article 7 PROSECUTION AND PROGRESS to cover such risk of damage.

4.10.5 In the event the Contractor, simultaneously with the discovery of an unknown utility or other property, damages that utility or other property, the Contractor shall immediately notify the Engineer. If the Contractor is without fault in such a situation, notwithstanding subsection 4.10.4, the Contractor shall not be liable for resulting damages or the defense of the State from claims brought on account of said damages to unknown utilities or other property. Upon instruction from the Engineer, the Contractor shall repair all damages and execute a plan for dealing with the damaged utility or other property. This repair work shall be considered additional work as covered in Section 4.2 CHANGES.

ARTICLE 5 - Control of Work

5.1 AUTHORITY OF THE ENGINEER

5.1.1 The Engineer shall make final and conclusive decisions on all questions which may arise relating to the quality and acceptability of the materials furnished and work performed, the manner of performance and rate of progress of the work, the interpretation of the Contract Documents, the acceptable fulfillment of the contract on the part of the Contractor, the compensation under the

Contract and the mutual rights of the parties to the Contract.

5.1.2 The Engineer shall have the authority to enforce and make effective such decisions and orders at the Contractor's expense when the Contractor fails to carry such decisions and orders out promptly and diligently.

5.1.3 The Engineer shall have the authority to suspend the work wholly or in part as provided in Section 7.24 SUSPENSION OF WORK.

5.1.4 The Engineer may delegate specific authority to act for the Engineer to a specific person or persons. Such delegation of authority shall be established in writing to the Contractor.

5.2 AUTHORITY OF THE INSPECTOR

5.2.1 The Inspector shall observe and inspect the contract performance and materials. The Inspector does not have any authority vested in the Engineer unless specifically delegated in writing.

5.2.2 The Inspector may offer advice and recommendations to the Contractor, but any such advice or recommendations are not directives from the Engineer.

5.2.3 The Inspector has no authority to allow deviations from the Contract Documents and may reject any and all work that the Inspector deems is not in conformity with the contract requirements. Failure of an Inspector at any time to reject non-conforming work shall not be considered a waiver of the Department's right to require work in strict conformity with the Contract Documents as a condition of final acceptance.

5.3 **AUTHORITY OF CONSULTANT(S)** - The Department may engage Consultant(s) for limited or full observation to supplement the inspections performed by the State and respective Counties. Unless otherwise specified in writing to the Contractor, such retained Consultant(s) will have the authority of a Project Inspector.

5.4 SHOP DRAWINGS AND OTHER SUBMITTALS

5.4.1 The following documents shall be submitted where required by the contract documents:

5.4.1.1 Shop Drawings

(1) The Contractor shall prepare, and thoroughly check, approve, all shop drawings, including those prepared by subcontractors or any other persons. The Contractor shall indicate its approval by stamping and signing each drawing. Any shop drawing submitted without being reviewed, stamped and signed will be considered as not having been submitted, and any delay caused thereby shall be the Contractor's responsibility.

(2) Shop drawings shall indicate in detail all parts of an item of work, including erection and setting instructions and engagements with work of other trades or other separate contractors. Shop drawings for structural steel, millwork and pre-cast concrete shall consist of calculations, fabrication details, erection drawings and other working drawings, as necessary, to show the details, dimensions, sizes of members, anchor bolt plans, insert locations and other information necessary for the complete fabrication and erection of the structure to be constructed.

(3) All shop drawings as required by the contract, or as determined by the Engineer to be necessary to illustrate details of the Work shall be submitted to the Engineer with such promptness as to cause no delay in the work or in that of any other Contractor. Delay caused by the failure of the Contractor to submit shop drawings on a timely basis to allow for review, possible resubmittal and acceptance will not be considered as a justifiable reason for a contract time extension. Contractor, at its own risk, may proceed with the work affected by the shop drawings before receiving acceptance; however the Department shall not be liable for any costs or time required for the correction of work done without the benefit of accepted shop drawings.

(4) It is the Contractor's obligation and responsibility to check all of its and its subcontractor's shop drawings and be fully responsible for them and for coordination with connecting and other related work. The Contractor shall prepare, and submit to the Engineer coordination drawings showing the installation locations of all plumbing, piping, duct and electrical work including equipment throughout the project. By approving and submitting shop drawings, the Contractor thereby represents that it has determined and verified all field measurements and field construction criteria, or will do so, and that it has checked and coordinated each shop

drawing with the requirements of the work and the contract documents. When shop drawings are prepared and processed before field measurements and field construction criteria can be or have been determined or verified, the Contractor shall make all necessary adjustments in the work or resubmit further shop drawings, all at no change in contract price or time.

5.4.1.2 Shop Drawing Form - Each drawing and/or series of drawings submitted must be accompanied by a letter of transmittal giving a list of the titles and number of the drawings. Each series shall be numbered consecutively for ready reference and each drawing shall be marked with the following information:

- (1) Date of Submission
- (2) Name of Project
- (3) Project Number
- (4) Location of Project
- (5) Name of submitting Contractor and Subcontractor
- (6) Revision Number

5.4.1.3 The size of the sheets that shop drawings are prepared on shall be as appropriate to suit the drawing being presented so that the information is clearly and legibly depicted. At the determination of the Engineer, for each sheet of drawings, the submittal shall consist of either; one reproducible transparency and five prints, or eight prints.

5.4.1.4 Descriptive Sheets and Other Submittals - When a submittal is required by the contract, the Contractor shall submit to the Engineer eight (8) complete sets of descriptive sheets such as shop drawings, brochures, catalogs, illustrations, calculation, material safety data sheets (MSDS), certificates, reports, warranty, etc., which will completely describe the material, product, equipment, furniture or appliances to be used in the project as shown in the drawings and specifications and how it will be integrated into adjoining construction. When submittals are specified to be submitted under Web Based Construction Management System, the number of complete sets will be as specified or as directed by the Engineer. Prior to the submittal, the Contractor shall review and check all submittal sheets for conformity to the contract requirements and indicate such conformity by marking or stamping and signing each sheet. Where descriptive sheets include materials, systems, options, accessories, etc. that do not apply to this contract, non-relevant items

shall be crossed out so that all remaining information will be considered applicable to this contract. It is the responsibility of the Contractor to submit descriptive sheets for review and acceptance by the Engineer as required at the earliest possible date after the date of award in order to meet the construction schedule. Delays caused by the failure of the Contractor to submit descriptive sheets as required will not be considered as justifiable reasons for contract time extension.

5.4.1.5 Material Samples and Color Samples – When material and color sample submittals are required by the contract, the Contractor shall submit to the Engineer no less than three (3) samples conforming to Section 6.6 MATERIAL SAMPLES. One sample will be retained by the Consultant, one sample will be retained by the State, and the remaining sample(s) will be returned to the contractor. Prior to the material and color submittal, the Contractor shall review and check all samples for conformity to the contract requirements and indicate such conformity by marking or stamping and signing each sample. It is the responsibility of the Contractor to submit samples for review and acceptance by the Engineer as required at the earliest possible date after the date of award in order to meet the construction schedule. Delays caused by the failure of the Contractor to submit material and color samples as required will not be considered as justifiable reasons for contract time extension.

5.4.1.6 Unless the technical sections (Divisions 2 – 16) specifically require the Contractor furnish a greater quantity of shop drawings and other submittals, the Contractor shall furnish the quantities required by this section.

5.4.2 Submittal Variances - The Contractor shall include with the submittal, written notification clearly identifying all deviations or variances from the contract drawings, specifications and other Contract Documents. The notice shall be in a written form separate from the submittal. The variances shall also be clearly indicated on the shop drawing, descriptive sheet, material sample or color sample. Failure to so notify of and identify such variances shall be grounds for the subsequent rejection of the related work or materials, notwithstanding that the submittal was accepted by the Engineer. If the variances are not acceptable to the Engineer, the Contractor will be required to furnish the item as specified or indicated on the contract documents at no additional cost or time.

5.4.3 Review and Acceptance Process - Submittals will be returned to the Contractor within twenty one (21) days (for projects on Oahu) and twenty five (25) days (for projects on the islands of Hawaii, Maui, Kauai, Molokai and Lanai) after receipt by the Engineer unless otherwise agreed between the Contractor and the Engineer or as stated elsewhere in the contract documents.

5.4.3.1 The acceptance by the Engineer of the Contractor's submittal relates only to their sufficiency and compliance with the intention of the contract. Acceptance by the Engineer of the Contractor's submittal does not relieve the Contractor of any responsibility for accuracy of dimensions, details, and proper fit, and for agreement and conformity of submittal with the contract drawings and specifications. Nor will the Engineer's acceptance relieve the Contractor of responsibility for variance from the contract documents unless the Contractor, at the time of submittal, has provided notice and identification of such variances required by this section. Acceptance of a variance shall not justify a contract price or time adjustment unless the Contractor requests such an adjustment at the time of submittal and the adjustment are explicitly agreed to in writing by the Engineer. Any such request shall include price details and proposed scheduling modifications. Acceptance of a variance is subject to all contract terms, stipulations and covenants, and is without prejudice to any and all rights under the surety bond.

5.4.3.2 If the Engineer returns a submittal to the Contractor that has been rejected, the Contractor, so as not to delay the work, shall promptly make a resubmittal conforming to the requirements of the contract documents and indicating in writing on the transmittal and the subject submittal what portions of the resubmittal has been altered in order to meet the acceptance of the Engineer. Any other differences between the resubmittal and the prior submittal shall also be specifically described in the transmittal.

5.4.3.3 No mark or notation made by the Engineer on or accompanying the return of any submittal to the Contractor shall be considered a request or order for a change in work. If the Contractor believes any such mark or notation constitutes a request for a change in the work for which it is entitled to an adjustment in contract price and/or time, the Contractor must follow the same procedures established in Section 4.2 CHANGES for

oral orders, directions, instructions, interpretations or determinations from the Engineer or else lose its right to claim for an adjustment.

5.5 COORDINATION OF CONTRACT DOCUMENTS - It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. The Contract Documents are complementary: any requirement occurring in one document is as binding as though occurring in all. In the event of conflict or discrepancy the priorities stated in the following subparagraphs shall govern:

5.5.1 Addenda shall govern over all other Contract Documents. Subsequent addenda issued shall govern over prior addenda only to the extent specified.

5.5.2 SPECIAL CONDITIONS and Proposal shall govern over the GENERAL CONDITIONS and Specifications.

5.5.3 Specifications shall govern over drawings.

5.5.4 Specification Error - Should an error or conflict appear within the specification, the Contractor shall immediately notify the Engineer. The Engineer shall promptly issue instructions as to procedure. Any requirement occurring in one or more parts of the specification is as binding as though occurring in all applicable parts.

5.5.4.1 Should an error or conflict appear within a specification section, between a listed manufacturer / product and the performance requirements of the specification section, the performance requirements shall govern.

5.5.5 Drawings:

5.5.5.1 Schedules shall govern over all other notes and drawings.

5.5.5.2 Bottom elevations of footings shown on drawings shall govern over a general note such as: "All footings shall rest on firm, undisturbed soil and extend a minimum of a certain number of feet into natural or finish grade, whichever is lower."

5.5.5.3 Except for drawing schedules and bottom elevations as noted above, general notes shall govern over all other portions of the drawings:

5.5.5.4 Larger scale drawings shall govern over smaller scale drawings.

5.5.5.5 Figured or numerical dimensions shall govern over dimensions obtained by scaling. Measurements from the drawings when scaled shall be subject to the approval of the Engineer.

5.5.5.6 In cases of discrepancies in the figures or drawings, the discrepancies shall be immediately referred to the Engineer without whose decision said discrepancy shall not be corrected by the Contractor save at its own risk and in the settlement of any complications arising from such adjustment without the knowledge and consent of the Engineer, the Contractor shall bear all extra expense involved.

5.5.5.7 Items shown on the drawings that are completely void in terms of description, details, quality and / or performance standards in both the drawings and specifications to make a price determination shall be considered an omission and the Contractor shall immediately refer same to the Engineer for a decision.

5.5.5.8 Where there is a conflict between the architectural sheets and the civil or landscaping or electrical sheets, etc., the conflict shall be considered a discrepancy and the Contractor shall immediately refer same to the Engineer for a decision.

5.5.5.9 Any requirement occurring in one or more of the sheets is as binding as though occurring in all applicable sheets.

5.6 INTERPRETATION OF DRAWINGS AND SPECIFICATIONS - The Contractor shall carefully study and compare the Contract Documents with each other, with field conditions and with the information furnished by the State and shall at once report to the Engineer errors, conflicts, ambiguities, inconsistencies or omissions discovered. Should an item not be sufficiently detailed or explained in the Contract Documents, Contractor shall report and request the Engineer' clarification and interpretation. The Engineer will issue a clarification or interpretation that is consistent with the intent of and reasonably inferred from Contract Documents.

5.7 EXAMINATION OF DRAWINGS, SPECIFICATIONS, PROJECT SITE

5.7.1 The Contractor shall examine carefully the Project Site to become familiar with the conditions to be encountered in performing the Work and the requirements of the Contact Documents.

5.7.1.1 No extra compensation will be given by reason of the Contractor’s misunderstanding or lack of knowledge of the requirements of the Work to be accomplished or the conditions to be encountered in performing the project.

5.7.1.2 No extra compensation will be given by reason of the Contractor’s misunderstanding or lack of knowledge when the existence of differing site, subsurface or physical conditions could have been reasonably discovered or revealed as a result of any examination, investigation, exploration, test or study of the site and contiguous areas required by the Bidding requirements or Contract Documents to be conducted by or for the Contractor.

5.7.2 When the Contract Drawings include a log of test borings showing a record of the data obtained by the Department’s investigation of subsurface conditions, said log represents only the opinion of the Department as to the character of material encountered in its test borings and at only the location of each boring. The Contractor acknowledges that underground site conditions in Hawaii vary widely. There is no warranty, either expressed or implied, that the conditions indicated are representative of those existing throughout the work or any part of it, or that other conditions may not occur.

5.7.3 Reference is made to the SPECIAL CONDITIONS for identification of subsurface investigations, reports, explorations and tests utilized by the State in preparation the Contract Documents. Such reports, drawings, boring logs etc. are not part of the Contract Documents.

5.8 COOPERATION BETWEEN THE CONTRACTOR AND THE DEPARTMENT

5.8.1 Furnishing Drawings and Specifications - Contractor to supply copies of the Contract Drawings and Specifications. Contractor shall have and maintain

at least one copy of the Contract Drawings and Specifications on the work site, at all times. Contractor shall cooperate with the Engineer, the Inspector(s), and other contractors in every possible way.

5.8.2 Superintendent - The Contractor shall have a competent superintendent or agent on the work site while work is being performed under the contract. The superintendent or agent shall be experienced in the type of project being undertaken and the work being performed. The superintendent or agent shall represent the Contractor and shall have the authority to act on behalf of the Contractor. Communications given to the superintendent or agent shall be as binding as if given to the Contractor.

5.8.2.1 If the superintendent or agent is not present at the work site, the Engineer shall have the right to suspend the work as described under Section 7.24 SUSPENSION OF WORK.

5.8.2.2 The Contractor shall file with the Engineer a written statement giving the name of the superintendent or agent assigned to the project. The Contractor shall be responsible for notifying the Engineer in writing of any change in the superintendent or agent.

5.8.2.3 The requirements of this subsection 5.8.2 may be waived by the Engineer.

5.8.3 Engineering Work - The Contractor shall properly and accurately lay out the work, perform all engineering work, and furnish all engineering materials and equipment required to establish and maintain all lines, grades, dimensions and elevations called for in the drawings or required in the progress of construction, unless otherwise noted in the contract documents. The Contractor will be held definitely and absolutely responsible for any errors in lines, grades, dimensions and elevations and shall at once, on instruction from the Engineer, correct and make good such errors or any errors, or faults in the work resulting from errors in engineering performed under the requirements of its contract to the entire satisfaction of the Engineer. Full compensation for the work shall be included in the prices paid for contract items of work. No additional allowance will be made for the correction of incorrect engineering work.

5.8.3.1 The Engineer shall furnish the requisite bench elevations.

5.8.3.2 The Contractor shall locate and verify all lines, grades, dimensions and elevations indicated on the drawings before any excavation, or construction begins. Any discrepancy shall be immediately brought to the attention of the Engineer, any change shall be made in accordance with the Engineer's instruction.

5.8.3.3 The Contractor shall verify all street survey monuments (horizontal and vertical alignment) prior to final acceptance by the Engineer in accordance with any governmental requirements.

5.8.3.4 The Contractor shall provide a surveyor or Civil Engineer licensed in the State of Hawaii to verify and establish all lines, grades, dimensions and elevations.

5.8.4 Use of Structure or Improvement - The Department shall have the right, at any time during construction of the structure or improvements, to enter same for the purpose of installing by government labor or by any other Contractor or utility any necessary work in connection with the installation of facilities, it being mutually understood and agreed, however, that the Contractors, utilities and the Department will, so far as possible work to the mutual advantage of all, where their several works in the above mentioned or in unforeseen instances touch upon or interfere with each other.

As a convenience to those involved, the Engineer shall allocate the work and designate the sequence of construction in case of controversy between Contractors on separate projects under State jurisdiction.

5.8.4.1 The Department shall also have the right to use the structure, equipment, improvement or any part thereof, at any time after it is considered by the Engineer as available. In the event that the structure, equipment or any part thereof is so used, the Department shall be responsible for all expenses incidental to such use and any damages resulting from the Department's use.

5.8.4.2 Equipment warranty will commence to run before the work is complete when and if the Department begins actual use of the equipment for the purpose for which the equipment was designed and installed.

5.8.4.3 If the Department enters the structure for construction and / or occupancy and the Contractor is delayed because of interference by the Department or by extra work resulting from damage which the Contractor

is not responsible for, or by extraordinary measures the Contractor must take to accommodate the Department, the Contractor shall be granted an extension of time in accordance with Section 7.21 CONTRACT TIME. However, if such use increases the cost or delays the completion of the remaining portions of work, the Contractor shall be entitled to such extra compensation or extension of time or both, as the State may determine to be proper. Any additional work necessary will be paid in accordance with Section 8.3 PAYMENT FOR ADDITIONAL WORK.

5.9 INSPECTION - The Engineer, the Department's consultants, Inspectors employed by the Department and other representatives duly authorized by the Department shall at all times have access to the work during its construction and shall be furnished with every reasonable facility for ascertaining at any time that the materials and the workmanship are in accordance with the requirements and intentions of the contract. All work done and all materials furnished shall be subject to inspection and acceptance.

5.9.1 Such inspection and approval may extend to all or part of the work, and to the preparation, fabrication or manufacture of the materials to be used. By entering into a contract for the supply of materials, equipment or performance of labor in connection with the Work, such Material and Equipment Supplier or Labor Contractor consents to and is subject to the terms of this Section 5.9 to the same extent as the Contractor.

5.9.2 Authority to Suspend Operations - The Inspector shall have the authority to suspend operations of any work being improperly performed by issuing a written order giving the reason for shutting down the work. Should the Contractor disregard such written order, the work done thereafter will not be accepted nor paid for.

5.9.3 The inspection of the work shall not relieve the Contractor of any of its obligations to fulfill the contract as prescribed. Notwithstanding prior payment and acceptance by the Engineer, defective and nonconforming work shall be corrected to comply with the contract requirements. Unsuitable, unspecified or unapproved materials may be rejected.

5.9.4 Federal Agency Inspection - Projects financed in whole or in part with Federal funds shall be subject to

inspection and corrective requirements at all times by the Federal Agency involved at no cost to the State.

5.10 REMOVAL OF DEFECTIVE, NON-CONFORMING AND UNAUTHORIZED WORK

5.10.1 All work which has been rejected as not conforming to the requirements of the Contract shall be remedied or removed and replaced by the Contractor in an acceptable manner and no compensation will be allowed for such removal or replacement. Any work done beyond the work limits shown on the drawings and specifications or established by the Engineer or any additional work done without written authority will be considered as unauthorized and will not be paid for. Work so done may be ordered removed at the Contractor expense.

5.10.2 Scheduling Corrective Work - The Contractor shall perform its corrective or remedial work at the convenience of the State and shall obtain the Engineer's approval of its schedule.

5.10.3 Failure to Correct Work -Upon failure on the part of the Contractor to comply promptly with any order of the Engineer made under the provisions of this Section 5.10, the Engineer shall have authority to cause defective work to be remedied or removed and replaced, and unauthorized work to be removed, at the Contractor's expense, and to deduct the costs from any monies due or to become due the Contractor.

5.11 VALUE ENGINEERING INCENTIVE

§3-132 HAR amended by Act 149 SLH 1999 - On projects with contract amounts in excess of \$250,000, the following Value Engineering Incentive Clause shall apply to allow the Contractor to share in cost savings that ensue from cost reduction proposals it submits.

5.11.1 The Value Engineering Incentive Clause applies to all Value Engineering Change Proposals (cost reduction proposals, hereinafter referred to as (VECP) initiated and developed by the Contractor for changing the drawings, designs, specifications or other requirements of this contract. This clause does not, however apply to any VECP unless it is identified as such by the Contractor at the time of its submission to the Engineer.

5.11.2 Value Engineering Change Proposal - All VECP must:

5.11.2.1 Result in a savings to the State of at least four thousand dollars (\$4,000) by providing less costly items than without impairing any essential functions and characteristics such as service life, reliability, economy of operation, ease of maintenance and all necessary features of the completed work.

5.11.2.2 Require, in order to be applied to this contract, a change order to this contract.

5.11.2.3 Not adversely impact on the schedule of performance or the contract completion date.

5.11.3 VECP Required Information - The VECP will be processed expeditiously and in the same manner as prescribed for any other change order proposal. As a minimum, the following information will be submitted by the Contractor with each proposal:

5.11.3.1 A description of the difference between the existing contract requirements and the VECP, and the comparative advantages and disadvantages of each including durability, service life, reliability, economy of operation, ease of maintenance, design safety standards, desired appearance, impacts due to construction and other essential or desirable functions and characteristics as appropriate;

5.11.3.2 An itemization of the requirements of the contract which must be changed if the VECP is adopted and a recommendation as to how to make each such change;

5.11.3.3 An estimate of the reduction in performance costs that will result from adoption of the VECP taking into account the costs of implementation by the Contractor, including any amounts attributable to subcontracts, and the basis for the estimate;

5.11.3.4 A prediction of any effects the VECP would have on other costs to the State, such as State furnished property costs, costs of related items, and costs of maintenance and operation over the anticipated life of the material, equipment, or facilities as appropriate; the construction schedule, sequence and time; and bid item totals used for evaluation and payment purposes;

5.11.3.5 A statement of the time by which a change order adopting the VECP must be issued so as to obtain the maximum cost reduction during the remainder of this contract noting any effect on the contract time; and

5.11.3.6 The dates of any previous submissions of the VECP, the numbers of any Government contracts under which submitted and the previous actions by the Government, if known.

5.11.4 Required Use of Licensed Architect or Engineer - When, in the judgment of the Engineer, a VECP alters the design prepared by a registered professional architect or engineer, the Contractor shall ensure the changes to be prepared are by or under the supervision of a licensed professional architect or engineer, and stamped and so certified.

5.11.5 Unless and until a change order applies a VECP to a contract, the Contractor shall remain obligated to perform in accordance with the terms of the contract and the Department shall not be liable for delays incurred by the Contractor resulting from the time required for the Department's determination of the acceptability of the VECP.

5.11.5.1 The determination of the Engineer as to the acceptance of any VECP under a contract shall be final.

5.11.6 Acceptance of VECP - The Engineer may accept in whole or in part any VECP submitted pursuant to this section by issuing a change order to the contract. Prior to issuance of the change order, the Contractor shall submit complete final contract documents similar to those of the original contract showing the accepted changes and the new design and features as well as the following:

5.11.6.1 Design calculations;

5.11.6.2 The design criteria used; and

5.11.6.3 A detailed breakdown of costs and expenses to construct or implement such revisions.

5.11.6.4 The change order will identify the final VECP on which it is based.

5.11.7 VECP Price Adjustments - When a VECP is accepted under a contract, an adjustment in the contract price shall be made in accordance with Section 4.4

PRICE ADJUSTMENT. The adjustment shall first be established by determining the effect on the Contractor's cost of implementing the change, including any amount attributable to subcontractors and to the Department's charges to the Contractor for architectural, engineering, or other consultant services, and the staff time required to examine and review the proposal. The contract price shall then be reduced by fifty percent (50%) of the net estimated decrease in the cost of performance.

5.11.8 The Contractor may restrict the Department's right to use the data or information or both, on any sheet of a VECP or of the supporting data, submitted pursuant to this paragraph, if it is stated on that sheet as follows:

5.11.8.1 "This data or information or both shall not be disclosed outside the Department or be duplicated, used, or disclosed, in whole or in part, for any purpose other than to evaluate this VECP. This restriction shall not limit the Department's right to use this data or information or both if obtained from another source, or is otherwise available, without limitations. If this VECP is accepted by the Department by issuance of a change order after the use of this data or information or both in such an evaluation, the Department shall have the right to duplicate, use and disclose any data or information or both pertinent to the proposal as accepted in any manner and for any purpose whatsoever and have others so do."

5.11.9 In the event of acceptance of a VECP, the Department shall have all rights to use, duplicate or disclose in whole or in part in any manner and for any purpose whatsoever, and to have or permit others to do so, any data or information or both reasonably necessary to fully utilize such proposal.

5.11.10 The Contractor shall submit with each VECP all required information and provide all additional information as may be required by the Engineer to evaluate and implement the VECP. The cost for preparing the VECP shall be the Contractor's responsibility, and any part of the Contractor's cost for implementing the change shall be due only when the proposal is accepted and a change order is issued.

5.11.11 If the services of the Department's architect, engineer or consultant is necessary to review and evaluate a VECP, the cost therefore shall be paid for by the Contractor.

5.11.12 Each VECP shall be evaluated as applicable to this contract, and past acceptance on another Department project for a similar item shall not be automatic grounds for approval.

5.11.13 The method by which the Contractor will share a portion of the cost savings from an accepted VECP shall be for this contract only, and no consideration shall be made for future acquisition, royalty type payment or collateral savings.

5.11.13.1 The Department may accept the proposed VECP in whole or in part. The Engineer shall issue a contract change order to identify and describe the accepted VECP.

5.12 SUBCONTRACTS - Nothing contained in the contract documents shall create a contractual relationship between the State and any subcontractor. The contractor may subcontract a portion of the work but the contractor shall remain responsible for the work that is subcontracted.

5.12.1 Replacing Subcontractors - Contractors may enter into subcontracts only with subcontractors listed in the offer form. The contractor will be allowed to replace a listed subcontractor if the subcontractor:

5.12.1.1 Fails, refuses or is unable to enter into a subcontract consistent with the terms and conditions of the subcontractor's offer presented to the contractor; or

5.12.1.2 Becomes insolvent; or

5.12.1.3 Has any license or certification necessary for performance of the work suspended or revoked; or

5.12.1.4 Has defaulted or has otherwise breached the subcontract in connection with the subcontracted work; or

5.12.1.5 Agrees to be substituted by providing a written release; or

5.12.1.6 Is unable or refuses to comply with other requirements of law applicable to contractors, subcontractors, and public works projects.

5.12.2 Notice of Replacing Subcontractor – The contractor shall provide a written notice to the Contracting Officer when it wishes to replace a

subcontractor, including in the notice, the reasons for replacement. The contractor agrees to defend, hold harmless and indemnify the State against all claims, liabilities, or damages whatsoever, including attorneys fees arising out of or related to the replacement of a subcontractor. The contractor may not replace the subcontractor until the Contracting Officer approves of the replacement.

5.12.3 Adding Subcontractors – The Contractor may enter into a subcontract with a subcontractor that is not listed in the offer form only after this contract becomes enforceable and only after the Contracting Officer has approved the subcontractor.

5.12.4 Subcontracting - Contractor shall perform with its own organization, work amounting to not less than twenty (20%) of the total contract cost, exclusive of costs for materials and equipment the Contractor purchases for installation by its subcontractors, except that any items designated by the State in the contract as “specialty items” may be performed by a subcontract and the cost of any such specialty items so performed by the subcontract may be deducted from the total contract cost before computing the amount of work required to be performed by the Contractor with its own organization.

ARTICLE 6 - Control of Materials and Equipment

6.1 MATERIALS AND EQUIPMENT - Contractor shall furnish, pay for and install all material and equipment as called for in the drawings and specifications. Materials and equipment shall be new and the most suitable for the purpose intended unless otherwise specified. The State does not guarantee that the specified or pre-qualified product listed in the drawings and specifications are available at the time of bid or during the contract period.

6.2 SOURCE OF SUPPLY AND QUALITY OF MATERIALS

6.2.1 Only materials conforming to the drawings and specifications and, when required by the contract have been accepted by the Engineer, shall be used. In order to expedite the inspection and testing of materials, at the request of the Engineer, the Contractor shall identify its proposed sources of materials within ten (10) days after notification by the Engineer.

6.2.2 At the option of the Engineer, the materials may be accepted by the Engineer at the source of supply before delivery is started. Representative preliminary samples of the character and quantity prescribed shall be submitted by the Contractor or producer for examination and tested in accordance with the methods referred to under samples and tests.

6.2.3 Engineer's Authorization to Test Materials - Materials proposed to be used may be inspected and tested whenever the Engineer deems necessary to determine conformance to the specified requirements. The cost of testing shall be borne by the Contractor. However, should test results show that the material(s) is in compliance with the specified requirements, the cost of the testing will be borne by the State.

6.2.4 Unacceptable Materials - In the event material(s) are found to be unacceptable, the Contractor shall cease their use, remove the unacceptable material(s) that have already been installed or applied, and furnish acceptable materials all at no additional cost to the State. No material which is in any way unfit for use shall be used.

6.3 SUBSTITUTION AFTER CONTRACT AWARD

6.3.1 Materials, equipment, articles and systems noted on the drawings and specifications, establish a standard of quality, function, performance or design requirements and shall not be interpreted to limit competition. Should trade names, makes, catalog numbers or brand names be specified, the contractor shall infer that these items indicate the quality, style, appearance or performance of the material, equipment, article, or systems to be used in the project. The contractor is responsible to use materials, equipment, articles or systems that meet the project requirements. Unless specifically provided otherwise in the contract documents, the contractor may, at its option, use any material equipment, article or system that, in the judgment of the Contracting officer, is equal to that required by the contract documents.

6.3.1.1 If after installing a material, equipment, article or system a variance is discovered, the contractor shall immediately replace the material, equipment, article or system with one that meets the requirements of the contract documents.

6.3.2 Substitution After Contract Award - Subject to the Contracting Officer's determination; material, equipment, article or system with a variant feature(s) may be allowed as a substitution, provided it is in the State's best interest. The State may deny a substitution; and if a substitution is denied, the contractor is not entitled to any additional compensation or time extension.

6.3.2.1 The contractor shall include with the submittal, a notification that identifies all deviations or variances from the contract documents. The notice shall be in a written form separate from the submittal. The variances shall be clearly shown on the shop drawing, descriptive sheet, and material sample or color sample; and the contractor shall certify that the substitution has no other variant features. Failures to identify the variances are grounds to reject the related work or materials, notwithstanding that the Contracting Officer accepted the submittal. If the variances are not acceptable to the Contracting Officer, the contractor will be required to furnish the item as specified on the contract documents at no additional cost or time.

6.3.2.2 Acceptance of a variance shall not justify a contract price or time adjustment unless the contractor requests an adjustment at the time of submittal and the adjustments are explicitly agreed to in writing by the Contracting Officer. Any request shall include price details and proposed scheduling modifications. Acceptance of a variance is subject to all contract terms, and is without prejudice to all rights under the surety bond.

6.3.2.3 The contractor can recommend improvements to the project, for materials, equipment, articles, or systems by means of a substitution request, even if the improvements are at an additional cost. The Contracting Officer shall make the final determination to accept or reject contractor's proposed improvements. If the proposal material, equipment, article or system cost less than the specified item, the Department will require a sharing of cost similar to value engineering be implemented. State reserves its right to deny a substitution; and if a substitution is denied, the contractor is not entitled to additional compensation or time extension.

6.3.2.4 If the specified material and / or equipment inadvertently lists only a single manufacturer.

6.3.3 A substitution request after Contract Award shall be fully explained in writing. Contractor shall provide brochures showing that the substitute material and / or equipment is equal or better in essential features and also provide a matrix showing comparison of the essential features. Contractor shall justify its request and include quantities and unit prices involved, respective supplier's price quotations and such other documents necessary to fully support the request. Any savings in cost will be credited to the Department. Contractor shall absorb any additional cost for the substitute item(s) or for its installation. Submitting a substitution request, does not imply that substitutions, for brand name specified materials and equipment, will be allowed. The Engineer may reject and deny any request deemed irregular or not in the best interest of the Department. A request for substitution shall not in any way be grounds for an extension of contract time. At the discretion of the Engineer, a time extension may be granted for an approved substitution.

6.4 ASBESTOS CONTAINING MATERIALS - The use of materials or equipment containing asbestos is prohibited under this contract. Contractor warrants that all materials and equipment incorporated in the project are asbestos-free.

6.5 TEST SAMPLES

6.5.1 The Engineer may require any or all materials to be tested by means of samples or otherwise. Contractor shall collect and forward samples requested by the Engineer. Contractor shall not use or incorporate any material represented by the samples until all required tests have been made and the material has been accepted. In all cases, the Contractor shall furnish the required samples without charge. Where samples are required from the completed work, the Contractor shall cut and furnish samples from the completed work. Samples so removed shall be replaced with identical material and refinished. No additional compensation will be allowed for furnishing test samples and their replacement with new materials.

6.5.2 Tests of the material samples will be made in accordance with the latest standards of the American Society for Testing and Materials (ASTM), as amended prior to the contract date unless otherwise provided. In cases where a particular test method is necessary or specifications and serial numbers are stipulated, the test shall be made by the method stated in the above-

mentioned publication. Where the test reference is the American Association of State Highway and Transportation Officials (AASHTO), it means the specifications and serial numbers of the latest edition and amendments prior to the bid date.

6.5.3 The Engineer may retest any materials which have been tested and accepted at the source of supply after the same has been delivered to the work site. The Engineer shall reject all materials which, when retested, do not meet the requirements of the contract.

6.6 MATERIAL SAMPLES

6.6.1 The Contractor shall furnish all samples required by the drawings and specifications or that may be requested by the Engineer of any and all materials or equipment it proposes to use. Unless specifically required, samples are not to be submitted with the bid.

6.6.2 No materials or equipment of which samples are required shall be used on the Work until the Engineer has received and accepted the samples. If the Contractor proceeds to use such materials before the Engineer accepts the samples, the Contractor shall bear the risk.

6.6.3 Contractor shall furnish two (2) copies of a transmittal letter with each shipment of samples, The letter shall provide a list of the samples, the name of the building or work for which the materials are intended and the brands of the materials and names of the manufacturers. Also, each sample submitted shall have a label indicating the material represented, its place of origin, the names of the producer, the Contractor and the building or work for which the material is intended. Samples of finished materials shall be marked to indicate where the materials represented are required by the drawings or specifications.

6.6.4 Acceptance of any sample(s) shall be only for the characteristics or for the uses named in such acceptance and for no other purpose. Acceptance of samples shall not change or modify any contract requirement. All samples will be provided by the Contractor at no extra cost to the Department. See also Section 5.4 SHOP DRAWINGS AND OTHER SUBMITTALS.

6.7 NON-CONFORMING MATERIALS - All materials not conforming to the requirements of these contract documents, whether in place or not, shall be

rejected and removed immediately from the site of work unless otherwise permitted by the Engineer in writing. No rejected material which has subsequently been made to conform shall be used unless and until written acceptance has been given by the Engineer. If the Contractor fails to comply forthwith with any order of the Engineer made under the provisions of this Section 6.7, the Engineer shall have the authority to remove and replace non-conforming materials and charge the cost of removal and replacement to the Contractor.

6.8 HANDLING MATERIALS - Contractor shall handle all materials to preserve their quality and fitness for work. Transport aggregates from the source or storage site to the work in tight vehicles to prevent loss or segregation of materials after loading and measuring.

6.9 STORAGE OF MATERIALS - Contractor shall store all materials to preserve their quality and fitness for the work. Unless otherwise provided, any portion of the project site within the Project Contract Limit not required for public travel, may be used for storage purposes and for the Contractor's plant and equipment. Any additional space required shall be provided by the Contractor at its expense subject to the Engineer's acceptance. Contractor shall store materials on wooden platforms or other hard, clean surfaces and covered to protect it from the weather and damage. Stored materials shall be located to allow prompt inspection.

6.10 PROPERTY RIGHTS IN MATERIALS - Nothing in the contract shall be construed to vest in the Contractor any right to any materials and equipment after such materials and equipment have been attached, affixed to, or placed in the work.

6.11 ASSIGNMENT OF ANTITRUST CLAIMS FOR OVERCHARGES FOR GOODS PURCHASED - Contractor (or Vendor) and the Department recognize that in actual economic practice, overcharges resulting from antitrust violations are in fact usually borne by the Department. Therefore, Contractor hereby assigns to the Department any and all claims for such overcharges as to goods purchased in connection with this order or contract, except as to overcharges which result from antitrust violations commencing after the price is established under this order or contract and any change order. In addition, Contractor warrants and represents that each of its first tier suppliers and

subcontractors shall assign any and all such claims to the Department, subject to the aforementioned exception.

ARTICLE 7 - Prosecution and Progress (Including Legal Relations and Responsibility)

7.1 PROSECUTION OF THE WORK

7.1.1 After approval of the contract by the Department of Defense, a Notice to Proceed will be given to the Contractor as described in Section 3.10 NOTICE TO PROCEED. The Notice to Proceed will indicate the date the Contractor is expected to begin the construction and from which date contract time will be charged.

7.1.2 The Contractor shall begin work no later than ten (10) working days from the date in the Notice to Proceed and shall diligently prosecute the same to completion within the contract time allowed. The Contractor shall notify the Engineer at least three (3) working days before beginning work.

7.1.3 If any subsequent suspension and resumption of work occurs, the Contractor shall notify the Engineer at least twenty-four (24) hours before stopping or restarting actual field operations.

7.1.4 Working Prior to Notice to Proceed - The Contractor shall not begin work before the date in the Notice to Proceed. Should the Contractor begin work before receiving the Notice to Proceed, any work performed in advance of the specified date will be considered as having been done at the Contractor's risk and as a volunteer and subject to the following conditions:

7.1.4.1 Under no circumstances shall the Contractor commence work on site until it has notified the Engineer of its intentions and has been advised by the Engineer in writing that the project site is available to the Contractor. The project site will not be made available until the Contractor has complied with commencement requirements under Section 7.2 COMMENCEMENT REQUIREMENTS.

7.1.4.2 In the event the contract is not executed, the Contractor shall, at its own expense, do such work as is necessary to leave the site in a neat condition to the satisfaction of the Engineer. The Contractor shall not be reimbursed for any work performed.

7.1.4.3 All work done prior to the Notice to Proceed shall be performed in accordance with the contract documents, but will only be considered authorized work and be paid for as provided in the contract after the Notice to Proceed is issued.

7.1.5 For repairs and/or renovations of existing buildings, unless otherwise permitted by the Engineer, the Contractor shall not commence with the physical construction unless all or sufficient amount of materials are available for either continuous construction or completion of a specified portion of the work. When construction is started, the Contractor shall work expeditiously and pursue the work diligently until it is complete. If only a portion of the work is to be done in stages, the Contractor shall leave the area safe and usable for the user agency at the end of each stage.

7.2 COMMENCEMENT REQUIREMENTS - Prior to beginning work on site, the Contractor shall submit the following to the Engineer:

7.2.1 Identification of the Superintendent or authorized representative on the job site. Refer to Section 5.8 COOPERATION BETWEEN THE CONTRACTOR AND THE DEPARTMENT.

7.2.2 Proposed Working Hours on the job. Refer to Section 7.5 NORMAL WORKING HOURS.

7.2.3 Permits and Licenses. Refer to Section 7.4 PERMITS AND LICENSES.

7.2.4 Schedule of Prices to be accepted for the agreed Monthly Payment Application. Unless the proposal provides unit price bids on all items in this project, the successful Bidder will be required, after the award of contract, to submit a schedule of prices for the various items of construction included in the contract. For projects involving more than a single building and / or facility, the breakdown cost shall reflect a separate schedule of prices for the various items of work for each building and/or facility. The sum of the prices submitted for the various items must equal the lump sum bid in the Bidder's proposal. This schedule will be subject to acceptance by the Engineer who may reject same and require the bidder to submit another or several other schedules if in the Engineer's opinion the prices are unbalanced or not sufficiently detailed. This schedule of prices shall be used for the purpose of determining the

value of monthly payments due the Contractor for work installed complete in place; and may be used as the basis for determining cost and credit of added or deleted items of work, respectively.

7.2.4.1 The Contractor shall estimate at the close of each month the percentage of work completed under each of the various construction items during such month and submit the Monthly Payment Application to the Engineer for review and approval. The Contractor shall be paid the approved percentage of the price established for each item less the retention provided in Section 8.4 PROGRESS PAYMENTS.

7.2.5 Proof of Insurance Coverage. Certificate of Insurance or other documentary evidence satisfactory to the Contracting Officer that the Contractor has in place all insurance coverage required by the contract. The Certificate of Insurance shall contain wording which identifies the Project number and Project title for which the certificate of insurance is issued. Refer to Section 7.3 INSURANCE REQUIREMENTS.

7.2.6 Until such time as the above items are processed and approved, the Contractor shall not be allowed to commence on any operations unless authorized by the Engineer.

7.3 INSURANCE REQUIREMENTS

7.3.1 Obligation of Contractor - Contractor shall not commence any work until it obtains, at its own expense, all required herein insurance. Such insurance shall be provided by an insurance company authorized by the laws of the State to issue such insurance in the State of Hawaii. Coverage by a "Non-Admitted" carrier is permissible provided the carrier has a Best's Rating of "A-VII" or better.

7.3.2 All insurance described herein will be maintained by the Contractor for the full period of the contract and in no event will be terminated or otherwise allowed to lapse prior to written certification of final acceptance of the work by the State.

7.3.3 Certificate(s) of Insurance acceptable to the State shall be filed with the Engineer prior to commencement of the work. Certificates shall identify if the insurance company is a "captive" insurance company or a "Non-Admitted" carrier to the State of Hawaii. The best's rating must be stated for the "Non-

Admitted" carrier. Certificates shall contain a provision that coverage's being certified will not be cancelled or materially changes without giving the Engineer at least thirty (30) days prior written notice. If the State is to be an Additional Insured on any of the required insurance, it shall be so noted on the certificate. Should any policy be canceled before final acceptance of the work by the State, and the Contractor fails to immediately procure replacement insurance as specified, the State, in addition to all other remedies it may have for such breach, reserves the right to procure such insurance and deduct the cost thereof from any money due to the Contractor.

7.3.4 Nothing contained in these insurance requirements is to be construed as limiting the extent of Contractor's responsibility for payment of damages resulting from its operations under this contract, including the Contractor's obligation to pay performance liquidated damages, nor shall it affect the Contractor's separate and independent duty to defend, indemnify and hold the State harmless pursuant to other provisions of this contract. In no instance will the State's exercise of an option to occupy and use completed portions of the work relieve the Contractor of its obligation to maintain the required insurance until the date of final acceptance of the work.

7.3.5 All insurance described herein shall be primary and cover the insured for all work to be performed under the contract, all work performed incidental thereto or directly or indirectly connected therewith, including traffic detour work or other work performed outside the work area and all change order work.

7.3.6 The Contractor shall, from time to time, furnish the Engineer, when requested, satisfactory proof of coverage of each type of insurance required covering the work. Failure to comply with the Engineer's request may result in suspension of the work, and shall be sufficient grounds to withhold future payments due the Contractor and to terminate the contract for Contractor's default.

7.3.7 Types of Insurance - Contractor shall purchase and maintain insurance described below which shall provide coverage against claims arising out of the Contractor's operations under the contract, whether such operations be by the Contractor itself or by any subcontractor or by anyone directly or indirectly employed by any of them or by anyone for whose acts any of them may be liable.

7.3.7.1 Worker's Compensation -The Contractor shall obtain worker's compensation insurance for all persons whom they employ in carrying out the work under this contract. This insurance shall be in strict conformity with the requirements of the most current and applicable State of Hawaii Worker's Compensation Insurance laws in effect on the date of the execution of this contract and as modified during the duration of the contract.

7.3.7.2 General Liability - The Contractor shall obtain General Liability insurance with a limit of not less than \$2,000,000 per occurrence and in the Aggregates. The General liability insurance shall include the State as an Additional Insured. The required limit of insurance may be provided by a single policy or with a combination of primary and excess policies. Refer to SPECIAL CONDITIONS for any additional requirements.

7.3.7.3 Auto Liability - The Contractor shall obtain Auto Liability Insurance covering all owned, non-owned and hired autos with a combined single Limit of not less than \$1,000,000 per occurrence. The required limit of insurance may be provided by a single policy or with a combination of primary and excess policies. Refer to SPECIAL CONDITIONS for any additional requirements.

7.3.7.4 Property Insurance (Builders Risk)

- (1) New Building(s) - The Contractor shall obtain Property Insurance covering building(s) being constructed under this Contract. The limit shall be equal to the completed value of the building(s) and shall insure against all-loss excluding earthquakes and floods. The coverage shall be provided by a company authorized to write insurance in the State of Hawaii as an insurer.
- (2) Building Renovation and / or Installation Contract - The Contractor shall obtain Property Insurance with a limit equal to the completed value of the work or property being installed and shall insure against all-loss excluding earthquakes and floods. The coverage shall be provided by a company authorized to write insurance in the State of Hawaii as an insurer. Refer to SPECIAL CONDITIONS for any additional requirements.
- (3) The Contractor is not required to obtain property insurance for contracts limited to site development

7.4 PERMITS AND LICENSES

7.4.1 The State or its representative may process Federal (e.g. Corps of Engineers), State and County Permit applications. The Contractor shall pick up the pre-processed Permits at the appropriate governmental agency and pay the required fees. Other permits necessary for the proper execution of the work such as utility connection permits, elevator installation permits etc., unless processed by the State and paid for by the Contractor, shall be obtained and paid for by the Contractor.

7.4.2 Until such time as the above permits are approved, the Contractor shall not be allowed to commence any operations without written approval of the Engineer.

7.4.3 The Engineer reserves the right to waive application and processing of the building permit.

7.5 NORMAL WORKING HOURS - Prior to beginning operations, unless otherwise established by the State, the Contractor shall notify the Engineer in writing of the time in hours and minutes, A.M. and P.M. respectively, at which it desires to begin and end the day's work. If the Contractor desires to change the working hours, it shall request the Engineer's approval three (3) consecutive working days prior to the date of the change.

7.6 HOURS OF LABOR (Section 104-2 Hawaii Revised Statutes)

7.6.1 No laborer or mechanic employed on the job site of any public work of the Department or any political sub-division thereof shall be permitted or required to work on Saturday, Sunday or a legal holiday of the State or in excess of eight hours on any other day unless the laborer or mechanic receives overtime compensation for all hours worked on Saturday, Sunday and a legal holiday of the State or in excess of eight hours on any other day. For the purposes of determining overtime compensation under this Section 7.6, the basic hourly rate of any laborer or mechanic shall not be less than the basic hourly rate determined by the Department of Labor and Industrial Relations to be the prevailing basic hourly rate for corresponding classes of laborers and mechanics on projects of similar character in the Department.

7.6.2 Overtime compensation means, compensation based on one and one-half times the laborers or mechanics basic hourly rate of pay plus the cost to an employer of furnishing a laborer or mechanic with fringe benefits.

7.7 PREVAILING WAGES - (§ 104-2 HRS)

7.7.1 The Contractor shall at all times observe and comply with all provisions of Chapter 104, HRS, the significant requirements of which are emphasized in the Department of Labor and Industrial Relations Publication No. H104-3 entitled 'Requirements of Chapter 104, HRS Wages and Hours of Employees on Public Works Law'.

7.7.2 Wage Rate Schedule - The wage rate schedule is not physically enclosed in the bid documents. However, the wage rate schedule is incorporated herein by reference and made a part of the Bid and Contract Documents. Said wage rate schedule may be obtained from the Contracts Office, Department of Accounting and General Services, 1151 Punchbowl Street, Room 422, Honolulu, Hawaii or, via the FAX-ON-DEMAND system of the Department of Labor and Industrial Relations, phone number (808) 586-8695. When the bid documents are made available on respective neighbor islands, copies of the wage rate schedule may also be obtained from the office of the respective neighbor island DAGS District Office.

7.7.3 The Contractor or its subcontractor(s) shall pay all laborers and mechanics employed on the job site, unconditionally and not less often than once a week, and without deduction or rebate on any account except as allowed by law, the full amounts of their wages including overtime, accrued to not more than five (5) working days prior to the time of payment, at wage rates not less than those stated in the contract, regardless of any contractual relationship which may be alleged to exist between the Contractor and subcontractor and such laborers and mechanics. The wages stated in the contract shall not be less than the minimum prevailing wages (basic hourly rate plus fringe benefits), as determined by the Director of Labor and Industrial Relations and published in wage rate schedules. Any increase in wage rates, as determined by the Director of Labor and Industrial Relations and issued in the wage rate schedule, shall be applicable during the performance of the contract, in accordance with section 104-2(a) and (b), Hawaii Revised Statutes. Notwithstanding the provisions of the original contract,

if the Director of Labor and Industrial Relations determines that prevailing wages have increased during the performance of the contract, the rate of pay of laborers and mechanics shall be raised accordingly.

7.7.4 Posting Wage Rate Schedule - The rates of wages to be paid shall be posted by the Contractor in a prominent and easily accessible place at the job site and a copy of such wages required to be posted shall be given to each laborer and mechanic employed under the contract by the Contractor at the time the person is employed thereunder, provided that where there is a collective bargaining agreement, the Contractor does not have to provide its employees the wage rate schedules. Any revisions to the schedule of wages issued by the Director of Labor and Industrial Relations during the course of the contract shall also be posted by the Contractor and a copy provided to each laborer and mechanic employed under the contract as required above.

7.7.5 The Engineer may withhold from the Contractor so much of the accrued payments as the Engineer may consider necessary to pay to laborers and mechanics employed by the Contractor or any subcontractor on the job site. The accrued payments withheld shall be the difference between the wages required by this contract and the wages actually received by such laborers or mechanics.

7.8 FAILURE TO PAY REQUIRED WAGES
(§ 104-4, HRS) - If the Department finds that any laborer or mechanic employed on the job site by the Contractor or any subcontractor has been or is being paid wages at a rate less than the required rate by the contract, or has not received their full overtime compensation, the Department may, by written notice to the Contractor, terminate its right, or the right of any subcontractor, to proceed with the work or with the part of the work on which the required wages or overtime compensation have not been paid and may complete such work or part by contract or otherwise, and the Contractor and its sureties shall be liable to the Department for any excess costs occasioned thereby.

7.9 PAYROLLS AND PAYROLL RECORDS
(§ 104-3 HRS)

7.9.1 A certified copy of each weekly payroll shall be submitted to the Engineer within seven (7) calendar days after the end of each weekly payroll period. Failure to do so on a timely basis shall be cause for disqualification

from bidding in accordance with the provisions of Section 2.12 DISQUALIFICATION OF BIDDERS. The Contractor shall be responsible for the timely submission of certified copies of payrolls of all subcontractors. The certification shall affirm that payrolls are correct and complete, that the wage rates contained therein are not less than the applicable rates contained in the wage determination decision, any amendments thereto during the period of the contract, and that the classifications set forth for each laborer and mechanic conform with the work they performed.

7.9.2 Payroll records for all laborers and mechanics working at the site of the work shall be maintained by the General Contractor and its subcontractors, if any, during the course of the work and preserved for a period of four (4) years thereafter. Such records shall contain the name of each employee, their correct classification, rate of pay, daily and weekly number of hours worked, itemized deductions made and actual wages paid. Such records shall be made available for inspection at a place designated by the Engineer, the Director of Labor and any authorized persons who may also interview employees during working hours on the job site.

7.9.3 Note that the falsification of certifications noted in this Section 7.9 may subject the Contractor or subcontractor to penalties and debarment under the laws referenced in Section 7.14 LAWS TO BE OBSERVED and / or criminal prosecution.

**7.9A APPRENTICESHIP AGREEMENT
CERTIFICATION (HRS §103-55.6)**

7.9A.1 For the duration of a contract awarded and executed utilizing the apprenticeship agreement preference, the Contractor shall certify for each month that work is being conducted on the project, that it continues to be a participant in the relevant registered apprenticeship program for each trade it employs.

7.9A.2 Monthly certification shall be made by completing the *Monthly Report of Contractor's Participation – Form 2* made available by the State Department of Labor and Industrial Relations, the original to be signed by the respective apprenticeship program sponsors authorized official, and submitted by the Contractor to the Engineer with its monthly payment requests. The *Monthly Report of Contractor's Participation – Form 2* is available on the DLIR website at: <http://hawaii.gov/labor/wdd>.

7.9A.3 Should the Contractor fail or refuse to submit its *Monthly Report of Contractor's Participation – Form 2*, or at any time during the duration of the contract, cease to be a party to a registered apprenticeship agreement for any of the apprenticeable trades the Contractor employs, or will employ, the Contractor will be subject to the following sanctions:

7.9A.3.1 Withholding of the requested payment until all of the required *Monthly Report of Contractor's Participation – Form 2s* are properly completed and submitted.

7.9A.3.2 Temporary or permanent cessation of work on the project, without recourse to breach of contract claims by the Contractor; provided the Department shall be entitled to restitution for nonperformance or liquidated damages claims; or

7-9A.3.3 Proceedings to debar or suspend pursuant to HRS §103D-702.

7.9A.4 If events such as “acts of God”, acts of public enemy, acts of the State or any other governmental body in its sovereign or contractual capacity, fires, floods, epidemics, freight embargoes, unusually severe weather, or strikes or other labor disputes prevent the Contractor from submitting the *Monthly Report of Contractor's Participation - Form 2*, the Contractor shall not be penalized as provided herein, provided the Contractor completely and expeditiously complies with the certification process when the event is over.

7.10 OVERTIME AND NIGHT WORK

7.10.1 Overtime work shall be considered as work performed in excess of eight (8) hours in any one day or work performed on Saturday, Sunday or legal holiday of the State. Overtime and night work are permissible when approved by the Engineer in writing, or as called for elsewhere within these GENERAL CONDITIONS.

7.10.2 Overtime Notification - Contractor shall notify the Engineer in writing at least two (2) working days prior to doing overtime and night work, to insure proper inspection will be available. The notification shall address the specific work to be done. A notification is not required when overtime work and night work are included as normal working hours in the contract and in the contractor's construction schedule.

7.10.3 In the event that work other than that contained in the above notification is performed and for which the Engineer determines State inspection services were necessary but not available because of the lack of notification, the Contractor may be required to remove all such work and perform the work over again in the presence of State inspection personnel.

7.10.4 Any hours worked in excess of the normal eight (8) working hours per day or on Saturdays, Sundays or legal State holidays will not be considered a working day.

7.10.5 The State hereby reserves the right to cancel the overtime, night, Saturday, Sunday or legal State holiday work when it is found that work during these periods is detrimental to the public welfare or the user agency.

7.11 OVERTIME AND NIGHT PAYMENT FOR STATE INSPECTION SERVICE

7.11.1 The Department is responsible for overtime or night time payments for Department's inspection services, including Department's Inspector, State staff personnel and the Department's Consultant(s) engaged on the project, when overtime and night work are included as normal working hours in the contract and in the contractor's construction schedule.

7.11.2 Whenever the Contractor's operations require the State's inspection and staff personnel to work overtime or at night, the Contractor shall reimburse the State for the cost of such services unless otherwise instructed in the Contract. The Engineer will notify the Contractor of the minimum number of required Department employees and other personnel engaged by the Department prior to the start of any such work. The costs chargeable to the Contractor shall include but not be limited to the following:

7.11.2.1 The cost of salaries which are determined by the State and includes overtime and night time differential for the Department's staff and inspection personnel. In addition to the cost of the salaries, the Contractor shall reimburse the State's share of contributions to the employee's retirement, medical plan, social security, vacation, sick leave, worker's compensation funds, per diem, and other applicable fringe benefits and overhead expenses.

7.11.2.2 The transportation cost incurred by the Department's staff and inspection personnel which are based on established rental rates or mileage allowance in use by the Department for the particular equipment or vehicle.

7.11.2.3 Fees and other costs billed the State by Consultants engaged on the project for overtime and/or night time work.

7.11.3 Payment for Inspection Services - The monies due the Department for staff and inspection work and use of vehicles and equipment as determined in subsection 7.11.2 shall be deducted from the monies due or to become due the Contractor. In any and all events, the Contractor shall not pay the Department's employees directly.

7.12 LIMITATIONS OF OPERATIONS

7.12.1 Contractor shall at all times conduct the work in such manner and in such sequence as will insure the least practicable interference with pedestrian and motor traffic passageways. The Contractor shall furnish convenient detours and provide and plan all other appropriate signs, flashers, personnel, warnings, barricades and other devices for handling pedestrian and motor traffic.

7.12.2 In the event that other contractors are also employed on the job site, the Contractor shall arrange its work and dispose of materials so as not to interfere with the operations of the other contractors engaged upon adjacent work. The Contractor shall join its work to that of others and existing buildings in a proper manner, and in accordance with the drawings and specifications, and perform its work in the proper sequence in relation to that of others, all as may be directed by the Engineer.

7.12.3 Each Contractor shall be responsible for any damage done by it to work performed by another contractor. Each Contractor shall so conduct its operations and maintain the work in such condition that adequate drainage shall be in effect at all times.

7.12.4 In the event that the Contractor fails to prosecute its work as provided in this Section 7.12 or disregards the directions of the Engineer, the Engineer may suspend the work until such time as the Contractor provides for the prosecution of the work with minimum interference to traffic and passageways or other

contractors, adequate drainage, the repair of damage and complies with the direction of the Engineer. No payment will be made for the costs of such suspension.

7.13 ASSIGNMENT OR CHANGE OF NAME §3-125-14 HAR

7.13.1 Assignment - The Contractor shall not sublet, sell, transfer, assign or otherwise dispose of this contract or any part hereof or any right, title or interest herein or any monies due or to become due hereunder without the prior written consent of the Engineer.

7.13.2 The Contractor may assign money due or to become due it under the contract and such assignment will be recognized by the Department, if given proper notice thereof, to the extent permitted by law; but any assignment of monies shall be subject to all proper set-offs in favor of the State and to all deductions provided in the contract and particularly all monies withheld or unpaid, whether assigned or not, shall be to use by the Department for the completion of the work in the event that the Contractors should be in default therein.

7.13.3 Recognition of a Successor in Interest; Assignment - When in the best interest of the State, a successor in interest may be recognized in an assignment agreement in which the transferor and the transferee and the State shall agree that:

7.13.3.1 The transferee assumes all of the transferor's obligations;

7.13.3.2 Transferor remains liable for all obligations under the contract but waives all rights under the contract against the State; and

7.13.3.3 The transferor shall continue to furnish, and the transferee shall also furnish, all required bonds.

7.13.4 Change of Name - When a Contractor requests to change the name in which it holds a contract with the State, the Engineer shall, upon receipt of a document indicating such change of name (for example: an amendment to the articles of incorporation of the corporation), enter into an agreement with the requesting Contractor to effect such a change of name. The agreement changing the name shall specifically indicate that no other terms and conditions of the contract are thereby changed.

7.13.5 All change of name or novation agreements effected hereunder other than by the Engineer shall be reported to the Engineer within thirty (30) days of the date that the agreement becomes effective.

7.13.6 Notwithstanding the provisions of paragraphs 7.13.3.1 through 7.13.3.3 above, when a Contractor holds contracts with more than one purchasing agency of the State, the novation or change of name agreements herein authorized shall be processed only through the Department of Defense, State of Hawaii.

7.14 LAWS TO BE OBSERVED

7.14.1 The Contractor at all times shall observe and comply with all Federal, State and local laws or ordinances, rules and regulations which in any manner affect those engaged or employed in the work, the materials used in the work, and the conduct of the work. The Contractor shall also comply with all such orders and decrees of bodies or tribunals having any jurisdiction or authority over the work. Any reference to such laws, ordinances, rules and regulations shall include any amendments thereto before and after the date of this contract.

7.14.2 The Contractor shall defend, protect, hold harmless and indemnify the State and its Departments and Agencies and all their officers, representatives, employees or agents against any claim or liability arising from or based on the violation of any such laws, ordinances, rules and regulations, orders or decrees, whether such violation is committed by the Contractor or its Subcontractor(s) or any employee of either or both. If any discrepancy or inconsistency is discovered in the contract for the work in relation to any such laws, ordinances, rules and regulations, orders or decrees, the Contractor shall forthwith report the same to the Engineer in writing.

7.14.3 While the Contractor must comply with all applicable laws, attention is directed to: Wage and Hours of Employees on Public Works, Chapter 104, Hawaii Revised Statutes (HRS); Hawaii Public Procurement Code, Authority to debar or suspend, Section 103D-702, HRS; Hawaii Employment Relations Act, Chapter 377, HRS; Hawaii Employment Security Law, Chapter 383, HRS; Worker's Compensation Law, Chapter 386, HRS; Wage and Hour Law, Chapter 387, HRS; Occupational Safety and Health, Chapter 396, HRS; and Authority to

Debar or Suspend, Chapter 126, subchapter 2, Hawaii Administrative Rules (HAR).

7.15 PATENTED DEVICES, MATERIALS AND PROCESSES

- If the Contractor desires to use any design, device, material, or process covered by letters of patent or copyright, the right for such use shall be procured by the Contractor from the patentee or owner. The Contractor shall defend, protect, indemnify and hold harmless the State and its Departments and Agencies, any affected third party, or political subdivision from any and all claims for infringement by reason of the use of any such patented design, device, material or process, or any trademark or copyright in connection with the work to be performed under the contract, shall defend, protect, indemnify and hold harmless the State and its Departments and Agencies for any costs, expenses and damages which it may be obligated to pay by reason of any such infringement at any time during the prosecution or after the completion of the work. This section shall not apply to any design, device, material or process covered by letters of patent or copyright, which the Contractor is required to use by the drawings or specifications.

7.16 SANITARY, HEALTH AND SAFETY PROVISIONS

7.16.1 The Contractor shall provide and maintain in a neat, sanitary condition such accommodations for the use of its employees as may be necessary to comply with the requirements of the State and local Boards of Health, or other bodies or tribunals having jurisdiction. Unless otherwise stated in the drawings or specifications, the Contractor shall install toilet facilities conveniently located at the job site and maintain same in a neat and sanitary condition for the use of the employees on the job site for the duration of the contract. The toilet facilities shall conform to the requirements of the State Department of Health. The cost of installing, maintaining and removing the toilet facilities shall be considered incidental to and paid for under various contract pay items for work or under the lump sum bids as the case may be, and no additional compensation will be made therefore. These requirements shall not modify or abrogate in any way the requirements or regulations of the State Department of Health.

7.16.2 Attention is directed to Federal, State and local laws, rules and regulations concerning construction safety and health standards. The Contractor shall not

require any worker to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to their health or safety.

7.17 PROTECTION OF PERSONS AND PROPERTY

7.17.1 Safety Precautions and Programs - The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract. The Contractor shall take reasonable precautions for the safety of, and shall provide reasonable protection to prevent damage, injury or loss to:

7.17.1.1 All persons on the Work site or who may be affected by the Work;

7.17.1.2 All the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor and its subcontractors; and

7.17.1.3 Other property at the site or adjacent thereto, including trees, shrubs lawns walks pavement, roadways structures, and utilities not designated for removal, relocation or replacement in the course of construction.

7.17.2 Contractor shall give notices and comply with applicable laws, ordinances, regulations, rules, and lawful orders of any public body having jurisdiction for the safety of persons or property or their protection from damage, injury or loss; and the Contractor shall erect and maintain reasonable safeguards for safety and protection, including posting danger signs, or other warnings against hazards.

7.17.3 The Contractor shall notify Owners of adjacent properties and of underground (or overhead) utilities when performing work, which may affect the Owners; and shall cooperate with the Owners in the protection, removal and replacement of their property.

7.17.4 All damage, injury or loss to any property referred to in paragraphs 7.17.1.2 and 7.17.1.3 caused by the fault or negligence or damage or loss attributable to acts or omissions directly or indirectly in whole or part by the Contractor a subcontractor or any one directly or indirectly employed by them, or by anyone for whose

acts they might be liable, shall be remedied promptly by the Contractor.

7.17.5 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the protection of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor

7.17.6 The Contractor shall not load or permit any part of the construction to be loaded so as to endanger its safety. The Contractor shall not injure or destroy trees or shrubs nor remove or cut them without permission of the Engineer. Contractor shall protect all land monuments and property marks until an authorized agent has witnessed or otherwise referenced their location and shall not remove them until directed.

7.17.7 In the event the Contractor encounters on the site, material reasonably believed to be asbestos or other hazard material that has not been rendered harmless, the Contractor shall stop work in the area and notify the Engineer promptly. The work in the affected area shall be resumed in the absence of hazard materials or when the hazard has been rendered harmless.

7.17.8 Emergencies - In an emergency affecting the safety and protection of persons or the Work or property at the site or adjacent thereto, Contractor without special instructions or authorization from the Engineer, shall act, at the Contractor's discretion, to prevent threatened damage, injury or loss. Contractor shall give the Engineer prompt written notice of the emergency and actions taken. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined under the provisions of Section 7.25 DISPUTES AND CLAIMS.

7.18 ARCHAEOLOGICAL SITES

7.18.1 Should historic sites such as walls, platforms, pavements and mounds, or remains such as artifacts, burials, concentration of charcoal or shells be encountered during construction, work shall cease in the immediate vicinity of the find and the find shall be protected from further damage. The Contractor shall immediately notify the Engineer and contact the State Historic Preservation Division which will assess the significance of the find and recommend the appropriate mitigation measures, if necessary.

7.18.2 When required, the Contractor shall provide and install any temporary fencing as shown on the drawings to protect archaeological sites within the project. The fencing shall be installed prior to any construction activity and shall be maintained by the Contractor for the duration of the project. Fence installation and maintenance shall be to the satisfaction of the Engineer. The Contractor shall remove the fencing upon completion of construction, or as directed by the Engineer.

7.18.3 No work shall be done within the temporary fencing area. If any construction work is done within the temporary fencing, the Contractor shall notify the Engineer immediately; and if the Contractor entered the archaeological site area without permission, it shall stop work in this area immediately. The Engineer shall notify the archaeologist to assess any damage to the area. The Contractor shall allow the archaeologist sufficient time to perform the field investigation.

7.18.4 Any site requiring data recovery within the project shall not be disturbed until data recovery is completed.

7.19 RESPONSIBILITY FOR DAMAGE CLAIMS; INDEMNITY

7.19.1 The Contractor shall indemnify the State and the Department against all loss of or damage to the State's or the Department's existing property and facilities arising out of any act or omission committed in the performance of the work by the Contractor, any subcontractor or their employees and agents. Contractor shall defend, hold harmless and indemnify the Department and the State, their employees, officers and agents against all losses, claims, suits, liability and expense, including but not limited to attorneys' fees, arising out of injury to or death of persons (including employees of the State and the Department, the Contractor or any subcontractor) or damage to property resulting from or in connection with performance of the work and not caused solely by the negligence of the State or the Department, their agents, officers and employees. The State or the Department may participate in the defense of any claim or suit without relieving the Contractor of any obligation hereunder. The purchase of liability insurance shall not relieve the Contractor of the obligations described herein.

7.19.2 The Contractor agrees that it will not attempt to hold the State and its Departments and Agencies and their officers, representatives, employees or agents, liable or responsible for any losses or damages to third parties from the action of the elements, the nature of the work to be done under these GENERAL CONDITIONS or from any unforeseen obstructions, acts of God, vandalism, fires or encumbrances which may be encountered in the prosecution of the work.

7.19.3 The Contractor shall pay all just claims for materials, supplies, tools, labor and other just claims against the Contractor or any subcontractor in connection with this contract and the surety bond will not be released by final acceptance and payment by the Department unless all such claims are paid or released. The

Department may, but is not obligated to, withhold or retain as much of the monies due or to become due the Contractor under this contract considered necessary by the Engineer to cover such just claims until satisfactory proof of payment or the establishment of a payment plan is presented.

7.19.4 The Contractor shall defend, indemnify and hold harmless the State and its Departments and Agencies and their officers, representatives, employees or agents from all suits, actions or claims of any character brought on account of any claims or amounts arising out of or recovered under the Workers' Compensation Laws or violation of any other law, by-law, ordinance, order or decree.

7.20 CHARACTER OF WORKERS OR EQUIPMENT

7.20.1 The Contractor shall at all times provide adequate supervision and sufficient labor and equipment for prosecuting the work to full completion in the manner and within the time required by the contract.

7.20.2 Character and Proficiency of Workers - All workers shall possess the proper license and / or certification, job classification, skill and experience necessary to properly perform the work assigned to them. All workmen engaged in special work or skilled work such as bituminous courses or mixtures, concrete pavement or structures, electrical installation, plumbing installation, or in any trade shall have sufficient experience in such work and in the operation of the equipment required to properly and satisfactorily

perform all work. All workers shall make due and proper effort to execute the work in the manner prescribed in these GENERAL CONDITIONS, otherwise, the Engineer may take action as prescribed herein.

7.20.2.1 Any worker employed on the project by the Contractor or by any subcontractor who, in the opinion of the Engineer, is not careful and competent, does not perform its work in a proper and skillful manner or is disrespectful, intemperate, disorderly or neglects or refuses to comply with directions given, or is otherwise objectionable shall at the written request of the Engineer, be removed forthwith by the Contractor or subcontractor employing such worker and shall not be employed again in any portion of the work without the written consent of the Engineer. Should the Contractor or subcontractor continue to employ, or again employ such person or persons on the project, the Engineer may withhold all payments which are or may become due, or the Engineer may suspend the work until the Engineer's orders are followed, or both.

7.20.3 Insufficient Workers - A sufficient number of workers shall be present to ensure the work is accomplished at an acceptable rate. In addition, the proper ratio of apprentice to journey worker shall be maintained to ensure the work is properly supervised and performed. In the event that the Engineer finds insufficient workers are present to accomplish the work at an acceptable rate of progress or if a adequate number of journey workers are not present and no corrective action is taken by the Contractor after being informed in writing, the Engineer may terminate the contract as provided for under Section 7.27 TERMINATION OF CONTRACT FOR CAUSE.

7.20.4 Equipment Requirements - All equipment furnished by the Contractor and used on the work shall be of such size and of such mechanical condition that the work can be performed in an acceptable manner at a satisfactory rate of progress and the quality of work produced will be satisfactory.

7.20.4.1 Equipment used on any portion of the project shall be such that no injury to the work, persons at or near the site, adjacent property or other objects will result from its use.

7.20.4.2 If the Contractor fails to provide adequate equipment for the work, the contract may be terminated

as provided under Section 7.27 TERMINATION OF CONTRACT FOR CAUSE.

7.20.4.3 In the event that the Contractor furnishes and operates equipment on a force-account basis, it shall be operated to obtain maximum production under the prevailing conditions.

7.21 CONTRACT TIME

7.21.1 Time is of the essence for this contract.

7.21.2 Calculation of Contract Time - When the contract time is on a working day basis, the total contract time allowed for the performance of the work shall be the number of working days shown in the contract plus any additional working days authorized in writing as provided hereinafter. Refer to Article 1 DEFINITIONS for the definition of Working Day. The count of elapsed working days to be charged against contract time shall begin from the date of Notice to Proceed and shall continue consecutively to the date of Project Acceptance determined by the Engineer. When the contract completion time is a fixed calendar date, it shall be the date on which all work on the project shall be completed. Maintenance periods are not included within the contract time unless specifically noted in the Contract Documents.

7.21.3 Modifications of Contract Time
§3-125-4 HAR

7.21.3.1 Extensions - For increases in the scope for work caused by alterations and additional work made under Section 4.2 CHANGES, the Contractor will be granted a time extension only if the changes increase the time of performance for the Contract. If the Contractor believes that an extension of time is justified and is not adequately provided for in a Field Order, it must request the additional time sought in writing when the detailed cost breakdown required by Section 4.2 CHANGES, is submitted. The Contractor must show how the time of performance for the critical path will be affected and must also support the time extension request with schedules and statements from its subcontractors, suppliers, and/or manufacturers. Compensation for any altered or additional work will be paid as provided in Section 4.2 CHANGES.

7.21.3.2 The Department may direct changes to the work at any time until the work is finally accepted. The

issuance of a Field Order at any time may alter or modify the contract duration only by the days specified therein; or if not specified therein, for the days the critical path must be extended for the change. Additional time to perform the extra work will be added to the time allowed in the contract without regard to the date the change directive was issued, even if the contract completion date has passed. A change requiring time will not constitute a waiver of pre-existing Contractor delay.

7.21.4 Delay for Permits - For delays beyond the control of the Contractor in obtaining necessary permits, one day extension for each day delay may be granted by the Engineer, provided the Contractor notifies the Engineer that the permits are not available, as soon as the delay occurs. Time extensions shall be the exclusive relief granted on account of such delays. No additional compensation will be paid for these time extensions.

7.21.5 Delays Beyond Contractor's Control §3-125-18(4) - For delays affecting the critical path caused by acts of God, or the public enemy, fire, unusually severe weather, earthquakes, floods, epidemics, quarantine restrictions, labor disputes, freight embargoes and other reasons beyond the Contractor's control, the Contractor may be granted an extension of time provided that:

7.21.5.1 The Contractor notifies the Engineer in writing within five (5) work days after the occurrence of the circumstances described above and states the possible effects on the completion date of the contract.

7.21.5.2 No time extension will be granted for weather conditions other than unusually severe weather occurrences, and floods.

7.21.5.3 The Contractor, if requested, submits to the Engineer within ten (10) work days after the request, a written statement describing the delay to the project. The extent of delay must be substantiated as follows:

- (a) State specifically the reason or reasons for the delay and fully explain in a detailed chronology the effect of this delay to the work and/or the completion date.
- (b) Submit copies of purchase order, delivery tag, and any other pertinent documentation to support the time extension request.

(c) Cite the period of delay and the time extension requested.

(d) A statement either that the above circumstances have been cleared and normal working conditions restored as of a certain day or that the above circumstances will continue to prevent completion of the project.

7.21.5.4 Time extensions shall be the exclusive relief granted and no additional compensation will be paid the Contractor for such delays.

7.21.6 Delays in Delivery of Materials - For delays in delivery of materials and / or equipment which occur as a result of unforeseeable causes beyond the control and without fault or negligence of both the Contractor, its subcontractor(s) or supplier(s), the Contractor may be granted an extension of time provided that it complies with the following procedures.

7.21.6.1 The Contractor must notify the Engineer in writing within five (5) consecutive working days after it first has any knowledge of delays or anticipated delays and state the effects such delays may have on the completion date of the contract.

7.21.6.2 The Contractor, if requested, must submit to the Engineer within ten (10) working days after a firm delivery date for the material and equipment is established, a written statement as to the delay to the progress of the project. The delay must be substantiated as follows:

- (a) State specifically the reason or reasons for the delay. Explain in a detailed chronology the effect of this delay to the other work and / or the completion date.
- (b) Submit copies of purchase order(s), factory invoice(s), bill(s) of lading, shipping manifest(s), delivery tag(s) and any other pertinent correspondence to support the time extension request.
- (c) Cite the start and end date of the delay and the days requested therefore. The delay shall not exceed the difference between the originally scheduled delivery date versus the actual delivery date.

7.21.6.3 Time extensions shall be the exclusive relief granted and no additional compensation will be paid the Contractor on account of such delay.

7.21.7 Delays For Suspension of Work - Delay during periods of suspension of the work by the Engineer shall be computed as follows:

7.21.7.1 When the performance of the work is totally suspended for one or more days (calendar or working days, as appropriate) by order of the Engineer in accordance with paragraphs 7.24.1.1, 7.24.1.2, 7.24.1.4 or 7.24.1.6 the number of days from the effective date of the Engineer's order to suspend operations to the effective date of the Engineer's order to resume operations shall not be counted as contract time and the contract completion date will be adjusted. Should the Contractor claim for additional days in excess of the suspension period, Contractor shall provide evidence justifying the additional time. During periods of partial suspensions of the work, the Contractor will be granted a time extension only if the partial suspension affects the critical path. If the Contractor believes that an extension of time is justified for a partial suspension of work, it must request the extension in writing at least five (5) working days before the partial suspension will affect the critical operation(s) in progress. The Contractor must show how the critical path was increased based on the status of the work and must also support its claim, if requested, with statements from its subcontractors. A suspension of work will not constitute a waiver of pre-existing Contractor delay.

7.21.8 Contractor Caused Delays - No time extension will be considered for the following:

7.21.8.1 Delays in performing the work caused by the Contractor, subcontractor and / or supplier.

7.21.8.2 Delays in arrival of materials and equipment caused by the Contractor, subcontractor and / or supplier in ordering, fabricating, delivery, etc.

7.21.8.3 Delays requested for changes which the Engineer determines unjustifiable due to the lack of supporting evidence or because the change is not on the critical path.

7.21.8.4 Delays caused by the failure of the Contractor to submit for review and acceptance by the Engineer, on a timely basis, shop drawings, descriptive sheets, material samples, color samples, etc. except as covered in subsection 7.21.5 and 7.21.6.

7.21.8.5 Failure to follow the procedure within the time allowed to qualify for a time extension.

7.21.8.6 Days the Contractor is unable to work due to normal rainfall or other normal bad weather day conditions.

7.21.9 Reduction in Time - If the Department deletes any portion of the work, an appropriate reduction of contract time may be made in accordance with Section 4.2 CHANGES.

7.22 CONSTRUCTION SCHEDULE

7.22.1 The Contractor shall submit its detailed construction schedule to the Engineer prior to the start of the work. The purpose of the schedule is to allow the Engineer to monitor the Contractor's progress on the work. The schedule shall account for normal inclement weather, unusual soil or other conditions that may influence the progress of the work, schedules and coordination required by any utility, off or on site fabrications, and all other pertinent factors that relate to progress.

7.22.2 Submittal of and the Engineer's receipt of the construction schedule shall not imply the Department's approval of the schedule's breakdown, its individual elements, and any critical path that may be shown. Any acceptance or approval of the schedule 1) shall be for general format only and not for sequences or durations thereon, and 2) shall not be deemed an agreement by the Department that the construction means, methods and resources shown on the schedule will result in work that conforms to the contract requirements. The Contractor has the risk of all elements (whether or not shown) of the schedule and its execution. Additional compensation shall not be due the Contractor in the event that deviations from the Contractor's schedule, caused by any design revisions required to resolve site conditions or State, County, or utility requirements, affect the efficiency of its operations.

7.22.3 In the event the Contractor submits and the Department receives an accelerated schedule (shorter than the contract time), such will not constitute an agreement to modify the contract time or completion date, nor will the receipt, acceptance or approval of such a schedule incur any obligation by the Department.

7.22.4 Caution - The Department will not be responsible if the Contractor does not meet its accelerated schedule.

7.22.5 The requirements of this Section 7.22 CONSTRUCTION SCHEDULE may be waived by the Engineer.

7.23 STATEMENT OF WORKING DAYS - For all contracts on a working day basis, the Contractor will submit a statement of the number of working days for each month together with the Monthly Payment Application. The Monthly Payment Application will not be processed without the statement of working days.

7.24 SUSPENSION OF WORK §3-125-7 HAR

7.24.1 Procedure to be followed - The Engineer may, by written order, suspend the performance of the Work up to thirty (30) days and the Engineer, for an unlimited number of days, either in whole or in part for any cause, including but not limited to:

7.24.1.1 Weather or excess bad weather days, considered unsuitable by the Engineer for prosecution of the work; or

7.24.1.2 Soil Conditions considered unsuitable by the Engineer for prosecution of the work; or

7.24.1.3 Failure of the Contractor to:

(1) Correct conditions unsafe for the general public or for the workers;

(2) Carry out orders given by the Engineer;

(3) Perform the work in strict compliance with the provisions of the contract; or

(4) Provide a qualified Superintendent on the jobsite as described under Section 5.8 COOPERATION BETWEEN THE CONTRACTOR AND THE DEPARTMENT.

7.24.1.4 When any redesign is deemed necessary by the Engineer; or

7.24.1.5 Disturbance due to noise, odors or dust arising from the construction even if such disturbance does not violate the section on Environmental Protection contained in the specifications; or

7.24.1.6 The convenience of the State.

7.24.2 Partial, Total Suspension of Work - Suspension of work on some but not all items of work shall be considered a partial suspension. Suspension of work on the entire work at the job site shall be considered total suspension. The period of suspension shall be computed as set forth in subsection 7.21.7 -Delays for Suspension of Work.

7.24.3 Payment §3-125-7 HAR

7.24.3.1 In the event that the Contractor is ordered by the Engineer in writing as provided herein to suspend all work under the contract in accordance with paragraphs 7.24.1.4 or 7.24.1.6, the Contractor may be reimbursed for actual direct costs incurred on work at the jobsite, as authorized in writing by the Engineer, including costs expended for the protection of the work. Payment for equipment which must standby during such suspension of work shall be made as described in clause 8.3.4.5. (e). No payment will be made for profit on any suspension costs. An allowance of five percent (5%) will be paid on any reimbursed actual costs for indirect categories of delay costs, including extended branch and home-office overhead and delay impact costs.

7.24.3.2 However, no adjustment to the contract amount or time shall be made under this Section 7.24 for any suspension, delay, or interruption:

(a) To the extent that performance would have been so suspended, delayed, or interrupted by any other cause, including the fault or negligence of the Contractor; or

(b) For which an adjustment is provided for or excluded under any other provision of this Contract.

7.24.3.3 Any adjustment in contract price made pursuant to this subsection shall be determined in accordance with this Section 7.24 and Section 4.2 CHANGES.

7.24.3.4 Claims for such compensation shall be filed with the Engineer within ten (10) calendar days after the date of the order to resume work or such claims will be waived by the Contractor. Together with the claim, the Contractor shall submit substantiating documents supporting the entire amount shown on the claim. The Engineer may make such investigations as are deemed

necessary and shall be the sole judge of the claim and the Engineer's decision shall be final.

7.24.4 Claims Not Allowed - No claim under this Section 7.24 shall be allowed:

7.24.4.1 For any direct costs incurred more than twenty (20) days before the Contractor shall have notified the Engineer in writing of any suspension that the Contractor considered compensable. This requirement shall not apply as to a claim resulting from a suspension order under paragraphs 7.24.1.4 or 7.24.1.6, and

7.24.4.2 Unless the claim is asserted in writing within ten (10) calendar days after the termination of such suspension, delay, or interruption, but in no case not later than the date of final payment under the contract.

7.24.4.3 No provision of this Section 7.24 shall be construed as entitling the Contractor to compensation for delays due to failure of surety, for suspensions made at the request of the Contractor, for any delay required under the Contract, for partial suspension of work or for suspensions made by the Engineer under the provisions of paragraphs 7.24.1.1, 7.24.1.2, 7.24.1.3 and 7.24.1.5.

7.25 DISPUTES AND CLAIMS §3-126-31 HAR

7.25.1 Required Notification - As a condition precedent for any claim, the Contractor must give notice in writing to the Engineer in the manner and within the time periods stated in Section 4.2 CHANGES for claims for extra compensation, damages, or an extension of time due for one or more of the following reasons:

7.25.1.1 Requirements not clearly covered in the contract, or not ordered by the Engineer as an extra;

7.25.1.2 Failure by the State and Contractor to agree to an Oral Order or an adjustment in price or contract time for a Field Order or a Change Order issued by the State;

7.25.1.3 An action or omission by the Engineer requiring performance changes beyond the scope of the contract;

7.25.1.4 Failure of the State to issue a Field Order for controversies within the scope of Section 4.2 CHANGES.

7.25.1.5 For any other type of claim, the Contractor shall give notice within the time periods set forth in contract

provisions pertaining to that event. If no specific contract provisions pertain to the claim, then the written notice of claim must be submitted within fifteen (15) days of the event giving rise to the claim.

7.25.2 Continued Performance of Work - The Contractor shall at all times continue with performance of the contract in full compliance with the directions of the Engineer. Continued performance by the Contractor shall not be deemed a waiver of any claim for additional compensation, damages, or an extension of time for completion, provided that the written notice of claim is submitted in accordance with subsection 7.25.1

7.25.3 The requirement for timely written notice shall be a condition precedent to the assertion of a claim.

7.25.4 Requirements for Notice of Claim -The notice of claim shall clearly state the Contractor's intention to make claim and the reasons why the Contractor believes that additional compensation, changes or an extension of time may be remedies to which it is entitled. At a minimum, it shall provide the following:

7.25.4.1 Date of the protested order, decision or action;

7.25.4.2 The nature and circumstances which caused the claim;

7.25.4.3 The contract provision that support the claim;

7.25.4.4 The estimated dollar cost, if any, of the protested work and how that estimate was determined; and

7.25.4.5 An analysis of the progress schedule showing the schedule change or disruption if the Contractor is asserting a schedule change or disruption.

7.25.5 If the protest or claim is continuing, the information required in subsection 7.25.4 above shall be supplemented as requested by the Engineer.

7.25.6 Final Statement for Claim - The Contractor shall provide a final written statement of the actual adjustment in contract price and/or contract time requested for each notice of claim. Such statement shall clearly set forth that it is the final statement for that notice of claim. All such final statements shall be submitted within thirty (30) days after completion of the work that is the subject of the claim, but in no event no

later than thirty (30) days after the Project Acceptance Date or the date of termination of the Contractor, whichever comes first.

7.25.7 All claims of any nature are barred if asserted after final payment under this contract has been made, except as provided under Section 8.9 CLAIMS ARISING OUT OF PAYMENT FOR REQUIRED WORK.

7.25.8 Contractor may protest the assessment or determination by the Engineer of amounts due the State from the Contractor by providing a written notice to the Engineer within thirty (30) days of the date of the Engineer's written assessment or determination. Said notice shall comply with all requirements of subsections 7.25.4 and 7.25.6 above. The requirement of such notice cannot be waived and it is a condition precedent to any claim by the Contractor. Failure to comply with these notice provisions constitutes a waiver of any claim.

7.25.9 In addition to the requirements of subsections 7.25.4, 7.25.6, and 7.25.8, all final written statements of claim shall be certified. This certification requirement applies to the Contractor without exception, including, but not limited to, situations involving "pass through" claims of subcontractors or suppliers. The certification must be executed by a person duly authorized to bind the Contractor with respect to the claim. The certification shall state as follows:

7.25.9.1 "I certify that the claim is made in good faith; that the supporting data are accurate and complete to the best of my knowledge and belief; that the amount requested accurately reflects the contract adjustment for which the Contractor believes the State is liable; and that I am duly authorized to certify the claim on behalf of the Contractor."

7.25.10 Decision on Claim / Appeal - The Contracting Officer shall decide all controversies between the State and the contractor which arise under, or are by virtue of, this contract and which are not resolved by mutual agreement. The decision of the Contracting Officer on the claim shall be final and conclusive, unless fraudulent or unless the contractor delivers to the Adjutant General a written appeal of the Contracting Officer's decision no later than 30 days after the date of the Contracting Officers decision. The Adjutant General's decision shall be final and conclusive, unless fraudulent or unless the contractor brings an action seeking judicial review of the

Adjutant General's decision in an appropriate circuit court of this State within six months from the date of the Adjutant General's decision.

7.25.10.1 If the contractor delivers a written request for a final decision concerning the controversy, the Adjutant General shall issue a final decision within 90 days after receipt of such a request; provided that if the Adjutant General does not issue a written decision within 90 days or within such longer period as may be agreed upon by the parties, then the contractor may proceed as if an adverse decision had been received. Both parties to this contract agree that the period of up to 30 days to appeal the Contracting Officer's decision to the Adjutant General shall not be included in the 90 day period to issue a final decision.

7.25.11 Payment and Interest - The amount determined payable pursuant to the decision, less any portion already paid, normally should be paid without awaiting Contractor action concerning appeal. Such payments shall be without prejudice to the rights of either party. Interest on amounts ultimately determined to be due to a Contractor shall be payable at the Statutory rate applicable to judgments against the State under Chapter 662, HRS from the date of receipt of a properly certified final written statement of actual adjustment required until the date of decision; except, however, that if an action is initiated in circuit court, interest under this Section 7.25 shall only be calculated until the time such action is initiated. Interest on amounts due the State from the Contractor shall be payable at the same rate from the date of issuance of the Engineer's notice to the Contractor. Where such payments are required to be returned by a subsequent decision, interest on such payments shall be paid at the statutory rate from the date of payment.

7.25.12 Contractor shall comply with any decision of the Engineer and proceed diligently with performance of this contract pending final resolution by a circuit court of this State of any controversy arising under, or by virtue of, this contract, except where there has been a material breach of contract by the State; provided that in any event the Contractor shall proceed diligently with the performance of the contract where the Engineer has made a written determination that continuation of work under the contract is essential to the public health and safety.

7.26 FAILURE TO COMPLETE THE WORK ON TIME

7.26.1 Completion of the work within the required time is important because delay in the prosecution of the work will inconvenience the public and interfere with the State's business. In addition, the State will be damaged by the inability to obtain full use of the completed work and by increased engineering, inspection, superintendence, and administrative services in connection with the work. Furthermore, delay may detrimentally impact the financing, planning, or completion of other State projects because of the need to devote State resources to the project after the required completion date. The monetary amount of such public inconvenience, interference with State business, and damages, is difficult, if not impossible, to accurately determine and precisely prove. Therefore, it is hereby agreed that the amount of such damages shall be the appropriate sum of liquidated damages as set forth below.

7.26.1.1 When the Contractor fails to complete the Work or any portion of the Work within the time or times fixed in the contract or any extension thereof, it is agreed the Contractor shall pay liquidated damages to the Department based upon the amount stated in the Offer form.

7.26.1.2 If the Contractor fails to correct Punch list deficiencies as required by Section 7.32 PROJECT ACCEPTANCE DATE, the State will be inconvenienced and damaged, therefore, it is agreed that the Contractor shall pay liquidated damages to the Department based upon the amount stated in the Offer Form. Liquidated damages shall accrue for all days after the Contract Completion Date or any extension thereof until the date the Punchlist items are corrected and accepted by the Engineer.

7.26.1.3 If the Contractor fails to submit final documents as required by Section 7.33 FINAL SETTLEMENT OF THE CONTRACT, the State will be inconvenienced and damaged, therefore, it is agreed that the Contractor shall pay liquidated damages to the Department based upon the amount stated in the Offer Form. Liquidated damages shall accrue for all days after the Contract Completion Date or any extension thereof, until the date the final documents are received by the Engineer.

7.26.1.4 The Engineer shall assess the total amount of liquidated damages in accordance with the amount stated in the Offer Form and provide written notice of such assessment to the Contractor.

7.26.2 Acceptance of Liquidated Damages -The assessment of liquidated damages by the Engineer shall be accepted by the parties hereto as final, unless the Contractor delivers a written appeal of the Engineer's decision in accordance with subsection 7.25.10 requirements. Any allowance of time or remission of charges or liquidated damages shall in no other manner affect the rights or obligations of the parties under this contract nor be construed to prevent action under Section 7.27 TERMINATION OF CONTRACT FOR CAUSE. If the Department terminates the Contractor's right to proceed, the resulting damage will include such liquidated damages for such time as may be required for final completion of the work after the required contract completion date.

7.26.3 Payments for Liquidated Damages -Liquidated damages shall be deducted from monies due or that may become due to the Contractor under the contract or from other monies that may be due or become due to the Contractor from the State.

7.27 TERMINATION OF CONTRACT FOR CAUSE §3-125-18 HAR

7.27.1 Default - If the Contractor refuses or fails to perform the work, or any separable part thereof, with such diligence as will assure its completion within the time specified in this contract, or any extension thereof, fails to complete the work within such time, or commits any other material breach of this contract, and further fails within seven (7) days after receipt of written notice from the Engineer to commence and continue correction of the refusal or failure with diligence and promptness, the Engineer may, by written notice to the Contractor, declare the Contractor in breach and terminate the Contractor's right to proceed with the work or the part of the work as to which there has been delay or other breach of contract. In such event, the Department may take over the work and perform the same to completion, by contract or otherwise, and may take possession of, and utilize in completing the work, the materials, appliances, and plant as may be on the site of the work and necessary therefore. Whether or not the Contractor's right to proceed with the work is terminated, the Contractor and the Contractor's sureties shall be liable for any damage

to the Department resulting from the Contractor's refusal or failure to complete the work within the specified time.

7.27.2 Additional Rights and Remedies - The rights and remedies of the Department provided in this contract are in addition to any other rights and remedies provided by law.

7.27.3 Costs and Charges

7.27.3.1 All costs and charges incurred by the Department, together with the cost of completing the work under contract, will be deducted from any monies due or which would or might have become due to the Contractor had it been allowed to complete the work under the contract. If such expense exceeds the sum which would have been payable under the contract, then the Contractor and the surety shall be liable and shall pay the Department the amount of the excess.

7.27.3.2 In case of termination, the Engineer shall limit any payment to the Contractor to the part of the contract satisfactorily completed at the time of termination. Payment will not be made until the work has satisfactorily been completed and the tax clearance required by Section 8.8 FINAL PAYMENT is submitted by the Contractor. Termination shall not relieve the Contractor or Surety from liability for performance liquidated damages.

7.27.4 Erroneous Termination for Cause - If, after notice of termination of the Contractor's right to proceed under this Section 7.27, it is determined for any reason that good cause did not exist to allow the Department to terminate as provided herein, the rights and obligations of the parties shall be the same as, and the relief afforded the Contractor shall be limited to, the provisions contained in Section 7.28 TERMINATION FOR CONVENIENCE.

7.28 TERMINATION FOR CONVENIENCE §3-125-22 HAR

7.28.1 Termination - The Engineer may, when the interests of the State so require, terminate this contract in whole or in part, for the convenience of the State. The Engineer shall give written notice of the termination to the Contractor specifying the part of the contract terminated and when termination becomes effective.

7.28.2 Contractor's Obligations - The Contractor shall incur no further obligations in connection with the terminated work and on the date set in the notice of termination the Contractor will stop work to the extent specified. The Contractor shall also terminate outstanding orders and subcontracts as they relate to the terminated work. The Contractor shall settle the liabilities and claims arising out of the termination of subcontracts and orders connected with the terminated work subject to the State's approval. The Engineer may direct the Contractor to assign the Contractor's right, title, and interest under terminated orders or subcontracts to the State. The Contractor must still complete the work not terminated by the notice of termination.

7.28.3 Right to Construction and Goods - The Engineer may require the Contractor to transfer title and delivery to the State in the manner and to the extent directed by the Engineer, the following:

7.28.3.1 Any completed work; and

7.28.3.2 Any partially completed construction, goods, materials, parts, tools, dies, jigs, fixtures, drawings, information, and contract rights (hereinafter called "construction material") that the Contractor has specifically produced or specially acquired for the performance of the terminated part of this contract.

7.28.3.3 The Contractor shall protect and preserve all property in the possession of the Contractor in which the State has an interest. If the Engineer does not elect to retain any such property, the Contractor shall use its best efforts to sell such property and construction material for the Department's account in accordance with the standards of section 490:2-706, HRS.

7.28.4 Compensation

7.28.4.1 Contractor shall submit a termination claim specifying the amounts due because of the termination for convenience together with cost or pricing data, submitted to the extent required by subchapter 15, chapter 3-122, HAR. If the Contractor fails to file a termination claim within one year from the effective date of termination, the Engineer may pay the Contractor, if at all, an amount set in accordance with paragraph 7.28.4.3.

7.28.4.2 The Engineer and the Contractor may agree to a settlement provided the Contractor has filed a termination claim supported by cost or pricing data

submitted as required and that the settlement does not exceed the total contract price plus settlement costs reduced by payments previously made by the State, the proceeds of any sales of construction, supplies, and construction materials under paragraph 7.28.3.3 of this Section, and the contract price of the work not terminated.

7.28.4.3 Absent complete agreement, the Engineer shall pay the Contractor the following amounts, less any payments previously made under the contract.

(a) The cost of all contract work performed prior to the effective date of the notice of termination work plus a five percent (5%) markup on the actual direct costs, including amounts paid to subcontractor, less amounts previously paid or to be paid for completed portions of such work; provided, however, that if it appears that the Contractor would have sustained a loss if the entire contract would have been completed, no markup shall be allowed or included and the amount of compensation shall be reduced to reflect the anticipated rate of loss. No anticipated profit or consequential damage will be due or paid.

(b) Subcontractors shall be paid a markup of ten percent (10%) on their direct job costs incurred to the date of termination. No anticipated profit or consequential damage will be due or paid to any subcontractor. These costs must not include payments made to the Contractor for subcontract work during the contract period.

(c) In any case, the total sum to be paid the Contractor shall not exceed the total contract price reduced by the amount of any sales of construction supplies, and construction materials.

7.28.4.4 Costs claimed, agreed to, or established by the State shall be in accordance with chapter 3-123, HAR.

7.29 CORRECTING DEFECTS - If the Contractor fails to commence to correct any defects of any nature, within ten (10) working days after the correction thereof has been requested in writing by the State, and thereafter to expeditiously complete the correction of said defects, the Engineer may without further notice to the Contractor or surety and without termination of contract, correct the defects and deduct the cost thereof from the contract price.

7.30 FINAL CLEANING - Before final inspection of the work, the Contractor shall clean all ground occupied by the Contractor in connection with the Work of all rubbish, excess materials, temporary structures and equipment, and all parts of the work must be left in a neat and presentable condition to the satisfaction of the Engineer. However, the Contractor shall not remove any warning and directional signs prior to the formal acceptance by the Engineer. Full compensation for final cleaning will be included in the prices paid for the various items of work or lump sum bid, as the case may be, and no separate payment will be made therefore.

7.31 SUBSTANTIAL COMPLETION, AND FINAL INSPECTION - Before the Department accepts the project as being completed, unless otherwise stipulated by the Engineer, the following procedure shall be followed:

7.31.1 Substantial Completion:

7.31.1.1 The Contractor and its subcontractors shall inspect the project to confirm whether the Project is Substantially Complete. This inspection effort shall include the testing of all equipment and providing a Punch list that identifies deficiencies which must be corrected. Contractor shall make the corrections and if required repeat the procedure. Also, the Contractor shall schedule final Building, Plumbing, Electrical, Elevator, Fire and other required inspections and obtain final approvals.

(a) When in compliance with the above requirements, the Contractor shall notify the Engineer in writing that project is Substantially Complete and ready for a Final Inspection. Along with the Substantial Completion notification, the Contractor shall provide its Punch list(s) with the status of the deficiencies and dates when the deficiencies were corrected. The Project Inspector and / or the Engineer shall make a preliminary determination whether project is Substantially Complete.

(b) If the Project is not Substantially Complete, the Engineer shall inform the Contractor. The Contractor shall identify deficiencies which must be corrected, update its Punch list, make the necessary corrections and repeat the previous step. After completing the necessary work, the Contractor shall notify the Engineer in writing that Punch list deficiencies have been corrected and the project is ready for a Final Inspection.

(c) If the Project is Substantially Complete, the Engineer shall schedule a Final Inspection within fifteen (15) days of the Contractor's notification letter or as otherwise determined by the Engineer.

7.31.1.2 In addition, and to facilitate closing of the project, the Contractor shall also proceed to obtain the following closing documents (where applicable) prior to the Final Inspection:

- (1) Field-Posted As-Built Drawings.
- (2) Maintenance Service Contract and two (2) copies of a list of all equipment.
- (3) Operating and maintenance manuals.
- (4) Air conditioning test and balance reports.
- (5) Any other final submittal required by the technical sections of the contract.

7.31.2 Final Inspection: If at the Final Inspection the Engineer determines that all work is completed, the Engineer shall notify the Contractor in accordance with Section 7.32 PROJECT ACCEPTANCE DATE. Should there be remaining deficiencies which must be corrected, the Contractor shall provide an updated Punch list to the Engineer, within five (5) days from the Final Inspection Date. The Contractor shall make the necessary corrections.

7.31.2.1 The Engineer shall confirm the list of deficiencies noted by the Contractor's punch list(s) and will notify the Contractor of any other deficiencies that must be corrected before final settlement.

7.31.3 The Engineer may add to or otherwise modify the Punch list from time to time. The Contractor shall take immediate action to correct the deficiencies.

7.31.4 Revoking Substantial Completion - At any time before final Project Acceptance is issued, the Engineer may revoke the determination of Substantial Completion if the Engineer finds it was not warranted. The Engineer shall notify the Contractor in writing with the reasons and outstanding deficiencies negating the declaration. Once notified, the Contractor shall make the necessary corrections and repeat the required steps noted in subsections 7.31.1 and 7.31.2.

7.32 PROJECT ACCEPTANCE DATE

7.32.1 If upon Final Inspection, the Engineer finds that the project has been satisfactorily completed in compliance with the contract, the Engineer shall declare the project completed and accepted and will notify the Contractor in writing of the acceptance by way of the Project Acceptance Notice.

7.32.2 Protection and Maintenance - After the Project Acceptance Date, the Contractor shall be relieved of maintaining and protecting the work EXCEPT that this does not hold true for those portions of the work which have not been accepted, including Punch list deficiencies. The State shall be responsible for the protection and maintenance of the accepted facility.

7.32.3 The date of Project Acceptance shall determine:

7.32.3.1 End of Contract Time.

7.32.3.2 Commencement of all guaranty periods except as noted in Section 7.34 CONTRACTOR'S RESPONSIBILITY FOR WORK: RISK OF LOSS.

7.32.3.3 Commencement of all maintenance services except as noted in Section 7.34 CONTRACTOR'S RESPONSIBILITY FOR WORK: RISK OF LOSS.

7.32.4 Punch list Requirements - If a Punch list is required under Section 7.31 SUBSTANTIAL COMPLETION AND FINAL INSPECTION, the Project Acceptance Notice will include the Engineer's Punch list and the date when correction of the deficiencies must be completed.

7.32.4.1 Punch list corrective work shall be completed prior to Contract Completion Date, or extension thereof.

7.32.5 Upon receiving the Punch list, the Contractor shall promptly devote the required time, labor, equipment, materials and incidentals necessary to correct the deficiencies expeditiously.

7.32.6 For those items of work that cannot be completed by the established date, the Contractor shall submit a schedule in writing to the Engineer for approval along with documentation to justify the time required, no later than five (5) working days before the date stipulated for completion of the Punch list work. A Proposed

schedule submitted after the five (5) day period will not be considered.

7.32.7 Failure to Correct Deficiencies - If the Contractor fails to correct the deficiencies within the time established in paragraph 7.32.4.1, the Contracting Officer shall assess liquidated damages as required by Section 7.26 - FAILURE TO COMPLETE THE WORK ON TIME.

7.32.8 If the Contractor fails to correct the deficiencies and complete the work by the established or agreed to date, the State also reserves the right to correct the deficiencies by whatever method it deems necessary and deduct the cost from the final payment due the contractor.

7.32.9 The Contractor may further be prohibited from bidding in accordance with Section 2.12 - DISQUALIFICATION OF BIDDERS. In addition, assessment of damages shall not prevent action under Section 7.27 - TERMINATION OF CONTRACT FOR CAUSE.

7.33 FINAL SETTLEMENT OF CONTRACT - The contract will be considered settled after the project acceptance date and when the following items have been satisfactorily submitted, where applicable:

7.33.1 Necessary Submissions in addition to the items noted under paragraph 7.31.1.2.

7.33.1.1 All written guarantees required by the contract.

7.33.1.2 Complete and certified weekly payrolls for the Contractor and its Subcontractor(s).

7.33.1.3 Certificate of Plumbing and Electrical Inspection.

7.33.1.4 Certificate of Building Occupancy.

7.33.1.5 Certificates for Soil Treatment and Wood Treatment.

7.33.1.6 Certificate of Water System Chlorination.

7.33.1.7 Certificate of Elevator Inspection, Boiler and Pressure Pipe installation.

7.33.1.8 All other documents required by the Contract.

7.33.2 Failure to Submit Closing Documents - The Contractor shall submit the final Payment Application and the above applicable closing documents within sixty (60)

days from the date of Project Acceptance or the agreed to Punch list completion date. Should the Contractor fail to comply with these requirements, the Engineer may terminate the Contract for cause. The pertinent provisions of Section 7.27 TERMINATION OF CONTRACT FOR CAUSE shall be applicable.

7.33.3 In addition, should the Contractor fail to furnish final closing documents within the required time period, the Engineer shall assess performance liquidated damages as required by Section 7.26 FAILURE TO COMPLETE THE WORK ON TIME.

7.34 CONTRACTOR'S RESPONSIBILITY FOR WORK; RISK OF LOSS

7.34.1 Until the establishment of the Project Acceptance Date or Beneficial Occupancy whichever is sooner, the Contractor shall take every necessary precaution against injury or damage to any part of the work caused by the perils insured by an All Risk policy excluding earthquakes and floods, whether arising from the execution or from the non-execution of the work. The Contractor shall rebuild, repair, restore and make good all injuries or damage to any portion of the work occasioned by the perils insured by an All Risk policy before the date of final acceptance and shall bear the risk and expense thereof.

7.34.2 After the Project Acceptance Date or Beneficial Occupancy whichever is sooner, the Contractor shall be relieved of maintaining and protecting the work except for those portions of the work which have not been accepted including Punch list deficiencies.

7.34.3 The risk of damage to the work from any hazard or occurrence that may be covered by a required Property Insurance policy is that of the Contractor, unless such risk of loss is placed elsewhere by express language in the contract documents. No claims for any loss or damage shall be recognized by the Department, nor will any such loss or damage excuse the complete and satisfactory performance of the contract by the Contractor.

7.35 GUARANTEE OF WORK

7.35.1 In addition to any required manufacturers warranties, all work and equipment shall be guaranteed by the Contractor against defects in materials, equipment or workmanship for one year from the Project Acceptance Date or as otherwise specified in the Contract Documents, whichever is earlier.

7.35.2 Repair of Work - If, within any guarantee period, repairs or changes are required in connection with the guaranteed work, which in the opinion of the Engineer is necessary due to materials, equipment or workmanship which are inferior, defective or not in accordance with the terms of the Contract, the Contractor shall within five (5) working days and without expense to the Department commence to:

7.35.2.1 Place in satisfactory condition in every instance all such guaranteed work and correct all defects therein; and

7.35.2.2 Make good and repair or replace to new or pre-existing condition all damages to the building, facility, work or equipment or contents thereof, resulting from such defective materials, equipment or installation thereof.

7.35.3 Manufacturer's and Installer's Guarantee- Whenever a manufacturer's or installer's guarantee on any product specified in the respective Specification sections, exceeds one year, this guarantee shall become part of this contract in addition to the Contractor's guarantee. Contractor shall complete the guarantee forms in the name of the Department and submit such forms to the manufacturer within such time required to validate the guarantee. Contractor shall submit to the Department a photocopy of the completed guarantee form for the Department's record as evidence that such guarantee form was executed by the manufacturer.

7.35.4 If a defect is discovered during a guarantee period, all repairs and corrections to the defective items when corrected shall again be guaranteed for the original full guarantee period. The guarantee period shall be tolled and suspended for all work affected by the defect. The guarantee period for work affected by the defect shall restart for its remaining duration upon confirmation by the Engineer that the deficiencies have been repaired or remedied.

7.35.5 If guarantee is specified for greater than two (2) years, two (2) years shall prevail except for

manufacturer's warranties. Manufacturer's warranties shall remain as specified in their respective Specification sections.

7.35.5.1 However, the number of years specified in the technical specifications shall prevail only if it is stated that the number of years for guarantee supersedes this provision.

7.36 WORK OF AND CHARGES BY UTILITIES

7.36.1 The Contractor shall be responsible for scheduling and coordinating the work with the utility companies and applicable Governmental agencies for permanent service installation and connections or modifications to existing utilities. The Contractor shall make available all portions of the work necessary for the Utility companies to do their work. The Department shall not bear the risk of any damage to the contract work caused by any utility company, and work of repairing such damage and delay costs must be resolved between the Contractor and the utility company and their insurers.

7.36.2 Unless stated as an allowance item to be paid by the Contractor, the Department will pay the utility companies and applicable governmental agencies directly for necessary modifications and connections. Contractor charges for overhead, supervision, coordination, profit, insurance and any other incidental expenses shall be included in the Contractor's Bid whether the utility is paid directly by the Department or by an allowance item in the Contract.

7.37 RIGHT TO AUDIT RECORDS

7.37.1 Pursuant to Section 103D-317 HRS the State, at reasonable times and places, may audit the books and records of a Contractor, prospective contractor, subcontractor and prospective subcontractor relating to the Contractor's or subcontractor's cost or pricing data. The books and records shall be maintained by the Contractor and subcontractor(s) for a period of four (4) years from the date of final payment under the contract.

7.37.2 The Contractor shall insure that its subcontractors comply with this requirement and shall bear all costs (including attorney's fees) of enforcement in the event of its subcontractor's failure or refusal to fully cooperate.

7.37.3 Additionally, Sections 231-7, 235-108, 237-39 and other HRS chapters through reference, authorizes the Department of Taxation to audit all taxpayers conducting business within the State. Contractors must make available to the Department of Taxation all books and records necessary to verify compliance with the tax laws.

7.38 RECORDS MAINTENANCE, RETENTION AND ACCESS

7.38.1 The Contractor and any subcontractor whose contract for services is valued at \$25,000 or more shall, in accordance with generally acceptable accounting practices, maintain fiscal records and supporting documents and related files, papers, and reports that adequately reflect all direct and indirect expenditures and management and fiscal practices related to the Contractor and subcontractor's performance of services under this Agreement.

7.38.2 The representative of the Department, the Adjutant General of the State of Hawaii, the Attorney General, (the Federal granting agency, the Comptroller General of the United States, and any of their authorized representatives when federal funds are utilized), and the Legislative Auditor of the State of Hawaii shall have the right of access to any book, document, paper, file, or other record of the Contractor and any subcontractor that is related to the performance of services under this Agreement in order to conduct an audit or other examination and / or to make copies, excerpts and transcripts for the purposes of monitoring and evaluating the Contractor and subcontractor's performance of services and the Contractor and subcontractor's program, management, and fiscal practices to assure the proper and effective expenditure of funds and to verify all costs associated with any claims made under this Agreement.

7.38.3 The right of access shall not be limited to the required retention period but shall last as long as the records are retained. The Contractor and subcontractor shall retain all records related to the Contractor and subcontractor's performance of services under this Agreement for four (4) years from the date of final payment, except that if any litigation, claim, negotiation, investigation, audit or other action involving the records has been started before the expiration of the four (4) year period, the Contractor and subcontractors shall retain the records until completion of the action and resolution of all issues that arise from it, or until the end of the four

(4) year retention period, whichever occurs later. Furthermore, it shall be the Contractor's responsibility to enforce compliance with this provision by any subcontractor.

ARTICLE 8 - Measurement and Payment

8.1 MEASUREMENT OF QUANTITIES

8.1.1 All work completed under the Contract shall be measured by the Engineer according to United States standard measures, or as stated in this Contract. The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the contract shall conform to good engineering practice. These measurements shall be considered correct and final unless the Contractor has protested same to the Engineer and has demonstrated the existence of an error by actual physical measurement before the work has progressed in a manner which would prohibit a proper check.

8.1.2 All measurements of the area of the various surface, pavement and base courses will be made in the horizontal projection of the actual surface and no deductions will be made for fixtures or structures having an area of nine (9) square feet or less. All measurements of headers, curbs, fences and any other type of construction which is to be paid for by its length, will be made in the horizontal projection of the actual driven length from toe to top of cutoff, except where slope exceeds ten percent (10%) and for piles, which will be by actual length. All materials which are specified for measurement by the cubic yard "Loose Measurement" or "Measured in the Vehicle" shall be hauled in approved vehicles and measured therein at the point of delivery. Approved vehicles for this purpose may be of any type or size satisfactory to the Engineer, provided that the body is of such type that the actual contents may be readily and accurately determined. Unless all approved vehicles on a job are of a uniform capacity each approved vehicle must bear a plainly legible identification mark indicating the specific approved capacity. The Inspector may reject all loads not hauled in such approved vehicles.

8.2 NO WAIVER OF LEGAL RIGHTS - The Engineer shall not be precluded or estopped by any measurements, estimate or certificate made either before or after the completion and acceptance of the work and payment therefore, from showing the true amount and

character of the work performed and materials furnished by the Contractor, or from showing that any such measurement estimate or certificate is untrue or incorrectly made, or rejecting the work or materials that do not conform in fact to the contract. The Engineer shall not be precluded or estopped, notwithstanding any such measurement, estimate, or certificate and payment in accordance therewith, from recovering from the Contractor and its sureties such damages as the Department may sustain by reason of the Contractor's failure to comply with the terms of the contract. Neither the acceptance by the Engineer or any representative of the Engineer, nor any payment for or acceptance of the whole or any part of the work, nor any extension of time, or any possession taken by the Engineer, shall operate as a waiver of any portion of the contract, or of any power herein reserved, or any right to damage herein provided. A waiver of any notice requirement or breach of the contract shall not be held to be a waiver of any other notice requirement or subsequent breach.

8.3 PAYMENT FOR ADDITIONAL WORK

8.3.1 Payment for Changed Conditions – A contract modification or change order complying with section 4.4 PRICE ADJUSTMENT and section 4.5 ALLOWANCES FOR OVERHEAD AND PROFIT shall be issued for all changes that are directed under Section 4.2 CHANGES. No payment for any change including work performed under the force account provisions will be made until a change order is issued or contract modification is executed.

8.3.1.1 At the completion of the force account work or at an intermediate interval approved by the Engineer, the contractor shall submit its force account cost proposal, including; approved daily force account records with any attached invoices or receipt, to the Engineer for processing a contract modification or change order.

8.3.2 On credit proposals and proposals covering both increases and decreases, the application of overhead and profit shall be on the net change in direct costs for the performance of the work.

8.3.3 When payment is to be made for additional work directed by a field order, the total price adjustment as specified in the field order or if not specified therein for the work contained in the related change order shall be considered full compensation for all materials, labor, insurance, taxes, equipment use or rental and overheads,

both field and home office including extended home and branch office overhead and other related delay impact costs.

8.3.4 Force Account Method - When, for the convenience of the Department, payment is to be made by the Force Account method, all work performed or labor and materials and equipment furnished shall be paid for as described below. Payment by the Force Account method will not alter any rights, duties and obligations under the contract.

8.3.4.1 Labor - For all hourly workers, the Contractor will receive the rate of wage including fringe benefits when such amounts are required by collective bargaining agreement or other employment contract generally applicable to the classes of labor employed on the work, which shall be agreed upon in writing before beginning work for each and every hour that said labor is actually engaged in said work.

(a) All markups for overhead and profit shall be added subject to limitations established in Section 4.5 ALLOWANCES FOR OVERHEAD AND PROFIT.

(b) No allowance for overtime compensation will be given without the written approval of the Engineer prior to performance of such work.

8.3.4.2 Insurance and Taxes - The Contractor and subcontractor(s) will also receive the actual additional costs paid for property damage, liability, workers compensation insurance premiums, State unemployment contributions, Federal unemployment taxes, social security and Medicare taxes to which a markup of up to six percent (6%) may be added.

8.3.4.3 Materials - For materials accepted by the Engineer and used, the Contractor and subcontractor(s) shall receive the actual cost of such materials delivered and incorporated into work, plus a markup allowed under Section 4.5 ALLOWANCES FOR OVERHEAD AND PROFIT.

8.3.4.4 Subcontractors - Subcontractor costs shall be the actual costs of the subcontractor marked up as defined in this Section 8.3 plus a markup allowed under Section 4.5 ALLOWANCES FOR OVERHEAD AND PROFIT.

8.3.4.5 Equipment

- (1) For machinery or special equipment (other than small tools as herein defined in clause 8.3.4.5.(h) owned or leased by the Contractor or a related entity, the use of which has been authorized by the Engineer:
- (a.) The Contractor will be paid at the per-hour rental rates based on the monthly rate established for said machinery or equipment in the then-current edition of the Rental Rate Blue Book for Construction Equipment including the estimated operating cost per hour and regional correction provided therein.
 - (b.) If no rate is listed for a particular kind, type or size of machinery or equipment, then the monthly, hourly rates shall be as agreed upon in writing by the Contractor and the Engineer prior to the use of said machinery or equipment. If there is no agreement, the Engineer will set a rate. The Contractor may contest the rate pursuant to Section 7.25 DISPUTES AND CLAIMS.
 - (c.) Rental rates which are higher than those specified in the aforesaid Rental Rate Blue Book publication may be allowed where such higher rates can be justified by job conditions such as work in water and work on lava, etc. Request for such higher rates shall be submitted in writing to the Engineer for approval prior to the use of the machinery or equipment in question.
- (2) For machinery or special equipment (other than small tools as herein defined in clause 8.3.4.5.(h) rented by the Contractor or a related entity specifically for the Force Account work, the use of which has been authorized by the Engineer; The Contractor will be paid the actual rental cost for the machinery or equipment, including mobilization and demobilization costs. A receipt from the equipment supplier shall be submitted to the Engineer.
- (3) For machinery or special equipment (other than small tools as herein defined in clause 8.3.4.5. (h) rented by the Contractor or a related entity for use in the project, but which will also be used for the Force Account work, the use of which has been authorized by the Engineer; The Contractor will be paid the actual rental cost for the machinery or equipment. No additional mobilization and demobilization costs will be paid. A receipt from the equipment supplier shall be submitted to the Engineer.
- (4) The rental rate for trucks not owned by the Contractor shall be those as established under the Hawaii State Public Utilities Commission, which will be paid for as an equipment item pursuant to paragraph 8.3.4.5. Rental rates for Contractor-owned trucks not listed in the Rental Rate Blue Book shall be agreed upon in writing by the Contractor and Engineer prior to the use of said trucks. If there is no agreement, the Engineer shall set the rate. The Contractor may contest the rate pursuant to Section 7.25 DISPUTES AND CLAIMS.
- (5) The rental period shall begin at the time equipment reaches the site of work, shall include each day that the machinery or equipment is at the site of the work and shall terminate at the end of the day on which the equipment is no longer needed. In the event the equipment must standby due to work being delayed or halted by reason of design, traffic, or other related problems uncontrollable by the Contractor, excluding Saturdays, Sundays and Legal Holidays, unless the equipment is used to perform work on such days, the rental shall be two hours per day until the equipment is no longer needed.
- (5.1) The rental time to be paid will be for the time actually used. Any hours or operation in excess of 8 hours in any one day must be approved by the Engineer prior to the performance of such work.
 - (5.2) Rental time will not be allowed or credited for any day on which machinery or equipment is inoperative due to its breakdown. On such days, the Contractor will be paid only for the actual hours, if any, that the machinery or equipment was in operation.
 - (5.3) In the event the Force Account work is completed in less than 8 hours, equipment rental shall nevertheless be paid for a minimum 8 hours.

- (5.4) For the purpose of determining the rental period the continuous and consecutive days shall be the normal 8-hour shift work day, Monday through Friday excluding legal holidays. Any work day to be paid less than 8 hours shall not be considered as continuous, except for equipment removed from rental for fuel and lubrication.
- (5.5) No additional premium beyond the normal rates used will be paid for equipment over 8 hours per day or 40 hours per week.
- (6) All rental rates for machinery and equipment shall include the cost of fuel, oil, lubricants, supplies, small tools, necessary attachments, repairs, maintenance, tire wear, depreciation, storage, and all other incidentals.
- (7) All machinery and equipment shall be in good working condition and suitable for the purpose for which the machinery and equipment is to be used.
- (8) Individual pieces of equipment or tools having a replacement value of one thousand dollars (\$1,000) or less, whether or not consumed by use, shall be considered to be small tools and included in the allowed markup for overhead and profit and no separate payment will be made therefore.
- (9) The total of all Force Account rental charges accrued over the duration of the contract for a specific item of equipment shall not exceed the replacement cost of that equipment.
- (9.1) The Contractor shall provide the cost of replacement to the Engineer prior to using the equipment. If the Engineer does not agree with the replacement cost, the Engineer shall set the replacement cost. The Contractor may contest the replacement cost pursuant to Section 7.25 DISPUTES AND CLAIMS.
- (10) Should the item of equipment be rented from an unrelated entity, the rental cost will be treated as an equipment cost under paragraph 8.3.4.5.
- (11) Transportation and/or Mobilization: The following provisions shall govern in determining the compensation to be paid to the Contractor for use of equipment or machinery on the Force Account method:
- (11.1) The location from which the equipment is to be moved or transported shall be approved by the Engineer.
- (11.2) Where the equipment must be transported to the site of the force account work, the Department will pay the reasonable cost of mobilizing and transporting the equipment, including its loading and unloading, from its original location to the site of force account work. Upon completion of the work the Department will pay the reasonable cost of mobilizing and transporting the equipment back to its original location or to another location, whichever cost is less.
- (11.3) The cost of transporting the equipment shall not exceed the rates established by the Hawaii State Public Utilities Commission. If such rates are nonexistent, then the rates will be determined by the Engineer based upon the prevailing rates charged by established haulers within the locale.
- (11.4) Where the equipment is self-propelled, the Department will pay the cost of moving the equipment by its own power from its original location to the site of the force account work. Upon completion of the work the Department will pay the reasonable cost of moving of the Equipment back to its original or another location, whichever cost is less.
- (11.5) At the discretion of the Engineer, when the Contractor desires to use such equipment for other than Force Account work, the costs of mobilization and transportation shall be prorated between the Force Account and non Force Account work.
- (12) Pickup trucks, vans, storage trailers, unless specifically rented for the Force Account work, shall be considered incidental to the Force Account work and the costs therefore are included in the markup

allowed under Section 4.5 ALLOWANCES FOR OVERHEAD AND PROFIT.

8.3.4.6 State Excise (Gross Income) Tax and Bond - A sum equal to the current percentage rate for the State excise (Gross Income) tax on the total sum determined in paragraphs 8.3.4.1, 8.3.4.2, 8.3.4.3 and 8.3.4.4 above, and the bond premium shall be added as compensation to the Contractor. The actual bond premium not to exceed one percent (1%) shall be added to items covered by paragraphs 8.3.4.1, 8.3.4.2, 8.3.4.3 and 8.3.4.4 when applicable.

- (1) The compensation as determined in paragraphs 8.3.4.1, 8.3.4.2, 8.3.4.3, 8.3.4.4 and 8.3.4.5 above shall be deemed to be payment in full for work paid on a force account basis.

8.3.4.7 Records - The Contractor and the Engineer shall compare records of the labor, materials and equipment rentals paid by the Force Account basis at the end of each day. These daily records, if signed by both parties, shall thereafter be the basis for the quantities to be paid for by the Force Account method. The Contractor shall not be entitled to payment for Force Account records not signed by the Engineer.

8.3.4.8 Statements - No payment will be made for work on a Force Account basis until the Contractor has submitted to the Engineer, duplicate itemized statements of the cost of such Force Account work detailed as follows:

- (a) Laborers - Name, classification, date, daily hours, total hours, rate, and extension for each laborer and foreman and also the amount of fringe benefits payable if any.
- (b) Equipment - Designation, dates, daily hours, total hours, rental rate, and extension for each unit of machinery and equipment.
- (c) Materials
 - (c.1) Quantities of materials, prices and extensions
 - (c.2) Costs of transporting materials, if such cost is not reflected in the prices of the materials.

- (c.3) Statements shall be accompanied and supported by receipted invoices for all materials used and transportation charges. However, if materials used on the Force Account work are not specifically purchased for such work but are taken from the Contractor's stock, then in lieu of the invoices the Contractors shall submit an affidavit certifying that such materials were taken from stock and that the amount claimed represents the actual cost to the Contractor.

- (d) Insurance - Cost of property damage, liability and worker's compensation insurance premiums, unemployment insurance contributions, and social security tax.

8.4 PROGRESS AND / OR PARTIAL PAYMENTS

8.4.1 Progress Payments - The Contractor will be allowed progress payments on a monthly basis upon preparing the Monthly Payment Application forms and submitting them to the Engineer. The monthly payment shall be based on the items of work satisfactorily completed and the value thereof at unit prices and/or lump sum prices set forth in the contract as determined by the Engineer and will be subject to compliance with Section 7.9 PAYROLLS AND PAYROLL RECORDS.

8.4.2 In the event the Contractor or any Subcontractor fails to submit certified copies of payrolls in accordance with the requirements of Section 7.9 PAYROLLS AND PAYROLL RECORDS, the Engineer may retain the amount due for items of work for which payroll affidavits have not been submitted on a timely basis notwithstanding satisfactory completion of the work until such records have been duly submitted. The Contractor shall not be due any interest payment for any amount thus withheld.

8.4.3 Payment for Materials - The Contractor will also be allowed payments of the manufacturer's, supplier's, distributor's or fabricator's invoice cost of accepted materials to be incorporated in the work on the following conditions:

- 8.4.3.1 The materials are delivered and properly stored at the site of Work; or

8.4.3.2 For special items of materials accepted by the Engineer, the materials are delivered to the Contractor or subcontractor(s) and properly stored in an acceptable location within a reasonable distance to the site of Work.

8.4.4 Partial payments shall be made only if the Engineer finds that:

8.4.4.1 The Contractor has submitted bills of sale for the materials or otherwise demonstrates clear title to such materials.

8.4.4.2 The materials are insured for their full replacement value to the benefit of the Department against theft, fire, damages incurred in transportation to the site, and other hazards.

8.4.4.3 The materials are not subject to deterioration.

8.4.4.4 In case of materials stored off the project site, the materials are not commingled with other materials not to be incorporated into the project.

8.5 PROMPT PAYMENT §3-125-23 HAR

8.5.1 Any money paid to a Contractor for work performed by a subcontractor shall be disbursed to such subcontractor within ten (10) days after receipt of the money in accordance with the terms of the subcontract; provided that the subcontractor has met all the terms and conditions of the subcontract and there are no bona fide disputes on which the Engineer has withheld payment.

8.5.2 Upon final payment to the Contractor, full payment to all subcontractors shall be made within ten (10) days after receipt of the money, provided there are no bona fide disputes over the subcontractor's performance under the subcontract.

8.5.3 All sums retained or withheld from a subcontractor and otherwise due to the subcontractor for satisfactory performance under the subcontract shall be paid by the contracting officer to the contractor and subsequently, upon receipt from the contracting officer, by the contractor to the subcontractor within the applicable time periods specified in subsection 8.5.2 and section 103-10 HRS.

8.5.3.1 Where a subcontractor has provided evidence to the contractor of satisfactorily completing all work under their subcontract and has provided a properly

documented final payment request as described in subsection (8.5.5) of this section, and;

8.5.3.1.a Has provided to the contractor an acceptable performance and payment bond for the project executed by a surety company authorized to do business in the State, as provided in section 8.6 RETAINAGE; or

8.5.3.1.b The following has occurred:

8.5.3.1.b.1 A period of ninety days after the day on which the last of the labor was done or performed and the last of the material was furnished or supplied has elapsed without written notice of a claim given to contractor and the surety, as provided for in section 103D-324 HRS; and

8.5.3.1.b.2 The subcontractor has provided to the contractor:

8.5.3.1.b.2.1 An acceptable release of retainage bond, executed by a surety company authorized to do business in the State, in an amount of not more than two times the amount being retained or withheld by the contractor.

8.5.3.1.b.2.2 Any other bond acceptable to the contractor; or

8.5.3.1.b.2.3 Any other form of mutually acceptable collateral.

8.5.4 If the contracting officer or the contractor fails to pay in accordance with this section, a penalty of one and one-half per cent per month shall be imposed upon the outstanding amounts due that were not timely paid by the responsible party. The penalty may be withheld from future payment due to the contractor, if the contractor was the responsible party. If a contractor has violated subsection 8.5.2 three or more times within two years of the first violation, the contractor shall be referred by the contracting officer to the contractor license board for action under section 444-17(14) HRS.

8.5.5 Final Payment Request. A properly documented final payment request from a subcontractor, as required by subsection 8.5.3, shall include:

8.5.5.1 Substantiation of the amounts requested;

8.5.5.2 A certification by the subcontractor, to the best of the subcontractor's knowledge and belief, that:

8.5.5.2.a The amounts requested are only for performance in accordance with the specification, terms, and conditions of the subcontract;

8.5.5.2.b The subcontractor has made payments due to its subcontractors and suppliers from previous payments received under the subcontract and will make timely payments from the proceeds of the payment covered by the certification, in accordance with their subcontract agreements and the requirements of this section; and

8.5.5.2.c The payment request does not include any amounts that the subcontractor intends to withhold or retain from a subcontractor or supplier in accordance with the terms and conditions of their subcontract; and

8.5.5.2.d The submission of documentation confirming that all other terms and conditions required under the subcontract agreement have been fully satisfied.

8.5.6 The Engineer shall return any final payment request that is defective to the contractor within seven days after receipt, with a statement identifying the defect.

8.5.7 A payment request made by a contractor to the Engineer that includes a request for sums that were withheld or retained from a subcontractor and are due to a subcontractor may not be approved under subsection 8.5.3 unless the payment request includes:

8.5.7.1 Substantiation of the amounts requested; and

8.5.7.2 A certification by the contractor, to the best of the contractor's knowledge and belief, that:

8.5.7.2.a The amounts requested are only for performance in accordance with the specifications, terms, and conditions of the contract;

8.5.7.2.b The subcontractor has made payments due to its subcontractors and suppliers from previous payments received under the contract and will make timely payments from the proceeds of the payment covered by the certification, in accordance with their subcontract agreements and the requirements of this section; and

8.5.7.2.c The payment request does not include any amounts that the contractor intends to withhold or retain

from a subcontractor or supplier in accordance with the terms and conditions of their subcontract.

8.5.8 The Engineer shall return any final payment request that is defective to the contractor within seven days after receipt, with a statement identifying the defect.

8.5.9 This section shall not be construed to impair the right of a contractor or a subcontractor at any tier to negotiate and to include in their respective subcontracts provisions that provide for additional terms and conditions that are requested to be met before the subcontractor shall be entitled to receive final payment under subsection 8.5.3 of this section; provided that any such payments withheld shall be withheld by the Engineer.

8.6 RETAINAGE – The Department will retain a portion of the amount due under the contract to the contractor, to ensure the proper performance of the contract.

8.6.1 The sum withheld by the Department from the contractor shall not exceed five percent (5%) of the total amount due the contractor and that after fifty percent (50%) of the contract is completed and progress is satisfactory, no additional sum shall be withheld; provided further that if progress is not satisfactory, the Engineer may continue to withhold as retainage, sums not exceeding five percent (5%) of the amount due the contractor.

8.6.2 The retainage shall not include sums deducted as liquidated damages from moneys due or that may become due the contractor under the contract.

8.6.3 **General Obligation Bonds** – The contractor may withdraw retainage monies in whole or in part by providing a general obligation bond of the State or its political subdivisions suitable to the Department. The contractor shall endorse over to the Department and deposit with the Department any general obligation bond suitable to the Department, but in no case with a face value less than the value established by law, of the amount to be withdrawn. The Department may sell the bond and use the proceeds in the same way as it may use monies directly retained from progress payments or the final payment.

8.6.4 Any retainage provided for in this section or requested to be withheld by the contractor shall be held by the Engineer.

8.6.5 A dispute between a contractor and subcontractor of any tier shall not constitute a dispute to which the State or any county is a party, and there is no right of action against the State or any county. The State and a county may not be interpleaded in any judicial or administrative proceeding involving such a dispute.

8.6.6 The retention amount withheld by the contractor from its subcontractor shall be not more than the same percentage of retainage as that of the contractor (also applies to subcontractors who subcontract work to other subcontractors) where a subcontractor has provided evidence to the contractor of:

8.6.6.1 A valid performance and a payment bond for the project that is acceptable to the contractor and executed by a surety company authorized to do business in this State;

8.6.6.2 Any other bond acceptable to the contractor; or

8.6.6.3 Any other form of collateral acceptable to the contractor.

8.6.7 A written notice of any withholding shall be issued to a subcontractor, with a copy to the procurement officer, specifying the following:

8.6.7.1 The amount to be withheld;

8.6.7.2 The specific causes for the withholding under the terms of the subcontract; and

8.6.7.3 The remedial actions to be taken by the subcontractor to receive payment of the amounts withheld.

8.6.8 The provisions of this section shall not be construed to require payment to subcontractors of retainage released to a contractor pursuant to an agreement entered into with the contracting officer meeting the requirements of subsection 8.6.3.

8.7 WARRANTY OF CLEAR TITLE - The Contractor warrants and guarantees that all work and materials covered by progress payments made thereon shall be free and clear of all liens, claims, security

interests or encumbrances, and shall become the sole property of the Department. This provision shall not, however, be construed as an acceptance of the work nor shall it be construed as relieving the Contractor from the sole responsibility for all materials and work upon which payments have been made or the restoration of any damaged work, or as waiving the right of the Department to require the fulfillment of all the items of the contract.

8.8 FINAL PAYMENT

8.8.1 Upon final settlement, the final payment amount, less all previous payments and less any sums that may have been deducted in accordance with the provisions of the contract, will be paid to the Contractor, provided the Contractor has submitted a Tax Clearance Certificate from the Department of Taxation and the Internal Revenue Service to the effect that all taxes levied or accrued under Federal and State Statutes against the contractor have been paid.

8.8.2 Sums necessary to meet any claims of any kind by the State may be retained from the sums due the Contractor until said claims have been fully and completely discharged or otherwise satisfied.

8.9 CLAIMS ARISING OUT OF PAYMENT FOR REQUIRED WORK

- If the Contractor disputes any determination made by the Engineer regarding the amount of work satisfactorily completed, or the value thereof, or the manner in which payment therefore is made or calculated, it shall notify the Engineer in writing of the specific facts supporting the Contractor's position. Such notice shall be delivered to the Engineer no later than thirty (30) days after the Contractor has been tendered payment for the subject work, or, if no payment has been tendered, not later than fifty (50) days after it has submitted the Monthly Payment Application required under Section 8.4 PROGRESS PAYMENTS herein to the Engineer for the work that is the subject of the dispute. The delivery of the written notice cannot be waived and shall be a condition precedent to the filing of the claim. No claim for additional compensation for extra work or change work shall be allowed under this provision, unless the notice requirements of Article 4 SCOPE OF WORK have been followed. Acceptance of partial payment of a Monthly Payment Application amount shall not be deemed a waiver of the right to make a claim described herein provided the notice provisions are followed. The existence of or filing of a payment claim herein shall not relieve the Contractor of its duty

to continue with the performance of the contract in full compliance with the directions of the Engineer. Any notice of claim disputing the final payment made pursuant to Section 8.8 FINAL PAYMENT must be submitted in writing not later than thirty (30) days after final payment that is identified as such has been tendered to the Contractor.

ARTICLE 9 - CONFIDENTIALITY OF PERSONAL INFORMATION

9.1 Definitions. "Personal information" means an individual's first name or first initial and last name in combination with any one or more of the following data elements, when either name or data elements are not encrypted:

1. Social Security number,
2. Driver's license number or Hawaii identification card number; or
3. Account number, credit or debit card number, access code, or password that would permit access to an individual's financial information.

Personal information does not include publicly available information that is lawfully made available to the general public from federal, state or local government records. "Technological safeguards" means the technology and the policy and procedures for use of the technology to protect and control access to personal information.

9.2 Confidentiality of Material.

- (1) All material given to or made available to the CONTRACTOR by the STATE by virtue of this Contract which is identified as personal information shall be safeguarded by the CONTRACTOR and shall not be disclosed without the prior written approval of the STATE.
- (2) CONTRACTOR agrees not to retain, use, or disclose personal information for any purpose other than as permitted or required by this Contract.
- (3) CONTRACTOR agrees to implement appropriate "technological safeguards" that are acceptable to the STATE to reduce the risk of unauthorized access to personal information.

(4) CONTRACTOR shall report to the STATE in a prompt and complete manner any security breaches involving personal information.

(5) CONTRACTOR agrees to mitigate, to the extent practicable, any harmful effect that is known to CONTRACTOR because of a use or disclosure of personal information by CONTRACTOR in violation of the requirements of this paragraph.

(6) CONTRACTOR shall complete and retain a log of all disclosures made of personal information received from the STATE, or personal information created or received by CONTRACTOR on behalf of the STATE.

9.3 Security Awareness Training and Confidentiality Agreements.

(1) CONTRACTOR certifies that all of its employees who will have access to the personal information have completed training on security awareness topics relating to protecting personal information.

(2) CONTRACTOR certifies that confidentiality agreements have been signed by all of its employees who will have access to the personal information acknowledging that:

- (a) The personal information collected, used or maintained by the CONTRACTOR will be treated as confidential;
- (b) Access to the personal information will be allowed only as necessary to perform the Contract; and
- (c) Use of the personal information will be restricted to uses consistent with the services subject to this Contract.

9.4 Termination for Cause. In addition to any other remedies provided for by this Contract, if the STATE learns of a material breach by CONTRACTOR of this paragraph by CONTRACTOR, the State may at its sole discretion:

- (1) Provide an opportunity for the CONTRACTOR to cure the breach or end the violation; or

(2) Immediately terminate this Contract.

9.5 Records Retention.

- (1) Upon any termination of this Contract, CONTRACTOR shall pursuant to chapter 487R, HRS, destroy all copies (paper or electronic form) of personal information received from the STATE.
- (2) The CONTRACTOR and any subcontractors shall maintain the files, books, and records that relate to the Contract, including any personal information created or received by the CONTRACTOR on behalf of the STATE, and any cost or pricing data, for three (3) years after the date of final payment under the Contract. The personal information shall continue to be confidential and shall not be disclosed without the prior written approval of the STATE. After the three (3) year retention period has ended, the files, books, and records that contain personal information shall be destroyed pursuant to chapter 487R, HRS.

ADDITIONAL GENERAL CONDITIONS FOR
CONSTRUCTION CONTRACTS

The following sections of the Hawaii Administrative Rules, Chapter §3-125 are hereby incorporated and made a part of the General Conditions.

CHANGES FOR CONSTRUCTION CONTRACTS - §HAR 3-125-4

1. Change Order. The procurement officer, at any time, and without notice to any surety in a signed writing designated or indicated to be a change order, may make changes in the work within the scope of the contract as may be found to be necessary or desirable. Such changes shall not invalidate the contract or release the sureties, and the contractor will perform the work as changed, as though it had been part of the original contract. Minor changes in the work may be directed by the procurement officer with no change in contract price or time or performance.
2. Adjustments of price or time for performance. If any change order increases or decreases the contractor's cost of, or the time required for performance of any part of the work under this contract, whether or not changed by the order, an adjustment may be made and the contract modified in writing accordingly. Any adjustment in contract price made pursuant to this clause shall be determined in accordance with the price adjustment clause of this contract. Failure of the parties to agree to an adjustment shall not excuse a contractor from proceeding with the contract as changed, provided that the State promptly and duly makes such provisional adjustments in payments or time for the direct costs of the work as changed as the State deems reasonable. The right of the contractor to dispute the contract price or time required for performance or both shall not be waived by its performing the work, provided however, that it follows the notice requirements for disputes and claims established by the contract or these rules.
3. Time Period for Claim. Within thirty days after receipt of a written change order under paragraph (1), unless such period is extended by the procurement officer in writing, the contractor shall file a notice of intent to assert claim for an adjustment. The requirement for timely written notice cannot be waived and shall be a condition precedent to the assertion of a claim.
4. Claim barred after final payment. No claim by the contractor for an adjustment hereunder shall be allowed if written notice is not given prior to final payment under this contract.
5. Claims not barred. In the absence of such a change order, nothing in this clause shall restrict the contractor's right to pursue a claim under the contract or for breach of contract.

PRICE ADJUSTMENT FOR CONSTRUCTION CONTRACTS - §HAR 3-125-13.

1. Price adjustment. Any adjustment in contract price pursuant to a clause in this contract shall be made in one or more of the following ways;
 - a. By agreement on a fixed price adjustment before commencement of the pertinent performance or as soon thereafter as practicable;
 - b. By unit prices specified in the contract or subsequently agree upon;
 - c. Whenever there is a variation in quantity for any work covered by any line item in breakdown costs provided by the contractor pursuant to contractual pre-work submittal requirements, by the procurement officer, at the procurement officer's discretion, adjusting the lump sum price proportionately;
 - d. In such other manner as the parties may mutually agree;
 - e. At the sole option of the procurement officer, by the costs attributable to the event or situation covered by the change, plus appropriate profit or fee; or
 - f. In the absence of agreement between the parties, by a unilateral determination by the procurement officer of the costs attributable to the event or situation covered by the clause, plus appropriate profit or fee, all as computed by the procurement officer in accordance with generally accepted accounting principles and applicable sections of chapters 3-123 and 3-126 (of the Hawaii Administrative Rules).

2. Determining the cost or credit. In determining the cost or credit to the State resulting from a change, the allowances for all overhead, extended overhead resulting from adjustments to contract time (including home office and field overhead) and profit combined, shall not exceed the percentages set forth below:
 - a. For the contractor, for any work performed by its own labor forces, fifteen per cent of the cost;
 - b. For each subcontractor involved, for any work performed by its own forces, fifteen per cent of the cost;
 - c. For the contractor or any subcontractor, for work performed by their subcontractors, ten per cent of the amount due the performing subcontractor.

3. Percentages for fee and overhead. Not more than three line item percentages for fee and overhead, not to exceed the maximum percentages shown above, will be allowed regardless of the number of tier subcontractors.

PROMPT PAYMENT BY CONTRACTORS TO SUBCONTRACTORS – §HAR 3-125-23

1. Prompt payment clause. Any money, other than retainage, paid to a contractor shall be dispersed to subcontractors within ten days after receipt of the money in accordance with the terms of the subcontract; provided that the subcontractor has met all the terms and conditions of the subcontract and there are no bona fide disputes; and, upon final payment to the contractor, full payment to the subcontractor, including retainage, shall be

made within ten days after receipt of the money; provided that there are no bona fide disputes over the subcontractor's performance under the subcontract.

CHANGES TO THE GENERAL CONDITIONS

1. Under ARTICLE 1 – DEFINITIONS, insert the following:

“1.70 CONTRACTING OFFICER REPRESENTATIVE (COR): The Department of Defense Project Manager (PM).”

2. Under ARTICLE 2 - PROPOSAL REQUIREMENTS AND CONDITIONS, modify section 2.6 - SUBSTITUTION OF MATERIALS AND EQUIPMENT BEFORE BID OPENING, by renaming section 2.6 - SUBSTITUTION BEFORE CONTRACT AWARD and deleting subsections 2.6.1, through 2.6.6 and substitute the following three new subsections and related paragraphs 2.6.1 through 2.6.3:

“2.6.1 For Substitutions after the Letter of Award is issued; refer to Section 6.3 SUBSTITUTION AFTER CONTRACT AWARD.

2.6.2 Unless specifically required otherwise in the contract documents, Offerors shall not submit products, materials, equipment, articles or systems for review or approval prior to submitting their Offers.

2.6.3 Offerors shall prepare their Offer forms based on the performance requirements of the materials, equipment, articles or systems noted on the drawings and specifications. If trade names, makes, catalog numbers or brand names are specified, Offerors shall infer that these items indicate the quality, style, appearance or performance of the material, equipment, article, or systems to be used in the project. The products and equipment of manufacturers listed throughout the specifications and other manufacturers are acceptable provided they meet or exceed the materials and construction requirements specified and are installed as specified.”

3. Under Article 6, delete subsections 6.3.2.4 and 6.3.3.

(S A M P L E)

Date: _____

Engineering Officer
Department of Defense
State of Hawaii
3949 Diamond Head Road
Honolulu, Hawaii 96816-4495

Dear Sir:

Subject: REQUEST FOR SUBSTITUTION

PROJECT TITLE & JOB NO.: _____

In accordance with the requirements of the Special Provisions and as stated on the Specifications, we hereby submit for substitution, _____ sets of technical brochures and statement of variances for your review and approval for the item(s) shown below.

| <u>ITEM</u> | <u>SPECIFIED BRAND</u> | <u>SUBSTITUTE BRAND</u> | <u>MODIFICATION/VARIANT FEATURES</u> |
|-------------|----------------------------|-----------------------------|------------------------------------------|
|-------------|----------------------------|-----------------------------|------------------------------------------|

I further certify that my request for substitution of the above item(s) has no other variant features.

SIGNATURE

NAME OF COMPANY AND TITLE

- NOTE:
1. Use own letterhead
 2. Submit one (1) original and two (2) copies
 3. If no variant feature indicate "None"

WEEKLY QUALITY CONTROL REPORT FORM

PROJECT: _____

PROJECT NO.: _____

WEEK OF: _____

WORK PERFORMED: _____

INSPECTION REPORT: _____

ATTACH ANY ADDITIONAL INFORMATION

DATE PREPARED: _____

INSPECTOR: _____

VERIFIED BY PRIME CONTRACTOR: _____

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01100 - PROJECT REQUIREMENTS

PART 1 - GENERAL

1.01 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: YCA Hilo Billet Shower Renovation
 - 1. Project Location: 79-1020 Haukapila Street, Kona, Hawaii 96750.
- B. The Work consists of shotcrete repairs.
 - 1. The Work includes
 - a. Mobilization/demobilization.
 - b. Cast-in-place concrete.
 - c. Wood treatment.
 - d. Rough carpentry.
 - e. Solid surface fabrications.
 - f. Membrane waterproofing.
 - g. Sealants.
 - h. Access doors.
 - i. Gypsum wallboard.
 - j. Ceramic tile.
 - k. Painting.
 - l. Bath accessories.
 - m. Plumbing.
- C. Perform operations and furnish equipment, fixtures, appliances, tools, materials, related items and labor necessary to execute, complete and deliver the Work as required by the Contract Documents.
- D. The Division and Sections into which these specifications are divided shall not be considered an accurate or complete segregation of work by trades. This also applies to work specified within each section.
- E. Contractor shall not alter the Drawings and Specification. If an error or discrepancy is found, notify the Contracting Officer.

- F. Specifying of interface and coordination in the various specification sections is provided for information and convenience only. These requirements in the various sections shall complement the requirements of this Section.

1.02 SPECIFICATION FORMATS AND CONVENTIONS

- A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

1. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated and include incomplete sentences. Omission of words or phrases such as “the Contractor shall”, “as shown on the drawings”, “a”, “an”, and “the” are intentional. Omitted words and phrases shall be provided by inference to form complete sentences. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred, as the sense requires. Singular words shall be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates. Where devices, or items, or parts thereof are referred to in the singular, it is intended that such reference shall apply to as many such devices, items or parts as are required to properly complete the Work.
2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.
 - a. The words “shall”, “shall be”, or “shall comply with”, depending on the context, are implied where a colon (:) is used within a sentence or phrase.
3. Abbreviations and Acronyms for Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities indicated in Gale Research’s “Encyclopedia of Associations” or in Columbia Books’ “National Trade & Professional Associations of the U.S.”.

B. Terms

1. Directed: Terms such as “directed”, “requested”, “authorized”, “selected”, “approved”, “required”, and “permitted” mean directed by Contracting Officer, requested by Contracting Officer, and similar phrases.
2. Indicated: The term “indicated” refers to graphic representations, notes, or schedules on drawings or to other paragraphs or schedules in specifications and similar requirements in the Contract Documents. Terms such as “shown”, “noted”, “scheduled”, and “specified” are used to help the user locate the reference.

3. Furnish: The term “furnish” means to supply and deliver to project site, ready for unloading, unpacking, assembly, and similar operations.
4. Install: The term “install” describes operations at project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
5. Provide: The terms “provide” or “provides” means to furnish and install, complete and ready for the intended use.
6. Installer: An installer is the Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-Subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
7. Submit: Terms such as “submit”, “furnish”, “provide”, and “prepare” and similar phrases in the context of a submittal, means to submit to the Contracting Officer.

C. Industry Standards

1. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
2. Publication Dates: Comply with standards in effect as of date of the Contract Documents, unless otherwise indicated.
3. Conflicting Requirements: If compliance with 2 or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Contracting Officer for a decision before proceeding.

1.03 CONTRACT

- A. Refer to SPECIAL PROVISIONS FOR CONSTRUCTION CONTRACTS for other contract conditions.

1.04 WORK SEQUENCE

- A. The Work shall be conducted in two (2) phases.
 1. Phase 1: Renovation of Boy’s Shower. Work of this phase shall be substantially complete and ready for occupancy within thirty (30) days of the commencement of construction.
 2. Phase 2: Renovation of Girl’s Shower. Work of this phase shall be substantially complete and ready for occupancy within thirty (30) days of the completion of Phase 1 work.

1.05 USE OF PREMISES AND WORK RESTRICTIONS

- A. General: Contractor shall have full use of construction zone for construction operations, including use of project site, during construction period. Contractor's use of premises is limited only by State's right to perform work or to retain other Contractors on portions of the project site.

- B. Contractor's use of premises is restricted as follows:
 - 1. Construction Times and Schedule:
 - a. Night, weekend and overtime work is allowed unless restricted elsewhere.

 - 2. Site Access and Parking:
 - a. Parking: Parking for the Contractor's employees (or Subcontractors) will be limited to the available areas within the designated Project Contract Limits or in areas designated by the Contracting Officer. Do not use parking stalls in regularly designated parking zones within the facility grounds. Unauthorized vehicles parked in marked stalls and in any area outside of the designated project construction site will be subject to towing at the Contractor's expense.

 - b. Maintain access to the Loading area through Project Contract Limits.

 - 3. Sanitation:
 - a. Use of facility toilet facilities will be as directed by the Contracting Officer. Facilities shall be kept clean. Abuse of this condition may result in the Contractor providing their own toilet facilities at no additional cost to the State.

 - 4. Noise and Dust Control:
 - a. In adjacent locations surrounding the project site, noise, dust and other disrupting activities, resulting from construction operations, are detrimental to the conduct of the Facility activities. Therefore, Contractor shall monitor its construction activities. Exercise precaution when using equipment and machinery to keep the noise and dust levels to a minimum.

 - b. To reduce loud disruptive noise levels, ensure mufflers and other devices are provided on equipment, internal combustion engines and compressors.

 - c. Schedule construction activities that create excessive noise and dust problems, such as concrete coring, drilling, hammering, trenching, and demolition, for the weekends, holidays or non-business hours. Overtime costs for the Contractor's employees and work force are the Contractor's responsibility.

 - d. The Contracting Officer will require any construction activity that produces excessiveness of noise and dust to be performed during non-business hours. The Contracting Officer shall make the final determination. Overtime costs for the Contractor's employees and work force are the Contractor's responsibility.

 - 5. Other Conditions:

- a. Arrange for construction debris and trash to be removed from project site weekly.
 - b. Operate machinery and equipment with discretion and with minimum interference to driveways and walkways. Do not leave machinery and equipment unattended on roads and driveways.
 - c. Store materials in the areas as designated by the Contracting Officer. Locate construction equipment, machinery, equipment and supplies within the Project Contract Limits.
 - d. Keep access roads roads, to the project site free of dirt and debris. Provide, erect and maintain lights, barriers, signs, etc. when working on facility roads, driveways and walkways to protect pedestrians and moped/bicycle riders. Obey facility traffic and safety regulations.
 - e. All smoking and vaping activities within construction limits on construction sites, indoor or outdoor, are prohibited. Violations will be considered a contractual noncompliance by the general contractor.
- C. Security Provisions: When work is performed outside the normal operating hours of the Department (or Users operations), only a single entry to the building will be permitted and a Special Duty Officer (Deputy Sheriff) shall be stationed at this entrance throughout the period that it is open. Contact and arrange with the Department of Public Safety, Sheriff's Division, Special Duty Assignment Officer by emailing all requests to: kurtlend.d.enos@hawaii.gov, and calling (808) 285-6001 (mobile cell) ; and the Sheriff's office on the island or region on Oahu where the project is to be constructed to provide the security personnel. Make arrangements at least 48 hours before security personnel are required. Special Duty Officer charges are **[\$45.00]** per hour or fraction thereof (minimum of quarter hour increments), for a minimum of 4 hours. If the situation requires more Sheriffs, each additional Sheriff will be paid at the same hourly rate. A Sergeant at an hourly rate of **[\$50.00]** will be required for every four Sheriffs and a Lieutenant at an hourly rate of **[\$55.00]** will be required for every three Sergeants. If the Sheriff's office receives less than 12 hours notice for cancellation of scheduled security services, a minimum of four hours per Sheriff will be assessed to the requester. Pay for State Security Guard's cost as part of the contract. Hourly rates shown above were as of June 16, 2022. No additional compensation will be given for any increase in these hourly rates up to 15%. Payment shall be made directly to the Special Duty Officer within 5 days of receipt after the Officer fills out a W-9 form on the jobsite. Contact the Sheriff's Office under the local jurisdiction of the project building in addition to contacting the Special Duty Assignment Officer as follows:

(1) Hawaii District: (808) 933-8833

Note that the Sheriff's Offices do not possess keys for access to the building such that arrangements must be made with DAGS Central Services Division Public Building Management Services Branch (808) 831-6733 and/or the building Owner to provide keys or the means for access to the building after normal working hours.

1.06 WORK UNDER OTHER CONTRACTS

- A. Separate Contract: The State may execute a separate contract for certain construction at the project site that was not known at the time Offers were submitted.

1.07 FUTURE WORK

- A. It is not anticipated the State will award a future contract that depends on the Work under this contract.

1.08 MISCELLANEOUS PROVISIONS

- A. Historical Archaeological Artifacts: All items having any apparent historical or archaeological interest discovered in the course of construction activities shall be carefully preserved. Should historic remains such as artifacts, burials, concentrations of shell or charcoal be encountered during the construction activities, work shall cease immediately in the adjacent vicinity of the find and the applicable site shall be protected from further damage. The Contractor shall immediately contact the Contracting Officer and the State Historic Preservation Division (SHPD) DLNR at (808) 692-8015. SHPD will assess the significance of the find and recommend an appropriate mitigation measure if necessary.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION [Not Used]

END OF SECTION

SECTION 01310 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - 1. General project coordination procedures.
 - 2. Project meetings.

1.02 PERFORMANCE AND COORDINATION

- A. Contractor is in charge of the Work within the Project Contract Limits, and shall direct and schedule the Work. Include general supervision, management and control of the Work of this project, in addition to other areas more specifically noted throughout the Specifications. Final responsibility for performance, interface, and completion of the Work and the Project is the Contractor's.
- B. The Contractor is responsible for jobsite Administration. Provide a competent superintendent on the job and provide an adequate staff to execute the Work. In addition, all workers shall dress appropriately and conduct themselves properly at all times. Loud abusive behavior, sexual harassment and misconduct will not be tolerated. Workers found in violation of the above shall be removed from the job site as directed by the Contracting Officer.
- C. The State will hold the Contractor liable for all the acts of Subcontractors and shall deal only with the Prime Contractor in matters pertaining to other trades employed on the job.
- D. Coordination: Provide project interface and coordination to properly and accurately bring together the several parts, components, systems, and assemblies as required to complete the Work pursuant to the GENERAL CONDITIONS and SPECIAL CONDITIONS.
 - 1. Provide interface and coordination of all trades, crafts and subcontracts. Ensure and make correct and accurate connections of abutting, adjoining, overlapping, and related work. Provide anchors, fasteners, accessories, appurtenances, and incidental items needed to complete the Work, fully, and correctly in accordance with the Contract Documents.
 - 2. Provide additional structural components, bracing, blocking, miscellaneous metal, backing, anchors, fasteners, and installation accessories required to properly anchor, fasten, or attach material, equipment, hardware, systems and assemblies to the structure.
 - 3. Provide excavation, backfilling, trenching and drilling for trades to install their work.

4. Provide concrete foundations, pads, supports, bases, and grouting for trades as needed to install their work.
5. Equipment, appliances, fixtures, hardware, and systems requiring electrical services shall be provided with such electrical services, including outlets, switches, overload protection, interlocks, panelboard space, disconnects, circuit breakers, and connections.
6. Materials, equipment, component parts, accessories, incidental items, connections, and services required to complete the Work which are not provided by Subcontractors shall be provided by the Contractor.
7. Coordination: Coordinate construction operations included in various Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections, that depend on each other for proper installation connection, and operation.

1.03 COOPERATION WITH OTHER CONTRACTORS

- A. The State reserves the right at any time to contract for or otherwise perform other or additional work within the Project Contract Limits. The Contractor of this project shall to the extent ordered by the Contracting Officer, conduct its work so as not to interfere with or hinder the progress or completion of the work performed by the State or other Contractors.

1.04 COORDINATION WITH OTHER PRIME CONTRACTORS

- A. Multiple prime Contractors performing work under separate agreements with the State may be present near the project location, adjacent to and abutting the Project Contract Limits. This Contractor shall coordinate activities, sequence of work, protective barriers and any and all areas of work interfacing with other Prime Contractor's work. Contractor shall provide a continuity of finishes, walks, landscape, etc. at abutting Contract Limits so no additional work will be required. Any damage to other Prime Contractor's Work committed by this Contractor (or its Subcontractor) shall be repaired promptly at no additional cost to the State.
- B. Coordinate Subcontractors and keep them informed of any work from the other Projects that may affect the site or the Subcontractor's work. If the Contractor has any questions regarding its coordination responsibilities or needs clarification as to the impact in scheduling of its work and the work of other projects, this Contractor shall notify the Contracting Officer in writing.
- C. Subject to approval by the Contracting Officer, this Contractor shall amend and schedule its work and operations to minimize disruptions to the work and operations of other projects.
 1. Relocate or remove and replace temporary barriers, fencing supports or bracing to allow work by others to proceed unimpeded. Do not remove required barriers supporting work until specified time or as approved by the Contracting Officer. This does not relieve the Contractor of the

responsibility of proper coordination of the work. If directed by the Contracting Officer, leave in place any temporary barriers.

2. Coordinate work that abuts or overlaps work of the other projects with the Contracting Officer and other Prime Contractors to mutual agreement so that work is 100 percent complete with continuity of all materials, systems and finishes.
3. When directed by the Contracting Officer, provide access into the construction zone to allow the other project's Contractor(s) to perform their Work and work that must be interfaced.
4. Contractor shall adjust and coordinate its Work and operations as required by the other projects as part of the Work of this contract without additional cost or delay to the State.
5. When directed by the Contracting Officer provide a combined Contractor's construction schedule.

D. Other Contracts: If known, they are listed in SECTION 01100 - PROJECT REQUIREMENTS.

1.05 SUBMITTALS

- A. Photo Documentation: Prior to the start of jobsite work, the Contractor shall photo document the existing conditions at the site and file with the Contracting Officer one complete set of documents.

1.06 PROJECT MEETINGS

- A. General: Schedule and conduct meetings and conferences as directed by the Contracting Officer at the HIENG Office, unless otherwise indicated. The Contractor is not required to set up a field office.
 1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Contracting Officer of scheduled meeting dates and times.
 2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
 3. Minutes: Contractor record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Contracting Officer, within 7 days of the meeting.
- B. Preconstruction Conference: Contracting Officer shall schedule a preconstruction conference before the start of construction, at a time convenient to the Contracting Officer, but no later than 7 days before the Project start date or jobsite start date whichever is later. Conference will be held at the Project site or another convenient location. The Contracting Officer shall conduct the meeting to review responsibilities and personnel assignments.

1. Attendees: Contracting Officer, and design consultants; Facility Users; Contractor and its superintendent; major Subcontractors; manufacturers; suppliers; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with the Project and authorized to conclude matters relating to the Work.
 2. Agenda: Discuss items of significance that could affect progress, including the following:
 - a. Tentative construction schedule.
 - b. Phasing.
 - c. Critical work sequencing and coordination.
 - d. Designation of responsible personnel.
 - e. Use of the premises.
 - f. Responsibility for temporary facilities and controls.
 - g. Parking availability.
 - h. Office, work, and storage areas.
 - i. Equipment deliveries and priorities.
 - j. First aid.
 - k. Security.
 - l. Progress cleaning.
 - m. Working hours.
- C. Progress Meetings: Conduct progress meetings at weekly or other intervals as determined by the Contracting Officer. Coordinate dates of meetings with preparation of payment requests.
1. Attendees: In addition to Contracting Officer, each Contractor, Subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
 2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
 - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's Construction Schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
 - b. Review present and future needs of each entity present, including the following:
 - 1) Outstanding Requests for information (clarification).
 - 2) Interface requirements.
 - 3) Sequence of operations.

- 4) Status of outstanding submittals.
- 5) Deliveries.
- 6) Off-site fabrication.
- 7) Access.
- 8) Site utilization.
- 9) Temporary facilities and controls.
- 10) Work hours.
- 11) Hazards and risks.
- 12) Progress cleaning.
- 13) Quality and work standards.
- 14) Force Account work.
- 15) Change Orders and Change Proposals.
- 16) Documentation of information for payment requests.

c. Corrective Action Plan: Contractor shall provide a plan of corrective action for any item which is delayed or expected to be delayed, then that item impacts the contractual dates.

3. Reporting: Distribute minutes of the meeting to each party present and to parties who should have been present. Include a brief summary, in narrative form, of progress since the previous meeting and report.

a. Schedule Updating: Revise Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01320 - CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
 - 1. Contractor's Construction Schedule.
 - 2. Submittals Schedule.
 - 3. Schedule of Prices.
 - 4. Payment Application.
- B. Related Sections include the following:
 - 1. SECTION 01310 - PROJECT MANAGEMENT AND COORDINATION for preparing a combined Contractor's Construction Schedule.
 - 2. SECTION 01330 - SUBMITTAL PROCEDURES for submitting schedules and reports.

1.02 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
 - 1. Critical activities are activities on the critical path and control the total length of the project. They must start and finish on the planned early start and finish times.
 - 2. Predecessor activity is an activity that must be completed before a given activity can be started.
- B. CPM: Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of project.
- C. Critical Path: The longest continuous chain of activities through the network schedule that establishes the minimum overall Project duration and contains no float.
- D. Event: The starting or ending point of an activity.
- E. Float: The measure of leeway in starting and completing an activity.

1. Float time is not for the exclusive use or benefit of either the Department or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date.
 2. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the following activity.
 3. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.
- F. Schedule of Prices: A statement furnished by Contractor allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Payment Applications.

1.03 SUBMITTALS

- A. Required Submittals: Submit 7 sets of the list of the required submittals, by Specification Section, within 15 days after award of the contract or upon earlier written instructions from the Contracting Officer. A general listing is provided under SECTION 01330 - SUBMITTAL PROCEDURES.
1. The listing shall indicate and include the following:
 - a. The number of copies required for submittal.
 - b. Planned submittal date.
 - c. Approval date required by the Contractor.
 - d. A space where the "date of submittal" can be inserted.
 - e. A space where the "date of approval" can be inserted.
 - f. A space where an "action code" can be inserted.
- B. Construction Schedule: Submit 3 sets of the Construction Schedule for review within 15 days after the award of the contract or upon earlier written instructions from the Contracting Officer.
- C. Schedule of Prices: Submit 3 sets of the Schedule of Prices integrated with the Construction Schedule for review within 15 days after the award of the contract or upon earlier written instructions from the Contracting Officer.
1. Use the Department's forms for Payment applications.
- D. Payment Application: Submit the payment application at earliest possible date and no sooner than the last day of the month after all payroll affidavits, updated submittal registers, and schedules have been submitted.

1.04 COORDINATION

- A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate Contractors.

- B. Construction Schedule: Coordinate Contractor's Construction Schedule with the Schedule of Prices, Submittals Schedule, loaded monthly event activity, and other required schedules and reports.
 - 1. Secure time commitments for performing critical elements of the Work from parties involved.
 - 2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.
- C. Schedule of Prices: Coordinate preparation of the schedule with preparation of Contractor's Construction Schedule.
 - 1. Correlate line items in the Schedule of Prices with other required administrative forms and schedules, including the following:
 - a. The Department's Payment Application form and the Construction Progress Report continuation sheet for the event cost estimate per time period
 - b. Submittals Schedule.

PART 2 - PRODUCTS

2.01 SUBMITTALS SCHEDULE

- A. Comply with the GENERAL CONDITIONS "SHOP DRAWINGS AND OTHER SUBMITTALS" Article. Furnish required submittals specified in this Section and in the Technical Sections. Submittals include one or more of the following: shop drawings, color samples, material samples, technical data, material safety data information, schedules of materials, schedules of operations, guarantees, certifications, operating and maintenance manuals, and field posted as-built drawings.
- B. Preparation: Furnish a schedule of submittals per Contracting Officer.
 - 1. Coordinate Submittals Schedule with list of subcontracts, the Schedule of Prices, and Contractor's Construction Schedule.
 - 2. The schedule shall accommodate a minimum of 21 calendar days for the State's review, as applicable for the Island the project is located.
 - 3. Prepare and submit an updated list to the Contracting Officer at monthly intervals or as directed by the Contracting Officer. The listing shall reflect all approvals received since the last update.

2.02 CONTRACTOR'S CONSTRUCTION SCHEDULE - GANTT CHART METHOD

- A. The construction schedule shall be in the form of a progress chart of suitable scale to indicate appropriately the percentage of work scheduled for completion

- by any given date during the period. The progress chart shall indicate the order in which the Contractor contemplates starting and completing the several salient features of the work (including acquiring materials, plant, and equipment).
- B. Upon completion of the Contracting Officer's review, the Contractor shall amend the schedule as necessary to reflect the comments. If necessary, the Contractor shall participate in a meeting with the Contracting Officer to discuss the proposed schedule and changes required. Submit the revised schedule for review within 7 calendar days after receipt of the comments.
 - C. Use the reviewed schedule for planning, organizing and directing the work, for reporting progress, and for requesting payment for the work completed. Unless providing an update, do not make changes to the reviewed schedule without the Contracting Officer's approval.
 - D. If, in the opinion of the Contracting Officer, the Contractor falls behind the approved schedule, the Contractor shall take steps necessary to improve progress, including those that may be required by the Contracting Officer, without additional cost to the State. The Contracting Officer may require the Contractor to increase the number of shifts, overtime operations, days of work, or amount of construction plant, and to submit for approval any supplemental schedule or schedules in chart form as the Contracting Officer deems necessary to demonstrate how the approved rate of progress will be regained.
 - E. Update the construction schedule at monthly intervals or when directed by the Contracting Officer to revise the schedule. Reflect any changes occurring since the last update with each invoice for progress payment. Submit copies of the purchase orders and confirmation of the delivery dates as directed. The Contracting Officer's review of the updated schedule is to check that the updated schedule does not alter the construction performance period unless the period was revised through a change order or contract modification.

2.03 SCHEDULE OF PRICES

- A. Furnish a schedule of prices per Contracting Officer.
- B. Provide a breakdown of the Contract Sum in enough detail to facilitate developing and the continued evaluation of Payment Applications. Provide several line items for principal subcontract amounts, or for materials or equipment purchased or fabricated and stored, but not yet installed, where appropriate. Round amounts to nearest whole dollar; total shall equal the Contract Price.
- C. Each item in the Schedule of Prices and Payment Application shall be complete. Include total cost and proportionate share of general overhead and profit for each item.

2.04 PAYMENT APPLICATION

- A. Use the Schedule of Prices as the Monthly Construction Progress Report. Each Payment Application shall be consistent with previous applications and payments. The Contracting Officer shall determine the appropriateness of each payment application item.
- B. Payment Application Times: The date for each progress payment is the last day of each month. The period covered by each Payment Application starts on the first day of the month or following the end of the preceding period and ends on the last day of the month.
- C. Updating: Update the schedule of prices listed in the Payment application when Change Orders or Contract Modifications result in a change in the Contract Price.
- D. Provide a separate line item for each part of the Work where Payment Application may include materials or equipment purchased or fabricated and stored, but not yet installed.
- E. Differentiate between items stored on-site and items stored off-site. Include evidence of insurance or bonded warehousing if required.
- F. Provide separate line items for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
- G. Payment Application Forms: Use and submit copies of the Payment Application and Construction Progress forms provided by Department. Forms are available at the Department's Public Works Division office or District office. Furnish 7 copies.
- H. Application Preparation: Complete every entry on form. Execute by a person authorized to sign legal documents on behalf of the Contractor.
 - 1. Entries shall match data on the Schedule of Prices and Contractor's Construction Schedule. Use updated schedules if revisions were made. Include amounts of Change Orders and Contract Modifications issued before last day of construction period covered by application.
- I. No payment will be made until the following are submitted each month:
 - 1. Monthly Estimate, 3 copies.
 - 2. Monthly Progress Report, 3 copies.
 - 3. Statement of Contract Time, 3 copies.
 - 4. Updated Submittal Register, 3 copy.
 - 5. Updated Progress Schedule, 3 copy.
 - 6. All Daily Reports, 3 copy.
 - 7. All Payroll Affidavits for work done, 3 copy.

- J. Retainage: The Department will withhold retainage in compliance with the GENERAL CONDITIONS.
- K. Transmittal: Submit the signed original and 6 copies of each Payment Application for processing.

2.05 GENERAL CONTRACTOR AND SUBCONTRACTORS DAILY PROGRESS REPORTS

- A. The General Contractor is responsible for submitting the General Contractor and Subcontractor Daily Progress Reports (Daily Reports) for the General Contractor, all subcontractors, and any lower-tier subcontractors.
- B. The form of the Daily Reports shall be as directed by the Contracting Officer. A separate report shall be made and submitted for the General Contractor (each calendar day) and each subcontractor (each day worked). The report shall include the following information for each employer: Name of General Contractor or Subcontractor, Report Number, Contract Day (consecutive calendar day from Notice to Proceed (NTP) Date), Date worked, work location and description, number of workers, trade/labor classification, and work hours. For General Contractor, only the Contract Day is required because the Report Number will be the same number.
- C. The Daily Reports shall be prepared from the project NTP Date. Daily Reports shall continue to be prepared and submitted up to the Project Acceptance Date. After the Project Acceptance Date, Daily Reports will be submitted for days worked only, and continue to date of Contract Completion Notice. Running Contract Day will stop at Project Acceptance Date.
- D. Submit/upload copies of the previous day's reports to the appropriate online folder(s) within the State's web based construction management system as directed by the Contracting Officer by 10:00 a.m. of the next working day.
- E. Daily Reports can be handwritten in the field.
- F. A sample Daily Progress Report Form will be supplied prior to start of work.

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01330 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.01 SUMMARY

- A. Comply with the GENERAL CONDITIONS “Shop Drawings and Other Submittals” section and “Material Samples” section.
- B. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other miscellaneous submittals.
- C. Related Sections include the following:
 - 1. SECTION 01320 - CONSTRUCTION PROGRESS DOCUMENTATION for submitting schedules and reports, including Contractor’s Construction Schedule and the Submittals Schedule.
 - 2. SECTION 01770 - CLOSEOUT PROCEDURES for submitting warranties, project record documents and operation and maintenance manuals.

1.02 SUBMITTAL PROCEDURES

- A. Coordinate Work and Submittals: Contractor shall certify the submittals were reviewed and coordinated.
- B. Submittal Certification: Provide in MS Word when submitting electronically. Contracting Officer will provide an electronic copy of the Submittal Certification. Provide a reproduction (or stamp) of the “Submittal Certification” and furnish the required information with all submittals. Include the certification on:
 - 1. The title sheet of each shop drawing, or on
 - 2. The cover sheet of submittals in 8-1/2 inch x 11-inch format, or on
 - 3. One face of a cardstock tag (minimum size 3-inch x 6-inch) tied to each sample. On the sample tag, identify the sample to ensure sample can be matched to the tag if accidentally separated. The opposite face of the tag will be used by the Contracting Officer to receive, review, log stamp and include comments.
- C. Variances: The Contractor shall request approval for a variance. Clearly note any proposed deviations or variances from the Specifications, Drawings, and other Contract Documents on the submittal and also in a separately written letter accompanying the submittal.

- 3. Tests
- 4. Closing
- D. Contractor shall separate all different types of data as separate line items all with the column requirements.
- E. Contractor shall send monthly updates and reconciled copies electronically to the Contracting Officer and the Design Consultant in MS Word or MS Excel or other format as accepted by the Contracting Officer.

| Section No. - Title | Shop Drawings & Diagrams | Samples | Certificates (Material, Treatment, Applicator, etc.) | Product Data, Manufacturer's Technical Literature | MSDS Sheets | Calculations | Reports (Testing, Maintenance, Inspection, etc.) | Test Plan | O & M Manual | Equipment or Fixture Listing | Schedules (Project Installation) | Maintenance Service Contract | Field Posted As-Built Drawings | Others | Guaranty or Warranty | Manufacturer's Guaranty or Warranty (Greater than one year) |
|---------------------------------------------|--------------------------|---------|------------------------------------------------------|---------------------------------------------------|-------------|--------------|--------------------------------------------------|-----------|--------------|------------------------------|----------------------------------|------------------------------|--------------------------------|--------|----------------------|-------------------------------------------------------------|
| 01310 – Project Management and Coordination | | | | | | | | | | | ■ | | | ■ | | |
| 01320 – Construction Progress Documentation | | | | | | | | | | | ■ | | | ■ | | |
| 01330 – Submittal Procedures | | | ■ | | | | | | | | | | | ■ | | |
| 01400 – Quality Requirements | | | ■ | | | | ■ | | | | | | | | | |
| 01500 – Temporary Facilities and Controls | | | | | | | ■ | | | | | | | ■ | | |

| Section No. – Title | Shop Drawings & Diagrams | Samples | Certificates (Material, Treatment, | Product Data, Manufacturer's | MSDS Sheets | Calculations | Reports (Testing, Maintenance, Test Plan | O & M Manual | Equipment or Fixture Listing | Schedules (Project Installation) | Maintenance Service Contract | Field Posted As-Built Drawings | Others | Guaranty or Warranty | Manufacturer's Guaranty or Warranty |
|-------------------------------------------------------|--------------------------|---------|------------------------------------|------------------------------|-------------|--------------|------------------------------------------|--------------|------------------------------|----------------------------------|------------------------------|--------------------------------|--------|----------------------|-------------------------------------|
| 01575 – Temporary Controls – Air Quality Requirements | | | ■ | | | | | | | | | | ■ | | |
| 01700 – Execution Requirements | | | | | | | | | | | | | ■ | | |
| 01770 – Closeout Procedures | ■ | | | | | | | ■ | | | | ■ | ■ | ■ | |
| 02070 – Selective Demolition | | | | | | | | | | | | | ■ | | |
| 03300 – Cast-in-Place Concrete | ■ | | | ■ | | | | | | | | | ■ | | |
| 06070 – Wood Treatment | | | ■ | ■ | ■ | | | | | | | | | 2 | 5 |
| 06100 – Rough Carpentry | | | ■ | | | | | | | | | | | | |
| 06611 – Solid Surface Fabrications | ■ | ■ | | ■ | | | | | | | | | | | 5 |
| 07110 – Membrane Waterproofing | | | ■ | ■ | ■ | | | | | | | | ■ | 2 | |
| 07920 - Sealants | | ■ | | ■ | ■ | | | | | | | | | 2 | |
| 08305 – Access Doors | | | | ■ | | | | | | | | | ■ | | |
| 09250 – Gypsum Wallboard | ■ | | | ■ | ■ | | | | | | | | | | |
| 09310 – Ceramic Tile | | ■ | ■ | | | | ■ | | | | | | ■ | | 2 |
| 09901 – Painting | | ■ | ■ | ■ | ■ | | | | | ■ | | | ■ | 2 | |
| 10800 – Bath Accessories | | ■ | | ■ | | | | | | ■ | | | | | |
| 15000 – General Mechanical Requirements | ■ | | ■ | ■ | | | ■ | ■ | | ■ | | ■ | ■ | 2 | |
| 15400 - Plumbing | | | | ■ | | | | | | | | | ■ | 2 | |

| | | | | | | | | | | | | | | | | |
|------------------------|---|--|--|---|--|--|--|--|--|--|--|--|---|---|----|--|
| 15800 - Ventilation | ■ | | | ■ | | | | | | | | | ■ | ■ | 12 | |
|------------------------|---|--|--|---|--|--|--|--|--|--|--|--|---|---|----|--|

END OF SECTION

SECTION 01400 - QUALITY REQUIREMENTS

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section includes administrative and procedural requirements for quality assurance.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Specific quality-control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
 - 2. Specified tests, inspections, and related actions do not limit Contractor's quality-control procedures that facilitate compliance with the Contract Document requirements.
 - 3. Requirements of this section or by the Department or authorities having jurisdiction, do not limit the Contractor's responsibility to provide quality-control services.
- C. Related Sections include the following:
 - 1. Section 01210 "Allowances" for testing and inspecting allowances.

1.02 DEFINITIONS

- A. **Quality-Assurance Services:** Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and ensure that proposed construction complies with requirements.
- B. **Quality-Control Services:** Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that completed construction complies with requirements. Services do not include contract enforcement activities performed by Contracting Officer.
- C. **Testing Agency:** An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.

1.03 (NOT USED)

1.04 SUBMITTALS

- A. **Qualification Data:** For QC Manager (alternate QC Manager), inspection and testing agencies, furnish evidence to demonstrate their capabilities and experience. Include proof of qualifications in the form of education, certifications, and license. For the testing agencies, include a recent report on the inspection of the testing agency by a recognized authority.

1. The Contracting Officer may disapprove any QC Manager (alternate QC Manager), inspection or testing agency or individual employed by the agency when the Contracting Officer determines it is in the best interest of the State. The Contractor is not entitled to any claim or cost increase or time extension due to the Contracting Officer's disapproval of an agency or individual.
- B. Reports: Prepare and submit certified written reports that include the following:
1. Date of issue.
 2. Project title and number.
 3. Name, address, and telephone number of testing agency.
 4. Dates and locations of samples and tests or inspections.
 5. Names of individuals making tests and inspections.
 6. Description of the Work and test and inspection method.
 7. Identification of product and Specification Section.
 8. Complete test or inspection data.
 9. Test and inspection results and an interpretation of test results.
 10. Ambient conditions at time of sample taking and testing and inspecting.
 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
 12. Name and signature of laboratory inspector.
 13. Recommendations on retesting and reinspecting.
 14. Combined Contractor Production and Contractor Quality Control Report, (one sheet): By 10:00 AM the next working day after each day that work is performed.
- C. Permits, Licenses, and Certificates: Submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.05 SCHEDULE FOR SUBMITTING INFORMATION AND REPORTS

- A. Deliver the original and two copies each of the following to the Department:
1. Combined Contractor Production and Contractor Quality Control Report, (one sheet): By 10:00 AM the next working day after each day that work is performed.

3. Field Test Reports: Within two working days after the test is performed, attached to the Contractor Quality Control Report;
4. Monthly Summary Report of Tests: 2 copies attached to the Contractor Quality Control Report;
5. Testing Plan and Log: 2 copies, at the end of each month;
6. Rework Items List: 2 copies, by the last working day of the month;
7. Quality Control meeting minutes: 2 copies, within 2 working days after the meeting and;
8. Quality Control Certifications: As required by the paragraph titled "Quality Control Certifications.

1.06 QUALITY ASSURANCE

- A. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- B. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- C. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing architect or engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar to those indicated for this Project in material, design, and extent.
- D. Inspection and Testing Agency Qualifications: An agency with the experience and capability to conduct testing and inspecting indicated, as documented by ASTM E-548, and that specializes in types of tests and inspections to be performed.

1.07 QUALITY CONTROL

- A. Contractor Responsibilities: Unless otherwise indicated, provide quality-control services specified and required by authorities having jurisdiction.
 1. Engage qualified inspection or testing agencies to perform quality-control services , unless services are indicated as the Department's responsibility.
 2. Notify Contracting Officer and the inspection or testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
 3. Submit certified written reports of each quality-control service.

4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- B. Special Inspections:
1. Special inspection per chapter 17 of the 2018 international building code govern portions of the work as described in the construction documents.
 2. The contractor shall hire and pay for third party special inspection and testing during construction of the following work:
 - a. Concrete
 - b. Reinforcing Steel
 - c. Gypsum Board Wall and Ceiling.
 - d. Plumbing Components.
 - e. All other special inspections as required by the Building Code.
 3. The minimum responsibilities of the special inspector shall be as outlined in chapter 17 of the "International Building Code" 2018 edition.
 4. It shall be the responsibility of the general contractor to notify the special inspector and the Engineer or his representative of all items requiring special inspection a minimum of 48 hours in advance.
 5. Special inspections do not relieve the general contractor of his responsibilities to complete the project in accordance with the construction documents and to be responsible for safety on the jobsite.
 6. During the course of the work under inspection, each Special Inspector shall submit detailed reports relative to progress and conditions of the Work, including deviations from specified requirements and stipulating dates, times and location. The special inspector shall submit a final report to the Contracting Officer stating whether the work requiring special inspection was, to the best of his/her knowledge, in conformance with construction documents and the applicable workmanship provisions of the building code.
 7. The special inspector shall be certified as a special inspector by the building official or the international conference of building officials (ICBO).
 8. The contractor shall check the construction prior to requesting for inspection. The contractor is responsible for their own work and shall not rely on the special inspector to catch all construction discrepancies.
- C. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing.

- D. Retesting and Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that revised or replaced Work that failed to comply with requirements established by the Contract Documents.
- E. Testing Agency Responsibilities: Cooperate with the Department and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
1. Notify the Contracting Officer and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 2. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
 3. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
 4. Do not release, revoke, alter, or increase requirements of the Contract Documents or approve or accept any portion of the Work.
 5. Do not perform any duties of Contractor.
- F. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
1. Access to the Work.
 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 4. Facilities for storage and field-curing of test samples.
 5. Preliminary design mix proposed for use for material mixes that require control by testing agency.
 6. Security and protection for samples and for testing and inspecting equipment at Project site.
- G. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and quality-control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
1. Schedule times for tests, inspections, obtaining samples, and similar activities.

1.08 QUALITY CONTROL MANAGER

- A. Duties: Provide a Quality Control Manager at the work site to implement and manage the QC Program. In addition to implementing and managing the QC Program, the QC Manager may perform the duties of the Project Superintendent. The QC Manager is required to; [attend the Coordination and Mutual Understanding Meeting,] conduct the QC meetings, perform submittal review, ensure testing is performed and provide QC certifications and documentation required in this Contact. The QC Manager is responsible for managing and coordinating [the QC specialists,] Testing Laboratory personnel and any other inspection and testing personnel required by this Contract.

Technical Service Office.

- B. Qualifications: An individual with a minimum of [10] years experience as [a superintendent, inspector, QC Manager, project manager, or construction manager] on similar size and type construction contracts which included the major trades that are part of this Contract. The individual must have experience in the areas of hazard identification and safety compliance. It is desirable that the QC Manager completed the course "Construction Quality Management for Contractors" offered by the Navy or the Army Corps of Engineers or other similar course.
- C. Approval: QC Manager shall be subject to the approval of the Contracting Officer. Unless the Contractor has a QC Manager on staff, the Contractor shall provide the names of at least three individuals, and shall rank the individuals based on the Contractor's preference to work with or hire. The Contracting Officer may approve all or any one of the individuals. If any individual is presently working for the Contractor as a QC Manager, the Contractor may choose to submit only one individual, and that individual is subject to approval.
1. Furnish evidence showing the individual(s) meets the qualifications, experience, training and other criteria required by this section.

1.09 (Not Used)

1.10 (Not Used)

1.11 (Not Used)

1.12 (Not Used)

1.13 (Not Used)

1.14 (Not Used)

1.15 (Not Used)

1.16 (Not Used)

1.17 (Not Used)

1.18 (Not Used)

1.19 RECORD (As-Builts) DRAWINGS

- A. The QC Manager is required to ensure the record drawings and jobsite record sets are kept current on a daily basis in accordance with Section 01770 – Closeout Procedures.

1.20 NOTIFICATION OF NON-COMPLIANCE

- A. Contractor will be notified of any detected non-compliance items. Take immediate corrective action after receipt of such notice.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.01 REPAIR AND PROTECTION

- A. General: On completion testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
 - 1. Provide materials and comply with installation requirements specified in other Sections of these Specifications. Restore patched areas and extend restoration into adjoining areas in a manner that eliminates evidence of patching.
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

3.02 DEPARTMENT'S AUTHORITY

- A. Review and removal of Quality Control Personnel:
 - 1. All Quality Control organization personnel are subject to review by Contracting Officer; and the Contracting Officer may interview any member of the Quality Control organization at any time in order to verify the submitted qualifications.
 - 2. The Contracting Officer has the authority to have the QC Manager replaced at any time for cause. Justifications may include, but are not limited to: not being on site when QC Manager's duties are required, or wrongfully approving substandard and noncompliant work.
 - 3. The Contractor is not entitled to any claim or cost increase or time extension due to the Contracting Officer's disapproval of an agency or individual.

END QUALITY REQUIREMENTS SECTION

SECTION 01500 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.01 SUMMARY

- A. Requirements for temporary facilities and controls, including temporary utilities, support facilities, and security and protection facilities.
- B. Temporary utilities include but are not limited to, the following:
 - 1. Water service and distribution.
 - 2. Sanitary facilities, including toilets, wash facilities, and drinking water facilities.
 - 3. Electric power service.
 - 4. Lighting.
 - 5. Telephone service.
- C. Support facilities include, but are not limited to, the following:
 - 1. Project signs.
 - 2. Storage and fabrication sheds.
 - 3. Trash, refuse disposal.
 - 4. Temporary roads and paving.
 - 5. Erosion controls and site drainage.
 - 6. Construction aids and miscellaneous services and facilities.
- D. Security and protection facilities and measures include, but are not limited to, the following:
 - 1. Environmental protection.
 - 2. Stormwater control.
 - 3. Related Sections: Refer to Divisions 2 through 10 for other temporary requirements.

1.02 USE CHARGES

- A. General: Cost or use charges for temporary facilities are not chargeable to the State and shall be included in the Contract Price. Allow other entities to use temporary services and facilities without cost, including, but not limited to, the following:
 - 1. Other Contractors with agreements with the State working within the contract limits.
 - 2. Occupants of Project.
 - 3. Testing agencies.
 - 4. Contracting Officer and personnel of authorities having jurisdiction.

1.03 SUBMITTALS

- A. Temporary Utility Reports: Submit reports of tests, inspections, meter readings, and similar procedures performed on temporary utilities.

- B. Landfill Disposal Receipts: Submit copies of receipts issued by a landfill facility. Include receipts with Contractor Daily Progress Report

1.04 QUALITY ASSURANCE

- A. Standards: Comply with IBC Chapter 33, "Safeguards During Construction", ANSI A10.6, NECA's "Standard for Installing and Maintaining Temporary Electric Power at Construction Sites", and NFPA 241, "Standard for Safeguarding Construction, Alteration, and Demolition Operations".
 - 1. Trade Jurisdictions: Assigned responsibilities for installation and operation of temporary utilities are not intended to interfere with trade regulations and union jurisdictions.
 - 2. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70, "National Electrical Code".
 - a. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

1.05 PROJECT CONDITIONS

- A. Temporary Utilities: At earliest feasible time, when acceptable to the Contracting Officer, change over from use of temporary service to use of permanent service.
 - 1. Temporary Use of Permanent Facilities: Installer of each permanent service shall assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Contracting Officer's acceptance, regardless of previously assigned responsibilities.
- B. Conditions of Use: The following conditions apply to use of temporary services and facilities by all parties engaged in the Work:
 - 1. Keep temporary services and facilities clean and neat.
 - 2. Relocate temporary services and facilities as required by progress of the Work.

1.06 PREPARATION AND PROTECTION

- A. Protection of Property: Continually maintain adequate protection of the Work from damage and protect all property, including but not limited to buildings, equipment, furniture, grounds, vegetation, material, utility systems located at and adjoining the job site. Repair, replace or pay the expense to repair damages resulting from Contractor's fault or negligence.
- B. Before starting work to be applied to previously erected constructions, make a thorough and complete investigation of the recipient surfaces and determine their suitability to receive required additional construction and finishes. Make any repair that is required to properly prepare surfaces, and coordinate the Work to provide a suitable surface to receive following Work.

- C. Commencing work by any trade implies acceptance of existing conditions and surfaces as satisfactory for the application of subsequent work, and full responsibility for finished results and assumption of warranty obligations under the Contract.
- D. Protect existing (including interiors) work to prevent damage by vandals or the elements. Provide temporary protection. Use curtains, barricades, or other appropriate methods. Take positive measures to prevent breakage of glass and damage to plastic, aluminum and other finishes.
- E. Repairs and Replacements: Promptly replace and repair damages to the approval of the Contracting Officer. Additional time required to secure replacements and to make repairs does not justify a time extension.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. General: Provide new materials. Undamaged, previously used materials in serviceable condition may be used if approved by Contracting Officer. Provide materials suitable for use intended.
- B. Water: Potable.

2.02 EQUIPMENT

- A. Drinking Water Fixtures: Drinking water fountains or containerized, tap dispenser, bottled water drinking water units, or water cooler dispensing water at 45 - 55 degree F available at project site including paper cup supply.
- B. Electrical Outlets: Properly configured, NEMA polarized outlets to prevent insertion of 110 to 120 V plugs into higher voltage outlets; equipped with ground fault circuit interrupters, reset button, and pilot light.
- C. Power Distribution System Circuits: Where permitted and overhead and exposed for surveillance, wiring circuits, not exceeding 125 V ac, 20 A rating, and lighting circuits may be nonmetallic sheathed cable.

PART 3 - EXECUTION

3.01 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.
- B. Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.02 TEMPORARY UTILITY INSTALLATION

- A. Engage appropriate local utility company to install temporary service or connect to existing service where directed by the Contracting Officer. Where utility company provides only part of the service, provide the remainder with matching, compatible materials and equipment. Comply with utility company recommendations.
1. Arrange with utility company, the Department, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
 2. Provide adequate capacity at each stage of construction. Before temporary utility is available, provide trucked in services.
- B. Storm Drainage: Drainage due to construction related activities into any storm drain and any major water runoff from the project site is generally prohibited. Drainage ditches, ponds or similar facilities capable of holding drainage water is recommended if possible. NPDES (National Pollutant Discharge Elimination System) permit is required for a project site one acre or more of land area (depending on configuration of a project site, it is possible that land area assumed to be less than one acre could be determined to be one acre or more and require a NPDES permit). Supporting documents such as Storm Water Pollution Control Plan, Spill Prevention and Response Plan, Storm Water Monitoring Plan, Best Management Practices Plan and other possible documents may be required for the permit application. The State Department of Health, Clean Water Branch should be contacted to determine all submission requirements for the permit application.
- C. Sewer Drainage: The respective environmental departments regulating wastewater for each County should be contacted to obtain a wastewater discharge permit if there is any intention to discharge effluents into any existing sewer manhole or to make a piping connection into any existing sewer line, if allowed by the County. A construction permit application may also be required if the intent is to make a temporary piping connection into the existing sewer line if the initial permit application for the project and associated design documents submitted did not include these details. There are regulations to determine what effluents may or may not be allowed to be discharged into the existing sewer system with temporary filtration, separators or other devices determined to be acceptable.
- D. Water Service: Make arrangements with the utility company for temporary use of water, and pay for all expenses. However, at the option of the Contractor, a temporary tap into the facility's existing water system is allowed, subject to the following conditions:
1. Comply with the Department of Health's and County water provider's requirements when tapping into the existing water system.
 2. Reasonable amounts of water will be available without charge.
 3. Meter the tapped line and prior to water use, notify the Contracting Officer to observe an initial meter reading.
 4. Take monthly meter readings. Pay the State, on a monthly basis, for water used at the current rate per 1,000 gallons.
 5. Payments are to be by check, made payable to the "Director of Finance, State of Hawaii" and mailed as directed by the Contracting Officer:
 6. Checks shall be accompanied by the following information:
 - a. Name of facility, Project Name and Title and DAGS Job No.
 - b. Contractor's name

- c. Initial meter reading for the month and final meter reading for the month.
 - d. Volume of water used and the amount due in payment for that water
 - 7. Upon completion of the project and just prior to removal of the water meter, notify the Contracting Officer to observe a final meter reading.
 - 8. Should the Contractor at any time fail to comply with any or all of the above conditions, the Department may terminate the use of water. The Contractor shall remove the hookup within 48 hours of notification of such termination.
- E. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water fixtures. Comply with regulations and health codes for type, number, location, operation, and maintenance of fixtures and facilities.
- 1. Disposable Supplies: Provide toilet tissue, paper towels, paper cups, and similar disposable materials for each facility. Maintain adequate supply. Provide covered waste containers for disposal of used material.
 - 2. Wash Facilities: Install wash facilities supplied with potable water at convenient locations for personnel who handle materials that require wash up. Dispose of drainage properly. Supply cleaning compounds appropriate for each type of material handled.
 - 3. Locate toilets and drinking water fixtures so personnel need not walk more than 2 stories vertically or 200-feet horizontally to facilities.
- F. Electric Power Service: Use of State facilities electrical power services will be permitted as long as equipment is maintained in a condition acceptable to the Contracting Officer.
- G. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations and traffic conditions.
- H. Telephone Service: Provide a portable wireless telephone with voice-mail or messaging service for superintendent's use in making and receiving telephone calls when at the construction site.

3.03 SUPPORT FACILITIES INSTALLATION

- A. General: Comply with the following:
- 1. Locate storage sheds, sanitary facilities, and other temporary construction and support facilities for easy access or where shown on Contract Drawings or as directed by the Contracting Officer.
 - 2. Maintain support facilities until near Substantial Completion. Remove before Substantial Completion.
- B. Site Drainage:
- 1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining property nor endanger permanent Work or temporary facilities.
 - 2. Before connection and operation of permanent drainage piping system, provide temporary drainage where roofing or similar waterproof deck construction is completed.

- C. Project Sign and Temporary Sign(s):
1. Provide and install project identification sign and other signs as listed. Sign designs are attached to Part 3 of this Section:
 - a. Project Sign
 2. Install signs where directed by the Contracting Officer or where indicated to inform public and persons seeking entrance to the Project. Do not permit installation of unauthorized signs.
 3. Provide temporary signs to provide directional information to constructional personnel and visitors.
 4. Construct signs with durable materials, properly supported or mounted, and visible.
- D. Trash, Refuse Disposal:
1. Department of Health – Illegal Dumping Notice. See attachment to Part 3 of this section.
 - a. This Notice to be printed out on 8.5x11” paper.
 - b. This Notice to be posted at the job site in locations visible to all contractors, subcontractors, suppliers, vendors, etc. throughout the duration of the project.
 2. Illegal Dumping of solid waste could subject the Contractor to fines and could lead to felony prosecution in accordance with Chapter 342H, HRS. For more information, see the following web site:
<http://www.hawaii.gov/health/environmental/waste/sw/pdf/Illdump.pdf>
 3. Provide waste collection containers in sizes adequate to handle waste from construction operations. Containerize and clearly label hazardous, dangerous, or unsanitary waste materials separately from other waste.
 4. Do not burn debris or waste materials on the project site.
 5. Do not bury debris or waste material on the project site unless specifically allowed elsewhere in these specifications as backfill material.
 6. Haul unusable debris and waste material to an appropriate off site dump area.
 - a. Water down debris and waste materials during loading operations or provide other measures to prevent dust or other airborne contaminants.
 - b. Vacuum, wet mop, or damp sweep when cleaning rubbish and fines which can become airborne from floors or other paved areas. Do not dry sweep.
 - c. Use enclosed chutes or containers to conveying debris from above the ground floor level.
 7. Clean up shall include the collection of all waste paper and wrapping materials, cans, bottles, construction waste materials and other objectionable materials, and removal as required. Frequency of clean up shall coincide with rubbish producing events.
- E. Janitorial Services: Provide janitorial services on a weekly basis for the Contracting first aid stations, toilets, wash facilities, and similar areas.

3.04 ENVIRONMENTAL CONTROLS

- A. General: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
- B. Dust Control:
 - 1. Prevent dust from becoming airborne at all times including non working hours, weekends and holidays in conformance with the State Department of Health, Administrative Rules, Title 11, Chapter 60.1 Air Pollution Control.
 - 2. Contractor is responsible for and shall determine the method of dust control. Subject to the Contractor's choice, the use of water or environmentally friendly chemicals may be used over surfaces that create airborne dust.
 - 3. Contractor is responsible for all damage claims due to their negligence to control dust.
- C. Noise Control
 - 1. Keep noise within acceptable levels at all times in conformance with the State Department of Health, Administrative Rules, Title 11, Chapter 46 Community Noise Control. Obtain and pay for the Community Noise Permit when construction equipment or other devices emit noise at levels exceeding the allowable limits.
 - 2. Ensure mufflers and other devices are provided on equipment, internal combustion engines and compressors to reduce loud disruptive noise levels and maintain equipment to reduce noise to acceptable levels.
 - 3. Unless specified elsewhere, do not start construction equipment that meet allowable noise limits prior to 6:45 A.M. or equipment exceeding allowable noise levels prior to 7:00 A.M.
- D. Erosion Control
 - 1. During grading operations, maintain the grade to prevent damage to adjoining property from water and eroding soil.
 - 2. Install temporary berms, cut off ditches and other provisions needed for construction methods and operations. Should there be a question if the temporary measures are insufficient to prevent erosion, the Contracting Officer shall make the final determination.
 - 3. Construct and maintain drainage outlets and silting basins where shown on the Drawings and when required to minimize erosion and pollution of waterways during construction.

3.05 VIOLATION OF ENVIRONMENTAL PROVISIONS

- A. Violations of any of the above environmental control requirements or any other pollution control requirements; which may also be specified in the other Specifications sections, shall be resolved under the SUSPENSION and CORRECTIVE WORK Section of the GENERAL CONDITIONS.

3.06 NOT USED

3.07 TEMPORARY FIRE PROTECTION

- A. Install and maintain temporary fire protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241.
 - 1. Locate fire extinguishers where convenient and effective for their intended purpose.
 - 2. Store combustible materials in containers in fire safe locations.
 - 3. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire protection facilities, stairways, and other access routes for firefighting. Prohibit smoking in hazardous fire exposure areas.
 - 4. Supervise welding operations, combustion type temporary heating units, and similar sources of fire ignition.

3.08 REMOVAL

- A. Maintenance: Maintain facilities in good operating condition until removal. Protect from damage caused by heat [or freezing] temperatures and similar elements.
- B. Termination and Removal: Remove each temporary facility when need for its service has ended, or when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
 - 1. Materials and facilities that constitute temporary facilities are the property of Contractor. The Department reserves the right to take possession of Project identification signs.

3.09 ATTACHMENTS

- A. Project Sign Drawings.
 - 1. Standard Detail for Project Sign Layout - DETAIL A/TG 01500.
 - 2. Standard Detail for Project Sign Specifications - DETAIL B/TG 01500.
 - 3. Standard Detail for Project Sign Details - DETAIL C/TG 01500.
- B. Dust Control Fence Drawings: Standard Detail for Dust Control Fence - DETAILS D and E/TG 01500.
- C. Department of Health – Illegal Dumping Notice

END OF SECTION

LETTER STYLE

COPY IS CENTERED AND SET IN ADOBE TYPE FUTURA HEAVY. IF THIS SPECIFIC TYPE IS NOT AVAILABLE, FUTURA DEMI BOLD MAY BE SUBSTITUTED. COPY SHOULD BE SET AND SPACED BY A PROFESSIONAL TYPESETTER AND ENLARGED PHOTOGRAPHICALLY FOR PHOTO STENCIL SCREEN PROCESS.

ART WORK

CONSTANT ELEMENTS OF THE SIGN LAYOUT – FRAME, OUTLINE, STRIPE, AND OFFICIAL STATE INFORMATION – MAY BE DUPLICATED FOLLOWING WORKING DRAWING MEASUREMENTS, OR BE REPRODUCED AND ENLARGED PHOTOGRAPHICALLY USING A LAYOUT TEMPLATE IF PROVIDED. THE "STATE OF HAWAII" MASTHEAD SHOULD BE REPRODUCED AND ENLARGED AS SPECIFIED, USING THE ARTWORK AS SHOWN.

TITLES

THE SPECIFIC MAJOR WORK OF THE PROJECT UNDER CONSTRUCTION IS EMPHASIZED BY USING 3 3/4" TYPE, ALL CAPITALS. SECONDARY INFORMATION SUCH AS LOCATIONS OR BUILDINGS USES 2 1/4" TYPE, ALL CAPITALS. OTHER RELATED INFORMATION OF LESSER IMPORTANCE USES 2 1/4" (CAPITAL HEIGHT) IN LOWER CASE LETTERS. ALL LINES OF TYPE SHOULD NOT EXCEED THE WIDTH OF THE 6'-2" STRIPE.

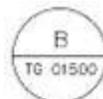
MATERIALS

PANEL IS 3/4" EXTERIOR GRADE HIGH DENSITY OVERLAID PLYWOOD, WITH RESIN BONDED SURFACES ON BOTH SIDES.

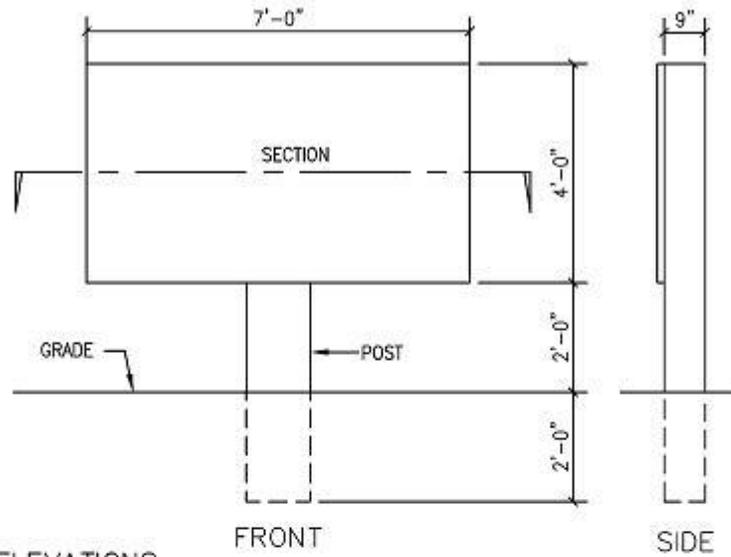
PAINTS & INKS

SCREEN PRINT INKS ARE MATTE FINISH. PAINTS ARE SATIN FINISH, EXTERIOR GRADE. REFERENCES TO AMERITONE COLOR KEY PAINT ARE FOR COLOR MATCH ONLY.

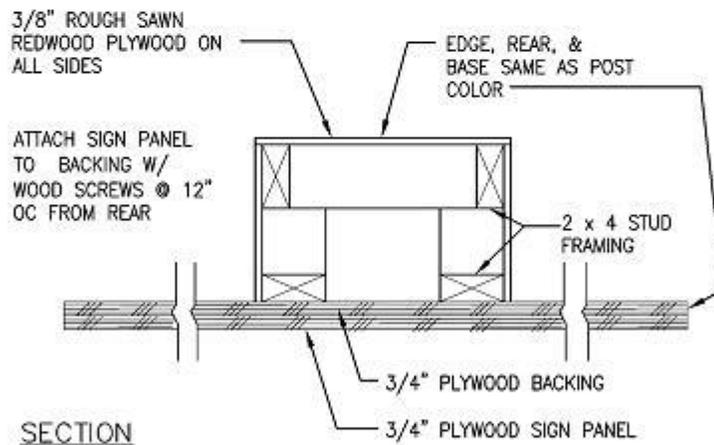
| | | | |
|--------|----|--------|-----------------|
| COLOR: | 1. | 1BL10A | BOHEMIAN BLUE |
| | 2. | 2H16P | SOFTLY (WHITE) |
| | 3. | 2VR2A | HOT TANGO (RED) |
| | 4. | 1M52E | TOKAY (GRAY) |



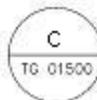
PROJECT SIGN SPECIFICATIONS



ELEVATIONS

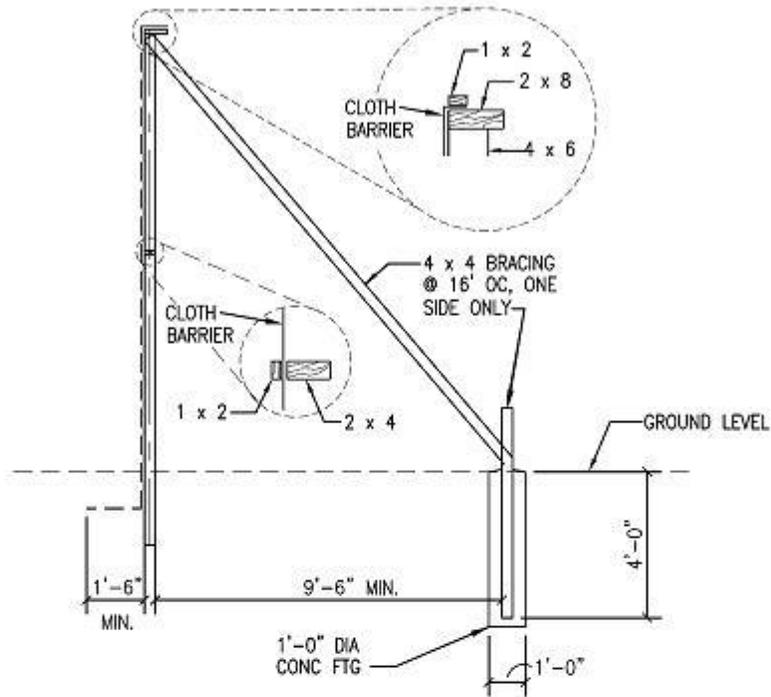


SECTION



PROJECT SIGN DETAILS

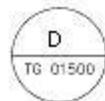
SCALE: NTS



SECTION

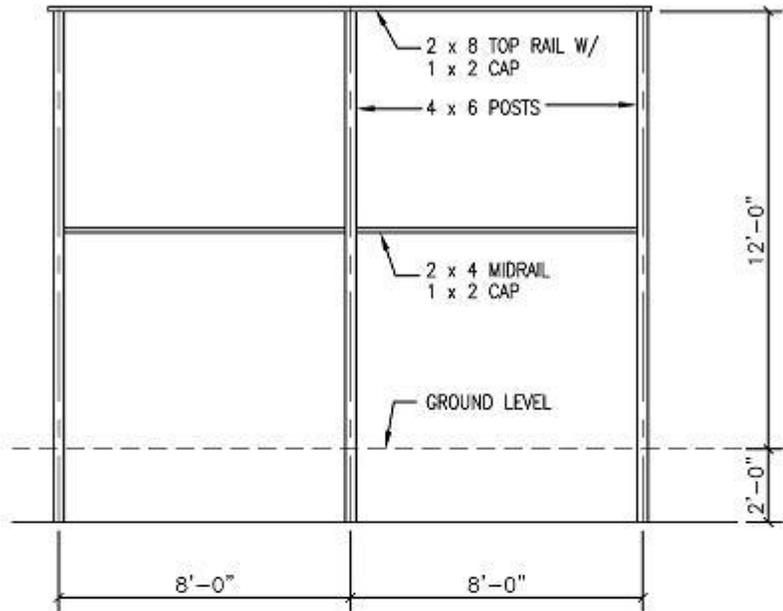
NOTES:

1. CLOTH BARRIER NOT SHOWN IN FRONT VIEW.
2. CLOTH BARRIER TO BE "GEOTEXTILE" OR "NURSERY SHADE".
3. LUMBER SIZES ARE NOMINAL INCHES.
4. AS SHOWN CLOTH TO BE BURIED AT BASE TO INDICATED DIMENSION.
5. 1 x 2 CLOTH BARRIER CAPS TO BE NAILED @ 12" OC.
6. BURLAP IS NOT ACCEPTABLE AS THE CLOTH BARRIER.
7. CLOTH TO HAVE NO HORIZONTAL SEAMS.
8. VERTICAL SEAMS TO BE MADE OVER UPRIGHTS ONLY.
9. ALL SEAMS TO BE CAPPED WITH MINIMUM 1 x 2.
10. ALL JOINTS TO BE SECURELY FASTENED BY MECHANICAL MEANS.



STANDARD DETAIL FOR
DUST CONTROL FENCE

SCALE: NTS



ELEVATION

NOTES:

1. CLOTH BARRIER NOT SHOWN IN FRONT VIEW.
2. CLOTH BARRIER TO BE "GEOTEXTILE" OR "NURSERY SHADE".
3. LUMBER SIZES ARE NOMINAL INCHES.
4. AS SHOWN CLOTH TO BE BURIED AT BASE TO INDICATED DIMENSION.
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9. ALL SEAMS TO BE CAPPED WITH MINIMUM 1 x 2.
10. ALL JOINTS TO BE SECURELY FASTENED BY MECHANICAL MEANS.



STANDARD DETAIL FOR
DUST CONTROL FENCE

SCALE: NTS

DEPARTMENT OF HEALTH ILLEGAL DUMPING NOTICE

The law requires you to dispose solid waste only at recycling or disposal facilities permitted by the Department of Health.

“Solid waste” includes municipal refuse, construction and demolition waste, household waste, tires, car batteries, derelict vehicles, green wastes, furniture, and appliances.

Illegal dumping of solid waste or allowing illegal disposal of solid waste on your property even if contractual or other arrangements are made could subject you to fines from \$10,000 to \$25,000 per occurrence and could lead to felony prosecution in accordance with Chapter 342H, HRS.

Contact the Department of Health, Solid Waste Section at 586-4226 to report illegal dumping activities or if you have further questions.

SECTION 01575 - TEMPORARY CONTROLS - AIR QUALITY REQUIREMENTS

PART 1 - GENERAL

1.01 SUMMARY

- A. This section describes the steps that the Contractor shall perform to control odors or dusts generated by the equipment, materials, or actions of the construction process that may affect the quality of air to non-Contractor personnel.

1.02 REFERENCES

- A. "Indoor Air Quality" published by the Sheetmetal and Air Conditioning Contractor's National Association (SMACNA).
- B. American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE) standards as follows: 62; 55; 52; and 1.
- C. "Indoor Air Quality in Public Buildings", Volumes I and II, by Sheldon L, Handy RW, Hartwell TD, et al.; (Public Access Buildings Study).
- D. National Particleboard Association (NPA) Standard for Formaldehyde Emission for Particleboard: NPA6.

1.03 DEFINITIONS

- A. "A/C" (Air Cond.) means any or all of the equipment used to air condition a building or space.
- B. "Air changes per hour" shall mean a number calculated by the maximum work area length in feet times the maximum work area width in feet times the maximum work area height in feet divided by 60 times the cubic feet per minute of air movement $(L \times W \times H)/(60 \times CFM)$.
- C. "Odor" means something that can be detected by a person's sense of smell whether objectionable or not to the person.
- D. "Perceivable" means able to attain an awareness solely through the use of the human senses such as smell, sight, hearing, taste, and touch.
- E. "VOC" means volatile organic compound, a compound containing a chemical constituent with a boiling point of less than 100 Deg C (volatile) and that contains carbon (organic).
- F. "VOC emission rate" means the total amount of hydrocarbons emitted per area and unit of time as determined from the product and test method data supplied by the manufacturer or from data in the EPA Public Access Buildings Study.

1.04 SUBMITTALS

- A. Submit a certification, which may be a copy of the product label or Material Safety Data Sheets (MSDS), of the VOC emission rate for all VOC containing

products. MSDS sheets and labels are acceptable only if the VOC data is available and highlighted.

- B. Submit VOC emission rates for all products containing any VOC compounds. Maintain a copy of the VOC certifications and emission rates (in a 3-ring binder) at the job site.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Provide temporary equipment including fans, blowers, tape, ducts, temporary wall materials and other similar items.

PART 3 - EXECUTION

3.01 GENERAL REQUIREMENTS

- A. If all particleboard products used in the Project meet NPA 6 Standard, and all other VOC-containing materials have certified VOC emission rates less than 100 micrograms/m²h, the requirements of PART 3 - EXECUTION are not required for VOC control.
- B. Ensure the all work areas are isolated from those areas in which persons not employed by the Contractor will be present during construction, including those interconnected by air conditioning systems, adjacent buildings, and public areas.
 - 1. Install isolation barriers so that odors and dust from the work areas are not perceivable in any surrounding occupied area, then remove the barriers before the final acceptance of the project; or
 - 2. Provide local fresh and exhaust air that will be adequate to ensure odors and dust from the work areas are not perceivable in any surrounding occupied area. Meet the following minimum criteria:
 - a. At least 4 air changes per hour continued from the start of any emission producing work until four hours after the conclusion of any emission producing work; and
 - b. Exhaust the ventilating air to the outside of the building, at least 25 feet downwind of any opening to the building, surrounding buildings, or similar occupied areas, and at least 100 feet downwind of any building air supply intakes.
- C. Upon notification by the Contracting Officer of an odor or dust complaint, immediately stop all odors and dust producing tasks, and then execute the requirements of subparagraph 3.01. B. 2. within 4 hours after Contracting Officer's notification.
 - 1. Compliance with subparagraph 3.01 B. 1. is not considered sufficient isolation in this instance.
 - 2. If the items in subparagraph 3.01 B. 2. were previously implemented without satisfactory results, increase the air changes to 8 per hour.

3. The requirements in paragraph 3.01 D. may be performed in lieu of the requirements stated in paragraph 3.01 C. with prior permission from the Contracting Officer or shall be performed if requested by the Contracting Officer.
- D. When the conditions described in subparagraphs 3.01 B. 1., 3.01 B. 2., or paragraph 3.01 C., are unable to maintain an air quality acceptable to 80 percent of the surrounding occupants, perform the following at no extra cost to the State:
1. Immediately discontinue the use of the offending product(s) upon notification by the Contracting Officer;
 2. Perform the odor or dust generating task(s) during a non-occupied time such as evenings, weekends and holidays;
 3. Thoroughly clean any odor or dust affected area and equipment prior to occupancy; and
 4. Complete the odor or dust generating task(s) at least 16 hours prior to occupancy.

3.02 VENTILATION AFTER CONSTRUCTION

- A. In all work areas of air conditioned new buildings perform a ventilation activity after construction has been completed but prior to occupancy according to the following:
1. Notify the Contracting Officer prior to starting the work involved with these steps or immediately if any step cannot be successfully completed;
 2. Perform the normal start up procedures for all ventilation equipment;
 3. Inspect areas adjacent to air intakes for the existence of air containing odors and eliminate the cause of any odors before proceeding;
 4. Ensure that the air conditioning or ventilation outside make-up air dampers are operable, then set them to remain in the wide open position to provide for the maximum possible flow of outside air into the building;
 5. Set the mechanical cooling equipment such as chilled water and air conditioning compressors as appropriate to off so that the temperature will stay as high as possible;
 6. Open windows and doors (interior) for maximum ventilation of the work area. Use care to maintain security and to prevent infiltration of dirt, debris, dust, or impact on surrounding occupied areas. Maintain protection from the elements of weather, and site cleanliness;
 7. Turn on all of the available lights and heat producing equipment;
 8. Run all of the air handling units and ventilation fans continuously for 72 hours; and
 9. Continue the ventilation procedure beyond the 72 hours if the Contracting Officer determines it necessary. Provide additional exhaust fans if directed

by the Contracting Officer. Ventilation beyond 72 hours is considered additional work provided the Contractor followed the steps required in this paragraph 3.02 A.

10. When the Contracting Officer determines that the ventilation is sufficient, replace all air conditioning and ventilation air filters. Readjust the building's equipment to the design settings and perform the start up steps required after such adjustments are made.
- B. In all work areas of a non-air conditioned new building, ventilate the building after completing construction and prior to occupancy. Perform ventilation as follows:
1. Notify the Contracting Officer prior to starting the ventilation work or immediately if any step cannot be successfully completed;
 2. Inspect areas adjacent to portable fans for the existence of or potential air containing odors. Eliminate the cause of any odor or potential odor;
 3. Open windows and doors (interior and exterior) for maximum ventilation of the work area. Use care to maintain security and to prevent infiltration of dirt, debris, dust, or impact on surrounding occupied areas. Maintain protection from the elements of weather, and site cleanliness;
 4. Turn on all of the available lights and heat producing equipment;
 5. Ventilate the work area using portable supply and exhaust fans capable of providing one complete work area air change per hour for 72 hours; and
 6. Continue the ventilation procedure beyond the 72 hours if the Contracting Officer determines it necessary. Provide additional exhaust fans if directed by the Contracting Officer. Ventilation beyond 72 hours is considered additional work provided the Contractor followed the steps required in this paragraph 3.02 B.
 7. When the Contracting Officer determines that the ventilation is sufficient, remove the portable equipment.
- C. In all work areas in an existing building, ventilate the building after completing construction and prior to occupancy. Perform ventilation as follows:
1. Use the steps in paragraph 3.02 A. when the work area is air conditioned by air handling equipment that can be completely isolated from all air conditioning and ventilation systems supplying occupied areas;
 2. Otherwise, use the steps in paragraph 3.02 B.

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes general procedural requirements governing execution of the Work including the following:
 - 1. Construction layout. Field engineering and surveying.
 - 2. General installation of products.
 - 3. Progress cleaning.
 - 4. Starting and adjusting.
 - 5. Protection of installed construction.
 - 6. Correction of the Work.
- B. Related Sections
 - 1. SECTION 01770 - CLOSEOUT PROCEDURES.

1.02 SUBMITTALS

- A. Landfill Receipts: Submit copy of receipts issued by a landfill facility, licensed to accept hazardous materials, for hazardous waste disposal.

1.03 NOTIFICATION

- A. Contact the Contracting Officer and the Project Contact Person at least 3 working days prior to starting any onsite work.

1.04 PROJECT AND SITE CONDITIONS

- A. Project Contract Limits (Contract Zone Limits) indicate only in general the limits of the work involved. Perform necessary and incidental work, which may fall outside of these demarcation lines. Confine construction activities within the Project Contract Limits and do not spread equipment and materials indiscriminately about the area.
- B. Disruption of Utility Services: Prearrange work related to the temporary disconnection of electrical and other utility systems with the Project Contact Person listed in SECTION 00800 - SPECIAL CONDITIONS and the Contracting Officer. Unless a longer notification period is required elsewhere in the Contract Documents, notify the Contracting Officer at least 15 days in advance of any interruption of existing utility service. Time and duration of interruptions are subject to the Contracting Officer's approval. Keep the utility interruptions and duration to a minimum so as not to cause inconvenience or hardship to the facility. If temporary electrical or other utility systems hook-up is required,

provide the necessary services. Pay for temporary services as part of the contract, unless specifically noted otherwise.

- C. Contractor's Operations - Provide means and methods to execute the Work and minimize interruption or interference to the facility's operations. Rearrange the construction schedule when construction activities result in interruptions that hamper the operations of the facilities.
- D. Maintain safe passageway to and from the facility's occupied buildings, rooms and other occupied spaces for the using agency personnel and the public at all times.
- E. Contractor, Subcontractor(s) and their employees will not be allowed to park in zones assigned to Users or facility personnel. Subject to availability, the Contracting Officer may designate areas outside of the Contract Zone Limits to be used by the Contractor. Restore any lawn area damaged by construction activities.

1.05 QUALITY ASSURANCE

- A. Land Surveyor Qualifications: A professional land surveyor with a license to practice in Hawaii.
- B. Professional Engineer Qualifications: A professional engineer with a license to practice in Hawaii.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.01 EXAMINING THE SITE

- A. Contractor and Subcontractors are expected to visit the site and make due allowances for difficulties and contingencies to be encountered. Compare contract documents with work in place. Become familiar, with existing conditions, the conditions to be encountered in performing the Work, and the requirements of the drawings and specifications.
- B. Verify construction lines, grades, dimensions and elevations indicated on the drawings before any clearing, excavation or construction begins. Bring any discrepancy to the attention of the Contracting Officer, and make any change in accordance with the Contracting Officer instruction.
- C. Obtain all field measurements required for the accurate fabrication and installation of the Work included in this Contract. Verify governing dimensions and examine adjoining work on which the Contractor or Subcontractor's work is in any way dependent. Submit differences discovered during the verification work to the Contracting Officer for interpretations before proceeding with the associated work. Exact measurements are the Contractor's responsibility.
- D. Furnish or obtain templates, patterns, and setting instructions as required for the installation of all Work. Verify dimensions in the field.

- E. Contractor shall accept the site and the existing building(s) in the condition that exists at the time access is granted to begin the Work. Verify existing conditions and dimensions shown and other dimensions not indicated but necessary to accomplish the Work.
- F. Locate all general reference points and take action to prevent their destruction. Lay out work and be responsible for lines, elevations and measurements and the work executed. Exercise precautions to verify figures and conditions shown on drawings before layout of work.

3.02 SITE UTILITIES AND TONING

- A. Cooperate, coordinate and schedule work to maintain construction progress, and accommodate the operations and work of the owners of underground or overhead utility lines or other property in removing or altering the lines or providing new services.
- B. Contact all the various utility companies before the start of the work to ascertain any existing utilities and to develop a full understanding of the utility requirements with respect to this Project. Furnish the Contracting Officer with evidence that the utility companies were contacted.
- C. Should the Contractor discover the existence and location of utilities in the contract drawings are not correct, do not disturb the utilities and immediately notify the Contracting Officer.
- D. Do not disturb or modify any utilities encountered, whether shown or not on the Contract Drawings, unless otherwise instructed in the drawings and specifications or as directed by the Contracting Officer. Repair and restore to pre-damaged condition any utilities or any other property damaged by construction activities.
- E. Transfer to "Field Posted As-Built" drawings the location(s) and depth(s) of new and existing utilities that differ from the Contract Drawings. Locate by azimuth and distance and depth(s) from fixed referenced points.
- F. Toning: Prior to the start of grading, or excavation or trenching work verify and confirm the presence, location and depth of existing underground utility lines in the area affected by the project, by "toning" or by other appropriate means acceptable to the Contracting Officer. The intent of this advanced toning is to afford the Contracting Officer an opportunity to identify utility lines that may or may not be shown on the drawings and issue a directive to address the existing conditions.
 - 1. Perform toning using instruments specifically developed and designed for the detection of underground pipes and cable utilities.
 - 2. Notify the Contracting Officer 48 hours in advance before toning operations. Provide information on the proposed toning method and other pertinent information.

- G. Recording Toning Information: Upon completion of the toning operation, submit drawings that show the location and approximate depth of the existing and newly discovered utility lines. Identify the type of utility lines. Also, identify where utility lines indicated on the drawings are not shown in their approximate location or where new utility lines are found or pointed out in the field.
- H. After ascertaining the exact location and depth of utilities within the project area, mark and protect the locations.
 - 1. Acquaint personnel working near utilities with the type, size, location, depth of the utilities, and the consequences that might result from disturbances.
 - 2. Do not start trenching or start similar operations until reasonable and appropriate precautions to protect the utilities are taken.
- I. For newly identified utility lines, if directed by the Contracting Officer, manually excavate within 2-feet of the utility line to avoid damage. Under this directive, manual excavation is considered additional work.

3.03 FIELD MEASUREMENTS

- A. Take field measurements to fit and install the Work properly. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress.
- B. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- C. Review of Contract Documents and Field Conditions: Submit a Request For Information (RFI) immediately upon discovery of the need for clarification of the Contract Documents. Include a detailed description of problem encountered, together with recommendations for changing the Contract Documents.

3.04 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to <the property survey and existing benchmarks> <existing conditions>. If discrepancies are discovered, notify the Contracting Officer promptly.
- B. General: Engage a licensed land surveyor to lay out the Work using accepted surveying practices.
 - 1. Establish benchmarks, control points, lines and levels at each story or level of construction and elsewhere as needed to locate each element of Project.
 - 2. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.

3. Inform installers of lines and levels to which they must comply.
 4. Check the location, level and plumb, of every major element as the Work progresses.
 5. Notify the Contracting Officer when deviations from required lines and levels exceed allowable tolerances.
 6. Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.
- C. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and invert elevations.
- D. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by the Contracting Officer.

3.05 FIELD ENGINEERING

- A. Reference Points: Locate existing permanent or temporary benchmarks, control points and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.
1. Do not change or relocate existing benchmarks or control points without the Contracting Officer's approval. Report lost or destroyed permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to the Contracting Officer before proceeding.
 2. Replace lost or destroyed permanent benchmarks and control points promptly. Base all replacements on the original survey control points.
- B. Benchmarks: Establish and maintain a minimum of 2 permanent or temporary benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.
1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
 2. Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.
 3. Remove temporary reference points when no longer needed. Restore marked construction to its original condition.

3.06 INSTALLATION

- A. Install materials, items, fixtures required by the various Divisions and Sections of the Specifications in accordance with Contract Documents, by workers specially trained and skilled in performance of the particular type of work, to meet guarantee and regulatory agency requirements. Should the drawings or specifications be void of installation requirements, install the materials, items, and fixtures in accordance with the manufacturer's current specifications, recommendations, instructions and directions.

3.07 CUTTING AND PATCHING

- A. Oversee cutting and patching of concrete, masonry, structural members and other materials where indicated on drawings and as required by job conditions. Unless noted elsewhere in the contract documents, do not cut or patch existing or new structural members without previously notifying the Contracting Officer.
- B. Provide patch materials and workmanship of equal quality to that indicated on the drawings or specified for new work.

3.08 CLEANING

- A. General: Clean the Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.
 - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 - 2. Do not hold waste more than 7 days unless approved otherwise by the Contracting Officer.
 - 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
 - 1. Remove liquid spills promptly.
 - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use only cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.

- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Cutting and Patching: Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar materials. Thoroughly clean piping, conduit, and similar features before applying paint or other finishing materials. Restore damaged pipe covering to its original condition.
- H. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.
- I. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- J. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- K. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.09 NOT USED

3.10 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Comply with manufacturer's written instructions to provide proper temperature and relative humidity conditions.

3.11 CORRECTION OF THE WORK

- A. Repair or replace defective construction. Restore damaged substrates and finishes. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Restore permanent facilities used during construction to their specified condition.
- C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
- D. Repair defective components that do not operate properly. Remove and replace operating components that cannot be repaired.

E. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

END OF SECTION

SECTION 01770 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout, including the following:
 - 1. Project Record Documents.
 - 2. Warranties.
 - 3. Instruction for the State's personnel.
- B. Related documents include the following:
 - 1. SECTION 01700 - EXECUTION REQUIREMENTS.

1.02 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting a Final Inspection to determine Substantial Completion, complete the following items in addition to requirements of Article 7 of the GENERAL CONDITIONS.
 - 1. Advise the Contracting Officer of pending insurance changeover requirements.
 - 2. Submit specific warranties, final certifications, and similar documents.
 - 3. Obtain and submit occupancy permits, operating certificates, and similar releases and access to services and utilities, unless waived by the Contracting Officer.
 - 4. Arrange to deliver tools, spare parts, extra materials, and similar items to a location designated by the Contracting Officer. Label with manufacturer's name and model number where applicable.
 - 5. Make final changeover of permanent locks and deliver keys to the Contracting Officer. Advise the State's personnel of changeover in security provisions.
 - 6. Complete startup testing of systems.
 - 7. Submit test, adjust, and balance records.
 - 8. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 - 9. Advise the Contracting Officer of changeover in other utilities.
 - 10. Submit changeover information related to the State's occupancy, use, operation, and maintenance.

12. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

1.03 FINAL COMPLETION

- A. Preliminary Procedures: Within 10 days from the Project Acceptance Date, complete the following items in addition to requirements of GENERAL CONDITIONS Article 7 PROSECUTION AND PROGRESS:
 1. Instruct the State's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Submit demonstration and training media materials.

1.04 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Preparation: Submit 2 copies of any updated and action taken list. In addition to requirements of GENERAL CONDITIONS Article 7 PROSECUTION AND PROGRESS, include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
 1. Organize list of spaces in sequential order, starting with exterior areas first and proceeding from lowest floor to highest floor.
 2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
 3. Include the following information at the top of each page:
 - a. Project Name and Title.
 - b. DoD Job No.
 - c. Date and page number.
 - d. Name of Contractor.

1.05 PROJECT RECORD DOCUMENTS AND REQUIREMENTS

- A. General:
 1. Definition: "Project Record Documents", including Record Drawings, shall fulfill the requirements of "Field-Posted As-Built Drawings" listed in the GENERAL CONDITIONS.
 2. Do not use Project Record Documents for daily construction purposes. Protect Project Record Documents from deterioration and loss. Provide access to Project Record Documents for Contracting Officer's reference during normal working. Maintain these documents as specified in paragraph entitled "Record Drawings" hereinafter.
 3. The Designer, under contract with the State, will update the drawings to show all addendum, PCD, and sketch changes. The Contracting Officer will transmit these drawings (mylar or vellum) to the Contractor who will make all "red-line" corrections to these drawings to record the changes

depicted on the Contractor's Field Posted Record ("As-Builts") by accepted drafting practices as approved by the Contracting Officer.

4. Where the recorded changes depicted on the Contractor's Field Posted Record ("As-Builts") are in the form of shop drawings, the Contractor shall provide those shop drawings electronically on the same sheet size as the drawings transmitted to the Contractor. The new drawing sheets shall be titled and numbered to conform to the construction drawings and clearly indicate what information they supercede in the actual construction drawings. For example a new drawing that replaces drawing M-3, could be numbered M3a.
5. The Contractor shall bring to the attention of the Contracting Officer any discrepancy between the changes made by the Designer and those depicted on addendum, PCD, and sketch changes. The Contracting Officer will resolve any conflicts.
6. Submit final Record Documents (Field Posted Record Drawings) before the Final Inspection Date and no later than the Contract Completion Date, unless the GENERAL CONDITIONS require otherwise.
7. The Contractor shall guarantee the accuracy of its final Record Documents. The State will hold the Contractor liable for costs the State incurs as a result of inaccuracies in the Contractor's Record Documents.
8. Prepare and submit [construction photographs and electronic files], damage or settlement surveys, property surveys, and similar final record information as required by the Contracting Officer.
9. Deliver tools, spare parts, extra materials, and similar items to a location designated by the Contracting Officer. Label with manufacturer's name and model number where applicable.
10. Submit pest-control final inspection report and warranty.

B. Record Drawings:

1. Maintain a duplicate full-size set as the Field Posted Record ("As-Builts") Drawings at the job site. Clearly and accurately record all deviations from alignments, elevations and dimensions, which are stipulated on the drawings and for changes directed by the Contracting Officer that deviate from the drawings.
2. Record changes immediately after they are constructed in place and where applicable, refer to the authorizing document (Field Order, Change Order, or Contract Modification). Use red pencil to record changes. Make Field Posted Record Drawings available to the Contracting Officer at any time so that its clarity and accuracy can be monitored and can be countersigned for validity.
 - a. Give particular attention to information on concealed elements that cannot be readily identified and recorded later.

- b. Accurately record information in an understandable drawing technique.
 - c. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
 - d. Mark the contract drawings or the shop drawings, whichever is most capable of showing actual physical conditions, completely and accurately. Where Shop Drawings are marked, show cross-reference on contract drawings.
 - e. Mark important additional information that was either shown schematically or omitted from original Drawings.
 - f. Locate concealed building utilities by dimension from bench marks or permanent structures. Locate site utilities by dimensions, azimuth and lengths from bench marks or permanent structures.
 - g. Note field order numbers, Change Order numbers, Contract Modification numbers, Alternate numbers, post-construction drawing numbers (PCD) and similar identification (RFI numbers) where applicable.
 - h. The Contractor shall initial each deviation and each revision marking.
3. Use the final updated Contract Drawing set (including all addenda, PCD, and sketches) plus applicable shop drawings for making the final Field Posted Record Drawings submittal.
 4. Certify drawing accuracy and completeness. Label and sign the record drawings or use digital electronic signature as approved by the Contracting Officer.
 5. Label the title sheet and on all sheets in the margin space to the right of the sheet number, written from the bottom upward, with the title "FIELD POSTED RECORD DRAWINGS" and certification information as shown below. Provide a signature line and company name line for each subcontractor that will also certify the respective drawing. Adjust size to fit margin space.

FIELD POSTED Certified By: _____ Date: _____
RECORD DRAWINGS [Contractor's Company Name]

6. Revise the Drawing Index and label the set "FIELD POSTED RECORD DRAWINGS". Include the label "A COMPLETE SET CONTAINS [] SHEETS" in the margin at the bottom right corner of each sheet. Quantify the total number of sheets comprising the set.
7. If the Contracting Officer determines a drawing does not accurately record a deviation or omits relevant information, the State will correct any FIELD POSTED RECORD DRAWINGS sheet. Contractor will be charged for the State's cost to correct the error or omission.
8. Use the final Field Posted Record Drawings sheets and create one electronic version of the set. The set shall be recorded in Adobe Acrobat PDF (Portable Document Format). Create a single indexed, bookmarked PDF file of the entire set of drawings on a USB.

1.06 WARRANTIES

- A. Submittal Time: Submit written manufacturer's warranties at request of the Contracting Officer for designated portions of the Work where commencement of warranties other than Project Acceptance date is indicated.
- B. Partial Occupancy: Submit properly executed manufacturer's warranties within 45 days of completion of designated portions of the Work that are completed and occupied or used by the State during construction period by separate agreement with Contractor.
- C. Organize manufacturer's warranty documents into an orderly sequence based on the table of contents of the Specifications.
 - 1. Bind warranties and bonds in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2 inch x 11-inch paper.
 - 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer and prime contractor.
 - 3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES", Project Name and Title, DoD Job Number, and name of Contractor.
 - 4. Use the final submittal of the warranties to create an electronic Adobe Acrobat PDF (Portable Document Format) version of the bound warranty documents files. Each sheet shall be separately scanned, at 600 DPI or better into a PDF file, indexed, and recorded on a USB.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 - EXECUTION

3.01 FINAL CLEANING

- A. General: Provide final cleaning . In addition to requirements of Article 7 of the GENERAL CONDITIONS conduct cleaning and waste-removal operations to comply with local laws and ordinances and federal and local environmental and antipollution regulations.

- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturers written instructions unless noted otherwise. Complete the following cleaning operations before requesting final inspection for entire Project or for a portion of Project:
1. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
 2. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits resulting from construction activities.
 3. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 4. Remove tools, construction equipment, machinery, and surplus material from Project site.
 5. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
 6. Remove debris and surface dust from limited access spaces, including: roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
 7. Sweep concrete floors broom clean in unoccupied spaces.
 8. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass surfaces, taking care not to scratch surfaces.
 9. Remove labels that are not permanent.
 10. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
 - a. Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.
 11. Wipe surfaces of mechanical and electrical equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
 12. Replace parts subject to unusual operating conditions.

13. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.

14. Leave Project clean and ready for occupancy.

D. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the State's property. Do not discharge volatile, harmful, or dangerous materials into drainage and sewer systems or onto State property. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION

DIVISION 2 - SITE CONSTRUCTION

SECTION 02070 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.01 SUMMARY

- A. Selective demolition includes, but is not limited to selective removal and subsequent disposal of all materials indicated to be removed.
- B. The extent of selective demolition is indicated on Drawings.

1.02 MATERIALS OWNERSHIP

- A. Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain State's property, demolished materials shall become Contractor's property and shall be removed from Project site.

1.03 SUBMITTALS

- A. Submit in accordance with Section 01330 – SUBMITTAL PROCEDURES.
- B. Proposed Dust-Control Measures: Submit statement or drawing that indicates the measures proposed for use, proposed locations, and proposed time frame for their operation. Identify options if proposed measures are later determined to be inadequate.
- C. Schedule of Selective Demolition Activities: Indicate the following:
 - 1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity.
 - 2. Interruption of utility services.
 - 3. Coordination for shutoff, capping, and continuation of utility services.
- D. Inventory: After selective demolition is complete, submit a list of items that have been removed and salvaged.
- E. Landfill Records: Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.

1.04 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Standards: Comply with ANSI A10.6 and NFPA 241.
- C. Predemolition Conference: Conduct conference at Project site. Review methods and procedures related to selective demolition including, but not limited to, the following:
 - 1. Inspect and discuss condition of construction to be selectively demolished.
 - 2. Review structural load limitations of existing structure.

3. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
4. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.

1.05 PROJECT CONDITIONS

- A. Condition of Structure: The State assumes no responsibility for actual condition of items or portions of structure to be removed.
- B. Hazardous Materials: Hazardous materials are present in building to be selectively demolished. A report on the presence of hazardous materials is included in this specification. Examine report to become aware of locations where hazardous materials are present and proceed as described in Section 01715 – Existing Conditions – Asbestos/Lead/Hazardous Material Survey.
 1. Hazardous material remediation is specified elsewhere in the Contract Documents.
 2. Do not disturb hazardous materials or items suspected of containing hazardous materials except under procedures specified elsewhere in the Contract Documents.
- C. Storage or sale of removed items or materials on-site will not be permitted.

PART 2 - PRODUCTS (not used)

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that utilities have been disconnected and capped.
- B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- C. Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.
- D. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Contracting Officer.
- E. Engage a currently licensed U.S. professional structural engineer to survey condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective demolition operations.
- F. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.

3.02 UTILITY SERVICES

- A. Existing Utilities: Maintain services indicated to remain and protect them against damage during selective demolition operations.
- B. Do not interrupt existing utilities serving occupied or operating facilities unless authorized in writing by the Contracting Officer and authorities having jurisdiction. Provide temporary services during interruptions to existing utilities, as acceptable to the Contracting Officer and to authorities having jurisdiction.
- C. Utility Requirements: Locate, identify, disconnect, and seal or cap off indicated utilities serving areas to be selectively demolished.
 - 1. Contracting Officer will arrange to shut off indicated utilities when requested by Contractor.
 - 2. Arrange to shut off indicated utilities with utility companies.
 - 3. If utility services are required to be removed, relocated, or abandoned, before proceeding with selective demolition provide temporary utilities that bypass area of selective demolition and that maintain continuity of service to other parts of building.
 - 4. Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit after bypassing.
- D. Utility Requirements: Refer to Division 15 and 16 Sections for shutting off, disconnecting, removing, and sealing or capping utilities. Do not start selective demolition work until utility disconnecting and sealing have been completed and verified in writing.

3.03 PREPARATION

- A. Pest Control: Employ a certified, licensed exterminator to treat building and to control rodents and vermin before and during selective demolition operations.
- B. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 - 1. Do not close or obstruct streets, walks, walkways, or other adjacent occupied or used facilities without permission from the Contracting Officer and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.
 - 2. Erect temporary protection, such as walks, fences, railings, canopies, and covered passageways, where required by authorities having jurisdiction.
 - 3. Protect existing site improvements, appurtenances, and landscaping to remain.
 - 4. Erect a plainly visible fence around drip line of individual trees or around perimeter drip line of groups of trees to remain.
- C. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
 - 1. Provide protection to ensure safe passage of people around selective

demolition area and to and from occupied portions of building.

2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
 3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
- D. Temporary Shoring: Provide and maintain interior and exterior shoring, bracing, or structural support to preserve stability and prevent movement, settlement, or collapse of construction to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
1. Strengthen or add new supports when required during progress of selective demolition.

3.04 POLLUTION CONTROLS

- A. Dust Control: Use water mist, temporary enclosures, and other suitable methods to limit spread of dust and dirt. Comply with governing environmental-protection regulations.
- B. Disposal: Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
1. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
- C. Cleaning: Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

3.05 SELECTIVE DEMOLITION

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
1. Proceed with selective demolition systematically, as required by engineered shoring sequence.
 2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
 3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
 4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.
 5. Maintain adequate ventilation when using cutting torches.

6. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
 7. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
 8. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
 9. Dispose of demolished items and materials promptly.
 10. Return elements of construction and surfaces that are to remain to condition existing before selective demolition operations began.
- B. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Contracting Officer, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.
- C. Concrete: Demolish in small sections. Cut concrete to a depth of at least 3/4 inch (19 mm) at junctures with construction to remain, using power-driven saw. Dislodge concrete from reinforcement at perimeter of areas being demolished, cut reinforcement, and then remove remainder of concrete indicated for selective demolition. Neatly trim openings to dimensions indicated.
- D. Concrete: Demolish in sections. Cut concrete full depth at junctures with construction to remain and at regular intervals, using power-driven saw, then remove concrete between saw cuts.
- E. Masonry: Demolish in small sections. Cut masonry at junctures with construction to remain, using power-driven saw, then remove masonry between saw cuts.
- F. Concrete Slabs-on-Grade: Saw-cut perimeter of area to be demolished, then break up and remove.

3.06 PATCHING AND REPAIRS

- A. General: Promptly repair damage to adjacent construction caused by selective demolition operations.
- B. Patching: Where damage has occurred to finished concrete or stucco finishes designated to remain, repair to paint ready condition per the requirements of Section 03365 - Concrete Repairs.
- C. Repairs: Where repairs to existing surfaces are required, patch to produce surfaces suitable for new materials.
- D. Finishes: Restore exposed finishes of patched areas and extend restoration into adjoining construction in a manner that eliminates evidence of patching and refinishing.

3.07 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Promptly dispose of demolished materials. Do not allow demolished materials to accumulate on-site.

- B. Burning: Do not burn demolished materials.
- C. Disposal: Transport demolished materials off State's property and legally dispose of them.
- D. Contractor must submit certified disposal manifests to the Contracting Officer. Submit manifests with the Contractor Daily Progress Report.

END OF SECTION

SECTION 02100 – MOBILIZATION/DEMobilIZATION

PART 1 - GENERAL

1.01 SUMMARY

- A. Mobilization for this project shall be performed in accordance with the requirements of the “Hawaii Standard Specifications for Road and Bridge Construction, 2005 (HSSRBC),” Section 699.
- B. Where the referenced provisions of the HSSRBC differ from any applicable requirements contained elsewhere within the Specifications, the most stringent criteria shall be considered to govern, unless otherwise approved by the Contracting Officer. All references to measurements and payment shall be deleted.
- C. Contractor shall submit a Schedule of Prices wherein the amount to be paid for this item does not exceed 10 percent of the sum of all items excluding the price of this item and the cost of any alternates.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION [Not Used]

END OF SECTION

DIVISION 3 - CONCRETE

SECTION 03300 - CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.01 SUMMARY

- A. Section includes cast-in-place concrete, including formwork, reinforcement, concrete materials, mix design, placement procedures, and finishes.

1.02 DEFINITIONS

- A. Cementitious Materials: Portland cement alone or in combination with one or more of blended hydraulic cement, fly ash and other pozzolans, ground granulated blast-furnace slag, and silica fume.

1.03 SUBMITTALS

- A. Product Data:
 - 1. Reinforcing steel - Certified mill test results or laboratory test results. Indicate bar size, yield strength, ultimate tensile strength, elongation and bend test. Provide chemical composition for rebars that are to be welded.
- B. Design Mixes: For each concrete mix. Include alternate mix designs when characteristics of materials, project conditions, weather, test results, or other circumstances warrant adjustments.
 - 1. Indicate amounts of mix water to be withheld for later addition at Project site.
- C. Material Certificates: Signed by manufacturers certifying that each of the following items complies with requirements:
 - 1. Form materials and form-release agents.
 - 2. Steel reinforcement and reinforcement accessories.
 - 3. Curing materials.
 - 4. Floor and slab treatments.
 - 5. Bonding agents.
 - 6. Adhesives.
 - 7. Epoxy joint filler.
 - 8. Joint-filler strips.
 - 9. Repair materials.

1.04 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products complying with ASTM C 94 requirements for production facilities and equipment.

- B. Source Limitations: Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant, each aggregate from one source, and each admixture from the same manufacturer.
- C. ACI Publications: Comply with the following, unless more stringent provisions are indicated and maintain a copy at the field office.
 - 1. ACI 301, "Specification for Structural Concrete."
 - 2. ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."
 - 3. ACI 347R "Guide to Formwork for Concrete"

PART 2 - PRODUCTS

2.01 FORM-FACING MATERIALS

- A. Smooth-Formed Finished Concrete: Comply with ACI 347R. Provide new or good finish form-facing panels that will provide continuous, true, and smooth concrete surfaces. Furnish in largest practicable sizes to minimize number of joints.
 - 1. Plywood, metal, or other ACI 347R approved panel materials.
- B. Rough-Formed Finished Concrete: Plywood, lumber, metal, or another approved material. Provide lumber dressed on at least two edges and one side for tight fit.
- C. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces. Form oils or waxes shall not be used for concrete surfaces intended to be painted.
 - 1. Formulate form-release agent with rust inhibitor for steel form-facing materials.

2.02 STEEL REINFORCEMENT

- A. Reinforcing Bars: Reinforcing steel shall conform to ASTM A955, deformed stainless steel bars, 400 series, duplex alloy, Grade 60.
- B. Tie Wire: Stainless steel, Type 304 or Type 316, 18 gage minimum.

2.03 REINFORCEMENT ACCESSORIES

- A. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire fabric in place that will not puncture the vapor retarder. Use plastic straps or brightly colored tie wires to secure reinforcing. Manufacture bar supports according to CRSI's "Manual of Standard Practice" from steel wire, plastic, or precast concrete of greater compressive strength than concrete.

2.04 CONCRETE MATERIALS

- A. Portland Cement: ASTM C 150, Type II.
- B. Normal-Weight Aggregate: ASTM C 33, uniformly graded, and as follows:
 - 1. Class: Moderate weathering region, but not less than 3M.

2. Aggregate Size: 1-1/2 inches (38 mm).
- C. Lightweight Aggregate: ASTM C 33.
1. Aggregate Size: No. 67 (3/4 inch to No. 4).
- D. Size of Coarse Aggregate: Except when otherwise specified or permitted, maximum size of coarse aggregate shall not exceed three-fourths of the minimum clear spacing between reinforcing bars (or bundled bars), one-fifth of the narrowest dimension between the sides of forms, or one-third of the thickness of slabs or toppings.
- E. Water: Potable and complying with ASTM C 94 or non potable meeting ASTM C-94 Acceptance Criteria for Questionable Water Supply. Use only potable water for job site mixing.

2.05 ADMIXTURES

- A. General: Admixtures certified by manufacturer to contain not more than 0.1 percent water-soluble chloride ions by mass of cementitious material and to be compatible with other admixtures and cementitious materials. Do not use admixtures containing calcium chloride.
- B. Water-Reducing Admixture: ASTM C 494, Type A.
- C. High-Range, Water-Reducing Admixture: ASTM C 494, Type F.
- D. Water-Reducing and Accelerating Admixture: ASTM C 494, Type E.
- E. Water-Reducing and Retarding Admixture: ASTM C 494, Type D.

2.06 RELATED MATERIALS

- A. Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber.
- B. Bonding Agent: ASTM C 1059, Type II, non-redispersible, acrylic emulsion or styrene butadiene.
- C. Epoxy-Bonding Adhesive: ASTM C 881, two-component epoxy resin, capable of humid curing and bonding to damp surfaces, of class and grade to suit requirements, and as follows:
1. Type II, non-load bearing, for bonding freshly mixed concrete to hardened concrete.
 2. Types I and II, non-load bearing, for bonding hardened or freshly mixed concrete to hardened concrete.
 3. Types IV and V, load bearing, for bonding hardened or freshly mixed concrete to hardened concrete.

2.07 REPAIR MATERIALS

- A. Repair Underlayment: Cement-based, polymer-modified, self-leveling product that can be applied in thicknesses from 1/8 inch and that can be feathered at edges to match adjacent floor elevations. Products shall contain no added gypsum.

1. Cement Binder: ASTM C 150, portland cement or hydraulic or blended hydraulic cement as defined in ASTM C 219.
 2. Primer: Product of underlayment manufacturer recommended for substrate, conditions, and application.
 3. Aggregate: Well-graded, washed gravel, 1/8 to 1/4 inch or coarse sand as recommended by underlayment manufacturer.
 4. Compressive Strength: Not less than 4000 psi (27.6 MPa) at 28 days when tested according to ASTM C 109/C 109M.
- B. Repair Topping: Traffic-bearing, cement-based, polymer-modified, self-leveling product that can be applied in thicknesses from 1/4 inch. Products shall contain no added gypsum.
1. Cement Binder: ASTM C 150, portland cement or hydraulic or blended hydraulic cement as defined in ASTM C 219.
 2. Primer: Product of topping manufacturer recommended for substrate, conditions, and application.
 3. Aggregate: Well-graded, washed gravel, 1/8 to 1/4 inch or coarse sand as recommended by topping manufacturer.
 4. Compressive Strength: Not less than 5500 psi (39 MPa) at 28 days when tested according to ASTM C 109/C 109M.

2.08 CONCRETE MIXES

- A. Prepare design mixes for each type and strength of concrete determined by either laboratory trial mix or field test data bases, as follows:
1. Proportion normal-weight concrete according to ACI 211.1 and ACI 301.
 2. Proportion lightweight structural concrete according to ACI 211.2 and ACI 301.
- B. Concrete curbs: Proportion normal-weight concrete mix as follows:
1. Compressive Strength (28 Days): 5000 psi.
- C. Cementitious Materials: Limit percentage, by weight, of cementitious materials other than portland cement in concrete as follows:
1. Fly Ash: 25 percent.
 2. Combined Fly Ash and Pozzolan: 25 percent.
 3. Ground Granulated Blast-Furnace Slag: 50 percent.
 4. Combined Fly Ash or Pozzolan and Ground Granulated Blast-Furnace Slag: 50 percent portland cement minimum, with fly ash or pozzolan not exceeding 25 percent.
- D. Maximum Water-Cementitious Materials Ratio: 0.40 to 0.45.

- E. Limit water-soluble, chloride-ion content in hardened concrete per ACI 318 Chapter 4 for corrosion protection of reinforcing steel.
- F. Admixtures: Use admixtures according to manufacturer's written instructions.
 - 1. Use water-reducing admixture or high-range water-reducing admixture (superplasticizer) in concrete, as required, for placement and workability.
 - 2. Use water-reducing and retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.
 - 3. Use water-reducing admixture in concrete required to be watertight.

2.09 FABRICATING REINFORCEMENT

- A. Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice."

2.10 CONCRETE MIXING

- A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94, and ASTM C 1116 and furnish batch ticket information. Batch ticket information shall include design mix reference, water that can be added at the jobsite, and admixtures. For transit mixing, complete not less than 70 revolutions of the drum at the manufacturer's rated mixing speed. Discharge concrete into its final position within 90 minutes after introduction of batch water to the cement. If a retarder admixture is used, the discharge time limit of 90 minutes may be increased by the time specified for retardation by the admixture manufacturer or the concrete supplier. Mix concrete a minimum of one minute at mixing speed immediately prior to discharge.
- B. Project-Site Mixing: Measure, batch, and mix concrete materials according to ASTM C 94. Mix concrete materials in appropriate drum-type batch machine mixer.
 - 1. For mixer capacity of 1 cu. yd.0.76 cu. m or less, continue mixing at least one and one-half minutes, but not more than five minutes after all ingredients are in mixer, before any part of batch is released.
 - 2. For mixer capacity larger than 1 cu. yd.0.76 cu. m, increase mixing time by 15 seconds for each additional 1 cu. yd.0.76 cu. m.
 - 3. Provide batch ticket for each batch discharged and used in the Work, indicating Project identification name and number, date, mix type, mix time, quantity, and amount of water added. Record approximate location of concrete placement in structure.
 - 4. Hand mixed concrete will not be allowed.

PART 3 - EXECUTION

3.01 FORMWORK

- A. Design, erect, shore, brace, and maintain formwork, according to ACI 301, to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until concrete structure can support such loads.

- B. Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117.
- C. Limit concrete surface irregularities, designated by ACI 347R as abrupt or gradual, as follows:
 - 1. Class D, 1 inch.
- D. Construct forms to prevent loss of concrete mortar.
- E. Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush or wrecking plates where stripping may damage cast concrete surfaces. Provide top forms for inclined surfaces steeper than 1.5 horizontal to 1 vertical. Kerf wood inserts for forming keyways, reglets, recesses, and the like, for easy removal.
 - 1. Do not use rust-stained steel form-facing material.
- F. Set edge forms, bulkheads, and intermediate screed strips for slabs to achieve required elevations and slopes in finished concrete surfaces. Provide and secure units to support screed strips; use strike-off templates or compacting-type screeds.
- G. Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris just before placing concrete.
- H. Retighten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.
- I. Coat contact surfaces of forms with form-release agent, according to manufacturer's written instructions, before placing reinforcement.

3.02 STEEL REINFORCEMENT

- A. General: Comply with CRSI's "Manual of Standard Practice" for placing reinforcement.
- B. Clean reinforcement of loose rust and mill scale, earth, ice, and other foreign materials.
- C. Accurately position, support, and secure reinforcement against displacement. Locate and support reinforcement with bar supports to maintain minimum concrete cover. Do not tack weld crossing reinforcing bars.
 - 1. Support slab reinforcing bars and welded wire fabric (WWF) as follows:

| BAR SIZE | MAXIMUM DISTANCE BETWEEN SUPPORTS |
|----------------|-----------------------------------|
| #3 | 2 feet |
| #4 | 3 feet |
| #5 | 4 feet |
| #3 at 15" E.W. | 4'-6" o.c. each way |

| WIRE FABRIC SHEETS | MAXIMUM DISTANCE BETWEEN SUPPORTS |
|--------------------|-----------------------------------|
| | |

| | |
|-------------------|---------------------|
| 6 x 6 - W2.9/w2.9 | 2'-0" o.c. each way |
| 6 x 6 - W6/W6 | 3'-0" o.c. each way |

- D. Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.
- E. Install welded wire fabric in longest practicable lengths on bar supports spaced to minimize sagging. Lap edges and ends of adjoining sheets at least one mesh spacing. Offset laps of adjoining sheet widths to prevent continuous laps in either direction. Lace overlaps with wire.

3.04 CONCRETE PLACEMENT

- A. Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections have been performed. Provide one day notification to Contracting Officer for each scheduled pour.
- B. Before placing concrete, water may be added at Project site, subject to limitations of ACI 301. Up to two gallons of water per cubic yard of concrete may be added at the jobsite provided the approved design mix accommodates the additional water.
 1. Do not add water to concrete after adding high-range water-reducing admixtures to mix.
- C. Convey concrete from mixer to the place of final deposit rapidly by methods that prevent segregation or loss of ingredients and will insure the required quality of concrete. Use conveying equipment, conveyors, hoppers, baffles, chutes, pumps that are sized and designed to prevent cold joints from occurring and prevent segregation in discharged concrete. Clean conveying equipment before each placement.
- D. Deposit concrete continuously or in layers of such thickness that no new concrete will be placed on concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as specified. Deposit concrete to avoid segregation.
- E. Deposit concrete in forms in horizontal layers with proper consolidation into previous layers and in a manner to avoid inclined construction joints. Place each layer while preceding layer is still plastic, to avoid cold joints.
- F. Deposit and consolidate concrete in a continuous operation, until placement of a panel or section is complete.
 1. Consolidate concrete during placement operations so concrete is thoroughly worked around reinforcement and other embedded items and into corners.
 2. Maintain reinforcement in position on chairs during concrete placement.
 3. Screed surfaces with a straightedge and strike off to correct elevations.
 4. Slope surfaces uniformly to drains where required.
 5. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane, free of humps or hollows, before excess moisture or

bleed-water appears on the surface. Do not further disturb surfaces before starting finishing operations.

3.05 FINISHING FORMED SURFACES

- A. Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defective areas repaired and patched. Remove fins and other projections exceeding ACI 347R limits for class of surface specified.

- B. Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch tie holes and defective areas. Remove fins and other projections exceeding 1/8 inch in height.
 - 1. Apply to concrete surfaces exposed to public view or to be covered with a coating or covering material applied directly to concrete, such as waterproofing, dampproofing, veneer plaster, or painting.

 - 2. Do not apply rubbed finish to smooth-formed finish.

3.06 FINISHING SLABS

- A. General: Comply with recommendations in ACI 302.1R for screeding, restraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.

- B. Scratch Finish: While still plastic, texture concrete surface that has been screeded and bull-floated or darbied. Use stiff brushes, brooms, or rakes.
 - 1. Apply scratch finish to surfaces indicated and to surfaces to receive concrete floor topping or mortar setting beds for ceramic tile.

- C. Float Finish: Consolidate surface with power-driven floats or by hand floating if area is small or inaccessible to power driven floats. Restraighten, cut down high spots, and fill low spots. Repeat float passes and restraightening until surface is left with a uniform, smooth, granular texture.
 - 1. Apply float finish to surfaces indicated, to surfaces to receive trowel finish, and to floor and slab surfaces to be covered with fluid-applied or sheet waterproofing.

- D. Trowel Finish: After applying float finish, apply first trowel finish and consolidate concrete by hand or power-driven trowel. Continue troweling passes and restraighten until surface is free of trowel marks and uniform in texture and appearance. Grind smooth any surface defects that would telegraph through applied coatings or floor coverings.
 - 1. Apply a trowel finish to surfaces indicated and to floor and slab surfaces exposed to view or to be covered with ceramic tile set over a cleavage membrane, paint, or another thin film-finish coating system.

 - 2. Finish surfaces to the following tolerances, measured within 24 hours according to ASTM E 1155/E 1155M for a randomly trafficked floor surface:
 - a. Specified overall values of flatness, F(F) 30; and levelness, F(L) 20; with minimum local values of flatness, F(F) 24; and levelness, F(L) 15; for suspended slabs.

3. Finish and measure surface so gap at any point between concrete surface and an unlevelled freestanding 10-foot-long straightedge, resting on two high spots and placed anywhere on the surface, does not exceed the following:
 - a. 1/4 inch.

3.07 MISCELLANEOUS CONCRETE ITEMS

- A. Filling In: Fill in holes and openings left in concrete structures, unless otherwise indicated, after work of other trades is in place. Mix, place, and cure concrete, as specified, to blend with in-place construction. Provide other miscellaneous concrete filling indicated or required to complete Work.
- B. Curbs: Provide monolithic finish to interior curbs by stripping forms while concrete is still green and by steel-troweling surfaces to a hard, dense finish with corners, intersections, and terminations slightly rounded.

3.08 CONCRETE PROTECTION AND CURING

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and with recommendations in ACI 305R for hot-weather protection during curing.
- B. Formed Surfaces: Cure formed concrete surfaces. If forms remain during curing period, moist cure after loosening forms. If removing forms before end of curing period, continue curing by one or a combination of the curing methods listed in paragraph C below.
- C. Unformed Surfaces: Begin curing immediately after finishing concrete. Cure unformed surfaces, including floors and slabs, concrete floor toppings, and other surfaces, by one or a combination of the following methods:
 1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:
 - a. Water.
 - b. Continuous water-fog spray.
 - c. Absorptive cover, water saturated, and kept continuously wet. Cover concrete surfaces and edges with 12-inch lap over adjacent absorptive covers.
 2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches, and sealed by waterproof tape or adhesive. Cure for not less than seven days. Immediately repair any holes or tears during curing period using cover material and waterproof tape.
 - a. Moist cure or use moisture-retaining covers to cure concrete surfaces to receive floor coverings.
 - b. Moist cure or use moisture-retaining covers to cure concrete surfaces to receive penetrating liquid floor treatments.
 - c. Cure concrete surfaces to receive floor coverings with either a moisture-retaining cover or a curing compound that the manufacturer recommends for use with floor coverings.

3. Curing Compound: Apply uniformly in continuous operation by spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.
4. Curing and Sealing Compound: Apply uniformly to floors and slabs indicated in a continuous operation by spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application where recommended by the manufacturer. Repeat process 24 hours later and apply a second coat. Maintain continuity of coating and repair damage during curing period.

3.09 CONCRETE SURFACE REPAIRS

- A. Defective Concrete: Repair and patch defective areas. Remove and replace concrete that cannot be repaired and patched to Contracting Officer's approval.
- B. Patching Mortar: Mix dry-pack patching mortar, consisting of one part portland cement to two and one-half parts fine aggregate passing a No. 16(1.2-mm) sieve, using only enough water for handling and placing.
- C. Repairing Formed Surfaces: Surface defects include color and texture irregularities, cracks, spalls, air bubbles, honeycombs, rock pockets, fins and other projections on the surface, and stains and other discolorations that cannot be removed by cleaning.
 1. Immediately after form removal, cut out honeycombs, rock pockets, and voids more than 1/2 inch in any dimension in solid concrete but not less than 1 inch in depth. Make edges of cuts perpendicular to concrete surface. Clean, dampen with water, and brush-coat holes and voids with bonding agent. Fill and compact with patching mortar before bonding agent has dried. Fill form-tie voids with patching mortar or cone plugs secured in place with bonding agent.
 2. Repair defects on surfaces exposed to view by blending white portland cement and standard portland cement so that, when dry, patching mortar will match surrounding color. Patch a test area at inconspicuous locations to verify mixture and color match before proceeding with patching. Compact mortar in place and strike off slightly higher than surrounding surface.
 3. Repair defects on concealed formed surfaces that affect concrete's durability and structural performance as determined by Contracting Officer.
- D. Perform structural repairs of concrete, subject to Contracting Officer's approval, using epoxy adhesive and patching mortar.
- E. Repair materials and installation not specified above may be used, subject to Contracting Officer's approval.

END OF SECTION

DIVISION 6 - WOOD AND PLASTICS

SECTION 06070 – WOOD TREATMENT

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Plant preservative and insecticide treatment of lumber and other wood products specified in other Sections of this Specification by pressure and dip methods.
- B. Field treatment of field cut or drilled lumber.

1.02 RELATED SECTIONS

- A. Section 06100 - Rough Carpentry: Lumber products.

1.03 REFERENCES

- A. American Wood-Preservers' Association
 - 1. AWPA C2-00: Lumber, Timber, Bridge Ties and Mine Ties-Preservative Treatment by Pressure Processes.
 - 2. AWPA C9-00: Plywood-Preservative Treatment by Pressure Processes.
 - 3. AWPA C31-00: Lumber Used out of Contact with the Ground and Continuously Protected from Liquid Water-Treatment by Pressure Processes.
 - 4. AWPA M4-01: Care of Preservative-Treated Wood Products.
 - 5. AWPA C20-99: Structural Lumber- Fire Retardant Treatment by Pressure Process.
 - 6. AWPA N1-01: All millwork, Preservative Treatment by Non-Pressure Process.
 - 7. AWPA N2-00: Composite Wood Products, Preservative Treatment by Non-Pressure Process.

1.04 SUBMITTALS

- A. Product Data: Provide data on all treatment products, including field application instructions if applicable.
 - 1. Provide manufacturer's Material Safety Data Sheets on all products, and hazardous materials.
- B. Preserver Certifications:
 - 1. Provide a Certificate of Treatment showing compliance with these specifications for the following:
 - a. Kiln drying
 - b. Method of treatment performed, including dip treatment.

- C Contractor's Certification: Provide a certification letter stating that all wood used on this job including cuts and penetration were treated and coated with preservatives in compliance with requirements of this contract.
- D. Guarantee: Guarantee form for written guarantee.
- E. Act 045, Session Laws of Hawaii 2018, Contractor Temporary Permit: If a permit is required by the Act, submit copy of Contractor Temporary Permit authorizing the use or application of chlorpyrifos as an active ingredient until December 31, 2022, as specified under section 1.06 ACT 045, SESSION LAWS OF HAWAII 2018, RELATING TO ENVIRONMENTAL PROTECTION.

1.05 REGULATORY REQUIREMENTS

- A. Comply with State OSHL (Occupancy Safety and Health Law) and pollution controls regulations of the State Department of Health and EPA.

1.06 ACT 045, SESSION LAWS OF HAWAII 2018, RELATING TO ENVIRONMENTAL PROTECTION

- A. Act 045, Session Laws of Hawaii 2018 was signed into law by the Hawaii State Governor on June 13, 2018. The law requires that all uses of chlorpyrifos and products which contain chlorpyrifos require possession of a permit, issued by the Hawaii Department of Agriculture Pesticides Branch, beginning January 1, 2019. On January 1, 2023 all uses and sale of chlorpyrifos in the State of Hawaii are banned and permitting of its use will cease at that time. Any chlorpyrifos permits that extend past December 31, 2022 will be terminated as of that date.
- B. The application for a permit to use chlorpyrifos includes all products that will be used in an Agricultural setting (which include cattle ear tags) or for a Non-Agricultural Use. Those who desire to use products which include chlorpyrifos as one or more active ingredients are required to fill in Form C-45 from the Hawaii Department of Agriculture.
- C. The permit application Form C-45, may be requested from the Pesticides Branch at the Hawaii Department of Agriculture following email address:
HDOA.PB@hawaii.gov.
- D. If you have any questions about this, you may contact the Pesticides Branch at (808) 973-9411 or email at HDOA.PB@hawaii.gov.

1.07 QUALITY ASSURANCE

- A. Source Limitations for Treated Wood: Obtain each type of fire-retardant-treated wood product through one source from a single producer.
- B. Comply with the American Wood-Preservers' Association standards as described in the applicable building or residential code. Preservatives shall be EPA registered.
- C. Do not use preservatives containing arsenic or other EPA banned chemicals.
- D. Do not use Perma-Clear 65 or other zinc naphthanate products.

- E. Do not use the pesticide containing chlorpyrifos as an active ingredient if Contractor did not obtain a Contractor Temporary Permit authorizing the use or application of chlorpyrifos. Refer to section 1.06 ACT 045, SESSION LAWS OF HAWAII 2018, RELATING TO ENVIRONMENTAL PROTECTION.

1.08 DELIVERY STORAGE AND HANDLING

- A. Protect AWPA C31 inorganic boron treated wood from contact with the ground, rain or other sources of liquid water until permanent installation of covering construction.

1.09 GUARANTEE

- A. Provide a two year guarantee to replace all treated wood which is attacked by subterranean termites.
- B. Provide a five year guarantee to replace all treated wood which is attacked by dry wood termites or deteriorates due to dry rot. This guarantee period supersedes the guarantee provisions of the Interim General Conditions (IGC). The Surety shall not be held liable beyond two years of the project acceptance date.
- C. Guarantee periods shall commence on Project Acceptance date.

PART 2 - PRODUCTS

2.01 GENERAL

- A. Mill lumber to finish size and shape prior to treating, and treat before assembly. Plywood may be treated in regular panel sizes.
- B. Mark each treated item with the treatment quality mark of an inspection agency approved by the American Lumber Standards Committee Board of Review.
 - 1. For exposed lumber indicated to receive a stained or natural finish, mark end or back of each piece, or omit marking and provide certificates of treatment compliance issued by inspection agency.

2.02 PRESSURE TREATMENT WITH WATER-BORNE PRESERVATIVES

- A. Treating solutions:
 - 1. Copper azole, Type A (CBA-A).
 - 2. Inorganic boron (SBX).
- B. Treatment Methods:
 - 1. General:
 - a. All water-borne treatment methods require incising of lumber of nominal 2 inch thickness (1-1/2 inches actual dimension).
 - b. Choice of treatment method and conditions of use of each treating solution shall conform to the treatment schedule contained in Part 3.
 - 2. CBA-A: Treatment methods, depth of penetration and treating solution retention shall conform to AWPA C2 for lumber and C9 for plywood.

3. SBX: Treatment method shall conform to AWPA C31. Treating solution retention shall be a minimum of 0.28 pounds per cubic foot (equivalent to 0.42 DOT).
- C. Drying:
1. Before Treatment:
 - a. CBA-A Treatment: Wood shall be air dried or kiln-dried before treatment to an average moisture content of 28 percent or less per AWPA standards.
 - b. SBX Treatment: Wood having a moisture content higher than 28% is acceptable when treating with SBX.
 2. After Treatment:
 - a. All 1 inch and 2 inch lumber and all plywood shall be dried to a moisture content of 19 percent or less after treatment.

2.03 PRESSURE TREATMENT WITH OIL-BORNE PRESERVATIVES

- A. Treating Solution:
1. 0.50 percent by weight chlorpyrifos, 0.75 percent by weight 3-iodo-2-propynyl butyl carbamate (IPBC). The solvent used in formulating the preservative solution shall meet the requirements of AWPA hydrocarbon solvent Type C, Standard P9, Paragraph 3.1.
 2. For interior application use low odor mineral spirits as solvent.
- B. Treatment Methods:
1. Treated wood shall attain the following net retention requirements: 0.0175 pounds of Chlorpyrifos per cubic foot of wood, 0.035 pound of 3-iodo-2 propynyl butyl carbamate per cubic foot of wood.
- C. Drying:
1. Before Treatment: All wood treated with oil-borne preservatives shall be kiln-dried to an average moisture content of 12% to 15% per AWPA standards.
 2. After Treatment: Wood shall be thoroughly dried and virtually odor-free prior to installation.

2.04 PRESERVATION BY DIP TREATMENT

- A. Treating Solution:
1. Any of the Oil-Borne Preservatives listed above.
 2. A solution of 1 quart chlorpyrifos in 55 gallons of a 0.50 percent IPBC solution.
- B. Treatment Methods:
1. Immersion treat for a minimum period of 15 minutes.
 2. Do not incise lumber scheduled to be left unpainted or receive a clear finish.
- C. Drying:
1. After Treatment: Wood shall be thoroughly dried and virtually odor-free prior to installation.

2.05 FIELD TREATMENT

A. Treatment Method:

1. Treat in accordance with AWPA Standard M4-98 using two heavy brush coats of a treating solution.

PART 3 - EXECUTION

3.01 SCHEDULE OF TREATMENTS

A. Species:

1. Treat all wood species except all-heart redwood.
2. All water-borne and oil-borne treatment solutions are applicable to douglas-fir and hem-fir species except for CBA-A treatment which is acceptable for hem-fir species only.

B. Application:

1. Pressure Treatment:

- a. General: Unless otherwise stipulated, all lumber and plywood shall be pressure treated.
- b. Hardwood flooring and exposed lumber 1-1/2" (net thickness) and over that will be unpainted or receive a clear finish shall be and pressure treated with oil-borne preservative. Do not incise lumber.
- c. SBX treated wood shall not be used in areas exposed to direct precipitation (e.g. exposed decking, trellises, fencing, etc.) unless painted or covered with a finish material.

2. Dip Treatment: All finish lumber under 1-1/2 inch net thickness (except hardwood flooring); finish plywood; and mill work items, such as for cabinet work, shelving and similar wood work that will be exposed to view in the finished work.

3. Field Cuts: Treat end cuts, notches and penetrations into treated lumber or plywood. Exception: Cuts and penetrations made in SBX treated wood 2 inches or less in nominal thickness need not be field treated.

END OF SECTION

SECTION 06100 - ROUGH CARPENTRY

PART 1 - GENERAL

1.01 SUMMARY

- A. Work Included: Provide all rough carpentry, complete, including but not limited to rough bucks, blocking, furring strips, and rough hardware.
- B. Related Work Described Elsewhere:
 - 1. Occupancy, air quality requirements are specified in Section 01575 - TEMPORARY CONTROLS, AIR QUALITY REQUIREMENTS.
 - 2. Wood treatment is under Section 06070 - WOOD TREATMENT.

1.02 QUALITY ASSURANCE

- A. Grading Marks: Factory mark each piece of lumber with type, grade, mill, and grading agency identification. Certificate of inspection and grading by a recognized agency may be submitted with each shipment in lieu of factory marking, at Contractor's option.
- B. Wood Preservative-Treatment: For non-fire-retardant treated lumber, wood preservative treatment shall be in accordance with Section 06070 – WOOD TREATMENT.

1.03 SUBMITTALS

- A. Submit in accordance with Section 01330 – SUBMITTAL PROCEDURES.
- B. Certificates: Provide a certificate of treatment showing compliance with the specifications, and a certificate of dryness for all wood specified to be dried after treatment.

1.04 PRODUCT HANDLING

- A. Delivery and Storage: Keep materials dry at all times. Protect against exposure to weather and contact with damp or wet surfaces. Stack lumber and provide air circulation within stacks. Store materials away from threat of termite or other insect infestation.

1.05 JOB CONDITIONS

- A. Coordination: Fit carpentry work to other work; scribe and cope as required for accurate fit. Correlate location of furring, rough bucks, blocking, nailing strips, and similar supports to allow proper attachment of other work.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Lumber, General:

Factory-mark each piece of lumber with type, grade, mill and grading agency, except omit marking from surfaces to be exposed with transparent finish or without finish.

Nominal sizes are indicated, except as shown by detail dimensions. Provide actual sizes as required by PS 20, for moisture content specified for each use.

1. Provide dressed lumber, S4S, unless otherwise indicated.
 2. Provide seasoned lumber with 15% maximum moisture content at time of dressing.
- B. Framing Lumber:
1. Light framing lumber: 2 inches through 4 inches thick, less than 6 inches wide, such as studs, plates, blocking, rough bucks, furring, etc., provide Construction grade, Douglas Fir/Larch, or Hem/Fir.
 2. For structural framing 2 inches through 4 inches thick, 6 inches and wider, provide No. 1 grade, Douglas Fir, (WCLB or WWPA).
 3. For exposed structure 4 x 12 and 4 x 16 members, provide Select Structural Grade, Douglas Fir, rough sawn, including all exposed edges and faces.
 4. For exposed 3 inch x 3 inch net Douglas Fir members, provide Select Grade, vertical grain, resawn.
- C. Concealed lumber such as studs, plates and blockings shall be Douglas Fir, Coastal Region construction Grade, S4S.
- D. Fasteners:
1. Fasteners and Anchorages: Provide size, type, material and finish as indicated and as recommended by applicable standards, complying with applicable ANSI Specifications for nails, staples, screws, bolts, nuts, washers and anchoring devices. Provide metal hangers and framing anchors of the size and type recommended by the manufacturer for each use including recommended nails. Provide all fasteners and anchorages with a hot-dip zinc coating ASTM A153, Class C or D as applicable.
 - a. Bolts, Nuts, and Studs: ANSI B18.2.1, ANSI B18.5.2.1M, ANSI B18.5.2.2M, ANSI B18.2.2, and ASTM A 687, hot dip galvanized.
 - b. Lag Screws and Lag Bolts: ANSI B18.2.1, hot dip galvanized.
 - c. Wood Screws: ANSI B18.6.1, hot dip galvanized.
 - d. Wire Nails: Steel wire shall be good commercial quality, entirely suitable for the purpose and sufficiently ductile to ensure that the finish nail shall withstand, without fracture, cold bending through 180 degrees over a diameter not greater than the diameter of the wire. Wire nails shall be hot dip galvanized.
 2. Power Driven Fastener Finish: Fasteners for pressure-preservative-treated wood shall be of hot-dipped zinc-coated galvanized, stainless steel.
 3. Although there are mechanically galvanized and electrogalvanized nails having additional coatings of passivating chromate and thermoplastic polymer, these fasteners shall not be used as they have not been approved

by the City and County of Honolulu Building Department for use in connection with preservative treated lumber.

4. In addition, due to problems with nail pull-out, smooth stainless steel nails shall not be used. "Ring-shank" type stainless steel nails are acceptable.
 5. Hot-dipped zinc-coated galvanized fasteners shall conform to ASTM A641, Class 1. Where the hot-dipped zinc-coated fastener is to be used in conjunction with treated wood foundations, its coating weight shall be at least 2.00 oz/sf for the average of specimens tested and 1.70 oz/sf for any individual specimens.
- E. Moisture Barrier: ASTM D 226, Type I, (No. 15), asbestos-free, asphalt saturated roofing felt.

2.02 WOOD TREATMENT

- A. All other lumber and plywood shall be treated in accordance with Section 06070 – WOOD TREATMENT.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. General: Discard units of material with defects which might impair quality of work, and units which too small to use in fabricating work with minimum joints or optimum joint arrangement.
1. Set carpentry work accurately to required levels and lines, with members plumb and true and accurately cut and fitted. Lumber shall be flush and tight against each other during fastening.
 2. Securely attach carpentry work to substrate by anchoring and fastening as shown and as required by recognized standards. Countersink nail heads on exposed carpentry work and fill holes. Overdriving of fasteners shall be avoided.
 3. Install fasteners without splitting of wood; predrill as required.
 4. Fasteners having chipped coatings shall not be used.
 5. Where more than 20% of the fasteners are found to be overdriven up to 1/8-inch deep, or if any fastener is overdriven more than 1/8-inch deep, additional fasteners shall be driven at a rate of 1 additional fastener for every 2 overdriven fasteners.
 6. Where the corrosion resistant coating on the head of the fastener has been chipped by the device in excess of 25%, the fastener shall be removed and replaced. The device shall not be used until its driver has been repaired.
 7. Use common wire nails, except as otherwise indicated. Use finishing nails for finish work. Select fasteners of size that will not penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members.

- B. Wood Framing, General:
 - 1. Provide framing members of sizes and on spacings shown, and frame openings as shown, or if not shown, comply with recommendations of "Manual for House Framing" of National Forest Products Association. Do not splice structural members between supports.
 - 2. Anchor and nail as shown, and to comply with the current ICBO Uniform Building Code.
 - 3. Provide moisture barrier below all wood plates resting on concrete.
- C. Wood Blocking, Rough Bucks, and Furring Strips: Provide wherever shown and where required for attachment of other work. Form to shapes as shown and cuts as required for true line and level of work to be attached. Coordinate location with other work involved. Attach to substrates as required to support applied loading. Countersink bolts and nuts flush with surfaces, unless otherwise shown.
- D. Retreat cut and penetrated non-fire-retardant-treated lumber including all coring holes for bolts and fastenings in accordance with Section 06070 – WOOD TREATMENT.
- E. Fastening By Pneumatic, Gas and Electric Powered Drivers
 - 1. Fasteners having chipped coatings shall not be used.
 - 2. Lumber shall be flush and tight against each other during fastening operations.
 - 3. Fasteners shall be driven flush with the face of the material. Overdriving of the fastener shall be avoided.
 - 4. Where more than 20% of the fasteners are found to be overdriven up to 1/8" deep, or if any fastener is overdriven more than 1/8" deep, additional fasteners shall be driven at a rate of 1 additional fastener for every 2 overdriven fasteners.
 - 5. Where the corrosion resistant coating on the head of the fastener has been chipped by the device in excess of 25%, the fasteners shall be removed and replaced. The device shall not be used until its driver has been repaired.
 - 6. Nails shall be of the proper length to suit their particular application (the point of the nail shall not be exposed after being driven).

END OF SECTION

SECTION 06611 – SOLID SURFACE FABRICATIONS

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes: Provide solid surfacing fabrications including but not limited to following:
 - 1. Shower stall walls.

- B. Related Sections: Following description of work is included for reference only and shall not be presumed complete:
 - 1. Provision of indoor air quality requirements: SECTION 01575 – TEMPORARY CONTROLS – AIR QUALITY REQUIREMENTS.

 - 2. Provision of plumbing and plumbing fixtures: SECTION 15400 – PLUMBING.

1.02 REFERENCES

- A. Abbreviations and Acronyms:
 - 1. VOC: Volatile Organic Compound.

- B. Definitions:
 - 1. Solid Surface: Non-porous, homogeneous material maintaining the same composition throughout the part with a composition of acrylic polymer, aluminum trihydrate filler and pigment.

- C. Reference Standards:
 - 1. ASTM C920-14a - Standard Specification for Elastomeric Joint Sealants

 - 2. ASTM D638-10 - Standard Test Method for Tensile Properties of Plastics

 - 3. ASTM D785-08 - Standard Test Method for Rockwell Hardness of Plastics and Electrical Insulating Materials

 - 4. ASTM D790-10 - Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials

 - 5. ASTM D5420-10 - Standard Test Method for Impact Resistance of Flat, Rigid Plastic Specimen by Means of a Striker Impacted by a Falling Weight (Gardner Impact)

 - 6. ASTM E84-14 - Standard Test Method for Surface Burning Characteristics of Building Materials

 - 7. ASTM E228-11 - Standard Test Method for Linear Thermal Expansion of Solid Materials with a Push-Rod Dilatometer

 - 8. ASTM G21-13 - Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi

 - 9. ASTM G22-76(96) - Standard Practice for Determining Resistance of Plastics to Bacteria

10. ASTM G155-13 - Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials
11. NFPA 255-06 - Standard Method of Test of Surface Burning Characteristics of Building Materials
12. SCAQMD Rule 1168 - Adhesive and Sealant Applications (amended January 2005)
13. UL 723 - Standard for Test for Surface Burning Characteristics of Building Materials

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Preinstallation Meetings: Arrange preinstallation meeting 1 week prior to commencing work with all parties associated with trade as designated in Contract Documents or as requested by Contracting Officer. Presided over by Contractor, include Contracting Officer who may attend, Subcontractor performing work of this trade, Owner's representative, testing company's representative and consultants of applicable discipline. Review Contract Documents for work included under this trade and determine complete understanding of requirements and responsibilities relative to work included, storage and handling of materials, materials to be used, installation of materials, sequence and quality control, Project staffing, restrictions on areas of work and other matters affecting construction, to permit compliance with intent of work of this Section.

1.04 SUBMITTALS

- A. Product Data: Indicate Product description including solid surface sheets, sinks, bowls and illustrating full range of standard colors, fabrication information and compliance with specified performance requirements. Submit Product data with resistance to list of chemicals.
- B. Shop Drawings: Submit Shop Drawings for work of this Section in accordance with Section 01330. Indicate plans, sections, dimensions, component sizes, edge details, thermosetting requirements, fabrication details, attachment provisions, sizes of furring, blocking, including concealed blocking and coordination requirements with adjacent work. Show locations and sizes of cutouts and holes for plumbing fixtures, faucets, and other items installed in solid surface.
- C. Coordination Drawings: Submit coordination drawings indicating plumbing and miscellaneous steel work indicating locations of wall rated or non-rated, blocking requirements, locations and recessed wall items and similar items.
- D. Samples: Submit minimum 6" x 6" samples. Cut sample and seam together for representation of inconspicuous seam. Indicate full range of color and pattern variation. Approved samples will be retained as standards for work.

1.05 CLOSEOUT SUBMITTALS

- A. Operational and Maintenance Data:
 1. Submit manufacturer's care and maintenance data, including repair and cleaning instructions. Include in Project closeout documents.

2. Provide a commercial care and maintenance kit and video. Review maintenance procedures and warranty details with State upon completion.

1.06 QUALITY ASSURANCE

A. Qualifications:

1. Installers: Provide work of this Section executed by competent installers with minimum 5 years experience in the application of Products, systems and assemblies specified and with approval and training of the Product manufacturers.

B. Mock-Ups:

1. Prior to final approval of Shop Drawings, erect 1 full size mock-up of each component at Project site demonstrating quality of materials and execution for Contracting Officer review.
2. Should mock-up not be approved, rework or remake until approval is secured. Remove rejected units from Project site.
3. Approved mock-up will be used as standard for acceptance of subsequent work.
4. Approved mock-ups may remain as part of finished work.

1.07 DELIVERY, STORAGE AND HANDLING

A. Delivery and Acceptance Requirements: Deliver no components to Project site until areas are ready for installation.

B. Storage and Handling Requirements:

1. Store components indoors prior to installation.
2. Handle materials to prevent damage to finished surfaces.

1.08 WARRANTY

- ### **A. Manufacturer Warranty: Provide manufacturer's standard warranty for material only for period of 10 years against defects and/or deficiencies in accordance with General Conditions of the Contract. Promptly correct any defects or deficiencies which become apparent within warranty period, to satisfaction of Contracting Officer and at no expense to State.**

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Manufacturer List: Products of following manufacturers are acceptable subject to conformance to requirements of Drawings, Schedules and Specifications:

1. Corian® by DuPont; www.corian.com
2. Samsung Chemical USA; www.staron.com
3. Wilsonart Contract; www.wilsonartcontract.com
4. Or approved equal.

2.02 MATERIALS

A. Performance/Design Criteria:

| Property | Requirement (min or max) | Test Procedure |
|----------------------------------|-------------------------------------------------------------------------------|-------------------------------------|
| 1. Solid Surface Based Products: | | |
| a. Tensile Strength | 6000 psi min | ASTM D638 |
| b. Tensile Modulus | 1.5 x 10 ⁶ psi min | ASTM D638 |
| c. Tensile Elongation | 0.4% min. | ASTM D638 |
| d. Flexural Strength | 10000 psi min | ASTM D790 |
| e. Flexural Modulus | 1.2 x 10 ⁶ psi min | ASTM D790 |
| f. Hardness | >85-Rockwell "M" scale min. | ASTM D785 |
| g. Thermal Expansion | 2.2 x 10 ⁻⁵ in./in./°F | ASTM E228 |
| h. Fungi and Bacteria | Does not support microbial growth | ASTM G21 & G22 |
| i. Microbial Resistance | Highly resistant to mold growth | UL 2824 |
| j. Ball Impact | No fracture - 1/2 lb. Ball: 6 mm slab - 36" drop 12 mm slab - 144" drop | NEMA LD 3, Method 3.8 |
| k. Weatherability | ΔE*94<5 in 1,000 hrs | ASTM G155 |
| l. Flammability | | ASTM E84, NFPA 255 & UL 723 |
| | All Colors | |
| | 6 mm | 12 mm |
| m. Flame Spread | <25 | <25 |
| n. Smoke Developed | <25 | <25 |
| o. Class | A | A NFPA 101®, Life Safety Code |

B. Solid Surface Material:

1. Non-porous, homogeneous material maintaining the same composition throughout the part with a composition of acrylic polymer, aluminum trihydrate

filler and pigment; not coated, laminated or of composite construction; meeting following criteria:

- C. Flammability: Class 1 and A when tested to UL 723.
- D. Adhesive for Bonding to Other Products: One component silicone to ASTM C920.
- E. Sealant: A standard mildew-resistant, FDA/UL recognized silicone color matched sealant or clear silicone sealants.

2.03 COMPONENTS

- A. Shower walls: 1/2" thick solid surfacing material, adhesively joined with inconspicuous seams, edge details as indicated on Drawings. Color selected later by Contracting Officer from manufacturer's full color range.
- B. Fabrication:
 - 1. Fabricate components in shop to greatest extent practical to sizes and shapes indicated, in accordance with approved Shop Drawings and solid polymer manufacturer requirements. Form joints between components using manufacturer's standard joint adhesive without conspicuous joints. Provide factory cutouts for plumbing fittings and bath accessories as indicated on Drawings.
 - 2. Where indicated, thermoform corners and edges or other objects to shapes and sizes indicated on Drawings, prior to seaming and joining. Cut components larger than finished dimensions and sand edges to remove nicks and scratches. Heat entire component uniformly prior to forming.
 - 3. Ensure no blistering, whitening and cracking of components during forming.
 - 4. Fabricate joints between components using manufacturer's standard joint adhesive. Ensure joints are inconspicuous in appearance and without voids. Attach 50 mm (2") wide reinforcing strip of solid polymer material under each joint. Reinforcing strip of solid polymer material is not required when using DuPont™ Joint Adhesive 2.0.
 - 5. Provide holes and cutouts for plumbing and bath accessories as indicated on Drawings.
 - 6. Rout and finish component edges to a smooth, uniform finish. Rout cutouts, then sand edges smooth. Repair or reject defective or inaccurate work.
 - 7. Finish: Ensure surfaces have uniform finish:
 - a. Polished, with a 60° gloss rating of 55 - 80.
 - 8. Fabrication Tolerances:
 - i. Variation in Component Size: +/-1/8".
 - ii. Location of Openings: +/-1/8" from indicated location.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verification of Conditions:
 - 1. Examine substrates and conditions, with fabricator present for compliance with requirements for installation tolerances and other conditions affecting performance of work. Proceed with installation only after unsatisfactory conditions have been corrected.
 - 2. Verify actual site dimensions and location of adjacent materials prior to commencing work.
 - 3. Notify Contracting Officer in writing of any conditions which would be detrimental to installation.
- B. Evaluation and Assessment: Commencement of work implies acceptance of previously completed work.

3.02 INSTALLATION

- A. Install components plumb, level, rigid, scribed to adjacent finishes in accordance with reviewed Shop Drawings and Product installation details.
- B. Fabricate field joints using manufacturer's recommended adhesive, with joints being inconspicuous in finished work. Exposed joints/seams are not permitted. Keep components and hands clean when making joints. Reinforce field joints as specified herein. Cut and finish component edges with clean, sharp returns.
- C. Route radii and contours to template. Anchor securely to base component or other supports. Align adjacent components and form seams to comply with manufacturer's written recommendations using adhesive in color to match work. Carefully dress joints smooth, remove surface scratches and clean entire surface.
- D. Seal between wall and components with joint sealant as specified herein and in Section 07920, as applicable.
- E. Keep components and hands clean during installation. Remove adhesives, sealants and other stains. Ensure components are clean on date of Substantial Completion of the Work.
- F. Coordinate connections of plumbing fixtures with Section 15400.

3.03 REPAIR

- A. Repair minor imperfections and cracked seams and replace areas of severely damaged surfaces in accordance with manufacturer's Technical Bulletins.

3.04 SITE QUALITY CONTROL

- A. Non-Conforming Work: Replace damaged work which cannot be satisfactorily repaired, restored or cleaned, to satisfaction of Contracting Officer at no cost to State.

3.05 CLEANING

- A. Remove excess adhesive and sealant from visible surfaces.
- B. Clean surfaces in accordance with manufacturer's Care and Maintenance Instructions.

3.06 PROTECTION

- A. Provide protective coverings to prevent physical damage or staining following installation for duration of Project.
- B. Protect surfaces from damage until date of Substantial Completion of the Work.

END OF SECTION

DIVISION 7 -THERMAL AND MOISTURE PROTECTION

SECTION 07110 - MEMBRANE WATERPROOFING (Below Grade and Between Slab)

PART 1 - GENERAL

1.01 SUMMARY

- A. The Contractor shall be an approved applicator of the manufacturer whose membrane waterproofing system he proposes to apply. He shall be familiar with the products, equipment and the specified requirements and methods needed for the proper installation of the membrane waterproofing system.

1.02 SUBMITTALS

- A. Submit in accordance with Section 01330 – SUBMITTAL PROCEDURES.
- B. The Contractor shall submit the following to the Contracting Officer for approval:
 - 1. Copy of installing contractor's current applicator license.
 - 2. Prior to the Start of Work, a signed certificate from the membrane waterproofing manufacturer stating that the Contractor is an approved applicator of his assemblies.
 - 3. Six (6) copies of the manufacturer's material specifications, application instructions and Material Safety Data Sheets for the membrane waterproofing system and materials which he proposes to use.
 - 4. Guaranty as noted under Section 1.03.

1.03 GUARANTY

- A. The Contractor shall execute to the State a 2-year written guaranty from the Project Acceptance Date that the installation will be watertight and that any leaks which develop during that period which are not due to improper use or willful damage will be repaired at no cost to the State.

1.04 PRODUCT HANDLING

- A. Delivery of Materials: All materials shall be delivered to the site in the original unbroken manufacturer's wrapping material and containers with the original labels thereon intact.
- B. Storage of Materials at Job Site
 - 1. Materials shall be stored in accordance with the manufacturer's recommendations.
 - 2. Materials which absorb moisture shall be kept under waterproof cover. Wet materials shall not be permitted to be used on the job and shall be removed promptly from the site.
- C. Cautions and Warnings
 - 1. Materials containing solvents shall be stored in a dry cool area with proper fire and safety precautions.

2. Vapors from bonding adhesives, lap cements, membrane material products, or other accessory materials may be harmful if inhaled or placed in contact with the skin. Vapors may also be flammable. The Contractor shall consult container labels and Material Safety Data Sheets for specific information and shall employ the necessary safety precautions needed for the products being used.

1.05 TESTING

- A. Horizontal membranes placed between slabs located above usable space shall be water tested for at least 24 hours under a head equal to the thickness of the floor finish to be placed atop the depressed floor slab plus 1 inch as measured from the slab high point. Any leaks shall be sealed and the membrane similarly re-tested until it is watertight. A detectable reduction water level detectable after 24 hours and not attributable to normal evaporation shall also be considered evidence of leakage.
- B. The Contractor shall notify the Contracting Officer 24 hours in advance before membrane is tested.
- C. Fluid-applied membranes shall be subject to compliance testing by the Contracting Officer to ensure proper thickness of application.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Sheet Applied Membrane Systems:

| | |
|---------------|------------------------------------|
| Material: | Rubberized Asphalt or Butyl Rubber |
| Thickness: | 60 mil min. |
| Facing Sheet: | Polyethylene or Polypropylene |

Products of the following manufacturers are acceptable provided they meet the materials and construction specified:

| | |
|---------------------------------------|-------------------|
| Nord Bitumi: | Nordtene 60 |
| Protecto Wrap Co.: | Jiffy Seal 140/60 |
| Polygard Products, Inc.: | Polygard 650 |
| Polyken Technologies: | Polyken 660 |
| Carlisle Coatings and Waterproofing.: | CCW-701 |
| Royston Laboratories: | 104-AHT |
| WR Grace & Co.: | Bituthene 3000 |

- B. Sheet Applied Membrane Systems:

| | |
|------------|-------------------------------------------------------------------------------|
| Material: | E.P.D.M. (Ethylene Propylene Diene Monomer) or Chlorinated Polyethylene (CPE) |
| Thickness: | 60 mil min. or as indicated. |

Products of the following manufacturers are acceptable provided they meet the materials and construction specified:

| | |
|--------------------|----------------|
| Carlisle Syntec | |
| Systems: | Sure-Seal EPDM |
| The Noble Company: | NobleSeal CP |

C. Sheet Applied Membrane Systems:

Material: High density polyethylene (20 mils thick) with bentonite facing of 1# per sq. ft.

Products of the following manufacturers are acceptable provided they meet the materials and construction specified:

Paramount Technical Products Inc. Paraseal (Below-grade application only.)

D. Sheet Applied Membrane Systems:

Material: PVC (Poly Vinyl Chloride)
Thickness: 40 mil. min.

Products of the following manufacturers are acceptable provided they meet the materials and construction specified:

Compotite Corporation: Composeal Blue Vinyl Shower Pan Membrane

E. Fluid Applied Membrane Systems (Cold-Applied):

Material: 1 or 2 component Polyurethane
Thickness: 60 mil min.

Products of the following manufacturers are acceptable provided they meet the materials and construction specified:

Mameco International Inc.: Vulkem 201 (moisture cure)
Vulkem 222 (chemical cure)

Multi-Chemical Products, Inc.: Mult-I-Thane 3000
Mult-I-Flex 3200 (between slab use only)

The Neogard Corporation: Permagard Pacific
Polymers, Inc.: Elasto-Deck BT (Type I or II)
Sonneborn: HLM 5000
Tremco: Tremco TP-60

F. Fluid Applied Membrane Systems (Hot-Applied)

Material: Rubberized Asphalt
Thickness: Per Manufacturer's Printed Instructions but no less than 1/8" min.

Products of the following manufacturers are acceptable provided they meet the materials and construction specified:

Hydrotech: Monolithic Membrane 6125
Tremco: Tremproof 150

G. Surface Primers, Sealants, Flashings, Reinforcing Sheets, Adhesives, Asphalts, Welding Agents, etc. shall be as recommended by the membrane manufacturer

for the specific project installation and shall be compatible with the substrate and membrane waterproofing with which it is in contact.

- H. Protective Layer for membrane waterproofing applied on vertical surfaces below grade shall be of inert material, compatible with the waterproofing membrane over which it is overlaid and acceptable to the membrane manufacturer. The following materials are acceptable provided the above stipulations are also met:
1. 7/16" thick glass fiberboard.
 2. 1/4" thick mineral hardboard.
 3. 1/4" thick fiberglass-and-asphalt protection panels.
 4. Heavy-duty reinforced rubberized asphalt sheets.

Inert, non-biodegradable Protective Boards which are compatible with the membrane waterproofing and are of sufficient thickness and density to protect the membrane waterproofing as recommended by the protective board manufacturer may be used in lieu of the protective layer described above. The indicated products of the following manufacturers are acceptable provided they also meet the above stipulations.

Amocor: Amocor-PB4 (Extruded Polystyrene)

Pacific Allied
Products, Ltd.: Expanded Polystyrene

Dow Chemical
Company: Styrofoam (Extruded Polystyrene)

Paramount
Technical
Products Inc.: Paradrain (Polyethylene geotextile)

PART 3 - EXECUTION

3.01 INSPECTION OF SURFACES

- A. Before the work is started, the Membrane Waterproofing Installer, together with the Contractor and Contracting Officer, shall examine the surfaces onto which membrane waterproofing is to be applied. Should any condition be found unsuitable, no work shall be done until the unsatisfactory condition has been corrected and is acceptable to the Membrane Waterproofing Installer. Proceeding with the work will imply acceptance of the conditions by the Membrane Waterproofing Installer.
- B. Materials used to patch substrate defects shall be compatible with the substrate and the membrane waterproofing.

3.02 INSTALLATION

- A. The procedures and details for the application of waterproofing membranes, especially such items as the patching of substrate defects; surface cleaning and preparation; surface priming; installation of bond breakers at joints; installation of inorganic cant strips at vertical and horizontal corners; mixing of components; number of membrane layers or coats; embedment of reinforcing sheets; details

at edges, corners, laps, penetrations and discontinuities; sealing and/or fastening of the top edge of the membrane placed on vertical surfaces; protection of the membrane; repair of damage; etc., shall be in strict accordance with the manufacturer's printed instructions and recommendations.

- B. For toilets, showers and other similar areas, the membrane shall be extended 4" up adjacent vertical surfaces or 1" above the finished floor level, whichever is higher.
- C. Sheet applied membranes shall be rolled or squeegeed onto the surface to ensure total adhesion to the substrate. Wrinkles and buckles in the membrane shall be avoided.
- D. Edges and ends of the sheet applied membranes shall be lapped and sealed in accordance with the manufacturer's recommendations.
- E. Adjoining surfaces which are not to receive waterproofing shall be protected to prevent spillage of liquid materials outside of the membrane area.
- F. A protective layer as specified in Sub-paragraph 2.01 G. above shall be provided over membranes on vertical surfaces below grade.
- G. The Contractor shall provide protection for horizontal between-slab membranes to prevent puncturing or damage as follows:
 - 1. Protective layer/boards shall be neatly trimmed and tightly butted together to provide a continuous cover over the membrane waterproofing.
 - 2. Care shall be taken during the backfilling operation to ensure that the membrane and protective layer/boards are not damaged.
- H. Care shall be taken to protect under-tile membranes from puncture or damage at all times until topping materials have set.
- I. Repair of any damage to the membrane waterproofing shall be in strict accordance with the manufacturer's recommendations.

3.03 CLEAN-UP

- A. The installer shall take care to keep surfaces that will be exposed clean. At the completion of work, he shall clean all surfaces onto which waterproofing materials have been dropped, spattered, or brushed and repair damages or defects for which he is responsible. He shall also remove and properly dispose of leftover materials and debris.

END OF SECTION

SECTION 07920 - SEALANTS

PART 1 - GENERAL

1.01 SUMMARY

- A. Completely close with sealant all joints indicated or specified to be sealed to a watertight condition.
- B. Related Work Described Elsewhere:
 - 1. Occupancy, air quality requirements are specified in Section 01575 - TEMPORARY CONTROLS - AIR QUALITY REQUIREMENTS.

1.02 SUBMITTALS

- A. Submit in accordance with Section 01330 - SUBMITTAL PROCEDURES.
- B. Manufacturer's Data: Submit copies of manufacturer's product data and specifications for type of sealant required, to the Contracting Officer for approval.
- C. Material Safety Data Sheets (MSDS): Submit MSDS for each sealant product.
- D. Color Samples: Submit sets of color finish samples of sealants.

1.03 JOB CONDITIONS

- A. Examine joint surfaces and backing, and their anchorage to the structure, and conditions under which joint sealer work is to be performed, and notify Contractor in writing of conditions detrimental to proper completion of the work and performance of sealers. Do not proceed with joint sealer work until unsatisfactory conditions have been corrected in a manner acceptable to Installer.
- B. Weather Conditions: Do not proceed with installation of sealants under adverse weather conditions. Proceed with the work only when weather conditions are favorable for proper cure and development of high early bond strength.

1.04 PRODUCT HANDUNG

- A. Delivery: Deliver sealants to the jobsite in sealed containers labeled to show the designated name, formula, or specification number, lot number, color, date of manufacture, shelf life, curing time, manufacturer's directions, and name of manufacturer.
- B. Storage: Carefully handle and store all materials to prevent inclusion of foreign materials. Remove from project site all damaged and deteriorated materials and materials exceeding shelf life.
- C. All sealant materials shall be installed prior to expiration of shelf life.

1.05 WARRANTY

- A. Provide a 2-year written warranty from the Project Acceptance Date against leaks, air infiltration, cracks, and other failures of the installation and materials.
 - 1. Repair of sealants to seal leaks caused by faulty materials or workmanship;

2. Repair or replace damage to the building or its finishes, equipment or furniture when occasioned by such leaks.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Sealant Backer Rod: Compressible rod stock of polyethylene foam, polyethylene-jacketed polyurethane foam, butyl rubber foam, neoprene foam or other flexible, permanent, durable, nonabsorptive material as recommended for compatibility with sealant by the sealant manufacturer to control the joint depth for sealant placement, to break bond of sealant at bottom of joint, to form optimum shape of sealant bead on back side, and to provide a highly compressible backer which will minimize the possibility of sealant extrusion when joint is compressed. Do not use oakum or other types of absorptive materials as backstops.
- B. Bond-Breaker Tape: Polyethylene tape or other plastic tape as recommended by sealant manufacturer.
- C. Masking Tape: Non-staining, nonabsorbent type compatible with joint sealants and to surfaces adjacent to joints.
- D. Primer for Sealants: Non-staining, as recommended by the sealant manufacturer.
- E. Sealants:
 1. At Exterior and Interior Vertical and Overhead Moving Joints: One-part polyurethane-based sealant, conforming to ASTM C 920, Type S, Grade NS, Class 25, Use NT. Provide one of the following, or approved equal:
 - a. Dymonic; Tremco, Inc.
 - b. Chem-Calk 900; Bostik Construction Products Div.
 - c. Sikaflex Ia; Sika Corp.
 - d. Dynatrol I; Pecora Corp.
 - e. NP-I; Sonneborn.
 2. At Interior Vertical and Overhead Non-Moving Joints: Non-Elastomeric Sealant; acrylic-emulsion type, conforming to ASTM C 834. Provide one of the following, or approved equal:
 - a. AC-20 Acrylic Latex; Pecora Corp.
 - b. Tremco Acrylic Latex 834; Tremco, Inc.
 - c. Chem-Calk 600; Bostik Construction Products Div.
 - d. Sonolac; Sonneborn.
 3. At Horizontal Traffic-Bearing Joints: Two-part polyurethane based sealant, conforming to ASTM C 920, Type M, Grade P, Class 25, Use T. Provide one of the following, or an approved equal:
 - a. Sikaflex 2c SL; Sika Corp.
 - b. THC-900; Tremco, Inc.
 - c. Urexpam NR-300; Type HM; Pecora Corp.
 - d. SL-2; Sonneborn.

4. Silicone Sealant: At Perimeter of All Plumbing Fixtures and Fittings: One- part mildew-resistant silicone sealant conforming to ASTM C 920, Type S, Grade NS, Class 25, Use NT, formulated with fungicide; intended for sealing interior joints with non-porous substrates. Provide one of the following, or approved equal:
 - a. Dow Corning 786; Dow Corning Corp.
 - b. SCS 1702 Sanitary; General Electric Co.
 - c. Tremsil 600 White; Tremco, Inc.
 - d. Omni Plus; Sonneborn.
 - e. 898 or 893, No. 345; Pecora Corp.

5. Bedding Compound: For installation of thresholds and similar items indicated to be bedded in sealant, use a preformed butyl-polyisobutylene sealant tape. Size of tape as required for the specific application. Provide one of the following, or approved equal:
 - a. Extru-Seal; Pecora Corp.
 - b. 440 Tape; Tremco, Inc.
 - c. Chem-Tape 40; Bostik Construction Products Div.

6. Acoustical Sealant: Provide one of the following, or approved equal:
 - a. Exposed and Concealed Joints: Non-sag, paintable, non-staining, latex sealant complying with ASTM C 834 that effectively reduces airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies according to ASTM E 90.
 - (1) AC-20 FTR; Pecora Corp.
 - (2) Sheetrock Acoustical Sealant; USG
 - b. Concealed Joints: Non-drying, non-hardening, non-skinning, nonstaining, gunnable, synthetic-rubber sealant recommended for sealing interior concealed joints to reduce airborne sound transmission.
 - (1) BA-98; Pecora Corp.
 - (2) Tremco Acoustical Sealant; Tremco.
 - (3) Pro-Series SC-170; Ohio Sealants.

PART 3 - EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS

- A. Comply with manufacturer's printed instructions except where more stringent requirements are shown or specified, and except where manufacturer's technical representative directs otherwise.

3.02 EXAMINATION

- A. Examine joints indicated to receive joint sealers, with Installer present, for compliance with requirements for joint configuration, installation tolerances and other conditions affecting joint sealer performance. Do not proceed with installation of joint sealers until unsatisfactory conditions have been corrected.

3.03 JOINT PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealers to comply with recommendations of joint sealer manufacturers and the following requirements:
 - 1. Remove all foreign material 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 repellants; water; and surface dirt.
 - 2. Clean concrete, masonry, unglazed surfaces of ceramic tile and similar porous joint substrate surfaces, by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealers. Remove loose particles remaining from above cleaning operations by vacuuming or blowing out joints with oil-free compressed air.
 - 3. Remove laitance and form release agents from concrete.
 - 4. Steel Surfaces in Contact with Sealant: Scrape and wirebrush to remove loose mill scale. Remove dirt, oil, or grease by solvent cleaning, and wipe surfaces with clean cloths.
 - 5. Clean metal, glass, glazed surfaces of ceramic tile, and other nonporous surfaces by chemical cleaners or other means which are not harmful to substrates or leave residues capable of interfering with adhesion of joint sealers.
- B. Joint Priming: Prime joint substrates where indicated or where recommended by joint sealer manufacturer based on preconstruction joint sealer-substrate tests or prior experience. Apply primer to comply with joint sealer manufacturer's recommendations. Confine primers to areas of joint sealer bond, do not allow spillage or migration onto adjoining surfaces.
- C. Masking Tape: Use masking tape 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. Remove tape immediately after tooling without disturbing joint seal.

3.04 INSTALLATION OF JOINT SEALERS

- A. General: Comply with joint sealer manufacturers' printed installation instructions applicable to products and applications indicated, except where more stringent requirements apply. Do not apply sealant on wet surfaces or when the surface temperature exceeds 130 degrees F.
- B. Sealant Installation Standard: Comply with recommendations of ASTM C 1193 for use of joint sealants as applicable to materials, applications and conditions indicated.

- C. Acoustical Sealant Application Standard: Comply with recommendations of ASTM C 919 for use of joint sealants in acoustical applications as applicable to materials, applications, and conditions indicated.
- D. Installation of Sealant Backings: Install sealant backings to comply with the following requirements:
 - 1. Install joint fillers of type indicated to provide support of sealants during application and at position required to produce the cross-sectional shapes and depths of installed sealants relative to joint widths which allow optimum sealant movement capability.
 - 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 adhesion of sealant to surfaces at back of joints would result in sealant failure.
 - 3. Install compressible seals serving as sealant backings to comply with requirements indicated above for joint fillers.
- E. Primer: Immediately prior to application of the sealant, clean out all loose particles from joints. Where recommended by sealant manufacturer, apply primer to joints in concrete, masonry units, wood, and other porous surfaces in accordance with compound manufacturer's instructions. Do not apply primer to exposed finish surfaces.
- F. 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.
- G. Tooling of Nonsag 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 sealant manufacturer.
 - 1. Provide concave joint configuration per Figure 5A in ASTM C 1193, unless otherwise indicated.
 - 2. Provide flush joint configuration per Figure 5B in ASTM C 1193, where indicated.

3.05 CLEAN UP

- A. 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.

3.06 PROTECTION

- 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 immediately and reseal joints with new materials to produce joint sealer installations with repaired areas indistinguishable from original work.

END OF SECTION

DIVISION 8 – DOORS AND WINDOWS

SECTION 08305 - ACCESS DOORS

PART 1 - GENERAL

1.01 SUMMARY

- A. Provide access doors as shown or required by drawings as specified herein. Sizes of each type of access door required are as specified herein. Mechanical contractors shall furnish locations and numbers of required access doors to General Contractor.

1.02 SUBMITTALS

- A. Submit in accordance with Section 01330 – SUBMITTAL PROCEDURES.
- B. Manufacturer's Data: Submit manufacturer's technical data and installation instructions for each type of access door assembly, including setting drawings, templates, instructions and directions for installation of anchorage devices. Include complete schedule, including types, general locations, sizes, wall and ceiling construction details, finishes, latching or locking provisions, and other data pertinent to installation.
- C. Verification: Obtain specific locations and sizes for required access doors from trades requiring access to concealed equipment, and indicate on submittal schedule.

1.03 QUALITY ASSURANCE

- A. Size Variations: Obtain the Contracting Officer's acceptance of manufacturer's standard size units which may vary slightly from sizes indicated.
- B. Coordination: Furnish inserts and anchoring devices which must be built into other work for installation of access doors. Coordinate delivery with other work to avoid delay.

PART 2- PRODUCTS

2.01 STAINLESS STEEL FLUSH PANEL DOORS

- A. For Ceramic Wall Tile and Wet Areas:
 - 1. Karp Assoc. Model DSC-214M.
 - 2. Milcor Style MS.
 - 3. J. L. Industries Model TMS.
 - 4. or approved equal.
- B. Finish: No. 4 satin finish stainless steel.

2.02 SIZES

- A. 22" x 22" unless otherwise shown. Verify location and condition before ordering.

2.03 OPERATION

- A. Locks shall be flush with door surface and shall be key locked with common key. Provide all units keyed alike with 2 keys per unit.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Comply with manufacturer's instructions for installation of access doors.
- B. Coordinate installation with work of other trades.
- C. Set frames accurately in position and securely attach to supports with face panels plumb or level in relation to adjacent finish surfaces.

3.02 ADJUST AND CLEAN

- A. Adjust hardware and panels after installation for proper operation.
- B. Remove and replace panels or frames which are warped, bowed or otherwise damaged.

END OF SECTION

DIVISION 9 – FINISHES

SECTION 09250 – GYPSUM WALLBOARD

PART 1 - GENERAL

1.01 SUMMARY

- A. Complete all gypsum wallboard work as indicated or required by the drawings and as specified herein. Work shall include, but not be limited to, the following:
 - 1. Gypsum wallboard on metal framing and furring.
 - 2. Metal stud framing for wallboard.
 - 3. Metal ceiling suspension system.

1.02 QUALITY ASSURANCE

- A. Fire Resistive Design: The construction shall comply with the applicable provisions of the Building Code, including all local amendments thereto and shall have been tested according to ASTM E 119 by an independent testing and inspecting agency acceptable to the authorities having jurisdiction. Installation and materials shall be in strict accordance with the above mentioned code.

The Fire Resistant Design shall be as indicated from UL's "Fire Resistance Directory", FM's "Approval Guide, Building Products", GA-600 "Fire Resistance Design Manual", or as listed otherwise.

- B. Sound Transmission Design: The construction shall comply with materials and construction identical to those tested in assemblies indicated according to ASTM E 90 and classified to ASTM E 413 by a qualified independent testing agency.
- C. Industry Standard: Comply with applicable requirements of GA 216 "Application and Finishing of Gypsum Board" and GA 214, "Recommended Specification: Levels of Gypsum Board Finish" by the Gypsum Association, except where more detailed or more stringent requirements are indicated including the recommendations of the manufacturer.
- D. Transverse Loading: The non-load bearing metal framing shall be capable of carrying a transverse load of 5 psf without exceeding the allowable stress or a deflection of L/360. Increase stud gauge, decrease stud spacing, or provide hidden from view lateral bracing to comply with these requirements at no additional cost to the State.
- E. Installer shall provide and maintain a copy of GA-216, GA-214, ASTM C 754, and ASTM C 840 at the jobsite.
- F. Gypsum Board Terminology: Refer to ASTM C 11, "Terminology Relating to Gypsum and Related Building Materials and Systems", for definition of terms for gypsum board assemblies not defined in this Section or in referenced standards.

1.03 SUBMITTALS

- A. Submit in accordance with Section 01330 - SUBMITTAL PROCEDURES.
- B. Manufacturer's Data: Material description and manufacturer's recommended installation procedures for each material.
- C. Shop Drawings: Submit shop drawings indicating fabrications and location of control and expansion joints including plans, elevations, sections, details and attachment to adjoining work. Submit setting drawings for backing plates and anchors.
- D. Material Safety Data Sheets (MSDS): Submit MSDS for each product.

1.04 PRODUCT HANDLING

- A. Deliver gypsum wallboard materials in sealed containers and bundles, fully identified with manufacturer's name, brand, type and grade; store in a dry well ventilated space, protected from the weather, under cover and off the ground. Stack gypsum panels flat to prevent sagging. Joint materials shall be stored in accordance with manufacturer's printed instructions. Damaged or deteriorated materials shall be removed from jobsite.
- B. Environmental Limitations: Comply with ASTM C 840 requirements or gypsum board manufacturer's written recommendations, whichever are more stringent.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. General: Provide panels in maximum lengths and widths available that will minimize joints and correspond with the applicable support system.
- B. Gypsum Wallboard: ASTM C 1396/C 1396M "Gypsum Wallboard", 5/8-inch thick, tapered edge type, 48-inches wide, Type "R" regular for all non-rated walls and Type "X" (Special Fire Retardant) for fire rated partitions and elsewhere as indicated. Build-up thickness with multiple layers when installed thickness is less than adjoining wallboard thickness.
- C. Cementitious Fiber-Mat Reinforced Sheathing: ASTM C 1325, ANSI A118.9, cementitious backer. DUROCK Brand Cement Board by United States Gypsum Company or approved equal. 5/8-inch thick, used for base under ceramic tile in wet areas as indicated.
 - 1. Fasteners: Cementitious backer unit board shall be firmly secured to the framing and/or plywood sheathing with corrosive-resistant treated screws ASTM A1513 manufacturer's standard bugle head self-drilling self-tapping corrosion resistance screws at 6-inches on center throughout.
- D. Moisture and Mold Resistant Gypsum Wallboard: Sheetrock Gypsum Panels Mold Tough Firecode Panel by United States Gypsum Company or approved equal. 5/8-inch thick, Type X, used moisture and mold resistant gypsum wallboards for ceiling and walls in toilets, shower, custodian and hallway that receive paint finish.

1. Mold-resistant: Scores a 10 (highest) when tested in accordance with ASTM D3273.
 2. Resists Water: Water resistant gypsum core with water shedding glass-mat on both sides.
 3. Fasteners: Corrosive resistant fasteners as recommended by the manufacturer.
 4. Prime entire surfaces with two coats of skim coat joint compound to provide a smooth surface. Apply primer and 2 coats of finish paint. Skim coat joint compound and paint finish system shall be recommended by the wallboard manufacturer. Finish for finish paint shall be semi-gloss.
- E. Wallboard Fasteners: ASTM C 1002 "Steel Drill Screws for the Application of Gypsum or Metal Plaster Bases", standard bugle head self-drilling, self-tapping corrosive-resistant drywall screws. Screws used in fire-resistive rated construction shall be of type approved for use by governing building code. Screws for structural studs shall conform to ASTM C 954 "Steel Drill Screws for the Application of Gypsum Board or Metal Plaster Bases to Steel Studs from 0.033-inch (0.84 mm) to 0.112-inch (2.84 mm) in Thickness".
- F. Reinforced Tape and Cement: ASTM C 475 "Joint Compound and Joint Tape for Finishing Gypsum Board", materials for treating joints and fastener heads shall be as manufactured or recommended by the Manufacturer of the wallboard used.
- G. Non-Load Bearing Studs: Comply with ASTM C 754 for conditions indicated. ASTM C 645 "Non-Load (Axial) Bearing Studs, Runners (Track), and Rigid Furring Channels for Screw Application of Gypsum Board", studs shall be 6-inch unless indicated otherwise on the drawings. Studs shall be rolled formed channel of 16 gauge galvanized steel, ASTM A 653 "Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process", G60 coating. Provide holes and notches for conduit or electrical wiring.
- H. Tracks: Metal floor and ceiling tracks shall be rolled formed channel of gauge electro-zinc plated steel of same gauge as stud with width dimensions suitable to corresponding stud sizes indicated on the drawings.
- I. Deep-Leg Deflection Track: ASTM C 645 top runner with 2-inch deep flanges. Furring Channels: ASTM C 645, hat-shaped, 7/8-inch deep, hot-dipped galvanized, 16 gauge.
- J. Resilient Channels: Roll-formed electro-zinc plated steel, 1/2-inch deep, equal to RC-1 by US Gypsum Co., designed to reduce sound transmission.
- K. Ceiling Support Materials and Systems:
1. General: Size ceiling support components to comply with ASTM C 754 "Installation of Steel Framing Members to Receive Screw-Attached Gypsum" unless indicated otherwise.
 2. Direct Suspension Systems: Manufacturer's standard zinc-coated or painted steel system of furring runners, furring tees, and accessories designed for

concealed support of gypsum drywall ceilings; of proper type for use intended.

System Manufacturer: Equal to one of the following:

Armstrong World Industries, Inc.

Chicago Metallic Corp.

USG Interiors, Inc.

3. Wire for Hangers and Ties: ASTM A 641/A 641M "Zinc-Coated (Galvanized) Carbon Steel Wire", Class 1 zinc coating, soft temper, 8 gauge for hangers supporting up to 12.5 square feet and 6 gauge where supporting up to 16 square feet and 18 gauge for ties.

- L. Wallboard Accessories: ASTM C 1047 "Accessories for Gypsum Wallboard and Gypsum Veneer Base", Vinyl Corp., Plastic Components Inc., Vinyl Tech or approved equal.
 1. Standard Corner Bead: Vinyl Corp. Corner Bead CB 125 at all outside corners of wall, ceiling, and soffit as indicated.
 2. Casing Trim: Vinyl Corp. "L" Bead SB 58, "J" Bead MJB58, or approved equal as indicated.
 3. Control Joint: Vinyl Corp. CJV 16 or approved equal.
 4. Other Accessories: As indicated or necessary for complete installation.
 5. All accessories shall be vinyl, PVC, or approved equal.

- M. Joint Treatment Materials: ASTM C 475; type recommended by manufacturer for the application indicated, except as otherwise noted. Perforated tape, and joint and topping compound, or "all-purpose" compound.

- N. Laminating Adhesive: Special adhesive or joint compound specifically recommended for laminating gypsum boards.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine substrates to which drywall construction attaches or abuts, preset hollow metal frames, and structural framing, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of drywall construction. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.02 INSTALLATION

- A. General: Comply with ASTM C 840 "Application and Finishing of Gypsum Board", Gypsum Association GA 216 and ASTM C 754 as applicable to the type of substrate and drywall support system indicated and per manufacturer's recommendations and instructions.

- B. Tolerances:

1. Maximum variation of finish surface from true flatness shall be 1/8-inch in 10-feet in any direction unless specified otherwise.
 2. Maximum variation of plumbness of wall shall be 1/8-inch in 10-feet of height.
 3. Maximum variation from true position shall be 1/8-inch.
- C. Ceiling Support Suspension Systems:
1. Secure hangers to structural support by connecting directly to structure where possible, otherwise connect to inserts, clips or other anchorage devices or fasteners as indicated. Ensure that structural anchorage provisions have been installed to receive ceiling anchors in a manner that will develop their full strength and at spacing required to support ceiling.
 2. Coordinate installation of ceiling suspension systems with installation of overhead structure to ensure that inserts and other provisions for anchorages to building structure have been installed to receive ceiling hangers at spacing required to support ceilings and that hangers will develop their full strength.
 3. Install hangers plumb and free from contact with objects within ceiling plenum that are not part of supporting structural or ceiling suspension system. Splay hangers only where required to miss obstructions and offset resulting horizontal forces by bracing, countersplaying, or other equally effective means.
 4. Where width of ducts and other construction within ceiling plenum produces hanger spacings that interfere with the location of hangers required to support standard suspension system members, install supplemental suspension members and hangers in form of trapezes or equivalent devices. Size supplemental suspension members and hangers to support ceiling loads within performance limits established by referenced standards.
 5. Secure hangers to structure, including intermediate framing members, by attaching to inserts, eyescrews, or other devices and fasteners that are secure and appropriate for structure and hanger, and in a manner that will not cause hangers to deteriorate or otherwise fail.
 6. Secure wire hangers by looping and wire-tying, either directly to structures or to inserts, eyescrews, or other devices and fasteners that are secure and appropriate for substrate, and in a manner that will not cause them to deteriorate or otherwise fail.
 7. Sway brace ceiling to conform to the applicable seismic zone and uplift, applicable requirements of ASTM E 580, "Application of Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels in Areas Requiring Seismic Restraint", and the manufacturer's recommendations.
 8. Space main runners 4-feet on center and space hangers 4-feet on center along runners, except as otherwise shown.
 9. Level main runners to a tolerance of 1/8-inch in 12-feet, measured both lengthwise on each runner and transversely between parallel runners.

10. Wire-tie or clip furring members to main runners and to other structural supports as indicated or as recommended by the manufacturer.
 11. Direct-hung Metal Support System: Attach perimeter wall track or angle wherever support system meets vertical surfaces. Mechanically join support members to each other and butt-cut to fit into wall track.
 12. Space furring member 16-inches on center, except as otherwise indicated.
 13. Install auxiliary framing at termination of drywall work, and at openings for light fixtures and similar work, as required for support of both the drywall construction and other work indicated for support thereon.
 14. Do not connect or suspend steel framing from ducts, pipes or conduit.
 15. Keep hangers and braces 2-inches clear of ducts, pipes and conduits.
- D. Metal Wall and Soffit Framing:
1. Install supplementary framing, blocking and bracing to support fixtures, equipment services, heavy trim, grab bars, toilet accessories, furnishings and similar work which cannot be adequately supported on gypsum board alone to comply with details indicated and with recommendations of gypsum board manufacturer, or if none available, with "Gypsum Construction Handbook" published by United States Gypsum Co.
 2. Isolate stud system from transfer of structural loading to system, both horizontally and vertically. Provide slip or cushioned type joints to attain lateral support and avoid axial loading.
 3. Install runner tracks at floors, ceilings and structural walls and columns where gypsum drywall stud system abuts other work, except as otherwise indicated.
 4. Extend partition stud system through ceilings and elsewhere as indicated to the structural support or substrate above the ceiling except where indicated to terminate at the ceiling line.
 5. Space studs and furring 16-inches on center, except as otherwise indicated.
 6. Install steel studs so flanges point in the same direction and leading edge or end of each panel can be attached to open (unsupported) edges of stud flanges first.
 7. Do not bridge building control and expansion joints with steel framing or furring. Frame both sides of joints independently.
 8. Frame openings with vertical studs securely attached by screws at each jamb either directly to frames or to jamb anchor clips on frame in accordance with manufacturer's recommendations; install runner track sections (for jack studs) at head and secure to jamb studs. Provide runner tracks of same gauge as jamb studs. Space jack studs same as partition studs.

9. Install framing below sills of openings to match framing required above opening heads.
 10. Install each steel framing and furring member so that fastening surface does not vary more than 1/8-inch from plane of faces of adjacent framing.
- E. Gypsum Wallboard, General:
1. Locate exposed end-butt joints as far from center of walls and ceilings as possible.
 2. Install exposed gypsum board with face side out. Do not install imperfect, damaged or damp boards. Butt boards together for a light contact at edges and ends with not more than 1/16-inch open space between boards. Do not force into place.
 3. Locate either edge or end joints over supports, except in horizontal applications or where intermediate supports or gypsum board back-blocking is provided behind end joints. Position boards so that both tapered edge joints abut, and mill-cut or field-cut end joints abut. Do not place tapered edges against cut edges or ends. Stagger vertical joints over different studs on opposite sides of partitions. Do not make joints other than control joints at corners of framed openings.
 4. Attach gypsum panels to steel studs so leading edge or end of each panel is attached to open (unsupported) edges of stud flanges first.
 5. Attach gypsum board to framing and blocking as required for additional support at openings and cutouts.
 6. Cover both faces of stud partition framing with gypsum board in concealed spaces (above ceilings, etc.), except in chase walls which are properly braced internally. Except where concealed application is required for sound, fire, air or smoke ratings, coverage may be accomplished with scraps of not less than 8 square foot area, and may be limited to not less than 75 percent of full coverage.
 7. Isolate perimeter of non-load-bearing drywall partitions at structural abutments. Provide 1/4-inch to 3/8-inch space and trim edge with J-type semi-finishing edge trim. Seal joints with acoustical sealant. Do not fasten drywall directly to stud system runner tracks.
 8. Space fasteners in gypsum boards in accordance with referenced standards and manufacturer's recommendations, except as otherwise indicated.
- F. Methods of Gypsum Wallboard Application:
1. On ceilings, apply gypsum board prior to wall/partition board application, to greatest extent possible and at right angle to framing, unless otherwise indicated.
 2. Install ceiling board panels across framing to minimize the number of abutting end joints and to avoid abutting end joints in the central area of each ceiling.

Stagger abutting end joints of adjacent panels not less than one framing member.

3. Locate edge and end joints over supports, except in ceiling application where intermediate supports or gypsum board back-blocking is provided behind end joints. Do not place tapered edges against cut edges or ends. Stagger vertical joints on opposite sides of partitions. Do not make joints other than control joints at corners of framed openings.
 4. Single-Layer Application:
 - a. On partitions/walls higher than 8'-1", apply gypsum board vertically (parallel), unless otherwise indicated, and provide sheet lengths which will minimize end joints.
 - b. On partitions/walls 8'-1" or less in height apply gypsum board horizontally (perpendicular); use maximum length sheets possible to minimize end joints.
 5. Single-Layer Fastening Method: Apply gypsum boards to supports by fastening with screws, spaced not to exceed 16-inch centers for walls and 12-inch centers for ceilings.
 6. Gypsum wallboard construction for fire rated and acoustical rated assemblies shall be in accordance with the design number indicated or if not indicated in accordance with the Building Code.
 7. Multi-Layer Application on Partitions/Walls: Apply gypsum board indicated for base layers and face layers vertically (parallel to framing) with joints of base layers located over stud or furring member and face-layer joints offset at least one stud or furring member with base-layer joints, unless otherwise indicated or required by fire-resistance-rated assembly. Stagger joints on opposite sides of partitions.
- G. Installation of Trim Accessories:
1. General: Where feasible, use the same fasteners to anchor trim accessory flanges as required to fasten gypsum board to the supports. Otherwise, attach trim in accordance with manufacturer's instructions and recommendations.
 2. Install corner beads at external corners.
 3. Install edge trim whenever edge of gypsum board would otherwise be exposed or semi-exposed. Provide type with face flange to receive joint compound except where semi-finishing type is indicated. Install L-type trim where work is tightly abutted to other work, and install special kerf-type where other work is kerfed to receive long leg of L-type trim. Install U-type trim where edge is exposed, revealed, gasketed, or sealant-filled (including expansion joints).
 4. Install J or LC-type semi-finishing trim where indicated.
 5. Install control joints where indicated or necessary in large ceiling and wall expanses.

3.03 DRYWALL FINISHING

- A. General: Apply treatment at gypsum board joints (both directions), flanges of trim accessories, penetrations, fasteners heads, surface defects and elsewhere in accordance with ASTM C 840 and Gypsum Association GA 216 and GA 214 as required to prepare work for decoration. Prefill open joints, rounded or beveled edges, and damaged surfaces using type of compound recommended by manufacturer.
1. Apply joint tape at joints between gypsum boards, except where a trim accessory is indicated that does not require tape.
 2. Apply joint compound in 3 coats (not including prefill of openings in base), and sand between last 2 coats and after last coat. Fastener heads, dents, gouges, and cut-outs shall be filled with joint compound and sanded.
 3. Accessories at exposed joints, edges, corners, openings, and similar locations shall be taped, floated with joint compound, and sanded to produce surfaces ready for gypsum board finishes.
- B. Finish interior gypsum wallboard by applying the following levels of gypsum board finish in accordance with GA-214.
1. Level 1: For ceiling plenum areas and other concealed areas.
 2. Level 2: Where wall panels form substrates for tile.
 3. Level 3: For wall surfaces to receive heavy-duty wallcoverings.
 4. Level 4: For ceiling surfaces to receive flat paint.
 5. Level 5: For wall surfaces to receive semi-gloss enamel.
 6. Where Level 5 gypsum board finish is indicated, embed tape in joint compound and apply first, fill (second), and finish (third) coats of joint compound over joints, angles, fastener heads, and accessories; and apply a thin, uniform skim coat of joint compound over entire surface. For skim coat, use joint compound specified for third coat, or a product specially formulated for this purpose and acceptable to gypsum board manufacturer. Touch up and sand between coats and after last coat as needed to produce a surface free of visual defects, tool marks, and ridges and ready for decoration.
 7. For Level 4 gypsum board finish, embed tape in joint compound and apply first, fill (second), and finish (third) coats of joint compound over joints, angles, fastener heads, and accessories. Touch up and sand between coats and after last coat as needed to produce a surface free of visual defects and ready for decoration.
 8. Where Level 3 gypsum board finish is indicated, embed tape in joint compound and apply first and fill (second) coats of joint compound.
 9. Where Level 2 gypsum board finish is indicated, embed tape in joint compound and apply first coat of joint compound.

10. Where Level 1 gypsum board finish is indicated, embed tape in joint compound.

3.04 BACKING PLATES AND ANCHORS

- A. Backing plates and anchors or blocking which are to be attached to studs or furring for anchoring items and work indicated on the drawings or specified in other Sections shall be installed and secured. Plates and anchors shall be welded or fastened in place in accordance with approved setting drawings.

3.05 CLEANING AND REPAIRING

- A. After installation and before painting, correct surface damage and defects. Leave surface clean and smooth, satisfactory to the painter. No painting shall be done over gypsum board work until the joints are thoroughly dry. Joints and fastenings are to be invisible after painting.

END OF SECTION

SECTION 09310 - CERAMIC TILE

PART 1 - GENERAL

1.01 SUMMARY

- A. Extent of new ceramic tile work is indicated on Drawings, notes and schedules.
- B. Related Work Described Elsewhere:
 - 1. Coordinate installation of waterproof membrane with Section 07110 - MEMBRANE WATERPROOFING.
 - 2. Coordinate installation of backer-rods, sealants and caulking at expansion and control joints with Section 07920 - SEALANTS.

1.02 QUALITY ASSURANCE

- A. The material to be furnished and the workmanship to be performed may be subject to inspection and/or tests by the Contracting Officer.

1.03 SUBMITTALS

- A. Submit in accordance with Section 01330 – SUBMITTAL PROCEDURES.
- B. Samples: Samples of various ceramic tiles shall be subscribed to the Contracting Officer for approval and for color and pattern selection. Samples shall be identified as to their grade and manufacturer and clearly marked their location.
- C. Certificate: Before installation of ceramic tile, the Standard Form of Master Grade Certificate signed by the Contractor and Manufacturer stating grade and kind of tile shall be submitted to the Contracting Officer. All packages of tile shall be delivered to the job in sealed cartons bearing grade seals in conformance with U.S. Department of Commerce Simplified Practice Recommendation R61-61.
- D. Warranties and Guaranties: Warranty for a min. of 2 years from the Project Acceptance Date against defects resulting from the use of defective or inferior materials, equipment or workmanship.
- E. The Contractor shall submit test reports, from an independent laboratory, indicating conformance of the tile to ANSI A137.1.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Porcelain Floor Tiles: Standard grade complying with ANSI A137.1.
 - 1. Unglazed porcelain floor tile shall be standard quality, dust-pressed, machine made porcelain body tile, slightly beveled modified straight edge, from price range group 2. Moisture absorption of the tile shall be less than 0.5%. Medleys consisting of not more than 3 colors to match existing where indicated. Minimum 2" x 2" square inside shower stalls. All floor tile shall have a minimum 0.6 coefficient of friction.

2. All trim shapes shall be provided as detailed and as required. External corners shall be rounded convex. Base tile shall be match existing. Other shapes such as curbs, beads, shoes, round out corners and square in corners, etc., shall be provided to achieve a neat complete installation.
- B. Pointing Grout for Ceramic Tile: Commercial Portland Cement Grout, chemical-resistant, water-cleanable, non-shrinking, tile-setting and grouting epoxy, white or gray as required, complying with ANSI 118.6 - Ceramic Tile Grouts.
 - C. Dry Set Portland Cement Mortar: ANSI A 118.1.
 - D. Latex Set Portland Cement Mortar: ANSI A 118.4.
 - E. Cement: Portland Cement conforming to the requirements of ASTM C-150, Type I.
 - F. Waterproof Admixture: Approved integral waterproof admixture
 - G. Sand: Conforming to ASTM C-144.
 - H. Hydrated Lime: Conforming to ASTM C-206, Type S or ASTM C-207, Type S.
 - I. Water: Fresh, clean and drinkable.
 - J. Reinforcing Wire Mesh:
 1. Floor: 2 x 2 welded wire fabric, 10 gauge, 304 stainless steel by McNichols or approved equal.
 - K. Tile Sealant: Tile sealant shall be one component neutral cure silicone sealant "Latasil Tile and Stone Sealant" by Laticrete or approved equal.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Before any work is begun, the Ceramic Tile Contractor shall inspect the walls and floors on which tile work is to be applied. Such surface shall be sound, clean, free of oily film, and in proper condition; if not, the Ceramic Tile Contractor should report defective conditions to the Contractor for corrective measures and send a copy of that report to the Contracting Officer. Proceeding with tile work will imply acceptance of the surface by the Ceramic Tile Contractor. Scratch coats or mortar setting beds shall not be applied until necessary grounds, hangers, anchors or other items to receive plumbing fixtures or other fittings of any kind which are to be secured against the tile surface have been installed properly. Coordinate work with other trades as necessary.

3.02 INSTALLATION

- A. Ceramic Tile:
 1. Installation shall be in accordance with ANSI A108.1 for Glazed Wall Tile, Ceramic Mosaic Tile, Quarry Tile and Paver Tile Installation with Portland Cement Mortar and the "Handbook for Ceramic Tile Installation" as published by the Tile Council of America, latest edition.

2. Work shall be carefully laid out in an endeavor to center the tiles, to space them evenly, and to avoid cutting them. If cutting is necessary, all cut ends shall be rubbed smooth and even. Lay out tile on floors and lengthwise on walls so that no tile less than 1/2 size occurs. For height stated in feet and inches, maintain full courses to produce nearest attainable heights without cutting tile. All cutting and drilling shall be done without marring the surfaces and shall be done neatly to fit closely around pipes, fixtures and fittings so that cover plates will overlap cuts.
3. Floor tile shall be laid in a straight joint pattern. Staggering of joints through openings will not be permitted.

B. Cement Mortar:

1. Mortar shall be freshly prepared and uniformly mixed in a drum-type batch mixer for at least 3 minutes in the following proportion by volume. No retempering of mortar will be permitted. Mortar that has reached its initial set shall be discarded.
2. For mortar setting bed on floors:

| | |
|------------|-------------------------------------------------------------|
| 1 part | portland cement |
| 6 parts | damp sand |
| Waterproof | admixture in accordance with manufacturer's specifications. |
3. For mortar setting bed on walls:

| | |
|----------|-----------------|
| 1 part | portland cement |
| 5 parts | damp sand |
| 1/2 part | hydrated lime |

up to

| | |
|---------|-----------------|
| 1 part | portland cement |
| 7 parts | damp sand |
| 1 part | hydrated lime |

C. Setting Procedures:

1. On floors, apply mortar setting bed not less than 3/4" thick, over an area no greater than can be covered with tile before the initial set. If mortar setting bed is to be applied directly on concrete surface, first saturate the surface with water but do not allow free water to appear on the surface. Embed reinforcing wire mesh in the middle of the setting bed. Screed, tamp and slope the mortar setting bed toward the floor drains a minimum of 1/8" per foot (and/or slope as shown).

Use a 3/32" to 1/16" thick skim coat of neat portland cement mixed to the consistency of a pasty thick cream to bond tile to the mortar setting bed. Press and beat the sheets of mounted tiles into the plastic mortar setting bed until exactly to the required slope or level as fixed by straight edges accurately placed at regular intervals. Joints shall be of uniform width of 1/16" or as determined by the spacers on the tiles.

2. On walls, apply scratch coat mixed in the following proportions by volume:

1 part portland cement
3 parts dry sand

Dampen hollow concrete block surfaces just before applying the scratch coat. Apply scratch coat plumb and true to a thickness not less than 1/4". Use sufficient pressure to key the coat properly and cross scratch the surface before initial set has taken place. Allow to dry a minimum of 24 hours.

Apply mortar setting bed not more than 3/4" thick on walls after first wetting the surface of the scratch coat evenly but not to the point of saturation. Embed reinforcing wire mesh in the middle of the setting bed. Attach temporary screeds with blobs of mortar to provide a plumb and true surface the proper distance back from the finish wall line. Apply, rod, and float the mortar setting bed over areas no greater than will be covered with tile while the setting bed remains plastic.

Use a 1/32" to 1/16" thick skim coat of neat portland cement mixed to the consistency of a pasty thick cream, to bond tile to the mortar setting bed. Soak tile in water for at least 1/2 hour, press and beat soaked tile into the plastic mortar setting bed to a true plane with uniform joints of 1/16" width or as determined by the spacers on the tiles. Cut through the setting bed horizontally and vertically at every fourth course. Dry set or latex set Portland cement mortar may be used as bond coat for wall tiles.

3. Sound tiles after setting to ensure proper bonding. Hollow sounding tiles shall be replaced.
 4. Allow tiles to set a minimum of 48 hours prior to grouting.
- D. Expansion and Control Joints: Install expansion and control joints as detailed on the contract drawings.
- E. Grouting and Pointing of Joints: Installation shall be in accordance with ANSI A108.10 - Installation of Grout in Tilework. Joints shall be saturated with water and then grouted with a Commercial Portland Cement Grout mixed with an acrylic waterproofing admixture in accordance with the admixture manufacturer's specifications to a uniform creamy consistency. The grout shall be forced into the joints to the full depth. Use gray color for floors and white for walls. Take special care not to scratch glazed tile during this operation. Remove surplus grout before it has hardened and leave the face of the tile clean. Keep expansion and control joints free of grout.
- F. Curing Floors: Apply reinforced kraft paper over floor as soon as pointing or grouting is completed. Lap the paper not less than 6 inches and leave in place for 3 full days.
- G. Sealants for tiles and joints: Apply tile sealant to seal all tiles and joints in accordance with the sealant manufacturer's directions.
- H. Cleaning: Upon completion of tile work, remove all rubbish, unused material, etc. and give the finished surface a thorough cleaning. Do not use acid solution on

glazed tile work. Do not permit traffic on tile floors for 24 hours after laying. Thereafter permit no traffic unless floors are covered with heavy paper. Leave finished tile work clean and free from cracked, chipped or broken tile. Protect tile work until acceptance of project.

END OF SECTION

SECTION 09901 - PAINTING

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes surface preparation and field painting of exposed items and surfaces.
 - 1. Surface preparation, priming, and finish coats specified in this Section are in addition to shop priming and surface treatment specified in other Sections.

- B. Paint exposed surfaces, except where these Specifications indicate that the surface or material is not to be painted or is to remain natural. If an item or a surface is not specifically mentioned, paint the item or surface the same as similar adjacent materials or surfaces. If a color of finish is not indicated, Contracting Officer will select from standard colors and finishes available.
 - 1. Complete interior ceiling of showers being renovated and restrooms.

 - 2. All exposed new items and if part of the existing surfaces are renovated, scratched, damaged or exposed to view by the renovation work, then the entire existing surfaces (such as an entire section of wall, entire door frame, entire door surfaces, etc.) shall be repainted and color shall be matched to adjoining existing surfaces.

 - 3. Non Ferrous metals, plated or factory finished items specifically noted to be painted or when such items occur as accessories and appurtenance to surfaces required to be painted.

 - 4. Pipes, conduit, ducts, support apparatus and other exposed mechanical and electrical items in areas to be painted.

- C. Surfaces not to be finished, unless otherwise indicated.
 - 1. Concrete floors, paving walks, stairs and textured concrete. Other concrete surfaces scheduled not to be painted.

 - 2. Stone Masonry and masonry scheduled to receive water repellent coatings.

 - 3. Structural steel and metal elements designated to receive sprayed fireproofing unless such finishes have been UL tested with the designated assembly and are approved by the fireproofing manufacturer.

 - 4. Finish hardware, unless prime coated.

 - 5. Glass, plastic laminate, and ceramic tile.

 - 6. Acoustical ceilings, unless scheduled to be painted.

 - 7. Flooring and floor coverings.

 - 8. Plumbing and lighting fixtures, and electrical device plates.

- D. Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels.
1. Prefinished items include the following factory-finished components:
 - a) Finished mechanical and electrical equipment.
 - b) Light fixtures.
 2. Concealed surfaces include walls or ceilings in the following generally inaccessible spaces:
 - a) Foundation spaces.
 - b) Furred areas.
 - c) Ceiling plenums.
 - d) Utility tunnels.
 - e) Pipe spaces.
 - f) Duct shafts.
 3. Finished metal surfaces include the following:
 - a) Anodized aluminum.
 - b) Chromium plate.
 - c) Copper and copper alloys.
 - d) Bronze and brass.
 4. Operating parts include moving parts of operating equipment and the following:
 - a) Valve and damper operators.
 - b) Linkages.
 - c) Sensing devices.
 5. Labels: Do not paint over UL, FMG, or other code-required labels or equipment name, identification, performance rating, or nomenclature plates.

1.02 REFERENCES

- A. ASTM D16 - Definition of terms relating to Paint, Varnish, Lacquer and Related Products.
- B. ASTM D2016 - Test Method for Moisture Content of Wood.
- C. MPI (Master Painter's Institute) - Approved Product List.
- D. PDCA (Painting and Decorating Contractors of America) - Painting - Architectural Specification Manual.
- E. PCA (Portland Cement Association) - Painting Concrete.
- F. SSPC (Steel Structures Painting Council - Steel Structures Painting Manual)

1.03 DEFINITIONS

- A. General: Standard coating terms defined in ASTM D 16 apply to this Section.

1.04 SUBMITTALS

- A. Product Data:

1. Materials List: Provide an inclusive list of required patching and coating materials. Indicate each material and cross-reference specific coating, finish system, and application. Identify each material by manufacturer's catalog number and general classification.
 - a. For products with premixed colors, provide manufacturer's standard color chips for selection by Contracting Officer.
 2. Manufacturer's Information: Provide data on all listed materials, including:
 - a. Thinning and mixing instructions
 - b. Application instructions and required mil film thicknesses.
 - c. Manufacturer's Material Safety Data Sheets.
- B. Certifications: Provide a letter certifying paints and coatings are free of asbestos, lead, zinc-chromate, strontium chromate, cadmium, and mercury and mercury compounds, . Provide a letter certifying the amounts of mildewcide added by both the paint manufacturer and paint supplier. Provide a letter certifying that abrasive blast media are free of crystalline silica.
- C. Schedule of Finishes: Provide finish schedule including paint spread rates required to achieve final dry film thickness indicated in the schedule.
- D. Schedule of Operations: Provide a work schedule showing sequence of operation and installation dates.
- E. Samples:
1. Submit color and finish samples, at manufacturers normal paint chip size illustrating range of colors and textures available for each surface finishing product scheduled.
 2. After color and finish sample are returned, submit paint finish samples, 8.5" x 11" in size illustrating selected colors and textures for each selection. Divide sample in horizontal strips showing prime and overlapping second and finish coats. Show coat tinting. Prepare transparent finish samples on same material as that on which coating will be applied. Identify each sample.
- F. Manufacturer's Instructions: Indicate special surface preparation procedures, and substrate conditions requiring special attention. Refer to Paragraph 3.01.
- G. Provide a Comprehensive Spray Plan when airless spraying is proposed.
- H. Qualification Data: For Applicator.
- I. Delivery Receipts: Provide 3 copies of the delivery receipt, signed by the user's representative, attesting to delivery of extra paint as required Paragraph 1.09.

1.05 QUALITY ASSURANCE

- A. Applicator Qualifications: A firm or individual experienced in applying paints and coatings similar in material, design, and extent to those indicated for this Project, whose work has resulted in applications with a record of successful in-service performance.

- B. Source Limitations: Obtain block fillers and primers for each coating system from the same manufacturer as the finish coats.
 - 1. Exception: Alkali resistant primers if compatible with the intermediate coat paint products.

- C. Field Samples (Mockups): Provide a full-coat field sample panel for each type of coating and substrate scheduled in Part 3. Comply with procedures specified in PDCA P5. Duplicate finish of approved sample Submittals.
 - 1. Contracting Officer will select one room or surface to represent surfaces and conditions for application of each type of coating and substrate.
 - a. Wall Surfaces: Provide samples at least 4 feet long by 8 feet high unless indicated otherwise on drawings.

 - b. Small Areas and Items: Contracting Officer will designate items or areas required.

 - 2. Apply benchmark samples, according to requirements for the completed Work. Provide temporary lighting levels similar to permanent lighting conditions for Contracting Officer's evaluation.
 - a. After finishes are accepted, Contracting Officer will use the room or surface to evaluate coating systems of a similar nature.

- D. Provide a Comprehensive Spray Plan when airless spraying is proposed. to include:
 - 1. Documentation that the individual spray applicator(s) on the project have completed an approved "Spray Applicator Certification Program" conducted by the Painting Industry of Hawaii. The certification program shall include material and equipment selection, use and maintenance, hands-on application and safety training.

 - 2. Proposed overspray protection methods.

 - 3. Paint Manufacturer's spray application instructions and recommendations for products to be used.

1.06 REGULATORY REQUIREMENTS

- A. Comply with State OSHL (Occupational Safety and Health Law) and pollution control regulations of the State Department of Health and EPA.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to Project site in manufacturer's original, unopened packages and containers bearing manufacturer's name and label and the following information:
 - 1. Product name or title of material.

 - 2. Product description (generic classification or binder type).

 - 3. Manufacturer's brand name and lot number and date of manufacture.

 - 4. Contents by volume, for pigment and vehicle constituents.

5. Thinning instructions.
 6. Application instructions and coverage.
 7. Color name and number.
 8. VOC content.
- B. Storage
1. Non-flammable Materials: Store materials not in use in tightly covered containers in a well-ventilated area. Maintain storage containers in a clean condition, free of foreign materials and residue.
 2. Flammable Materials:
 - a. Store in such a manner as to prevent damage. No paint material, empty cans, paint brushes and rollers may be stored in the building(s). Store these items in separate storage facilities away from the building(s). Contractor may furnish a separate job site storage structure, if the structure complies with the requirements of the local Fire Department. Keep the storage area clean. Lock any storage structures when not in use or when no visual supervision is possible.
 - b. All rejected materials shall be removed from the job site immediately.

1.08 PROJECT CONDITIONS

- A. Do not apply materials when surfaces and ambient temperatures are outside the ranges required by the paint product manufacturer.
- B. Protect public, pedestrians and tenants from injury. Provided, erect and maintain safety barricades around scaffolds, hoists and where construction operations create hazardous conditions.
- C. Completed Work: Provide necessary protection for wet paint surfaces.
- D. Protective Covering and Enclosures: Provide and install clean sanitary drop cloth or plastic sheets to protect furniture, equipment, floor and other areas that are not scheduled for treatment. Remove any paint applied to surfaces not scheduled for treatment.
- E. Fire Safety: Contractor and its employees shall not to smoke in the vicinity of the paint storage area. Exercise precautions against fire at all times and remove waste rags, plastic (polyester sheets), empty cans, etc. from the site at the end of each day.
- F. Where airless spraying is used, ensure that protective enclosures are erected to prevent the escape of overspray from the work area.
- G. Safeguarding Property: Safeguard the work and also the property of the State and other individuals in the vicinity of Contractor's work. Make good on any damages and for losses to work or property caused by Contractor or its employee's negligence. Where damaged property cannot be cleaned and

restored to its original condition (i.e. prior to being damaged) replace it with a new product of equal quality. No prorating or use of "used" products will be permitted.

1. For painting and spray painting operation, assume that cars will not be temporarily relocated from parking areas during the painting operations.
2. Paint overspray shall not carry more than 5 lineal feet beyond the building eave line nor within 10 lineal feet of pedestrians or property and surfaces not scheduled to be painted. Immediately cease spray painting when overspray carries beyond these specified limits. Do not continue until protective barriers are erected to properly contain the overspray and damages caused by the overspray have been corrected.
3. The Contractor shall be assessed \$300.00 for each incidence of property or personal damage caused by overspray until such time that a satisfactory settlement has been agreed upon by the damaged party and corrective action has been completed. All corrective action shall be settled within 24 hours from the time the damage is discovered. Should the Contractor fail to take corrective action in a timely and expeditious manner, the Contracting Officer shall contact the Contractor's Insurance company to seek resolution on the matter.

1.09 EXTRA MATERIALS

- A. Provide extra paint in each of the different colors, types and surface textures of paint to the user / school upon completion of the project. Paint shall be in unopened one gallon containers and labeled with color, type, texture, room locations, and date in addition to manufacturer's label.
 1. Provide 5 gallons of each color for paint used over large areas, such as the walls.
 2. Provide 1 gallon of each color for all other areas.

1.10 WARRANTY

- A. Provide a two year guarantee from the Project Acceptance Date that the work performed under this section conforms to the contract requirements and is free of any defect of material or workmanship.

PART 2 - PRODUCTS

2.01 PAINT MATERIALS, GENERAL

- A. Material Compatibility: Provide block fillers, primers, and finish-coat materials that are compatible with one another and with the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
- B. Mildewcide
 1. Except for metal primers, provide primer and finish coats with suitable chemical mildewcide to the maximum amount of mildewcide per gallon of paint permitted by the mildewcide manufacturer without adversely affecting the quality of the paint, but not less than one ounce per gallon.

- C. Material Quality: Provide manufacturer's best-quality paint material of the various coating types specified that are factory formulated and recommended by manufacturer for application indicated. Paint-material containers not displaying manufacturer's product identification will not be acceptable.
 - 1. Proprietary Names: Use of manufacturer's proprietary product names in the Paint Systems Schedule in Part 3 below to designate colors or materials, is not intended to imply that products named are required to be used to the exclusion of equivalent products of other manufacturers. Furnish manufacturer's material data and certificates of performance for proposed products to be used.
 - 2. Equivalency: Equivalent products to the specified products are listed in the Master Painter's Institute's "Architectural Painting Specification Manual."
 - 3. Substitution: Requests for substitution of a product if a manufacturer is not on the "Approved Product List" will be evaluated for equivalency based on product test results per the test criteria of the Master Painter's Institute.
- D. Colors: As scheduled.
- E. Hazard Materials: Do not use paint or paint products containing asbestos, lead, mercury and mercury compounds, zinc chromates, strontium-chromate, and cadmium. Do not use abrasive blast media that contain crystalline silica.

2.02 MISCELLANEOUS MATERIALS

- A. Provide patching and repair materials. Compatible with paint finishes and substrates.
- B. Accessories
 - 1. General: Provide other materials not specifically indicated but required to achieve the finishes specified, of commercial quality.
 - 2. Thinners: Thinning of paint shall be done using material recommended by the manufacturer. Mix proprietary products according to manufacturer's requirements. Do not use compound thinner, mineral oil, kerosene, refined linseed oil, or gasoline for thinning.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine substrates, areas, and conditions, with Applicator present, for compliance with requirements for paint application. Comply with procedures specified in PDCA P4.
 - 1. Proceed with paint application only after unsatisfactory conditions have been corrected and surfaces receiving paint are thoroughly dry.
 - a) Ensure that concrete and masonry surfaces are cured and dried to meet paint manufacturer's recommendations.

2. Start of painting will be construed as Applicator's acceptance of surfaces and conditions within a particular area.
- B. Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total system for various substrates. On request, furnish information on characteristics of finish materials to ensure use of compatible primers.
1. Notify Contracting Officer about anticipated problems when using the materials specified over substrates primed by others.

3.02 PREPARATION

- A. General: Remove hardware and hardware accessories, plates, machined surfaces, lighting fixtures, and similar items already installed that are not to be painted. If removal is impractical or impossible because of size or weight of the item, provide surface-applied protection before surface preparation and painting.
1. After completing painting operations in each space or area, reinstall items removed using workers skilled in the trades involved.
- B. Cleaning: Before applying paint or other surface treatments, clean substrates of substances that could impair bond of the various coatings. Remove dust, oil and grease before cleaning.
1. Schedule cleaning and painting so dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces.
- C. Surface Preparation: Clean and prepare surfaces to be painted according to manufacturer's written instructions for each particular substrate condition and as specified.
1. Provide barrier coats over incompatible primers or remove and reprime.
- D. Surface Preparation Cementitious Materials: Prepare concrete, concrete unit masonry, cement plaster, and mineral-fiber-reinforced cement panel surfaces to be painted. Remove efflorescence, chalk, dust, dirt, grease, oils, and release agents. Roughen as required to remove glaze. If hardeners or sealers have been used to improve curing, use mechanical methods of surface preparation.
1. Use abrasive blast-cleaning methods if recommended by paint manufacturer.
 2. Determine alkalinity and moisture content of surfaces by performing appropriate tests. Submit test results to Contracting Officer.
 - a. Prior to painting, concrete and masonry surfaces shall be allowed to cure and dry in accordance with the paint manufacturer's instructions and recommendations.
 - b. Efflorescence and laitance shall be removed from the surface.
 - c. Prior to paint application, concrete and masonry (including grout joints) scheduled to receive paint shall be tested to determine the alkalinity level of the surface. Testing shall be performed in strict accordance with the test kit manufacturer's instructions. Submit test results to the Contracting Officer.

- d. Where the alkalinity level exceeds the pH level limit of the primer take one of the following three remedies at no additional cost to the State:
 - 1) If new concrete or masonry, wait until alkaline level has dropped below the limit.
 - 2) Substitute a primer that is able to resist the measured alkalinity and that is compatible with the paint finish. Alkyd based primers and top-coats or epoxy ester primers shall not be used. Submit the substitute primer to the Contracting Officer for review.
 - 3) Neutralize the surface in accordance with the primer manufacturer's instructions to reduce the alkaline level. However, acid washing is not permitted where the surface has been finished with a cementitious coating.
3. Clean concrete floors to be painted with a 5 percent solution of muriatic acid or other etching cleaner. Flush the floor with clean water to remove acid, neutralize with ammonia, rinse, allow to dry, and vacuum before painting.
- E. Surface Preparation Wood: Clean surfaces of dirt, oil, and other foreign substances with scrapers, mineral spirits, and sandpaper, as required. Sand surfaces exposed to view smooth and dust off.
 1. Scrape and clean small, dry, seasoned knots, and apply a thin coat of white shellac or other recommended knot sealer before applying primer. After priming, fill holes and imperfections in finish surfaces with putty or plastic wood filler. Sand smooth when dried.
 2. Prime, stain, or seal wood to be painted immediately on delivery. Prime edges, ends, faces, undersides, and back sides of wood, including cabinets, counters, cases, and paneling.
 3. If transparent finish is required, backprime with spar varnish.
 4. Backprime paneling on interior partitions where masonry, plaster, or other wet wall construction occurs on back side.
 5. Seal tops, bottoms, and cutouts of unprimed wood doors with a heavy coat of varnish or sealer immediately on delivery.
- F. Surface Preparation Ferrous Metals: Clean ungalvanized ferrous-metal surfaces that have not been shop coated; remove oil, grease, dirt, loose mill scale, and other foreign substances. Use solvent or mechanical cleaning methods that comply with SSPC's recommendations.
 1. Blast steel surfaces clean as recommended by paint system manufacturer and according to SSPC-SP 6/NACE No. 3.
 2. Treat bare and sandblasted or pickled clean metal with a metal treatment wash coat before priming.
 3. Touch up bare areas and shop-applied prime coats that have been damaged. Wire-brush, clean with solvents recommended by paint manufacturer, and

touch up with same primer as the shop coat. Spot priming specified here shall be in addition to full prime painting scheduled in Part 3 below.

- G. Surface Preparation Galvanized Surfaces: Clean galvanized surfaces with nonpetroleum-based solvents so surface is free of oil and surface contaminants. Remove pretreatment from galvanized sheet metal fabricated from coil stock by mechanical methods.
- H. Material Preparation: Mix and prepare paint materials according to manufacturer's written instructions.
 - 1. Maintain containers used in mixing and applying paint in a clean condition, free of foreign materials and residue.
 - 2. Stir material before application to produce a mixture of uniform density. Stir as required during application. Do not stir surface film into material. If necessary, remove surface film and strain material before using.
 - 3. Use only thinners approved by paint manufacturer and only within recommended limits.
- I. Tinting: Tint each undercoat a lighter shade to simplify identification of each coat when multiple coats of same material are applied. Tint undercoats to match the color of the finish coat, but provide sufficient differences in shade of undercoats to distinguish each separate coat.

3.03 APPLICATION

- A. General: Apply paint according to manufacturer's written instructions. Use applicators and techniques best suited for substrate and type of material being applied.
 - 1. Paint colors, surface treatments, and finishes are indicated in the paint schedules.
 - 2. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film.
 - 3. Provide finish coats that are compatible with primers used.
 - 4. The term "exposed surfaces" includes areas visible when permanent or built-in fixtures, grilles, and similar components are in place. Extend coatings in these areas, as required, to maintain system integrity and provide desired protection.
 - 5. Paint surfaces behind movable equipment and furniture the same as similar exposed surfaces. Before final installation of equipment, paint surfaces behind permanently fixed equipment or furniture with prime coat only unless otherwise noted.
 - 6. Paint interior surfaces of ducts with a flat, nonspecular black paint where visible through registers or grilles.

7. Paint back sides of access panels and removable or hinged covers to match exposed surfaces.
 8. Finish doors on tops, bottoms, and side edges the same as faces.
 9. Sand lightly between each succeeding enamel or varnish coat.
 10. Ensure primers are top coated within the times required by the paint manufacturers. Top coats not applied within the recoating window may be rejected.
- B. Scheduling Painting: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.
1. The number of coats and film thickness required are the same regardless of application method. Do not apply succeeding coats until previous coat has cured as recommended by manufacturer. If sanding is required to produce a smooth, even surface according to manufacturer's written instructions, sand between applications.
 2. If undercoats, stains, or other conditions show through final coat of paint, apply additional coats until paint film is of uniform finish, color, and appearance. Give special attention to ensure that edges, corners, crevices, welds, and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces.
 3. Allow sufficient time between successive coats to permit proper drying. Do not recoat surfaces until paint has dried to where it feels firm, and does not deform or feel sticky under moderate thumb pressure, and until application of another coat of paint does not cause undercoat to lift or lose adhesion.
 4. Be aware of the requirements for, and restrictions on, spray painting contained in PROJECT CONDITIONS Paragraph.
- C. Application Procedures: Apply paints and coatings by brush, roller, spray, or other applicators according to manufacturer's written instructions.
1. Brushes: Use brushes best suited for type of material applied. Use brush of appropriate size for surface or item being painted.
 2. Rollers: Use rollers of carpet, velvet-back, or high-pile sheep's wool as recommended by manufacturer for material and texture required.
 3. Spray Equipment: Use airless spray equipment with orifice size as recommended by manufacturer for material and texture required.
- D. Minimum Coating Thickness: Apply paint materials no thinner than manufacturer's recommended spreading rate to achieve dry film thickness indicated. Provide total dry film thickness of the entire system as recommended by manufacturer.

- E. Mechanical and Electrical Work: Painting of mechanical and electrical work is limited to items exposed in equipment rooms and occupied spaces.
- F. Mechanical items to be painted include, but are not limited to, the following:
 - 1. Uninsulated metal piping.
 - 2. Uninsulated plastic piping.
 - 3. Pipe hangers and supports.
 - 4. Tanks that do not have factory-applied final finishes.
 - 5. Visible portions of internal surfaces of metal ducts, without liner, behind air inlets and outlets.
 - 6. Duct, equipment, and pipe insulation having "all-service jacket" or other paintable jacket material.
 - 7. Mechanical equipment that is indicated to have a factory-primed finish for field painting.
- G. Electrical items to be painted include, but are not limited to, the following:
 - 1. Switchgear.
 - 2. Panelboards.
 - 3. Electrical equipment that is indicated to have a factory-primed finish for field painting.
- H. Block Fillers: Apply block fillers to concrete masonry block at a rate to ensure complete coverage with pores filled.
- I. Prime Coats: Before applying finish coats, apply a prime coat, as recommended by manufacturer, to material that is required to be painted or finished and that has not been prime coated by others. Recoat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to ensure a finish coat with no burn-through or other defects due to insufficient sealing.
- J. Pigmented (Opaque) Finishes: Completely cover surfaces as necessary to provide a smooth, opaque surface of uniform finish, color, appearance, and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections will not be acceptable.
- K. Transparent (Clear) Finishes: Use multiple coats to produce a glass-smooth surface film of even luster. Provide a finish free of laps, runs, cloudiness, color irregularity, brush marks, orange peel, nail holes, or other surface imperfections.
 - 1. Provide satin finish for final coats.
- L. Stipple Enamel Finish: Roll and redistribute paint to an even and fine texture. Leave no evidence of rolling, such as laps, irregularity in texture, skid marks, or other surface imperfections.

- M. Completed Work: Match approved samples for color, texture, and coverage. Remove, refinish, or repaint work not complying with requirements.

3.04 FIELD QUALITY CONTROL TESTING

- A. Inspection and Approvals: Obtain written approval upon completion of each phase of work (phases of work are: surface preparation and spot prime, prime, first finish coat, second finish coat) before proceeding into the next phase or work. For any particular area of work that deviates from the submitted work schedule, notify the Contracting Officer one day (24 hours minimum) in advance when completing any phase of work. Provide access to areas to be inspected.
 - 1. Failure to obtain approval of any phase of work for a work area may result in redoing the operation at no cost to the State.
 - 2. Right of Rejection: Non conforming work will be rejected by the Contracting Officer. Remove rejected material from the job site immediately. Redo rejected work at no cost to the State.
- B. Thickness Testing: The Contracting Officer will require all paints and their applied thickness tested determine compliance with the Contract Documents. The State will select a laboratory, and the cost of testing shall be borne by the Contractor.
 - 1. Where the required paint thickness is deficient, provide additional coats to the affected surface(s) to meet the required paint thickness.
 - 2. Tests shall be paid by Contractor.
- C. Moisture Testing: Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
 - 1. Plaster and Gypsum Wallboard: 12 percent.
 - 2. Masonry, Concrete, and Concrete Unit Masonry: 12 percent.
 - 3. Wood: 15 percent, measured in accordance with ASTM D2016.
- D. Alkalinity Testing: Measure pH Level of surface to be painted. Notify Contracting Officer if alkalinity level is below the maximum permitted by the paint or primer manufacturer.
 - 1. Tests shall be paid by Contractor.
- E. Adhesion Testing:
 - 1. Provide adhesion testing per ASTM D3759 Test B (x scratch peel test):
 - a. Test after each scheduled paint coat.
 - b. Should test fail, remove paint, prepare surface, then recoat and test again.
 - 2. Testing shall be performed by a NACE certified inspector selected by the State. The cost of testing shall be borne by the Contractor.
 - 3. Tests shall be paid by Contractor.

3.05 CLEANING

- A. Cleanup: At the end of each workday, remove empty cans, rags, rubbish, and other discarded paint materials from Project site.
 - 1. After completing painting, clean glass and paint-spattered surfaces. Remove spattered paint by washing and scraping without scratching or damaging adjacent finished surfaces.

3.06 PROTECTION

- A. Protect work of other trades, whether being painted or not, against damage from painting. Correct damage by cleaning, repairing or replacing, and repainting, as approved by Contracting Officer.

- B. Provide "Wet Paint" signs to protect newly painted finishes. After completing painting operations, remove temporary protective wrappings provided by others to protect their work.
 - 1. After work of other trades is complete, touch up and restore damaged or defaced painted surfaces. Comply with procedures specified in PDCA P1.

3.07 INTERIOR PAINT SCHEDULE

- A. Concrete and Masonry (Other Than Concrete Unit Masonry): Provide the following paint systems over interior concrete and brick masonry substrates:
 - 1. Primer: One coat Loxon Concrete and Masonry Primer.
 - 2. Finish: Two coats Duration Home Interior Latex

- B. Concrete Unit Masonry: Provide the following finish systems over interior concrete masonry:
 - 1. Primer: One coat Loxon Acrylic Block Surfer.
 - 2. Finish: Two coats Duration Home Interior Latex

- C. Gypsum Board: Provide the following finish systems over interior gypsum board surfaces:
 - 1. Primer: One coat Premium Wall and Wood Primer.
 - 2. Finish: Two coats Duration Home Interior Latex

- D. Wood and Hardboard: Provide the following paint finish systems over new interior wood surfaces:
 - 1. Primer: One coat Premium Wall and Wood Primer.
 - 2. Finish: Two coats Duration Home Interior Latex

3.08 PAINT COLOR AND FINISH

- A. Any existing painted surface not specifically noted in the Drawings shall be finished to match adjoining work.

END OF SECTION

DIVISION 10 - SPECIALTIES

SECTION 10800 - BATH ACCESSORIES

1.01 SUMMARY

- A. The extent of each type of bath accessory is shown on the drawings and herein specified.

1.02 QUALITY ASSURANCE

- A. Inserts and Anchorages: Furnish inserts and anchoring devices for bath accessories. Provide setting drawings, templates, instructions and directions for installation of anchorage devices. Coordinate delivery with other work to avoid delay.
- B. Products:
 - 1. Provide products of the same manufacturer for each type of accessory unit and for units exposed in the same areas, wherever possible.
 - 2. Coordinate with the Contracting Officer for acceptable designs and finishes.
 - 3. Stamped names of labels on exposed faces of units will not be permitted, except where otherwise specified.

1.03 SUBMITTALS

- A. Submit in accordance with Section 01330 – SUBMITTAL PROCEDURES.
- B. Manufacturer's Data: Submit copies of manufacturer's specifications and installation instructions for each bath accessory.
- C. Schedules: Submit a schedule listing each accessory and each room where accessories are to be installed. Indicate the quantity of each accessory at each room.
- D. Samples: When requested, submit full-size samples of units to Contracting Officer for review of finishes. Acceptable samples will be returned and may be used in the work. Compliance with all other requirements is the exclusive responsibility of the Contractor.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Stainless Steel: AISI, Type 302/304. Provide satin finish, unless otherwise specified.

2.02 LIST OF BATH ACCESSORIES

- A. For convenience and to establish standards of quality and design, the following list indicates items manufactured by Bobrick Washroom Equipment Co. Equal products of the following manufacturers will be accepted:
 - 1. Bradley Corp., Washroom Accessories Division.

2. McKinney Parker Products Co.
- B. Grab Bars: Bobrick B-6806 or approved equal. 1-1/2" O.D. Grab bar shall be fabricated of type 304 satin finish stainless steel with concealed mounting flanges in sizes and configurations as shown on the Drawings.
- C. Robe Hooks: Bobrick B-B6717 or approved equal. Surface-mounted robe hook shall be type-304 stainless steel with satin finish. Flange shall be 22 gauge and quipped with concealed, 16-gauge mounting bracket that is secured to concealed, 16-gauge wall plate with a stainless steel setscrew. Cap shall be 10 gauge, welded to support arm.

2.03 FASTENERS

- A. Bath accessories shall be mounted with one-way tamper-proof stainless steel fasteners. Stainless steel shields shall be provided as required to suit the mounting conditions.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Installer must examine the areas and conditions under which bath accessories are to be installed. Notify the Contractor in writing of conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to the Installer.

3.02 INSTALLATION

- A. Use concealed fastenings wherever possible.
- B. Provide anchors, bolts and other necessary fasteners, and attach accessories securely to walls and partitions in locations as shown or directed.
- C. Install concealed mounting devices and fasteners fabricated of the same material as the accessories.
- D. Install exposed mounting devices and fasteners finished to match the accessories.
- E. Provide theft-resistant fasteners for all accessory mountings.
- F. Secure bath accessories to adjacent walls and partitions complying with the manufacturer's instructions for each item and each type of substrate construction. Provide blocking and mounting plates as required in partitions.

END OF SECTION

DIVISION 15 - MECHANICAL

SECTION 15000 - GENERAL MECHANICAL REQUIREMENTS

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS

- A. As specified in Section 00700.

1.02 DESCRIPTION OF WORK

- A. These general mechanical requirements govern work specified under all sections of Division 15 - MECHANICAL.
- B. The Contractor shall furnish all labor, materials, tools and equipment and perform all work and services necessary for a complete and properly operated mechanical work, equipment and systems, as shown on drawings and as specified, in accordance with the provisions of the Contract Documents and completely coordinated with work of all other trades.
- C. The Contractor shall completely examine the Contract Documents and shall report to the Contracting Officer any error, inconsistency or omission he discovers.
- D. Furnish and install all supplementary or miscellaneous items, details, appurtenances and devices incidental to or necessary for a sound, secure and complete mechanical system where work required is not specifically indicated.
- E. Drawings and specifications shall be taken together. Provide work specified and not indicated or work indicated and not specified as though mentioned in both.
- F. The Contractor shall warrant that all materials and equipment furnished under this Contract will be new and that all work will be good quality, free from faults and defects and in conformance with contract documents for a guaranteed period of two year. It shall be the Contractor's responsibility to obtain extended warranties for use of all new equipment provided by the Contractor prior to project acceptance at no additional cost to the State.
- G. The Contractor shall maintain at the site one copy of all Drawings, Specifications, Addenda, approved Shop Drawings, Change Orders and other modifications, in good order and marked to record all changes made during construction. These shall be made available to the Contracting Officer.
- H. The Contractor always shall keep the premises free from accumulation of waste materials or rubbish caused by his operations. At the completion of the work, he shall remove all his waste materials and rubbish from and about the project as well as all his tools, construction equipment, machinery and surplus materials and shall clean all new equipment and accessories.
- I. The Contractor shall give the Contracting Officer timely notice of its readiness for testing any work including the data arranged so the Contracting Officer may observe such testing. The Contractor shall bear all cost of such tests.

- J. The Contracting Officer shall have the right to accept or reject material, equipment, and/or workmanship and determine when the Contractor has complied with the contract documents.

1.03 INSPECTION OF SITE

- A. This Contractor shall visit the site and examine the conditions affecting his work before submitting his proposal. The submission of the proposal shall be considered evidence that the Contractor has visited the site and no extra payments will be allowed to the Contractor on account of extra work made necessary by his failure to visit the site.

1.04 SUBMITTALS

- A. Substitution Requests: Substitute materials or equipment may be used if qualified by written permission from the Contracting Officer. Submit a list of the substitutions with qualifying data for approval.
- B. Equipment and Material Submittal: Submit for approval before preparation of shop drawings, 8 sets of submittal data and pump curves showing manufacturer's name, trade name, catalog model or number, nameplate data, project specification and paragraph reference, performance specifications, certified dimensions, motor sizes and sound power levels by octave bands.
- C. Shop Drawings: After approval of equipment, submit for approval one set of reproducible transparencies and 8 sets of prints of dimensioned shop drawings, indicating equipment layout, piping, hangers, equipment bases, sleeves, support details, wiring diagrams for control and inter-lock, locations and sizes of openings. Drawings shall indicate adequate clearance for operation, maintenance, and replacement of operating equipment devices and components. Coordinate drawings with other trades to avoid interferences. Drawings shall be minimum 24 inches by 36 inches in size, except as specified elsewhere. Approval of shop drawings does not relieve the Contractor from responsibility of a complete installation or proper performance. No work shall commence until shop drawings are approved by the Contracting Officer.

The Contractor shall review, stamp with his approval and submit, all Shop Drawings required by the Contract Documents or subsequently by the as covered by modifications. At the time of submission, the Contractor shall inform the in writing of any deviation in the Shop Drawings from the requirements of the contract documents. By approving and submitting Shop Drawings, the Contractor certifies that he has determined and verified all field measurements and obstructions, field construction criteria, materials, catalog numbers and similar data, that he has checked and coordinated each Shop Drawing with the requirements of the work and of the Contract Documents and that all equipment fits within designated spaces.

- D. Standards Compliance: When materials or equipment must conform to the standards of organizations such as the American National Standards Institute (ANSI), American Society for Testing and Materials (ASTM), National Electrical Manufacturers Association (NEMA), and Underwriters Laboratories (UL), proof of such conformance shall be submitted to the Contracting Officer for approval. If an organization uses a label or listing to indicate compliance with a particular standard, the label or listing will be acceptable evidence, unless otherwise specified in the individual sections. In lieu of the label or listing, the Contractor shall submit a certificate from an independent testing organization, which is competent to perform acceptable test and is approved by the

Contracting Officer. The certificate shall state that the item has been tested in accordance with the specified organization's test methods and that the item conforms to the specified organization's standard. For materials and equipment whose compliance with organizational standards of specifications is not regulated by an organization using its own listing or label as proof of compliance, a certificate of compliance from the manufacturer shall be submitted for approval. The certificate shall identify the manufacturer, the product and the referenced standard and shall simply state that the manufacturer certifies that the product conforms to all requirements of the project specification and of the referenced standards listed.

- E. Certified Test Reports: Before delivery of materials and equipment, certified copies of all test reports specified in the individual sections shall be submitted for approval.
- F. Certificates of Conformance or Compliance: Submit certification from the manufacturer attesting that materials and equipment to be furnished for this project comply with the requirements of this specification and of the reference publications. Pre-printed certifications will not be acceptable; certifications shall be in the original. The certification shall not contain statements that could be interpreted to imply that the product does not meet all requirements specified, such as "as good as"; "achieve the same end use and result as materials formulated in accordance with the referenced publication", "equal or exceed the service and performance of the specified material". The certification shall simply state that the product conforms to the requirements specified.
- G. Schedule of Work: In conjunction with the shop drawing submittal, submit 6 sets of a construction schedule indicating dates, times, and description of work. Submit with enough detail to evaluate outage periods and interferences with building operation.
- H. "As-Built" Drawings: Keep at the job site a complete, accurate record of all approved deviations for the contract drawings, shop drawings, and specification. Keep one set of marked prints containing changes of the drawings affected and submit the record drawings together with the mark-up field office plans to the Contracting Officer.
- I. Balancing Report and Maintenance Manuals: After installation, the new system shall be tested, balanced and adjusted. Submit 8 copies of the balancing report and operating and maintenance manuals for approval before final inspection.

1.05 LAWS, REGULATIONS AND CODES

- A. All work shall be in accordance with government laws, ordinances, rules and regulations and orders.
- B. The following shall govern where applicable: the Plumbing Code of the County of Hawaii, the Building Code of the County of Hawaii, the Fire Code of the County of Hawaii, the Electrical Code of the County of Hawaii, State of Hawaii Department of Health Regulations, U.S. Department of Health and Human Services, Applicable National Fire Protection Association Standards, OSHA, Rules and Regulations and all other codes and standards referenced in these specifications. Where requirements differ in these codes and standards, the more stringent shall apply.

1.06 PERMITS AND INSPECTIONS

- A. Applications for permits will be done by the Contractor. The Contractor shall pay for all necessary permits and fees required for the mechanical work.
- B. The Mechanical Contractor shall apply and pay for all necessary inspections required by any public authority having jurisdiction.

1.07 DISCREPANCIES

- A. The Drawings and Specifications are intended to be cooperative. Any materials, equipment, or system related to this section and exhibited on the Architectural, Structural, Electrical or Mechanical Drawings but not mentioned in the Specifications are to be executed to the intent and meaning thereof, as if it were both mentioned in the Specifications and set forth on the Drawings.
- B. In case of differences between the Drawings and Specifications, the Specifications shall govern first, and then the Drawings. Large scale details shall take precedence over small scale Drawings as to the shape and details of construction. Specifications shall govern as to materials.
- C. Drawings and Specifications are intended to be fully cooperative and to agree, but should any discrepancy or apparent difference occur between Drawings and Specifications or should error occur in the work of others affecting the work, the Contractors shall notify the Contracting Officer at once. If the Contractor proceeds with the work affected without instructions from the Contracting Officer, he shall make good any resultant damage or defect. All interpretations of Drawings and Specifications shall be clarified by the Contracting Officer.

1.08 TRADE NAME

- A. Mentioning of a trade name in the plans and specifications indicates that the manufacturer is acceptable to the Contracting Officer. However, certain specified construction and details may not be regularly included in the manufacturer's catalogued product. The Mechanical Contractor shall provide the material or equipment complete as specified.

1.09 WORKMANSHIP AND MATERIALS

- A. Workmanship shall be of the best quality and none but competent mechanical workers skilled in their trades and thoroughly familiar with the work involved shall be employed. The Contractor shall furnish the services of an experienced superintendent, who will be constantly in charge of the erection of the work, until completed and accepted.
- B. Unless otherwise hereinafter specified, each article of its kind shall be the standard product of a single manufacturer.
- C. Whenever the words "or approved equal" or other words of similar intent or meaning are used, implying that judgment is to be exercised, it is understood that it is the judgment of the Contracting Officer that is referred to.
- D. The Contracting Officer shall have the right to accept or reject material, equipment and/or workmanship and determine when the Contractor has complied with the requirements herein specified.

- E. All manufactured materials shall be delivered and stored in their original containers. Equipment shall be clearly marked or stamped with the manufacturer's name and rating. Equipment and materials shall be carefully handled, properly stored, and adequately protected to prevent damage before and during installation, in accordance with the manufacturer's recommendations and as approved by the Contracting Officer. Damaged or defective items, in the opinion of the Contracting Officer, shall be replaced.
- F. Reference to standards are intended to be the latest revision of the standard specified.

1.10 MANUFACTURER'S RECOMMENDATIONS

- A. Equipment installed under this Division of the Specifications shall be installed according to manufacturer's recommendations, unless otherwise shown on the drawings or herein specified. Where installation procedures or any part thereof are required to be in accordance with the recommendations of the manufacturer of the material being installed, printed copies of these recommendations shall be furnished to the Contracting Officer, prior to installation. Installation of the item will not be allowed to proceed until the recommendations are received. Failure to furnish these recommendations can be cause for rejection of the material.

1.11 CONTINUITY OF SERVICES, PHASING

- A. The facility will be in use during construction of this project. It is intended that interruption of utilities be kept to a minimum. Notice of service interruptions shall be submitted to the Contracting Officer for approval at least two weeks before intended date of service interruptions. Exact date and time of interruption allowed shall be determined by the Contracting Officer. Provide temporary valves, connections, piping, etc., as necessary to assure this continuity of service; they shall be furnished under this section without additional charge to the State and shall be removed when no longer necessary.
- B. All work shall be done during regular working hours (7:00 A.M. to 4:30 P.M.), except where specified otherwise.
- C. The Contractor shall submit to the Contracting Officer a copy of his work schedule indicating the date and area to be affected by his work.
- D. Execute work using such methods, techniques, connections and tie-ins which will cause least interference with, and interruptions of, existing utilities and services. Keep roads clear of materials, debris, etc., to maximum extent possible. Schedule all arrangement for work which will cause interferences or interruptions, in advance with the Contracting Officer, all other affected trades and authorities having jurisdiction.
- E. Examine site and become familiar with existing local conditions affecting work.
- F. Examine all Drawings and Specifications, including electrical, and become familiar with the types and systems of construction to be used. Determine how such types and systems will affect the installation of mechanical work.
- G. Investigate, determine and verify locations of any overhead utilities on or near site. Determine such locations in conjunction with all public and private utility companies and with all authorities having jurisdiction.

1.12 OPENINGS, CUTTING AND REPAIRING

- A. The Mechanical Contractor shall cooperate with the work to be done under other sections in providing information as to openings required in walls and slabs for all piping including sleeves where required.
- B. Any drilling or cutting required for the performance of work under this Section shall be the responsibility of the Contractor and the cost there shall be borne by him.
- C. Holes in Concrete: The Mechanical Contractor shall pay all costs for cutting holes. All holes through existing concrete shall be either core drilled or saw cut. All holes required shall have the approval of the Contracting Officer prior to cutting and drilling.
- D. It shall be the responsibility of the Contractor to ascertain that all openings are properly located.

1.13 ELECTRICAL WORK

- A. All power wiring, including final hook-up to all mechanical equipment will be provided under the Electrical Division of this Specifications. Control devices required on the power wiring shall be provided by the Mechanical Contractor, to be wired by the Electrical Contractor.
- B. Electrical work under Electrical Division is based on the electrical rating of equipment indicated on the Mechanical Drawings. Additional electrical work caused by any deviation under the Mechanical Division shall be paid for by the Mechanical Contractor.
- C. All control wiring are included under mechanical work and shall be in accordance with Division 16 - Electrical, except where specified otherwise in Division 15 - Mechanical.
- D. The Mechanical Contractor shall furnish all starters for installation by the Electrical Contractor. The Mechanical Contractor shall turn over these items to the Electrical Contractor at the site after receipt of notice from the Electrical Contractor that he is ready to install said items.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. As specified in all sections of Division 15 - Mechanical.
- B. Materials and equipment shall be cataloged products of manufacturers regularly engaged in production of such materials or equipment and shall be manufacturer's latest design that complies with the specifications requirements. Materials and equipment shall duplicate items that have been in satisfactory commercial or industrial use at least 2 years prior to bid opening. Where two or more items of the same class of equipment are required, these items shall be products of a single manufacturer; however, the component parts of the items need not be the products of the same manufacturer. Each item of equipment shall have the manufacturer's name, address, model number, and serial number on the nameplate. Name of the distributing agent will not be acceptable.

PART 3 - EXECUTION

3.01 PIPING IDENTIFICATION

- A. Identification of all new pipe lines shall be by means of colored, waterproof, all temperature, self-adhering labels and directional arrow. Refer to painting section for color coding of existing and new piping.
- B. At Contractor's option, each system may be identified by painting with contrasting colors, using 3/4" high minimum stencil letters. Painting shall be done by the Mechanical Contractor or his Subcontractor.
- C. All exposed pipes, whether insulated or not shall be identified. Labels may be omitted from piping where the use is obvious, due to its connection to equipment and where the appearance would be objectionable in finished rooms, as approved by direction.
- D. Identification labels shall be placed as follows:
 - 1. Near each valve and branch connection.
 - 2. Wherever piping merges or disappears from view from the floor of the room in which it is installed.
 - 3. Labels shall not be more than 50 feet apart.

3.02 VALVE INDEX

- A. The Mechanical Contractor shall provide brass or plastic tags on all valves with letters stamped or engraved thereon designating service of each valve.

3.03 FIELD TEST

- A. The Mechanical Contractor shall perform all tests of the installed work and shall provide all services, labor, equipment, materials and instruments needed for the tests. During pressure tests, all items in the system to be tested, not designed for test pressures shall be removed or isolated from the system and shall be reconnected or unblocked after tests are completed. Should operating tests require the presence of manufacturers' representatives, the Mechanical Contractor shall cooperate with them and shall place at their disposal all assistance, materials, and services required to perform such test. The Mechanical Contractor shall certify in writing that all work has passed all required tests.

3.04 OPERATION AND MAINTENANCE MANUAL

- A. Furnish an operation and maintenance manual for each item of equipment. Furnish 8 copies of the manual bound in hardback binders or an approved equivalent. Furnish one complete manual prior to the time that equipment tests are performed and furnish the remaining manuals before the contract is completed. Inscribe the following identification on the cover: the words OPERATION AND MAINTENANCE MANUAL, the name and location of the equipment or the building, the name of the Contractor and the contract number. The manual shall include the names, addresses and telephone numbers of each subcontractor installing equipment and of the local representatives for each item of equipment. The manual shall have a table of contents and be assembled to conform to the table of contents with the tab sheets placed before instructions covering the subject. The instructions shall be legible and easily read, with large sheets of drawings folded in. The manual shall include: Wiring and control diagrams with data to explain detailed operation and control of each item of equipment; a control sequence describing start-up, operation, and shut-down; description of the function of each principle item of

equipment; the procedure for starting; the procedure for operating; shut-down instructions; installation instructions; maintenance instructions; lubrication schedule including type, grade, temperature range and frequency; safety precautions, diagrams and illustrations; test procedures; performance data; and parts list. The parts lists for equipment shall indicate the sources of supply, recommended spare parts and the service organization which is reasonably convenient to the project site. The manual shall be complete in all respects for equipment, controls, accessories and associated appurtenances provided.

3.05 POSTED OPERATING INSTRUCTION

- A. Furnish approved operation instructions for each principal item of equipment for the use of the operation and maintenance personnel. The operation instructions shall include wiring diagrams, control diagrams and control sequence for each principal item of equipment. Operating instruction shall be printed or engraved and shall be framed under glass or in approved laminated plastic and posted where directed by the Contracting Officer. Operating instructions shall be attached to or posted adjacent to each principal item of equipment including start up, procedure in the event of equipment failure and other items of instruction as recommended by the manufacturer of each item of equipment. Operating instructions exposed to the weather shall be made of weather-resistant materials or shall be suitably enclosed to be weather protected. Operating instructions shall not fade when exposed to sunlight and shall be secured to prevent easy removal or peeling.

3.06 QUALITY ASSURANCE

- A. The Mechanical Contractor shall have a local Oahu office, staffed with factory trained engineers fully capable of providing instruction, routine maintenance and emergency maintenance service on all system components. The Mechanical Contractor shall have a three year experience record in the design and installation of chilled water plant systems similar in scope and performance to that specified herein, and shall be prepared to provide evidence of this history as condition of acceptance and approval.

3.07 INSTRUCTION TO STATE PERSONNEL

- A. The Contractor shall furnish the services of competent instructors who will give full instruction to the designated personnel in the adjustment, operation and maintenance, including pertinent safety requirements, of the equipment or system specified. Each instructor shall be thoroughly familiar with all parts of the installation and shall be trained in operating theory as well as practical operation and maintenance work. Instruction shall be given during the first regular work week after the equipment or system has been accepted and turned over to the Contracting Officer for regular operation. The number of man-days (8 hours) of instruction furnished shall be as specified in other sections. When more than 4 man-days of instruction are specified, approximately half of the time shall be used for classroom instruction. All other times shall be used for instruction with the equipment or system. When significant changes or modifications in the equipment or systems are made under the term of the contract, additional instruction shall be provided to acquaint the operating personnel with the changes or modifications.

3.08 SAFETY REQUIREMENTS

- A. Belts, pulley, chains, gears, couplings, projecting setscrews, keys and other rotating parts located so that any person can come in close proximity thereto shall be fully enclosed or properly guarded. High temperature equipment and piping so located as to endanger personnel or create a fire hazard shall be properly guarded or covered with insulation of a type as specified herein. Items such as catwalks, ladders, and guard rails shall be provided where required for safe operation and maintenance of equipment.

3.09 FINAL INSPECTION

- A. Final inspection shall be requested by the Mechanical Contractor only after submittal of all required certificates. No final inspection will be made until all moving parts of equipment are properly guarded, all controls and safety devices tested and operative, all painting required is done and the site cleaned up.

3.10 GUARANTEE

- A. The Mechanical Contractor shall guarantee the installation for a period of one year from the date of acceptance of the project by the Contracting Officer against any defects due to faulty materials, equipment, workmanship, or installation. Upon notice of defect, the Mechanical Contractor shall correct or replace defective item at no additional cost to the State. The Contractor shall be advised that the State shall have the right for beneficial use of all new equipment prior to the project acceptance and guarantee period. The guarantee period shall be for one year after acceptance date. Start of beneficial use is not the start of the guarantee period.

END OF SECTION 15000

SECTION 15400 - PLUMBING

PART 1 - GENERAL

1.01 GENERAL CONDITIONS

- A. As specified in Section 00700.

1.02 GENERAL REQUIREMENTS

- A. Complete plumbing system as indicated on Drawings and/or specified herein or needed for a complete and proper plumbing installation. Project drawings show general requirements as to size, arrangement, and extent of piping and location of equipment.

1.03 QUALITY ASSURANCE

- A. Applicator Qualifications: Use sufficient journeymen and plumbers and competent supervisors to ensure proper and adequate installation throughout. In acceptance or rejection of installed plumbing, no allowances will be made for lack of skill on part of workmen.

- B. Laws, Regulations and Permits:

1. Comply with the requirements of all Federal, State and County of Hawaii ordinances and codes, Hawaii County Fire Department and all rules and regulations that apply to this work. Comply with Regulations of State Health Department, NFPA, and all other applicable codes.
2. Obtain and pay for all fees, permits, licenses, assessments and inspections.
3. At completion, submit certification from approving agencies that work meets above requirements.

- C. Substitution of another manufacturer's project for equipment specified hereinafter and for items with "acceptable equal" after the brand name requires approval in accordance with Section 00700 General Conditions. Acceptable equal products of the following manufacturers are acceptable in lieu of those specified hereinafter by the manufacturer and model number.

1. Drainage System Specialties: Josam, Zurn or Smith.

- D. Comply with the recommendations and requirements of the Codes and Standards listed hereinafter in addition to detailed requirements of this specification. In the event of conflicting requirements, this specification shall prevail.

1. American Society for Testing and Materials Publications (ASME):

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| D 1784 | Specification for Rigid Poly Vinyl Chloride (PVC) Compounds and Chlorinated Poly Vinyl Chloride (CPVC) Compounds. |
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| D 2235 | Standard Specification for Solvent Cements for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Piping and Fittings. |
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| D 2564 | Standard Specification for Solvent Cements for Poly Vinyl Chloride (PVC) Plastic Piping Systems. |
| D 2396 | Standard Classification System and Basis for Specifications for Rigid Acrylonitrile-Butadiene-Styrene (ABS) Materials for Piping and Fittings. |
| D 2661 | Standard Specification System for Rigid Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste and Vent Piping and Fittings. |
| D 3965 | Standard Classification System and Basis for Specifications for Rigid Acrylonitrile-Butadiene-Styrene (ABS) Materials for Piping and Fittings. |

1.04 SUBMITTALS

- A. As specified in Section 15000.
- B. Submittals shall include the following items:
 - 1. Pipe and fittings.
 - 2. Shower Assembly
 - 3. Shower Trench Drain
 - 4. Pipe Insulation
 - 5. Dimensioned Shop Drawings.
- C. Site Maintained Drawings:
 - 1. Maintain and accurate record of all changes made in installation from layout and materials shown on contract drawings and/or approved shop drawings.
 - 2. Record changes from contract drawings of all concealed piping. Indicate location of isolating valves and items requiring maintenance or inspection.
 - 3. Submit reproducible copies (contact Mylars) and electronic files in pdf and dwg format of these drawings to Contracting Officer prior to final acceptance.

1.05 PRODUCT HANDLING

- A. Protection:
 - 1. Use all means necessary to protect plumbing materials and fixtures before, during, and after installation and to protect installed work and materials of all other trades.
 - 2. Pipe openings shall be closed with caps or plugs during installation.
- B. Replacements: In event of damage, immediately make all repairs and replacements necessary and at no cost to the State.

1.06 GUARANTEE

- A. The Contractor shall guarantee the following:
 - 1. All equipment, accessories and materials furnished, for a period of two year from final acceptance against all defects in material and workmanship. If any equipment fails, does not operate satisfactorily or shows undue wear, the Contractor will be notified, and shall be required to remedy the defect and the damage to other work caused by such defect and the damage to other work caused by such defect immediately and at no additional cost to the State.
 - 2. All equipment shall produce the results specified or shown. All piping is drip free and properly installed to be free of vibration, pounding or objectionable noise.
- B. The above guarantee shall not be interpreted as voiding, limiting or reducing any equipment manufacturer's warranty or any guarantee allowed by law.

1.07 SUBSTITUTIONS

- A. No substitutions on equipment in this section shall be acceptable without formal approval by Contracting Officer.

1.08 MATERIAL AND EQUIPMENT MANUFACTURERS

- A. All products provided for the project shall be manufactured in the United States of America. No foreign materials and equipment shall be acceptable.

PART 2 – PRODUCTS

2.01 ASBESTOS PROHIBITION

- A. No asbestos containing materials or equipment shall be used under this section. The Contractor shall ensure that all materials and equipment incorporated in the project are asbestos-free.

2.02 MATERIALS

- A. Soil, Waste and Vent Piping:
 - 1. Gravity soil, waste and vent pipes shall be Schedule 40 PVC DWV cellular core or ABS DWV cellular core pipe with solvent weld drainage fittings.
 - a. Schedule 40 PVC DWV cellular core pipe shall conform to ASTM D 4396 and ASTM D 1784 for fittings and NSF Standard 14. Solvent primer shall conform to ASTM F 656 and solvent cement shall conform to ASTM D 2564.
 - b. Schedule 40 ABS DWV cellular core pipe shall conform to ASTM D 3965 and ASTM D 2661 for fittings and NSF Standard 14. Solvent cement shall conform to ASTM D 2235.
- B. Water Piping:
 - 1. All aboveground water shall be hard drawn Type "L" copper pipe with wrought soldered fittings, lead free 95/5 solder.

2. All underground water shall be hard drawn Type "K" copper pipe with wrought soldered fittings, lead free silver brazed. Provide pipe with color coded plastic sleeve.
 3. Provide I.P.S. brass nipples at connections to fixtures, hose bibbs and equipment.
- C. Valves:
1. Provide ball valves and check valves where shown on drawings and as required to isolate risers, equipment and groups of fixtures.
 2. Valve Schedule: Shall be Crane, Stockham, Nibco or approved equivalent. Nibco model numbers are shown as a guide.

Gate valves 2-1/2" and smaller Nibco #T113-LF
Ball valve 2-1/2" and smaller Nibco #S-585-80-LF.
- D. Unions:
1. Provide unions at all equipment and accessory locations and at screwed valves.
 2. Provide dielectric unions at lines of dissimilar metals.
- E. Pipe Hangers and Supports:
1. Horizontal steel or cast iron piping: Anvil Fig. 65 or Fig. 69 or approved equal.
 2. Horizontal copper piping: Anvil fig. CT-65 or Fig. CT-69 or approved equal.
 2. Beam clamps: Anvil Fig. 218 with Fig 157 or 292 with links or approved equal.
 3. Provide earthquake sway bracing.
 4. Prime and paint all exposed pipe hangers and supports to match adjacent surface.
- F. Pipe Sleeves, Fire Stops and Escutcheons:
1. Provide paintable escutcheons at exposed finish surfaces pierced by pipes.
- G. Cleanouts:
1. Provide cleanouts as indicated on drawings and same size as larger line. Josam, Smith or Zurn.
 3. Cleanouts to grade in unfinished and unpaved areas shall be Smith 4263, Josam, Zurn or approved equivalent, with heavy duty scoriated brass cover. Set cleanout in 18" x 18" x 4" concrete pad at unpaved areas.

2.03 PLUMBING FIXTURES

- A. Shall be set in approved workmanlike manner, edges against wall neatly pointed up with silicone caulking. Fixtures, trims and fittings shall be thoroughly cleaned and left in perfect operating condition. Where fixtures meet the wall or floor, the joint between the fixture and the wall or floor shall be made watertight with waterproof silicone caulking.

- B. Accessible Fixtures shall be installed in compliance with ADA Standards and as indicated on the Architectural drawings. Manufacturers listed show style and quality.

- 1. Shower Assembly: See Drawings for specifications.

2.04 TRENCH DRAIN

- A. Zurn, Smith or approved equal, stainless steel shower drain. See Drawings for specification.

2.05 WATER HAMMER ARRESTORS

- A. Precision Plumbing Products SWA Series or approved equal, maintenance free water hammer arrestor, barrel-fabricated of Type L hard drawn copper, copper or brass cap, composite piston, EPDM seal, and sweat connection. Unit shall be permanently sealed and pre-charged with nitrogen. Mount unit in the vertical position.
- B. Smith No 4730-U-NB, Zurn or approved equal, 12" x 12" square access cover with vandal proof screws, nickel bronze frame with stainless steel cover.

PART 3 - EXECUTION

3.01 GENERAL REQUIREMENTS

- A. Install pipe work as closely as possible to slab or structure above. If space allocated is too small, make necessary moves to fit into general pattern.
- B. Do not scale Drawings. Check all measurements at building and adjust to fit space allotted. Close cooperation between all trades will be required. Any work done without regard of work of other trades shall be moved if necessary to permit proper installation of other work.

3.02 CUTTING AND PATCHING

- A. Place sleeves for piping penetrating through poured concrete prior to pouring of concrete.
- B. Do not cut any openings in any structural member until location is reviewed by Structural Engineer and approved by the Contracting Officer.
- C. Cutting of holes in hardened concrete is not permitted except by review of Structural and approved by Contracting Officer which will be on an individual basis and require use of coring tools, power saws and drills.

3.03 ACCESS TO EQUIPMENT

- A. Install all control devices, specialties, valves and related items to provide easy access for operation, repair, inspection and maintenance.
- B. If these items are concealed behind walls or ceilings of non-removable type construction, provide access panels of proper size to provide for operation, maintenance, inspection and repair for concealed device.

3.04 PIPING INSTALLATION

- A. Screw-Jointed Piping: Cut piping accurately to required measurements and work into place without springing or forcing. Make proper provisions for expansion and contraction of all pipe. Free pipe and fittings from fins and burrs. Make screw joints with a lubricant or polytetrafluoroethylene tape applied on male threads only; full cut threads and not more than three threads on pipe shall remain exposed. Provide unions and union type connections and shut-off valves for all fixtures and equipment for ready disconnection.
- B. Solvent Cement Jointed Piping: Cut piping accurately to required measurements and work into place without springing or forcing. Make proper provisions for expansion and contraction of all pipe. Free pipe and fittings from fins and burrs. Clean pipe at joints to remove dirt, grease. Shavings or moisture from the inside and outside of the pipe and fittings. Check pipes and fittings for dry fit with pipe fully bottomed in the fitting socket. Apply primer to fitting and pipe surfaces to penetrate and soften the surfaces. Immediately apply solvent cement while the surface is still wet. While cement is wet, assemble the pipe and fittings. After assembly, wipe the excess cement or bead around the socket entrance. Provide unions and union type connections and shut-off valves for all fixtures and equipment for ready disconnection.

3.05 HANGERS

- A. Install hangers and supports for all pipe work to provide for expansion and contraction. Prevent vibration and maintain required grading by proper adjustment.
- B. Provide hangers appropriate for type of construction from which piping and/or equipment is to be suspended.
- C. Supporting rod diameters for pipe: 3/8" for pipe 2" and 1/2" for 2-1/2" and 3" pipe; 5/8" for 4" and 5" pipe.
- D. Spacing of Hangers:
 - 1. Provide at least one hanger per 5'-0" length of cast iron pipe. For cast iron pipe exceeding 5'-0" in length, provide supports at not more than 10'-0" intervals. Locate supports within 18" of each joint. Suspended lines shall be suitably braced to prevent horizontal movement.
 - 2. One 1/2" copper lines, not greater than 3'-6"; spacing of hangers on all copper pipe up to 1-1/2", not greater than 5'-0" and on 2" and 3" pipe not greater than 7'-0"; and on 4" pipe and over, not greater than 9'-0".
- E. Support vertical lines by hanger in horizontal line near riser and riser clamps at each floor. In addition, hubless cast iron pipe with stainless steel couplings and "Ty-Seal" joints shall be supported at sufficiently close intervals to keep system in alignment.
- F. Provide earthquake sway bracing.

3.06 PIPE SLEEVES AND COLLARS

- A. When pipes pass through ceilings or walls in finished portions of building, provide

approved pipe collars of sufficient size to completely cover pipe sleeves or ceiling opening. Fasten collars on pipe that will expand or contract to building structure.

3.07 FLASHINGS

- A. Flash pipes passing through roof with sheet lead weighing four pounds per square foot, with flashing extending 4" min. beyond pipe in all directions and carried to top of pipe with 2" return inside of pipe.

3.08 SOIL AND WASTE LINES

- A. Install soil and waste lines as shown on plans. Pitch horizontal soil and waste lines minimum 1/4" to a foot or as indicated. Make offsets, connections, etc., with 1/8 or 1/16 bends where possible.

3.09 WATER HAMMER ARRESTORS

- A. At top of water lines at fixtures, etc., where shown or required, provide manufactured water hammer arrestors. Crimping and soldering will not be permitted.

3.10 WATER PIPING

- A. Install water lines straight and true with due allowance for expansion and contraction, close to and parallel with building walls. Install vertical risers plumb and supported at each floor as specified. Install valves on individual lines to each building.
- B. Anchor supply piping to all plumbing fixtures to prevent movement.

3.11 EXCAVATION AND BACKFILL

- A. Place all lines in ground straight and true in trench having clearance of not less than 6" and not more than 9" on each side of pipe.
- B. Excavate trenches to required depth, accurately to grade and earth removed from under bell so that pipe rests on earth.
- C. When excess dirt has been removed, bring trench to required elevation with earth and compact firmly.
- D. Deposit excess dirt at building site or remove from premises as necessary.
- E. Provide all shoring necessary to protect excavation.
- F. After installation has been tested and approved, backfill trenches and excavation in 6" layers of manufactured sand, thoroughly hand tamped to a depth of 12" above pipe. After backfilling shall have a 90% compaction modified AASHO. Exercise extreme care to prevent damaging to underground pipe.

3.12 CLEANOUT

- A. Install cleanouts so that drainage pipe may be rodded without disturbing building structure. Provide cleanouts with flange and clamping ring where installed in floors with membrane.

3.13 IDENTIFICATION TAGS

- A. On all valves except those on supplies of plumbing fixtures, install brass or aluminum identification tags indicating function of the valve, size and working pressure.

3.14 IDENTIFICATION OF PIPING

- A. Identify all piping by painting or with labels or tapes with directional flow arrows. Spacing of identification marking on runs shall not exceed 50 feet.

3.15 TESTING AND CHLORINATION

- A. Sanitary piping shall be tested in accordance with Plumbing Code. Water piping shall be tested at 100 psi for 115 minutes without leaking. Contractor shall furnish all equipment for tests and pay for all costs of repairing any damage resulting from such tests. Contractor shall adjust systems until they are approved. Tests shall be performed in presence of, and to satisfaction of Contracting Officer and inspection of official agency involved.
- B. Water lines shall be thoroughly sterilized with chlorine before acceptance of work. Dosage of chlorine shall not be less than 50 ppm. After a contact period of not less than 8 hours, system shall be flushed with clean water until residual chlorine contents is not greater than 0.2 ppm. Chlorinating material shall be introduced into waterlines in a manner approved. All valves shall be opened and closed several times during contact period.

3.16 OPERATIONAL TEST

- A. Upon completion and disinfection and prior to acceptance of installation Contractor shall subject plumbing system to operating tests to demonstrate satisfactory, functional and operating efficiency. Such operating tests shall include following information in a report with conclusion as to adequacy of system:
 - 1. Time, date and duration of test.
 - 3. Operation of all fixtures and equipment.

3.17 CLEANING

- A. Thoroughly clean all fixtures, materials and equipment.
- B. Remove all labels, adjust for quiet and effective operation.

END OF SECTION 15400

SECTION 15800 - VENTILATION

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS

- A. As specified in Division 1 - General Requirements.

1.02 DESCRIPTION OF WORK

- A. As specified in Section 15000.

1.03 QUALITY ASSURANCE

- A. Laws, Regulations and Permits
 1. Comply with requirements of local and Contracting Officer codes and regulations and latest edition of SMACNA, and NFPA.
 2. Obtain and pay for all fees, permits, licenses, assessments and inspections.
 3. At completion, submit certification from approving agencies that work meets above requirement.
- B. Substitution of another manufacturer's product for equipment specified hereinafter and for items with "approved equal" after the brand name requires permission by the Contracting Officer before contract award. Approved equal products of the following manufacturers are acceptable in lieu of those specified hereinafter by the manufacturer and model number.
 1. Air Distribution Devices: Tuttle & Bailey, Titus or Metalaire.
- C. Comply with the recommendations and requirements of the Codes and Standards listed hereinafter in addition to detailed requirements of this specification.
 1. American National Standards Institute (ANSI) standards:
 - A13.1 Scheme for Identification Of Piping Standards.
 - B31.1 Power Piping.
 - C2 National Electrical Safety Code.
 2. Air Moving and Conditioning Association (AMCA) standards:
 - 210 Test Code For Moving Devices.
 - 300 Test Code For Sound Rating Air Moving.
 3. American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE):
 - Handbook, Applications - latest edition.
 - Equipment - latest edition.
 4. Sheet metal and Air Conditioning Contractors National Association (SMACNA):

Manual for the Balancing and Adjustment Of Air Distribution Systems.

Low Pressure Duct Construction Standards, 1976, 5th Edition.

Duct Liner Application Standard, 1975, 2nd Edition. Guidelines for Seismic Restraints of Mechanical Systems and Plumbing Piping Systems.

1.04 SUBMITTALS

- A. Submit in accordance with SECTION 01330 – SUBMITTAL PROCEDURES.
 - 1. Submittals shall include the following items:
 - a. Air Devices.
 - b. Dimensioned Shop Drawings.
 - 2. Review of shop drawings is confined to arrangement of equipment only and will not relieve Contractor from responsibility for proper fit, performance, or construction. Any deviation from contract documents including dimensional, performance or material changes shall be clearly noted on shop drawings. Since manufacturing methods vary, reasonable variations from the Contract Documents are acceptable; however, performance and material requirements are minimum, and the Contracting Officer retains the right to judge the equality of any variation.
 - 3. As-Built Drawings: Submit as-built drawings as specified under Section 01330 – SUBMITTAL PROCEDURES.
- B. Site Maintained Drawings:
 - 1. Maintain an accurate record of all changes made in installation from layout and materials show on Drawings and/or approved shop drawings.
 - 2. Record changes from contract drawings of all concealed piping. Indicate location of isolating valves and items requiring maintenance or inspection. Dimension underground piping from a visible point on structure. Indicate invert and slope of drainage piping at sufficient locations so that invert can be calculated for any point in system.
 - 3. Submit electronic files in dwg and pdf formats and reproducible copies of these drawings to Contracting Officer prior to final acceptance.
- C. Furnish to the Contracting Officer a complete brochure of all approved shop drawings, chlorination certificate signed by a registered Engineer, "as-built" drawings and written certification that the work conforms to all codes, prior to final payment.
- D. Provide specific manufacturer's warranties, list each piece of equipment, date warranty begins, date of expiration, and Contractor's address and telephone number to contact on warranty problems. These shall be turned over to the Contracting Officer at acceptance.
 - 1. Provide 2CD's for DOD Facilities Maintenance Branch.

1.05 PRODUCT HANDLING

- A. Protection: Use all means necessary to protect materials and equipment before, during, and after installation and to protect installed work and materials of all other trades.
- B. Replacements: In event of damage, immediately make all repairs and replacements necessary and at no cost to the State.

1.06 CERTIFICATES

- A. The Contracting Officer shall have the right to require a written certificate, dated and signed by a responsible employee of this Contractor, evidencing the performance of any portion of the work, or any testing; as a condition precedent to the acceptance of any work or the result of any test. Whenever a regulatory agency performs inspections or tests of any portion of the work, a certificate shall be furnished by the Contractor that the inspection or test was satisfactorily passed.

1.07 GUARANTEE

- A. All work to be guaranteed for a period of one year from date of acceptance of the work as a whole by Contracting Officer. Should any equipment, fixture or material fail within this period, Contractor shall be responsible for all damages to premises and shall repair or replace the defects at no cost to the Contracting Officer.
- B. All work will produce capacity and performance specified or shown.
- C. Requirements described in GENERAL REQUIREMENTS.

PART 2 – PRODUCTS

2.01 AIR DEVICES

- A. Provide for supply, return and exhaust air, of materials, sizes and approximate locations indicated; connect to ductwork in approved manner. Submit exact dimensions and locations for approval before duct connections for same are fabricated.
- B. Provide air devices with a sponge rubber gasket to prevent smearing. Provide all necessary angle frames for all air outlets. Contractor shall coordinate finish with Contracting Officer
- 1. Exhaust Registers: Aluminum 35-degree fixed horizontal face bars with key-operated multi-blade steel dampers. Select at maximum NC 20. Titus Model 350FL, Tuttle & Bailey or approved equivalent.

2.02 DUCTWORK

- A. Galvanized Sheet Steel: As per latest SMACNA "HVAC Duct Construction Standards", latest edition.

- B. Internal Duct Sound Insulation: Blanket flexible mineral fiber insulation conforming to ASTM C 553, Type 1, Class B-3, 1" thick.
- D. Flexible Connection: Neoprene coated glass fabric prefabricated connections.

PART 3 - EXECUTION

3.01 GENERAL REQUIREMENTS

- A. Note the space reserved for ducts, piping and necessary lights above furred ceilings are critical. Install ducts and piping as close as possible to slab or structure above. Location of light fixtures cannot be changed. If space allocated it too small for ducts and piping, make necessary move to fit into general pattern.
- B. Do not scale Drawings. Check all measurements at building and adjust work to fit space allotted. Close cooperation between all trades will be required. Any work done without regard for work of other trades shall be moved without extra charge, if necessary to permit proper installation of other work.

3.02 CUTTING AND PATCHING

- A. Cut all holes necessary for installation of work under this Section.
- B. Patching of all holes, etc., will be done under other sections of specification. Patch any holes cut unnecessarily.

3.03 ACCESS TO EQUIPMENT

- A. Install all control devices, specialties, etc., to provide for easy access for operation, repair and maintenance.
- B. If concealed, access doors and panels shall be provided. Coordinate installation of items where access door and panels are required for proper access. Access is required where valves or controls are installed behind walls or above non-removable ceilings.

3.04 DUCTWORK

- A. Low Pressure Ductwork:
 1. Erect all ducts with necessary elbows, dampers, etc., and all fans, air outlets, filters, dampers, etc., furnished under other articles of this Section.
 2. Provide sizes, runs and connections of ducts that adhere to drawings as closely as possible. Install to indicated heights as permitted by structure. Fabricate ductwork in workmanlike manner with airtight joints, presenting smooth surface on inside, neatly finished on outside; construct with curves and bends to ease flow of air.
 3. Openings through construction required for ductwork will be provided by others; shop drawings shall locate such duct openings. Obtain approval in ample time to meet building construction schedule. Ductwork shall have rectangular cross section unless otherwise indicated.

4. Details of construction and materials not specified herein shall be in accordance with ASHRAE Guide and SMACNA recommendations and as approved.
5. Fabricate, unless otherwise indicated or specified, in accordance with SMACNA "HVAC Duct Construction Standards", latest edition. Distance between joints on any size duct shall not exceed 8 feet.
6. Duct Connections: Flexible at both discharge and inlet of air moving equipment, applied in accordance with manufacturer's instructions. Allow 2" of free space between collars connected. Install a sheet metal band completely around collar at each end of connection and fasten to collars with screws through band and glass fabric, placed no more than 3" on centers.
7. Keep ductwork openings closed with sheet metal during construction to prevent injury, and take all possible precautions to keep interior of ducts, air intake chambers and fan housings free from dirt or dust.
8. Dampers and Deflectors: Provide splitter, butterfly and louver dampers, deflecting vanes, for control of air volume and direction and for balancing system, where indicated, specified and directed. Deflecting or turning vanes shall be provided at all duct turns or change of direction.
 - a. Dampers of galvanized steel, at least one gage heavier than that for duct size in which damper is installed, reinforced where directed; where indicating quadrant in accessible location, and locking device for adjusting locking damper in position.
 - b. Deflectors: Provide shop-fabricated blades; fit into side strips and screw or rivet to duct elbow in field.
 - c. Air Extractors: Provide at each branch take-off from main duct.
9. Duct Supports: Support horizontal ducts with hangers spaced not more than 8 feet apart; place hangers at changes of direction. Use strap hangers for ducts up to 30" wide. Strap hangers shall be one inch wide of 16 gauge galvanized sheet steel; extend down both sides of duct and turn under bottom at least 4", fasten to side and bottom with sheet metal screws.
10. Caulk all duct joints air tight.
11. Apply one coat of flat black enamel to interior portion of ductwork which can be seen through grilles, registers, screens or diffuser. Duct liner shall be dyed black but not painted.
12. Duct installation shall comply with UL assembly L206.

3.05 TESTING AND BALANCING

- A. All testing and balancing shall be performed by an independent third-party test and balancing contractor certified by AABC or NEBB and retained by the Contractor. Promptly repair all defects disclosed as result of tests or operations, at expense of Contractor, to satisfaction of Architect. Supply all instruments, labor and tools required by Tests. Any defective material or equipment shall be repaired, adjusted and replaced by new like material and equipment and retested before acceptance.
- B. Make operation tests on all machinery and devices to determine proper compliance with specifications. All equipment shall function quietly and efficiently; undue noise or vibration shall be promptly required and/or corrected before acceptance.
- C. Should any apparatus, material or work fail in any test, remove same immediately and replace with new perfect material and retest and/or correct before acceptance.
- D. Two weeks before expected completion date, put air conditioning, ventilation and exhaust systems and equipment into operation and continue operation of same during each working day, for not less than five eight-hour periods, until all adjusting, balancing, testing, demonstrations, instructions and cleaning of systems have been completed. Instructions and demonstrations required shall be given simultaneously with this operation.
- E. Balance, adjust and test air moving equipment and air distributing systems, using procedure recommended by ASHRAE "Guide". All instruments used shall be accurately calibrated and maintained in good working order. If requested, conduct tests in presence of Architect. Balancing and adjusting shall consist of:
 - 1. Adjusting all grilles, registers and diffusers for optimum air distribution and minimum noise and drafts, starting with all elements in wide open position.
 - 2. Adjusting all fan speeds and manually operated dampers to supply and/or return quantities of air specified or indicated.
 - 3. Make any changes in pulleys, belts and dampers, or all dampers, necessary for correct balance at no additional cost to Owner.
- F. Balance air system and equipment using procedure recommended by ASHRAE guide. All instruments used shall be accurately calibrated and maintained in good working order. If requested, conduct tests in presence of Contracting Officer.
- G. Test equipment as in actual operation, and test and adjust all temperature controllers, safety devices to operate smoothly and quietly.

- H. Testing of air conditioning system shall be done in the presence of Contracting Officer. Notify Contracting Officer 7 days prior to testing. Testing and balancing shall be done before final mechanical inspections.

3.06 CLEANING

- A. Thoroughly clean all fixtures, materials and equipment.
- B. Remove all labels, adjust for quiet and effective operation.

3.07 FINAL ACCEPTANCE

- A. The Contractor shall perform and complete his work according to the Contract Documents without fault or defect. In the absence of more specific directives, the work shall:
 - 1. Be placed in a thoroughly clean and unmarred condition.
 - 2. Be checked out in a step-by-step manner to ascertain that all fastenings, controls, valves safety devices, operating devices, and other required appurtenances have been provided and adjusted in accordance with the Contract Documents.
 - 3. Be free of previously condemned or rejected parts and be properly restored to the extent thereof.
 - 4. Be balanced for perfect operation wherever adjustments for balancing exist in the work, and submittals required under paragraph 3.07 submitted.
 - 5. Contain no hidden faults, defects, and/or unsafe conditions.
- B. Before calling for final inspection, the various systems shall be operated for a period of 48 hours continuously and show satisfactory operation.
- C. If it develops at the time of this inspection that there are any discrepancies between the installation and the plans, specifications, shop drawings, details, etc., the Contracting Officer will notify the Contractor shall make necessary changes and adjustments to correct the installation in accordance with the Contracting Officer's instructions and then notify the Contracting Officer that each item has be adjusted.
- D. The Contracting Officer or his representative will then inspect the installation and make any necessary re-tests. If the items mentioned in the Contracting Officer's letter have not been corrected, it will be necessary to make additional inspections and tests. All of these subsequent inspections by the Contracting Officer, his representative, or both, that are required for the Contracting Officer to pass on this work and to make final acceptance shall be paid for by the Contractor.

END OF SECTION

YCA HILO BILLET SHOWER RENOVATION

1046 LEILANI STREET
HILO, HAWAI'I 96720

TAX MAP KEY: (3) 2-1-012: 003

STATE OF HAWAI'I, DEPARTMENT OF DEFENSE

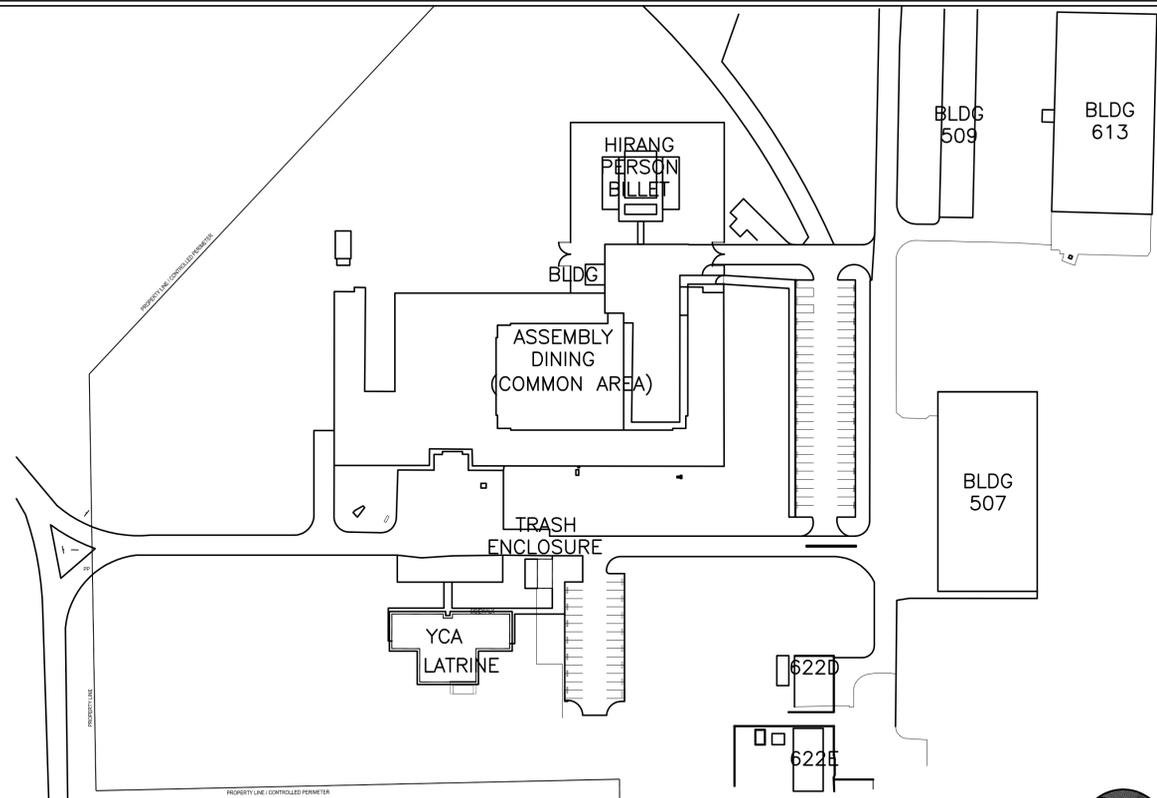
JOB NO. CA-1605-C2

CONSULTANTS

ARCHITECT
LOU CHAN & ASSOCIATES, INC.
PHONE: (808) 596-7551
EMAIL: MAIL@LOUCHANARCHITECTS.COM

MECHANICAL ENGINEER
PREPOSE ENGINEERING SYSTEMS
PHONE: 808.271.6200
EMAIL: ARNOLD@PREPOSEENG.COM

LOCATION MAP

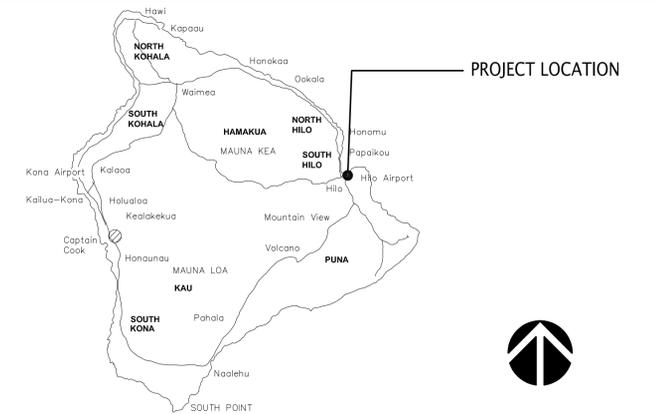


NOT TO SCALE



ISLAND MAP

HAWAII ISLAND
NOT TO SCALE

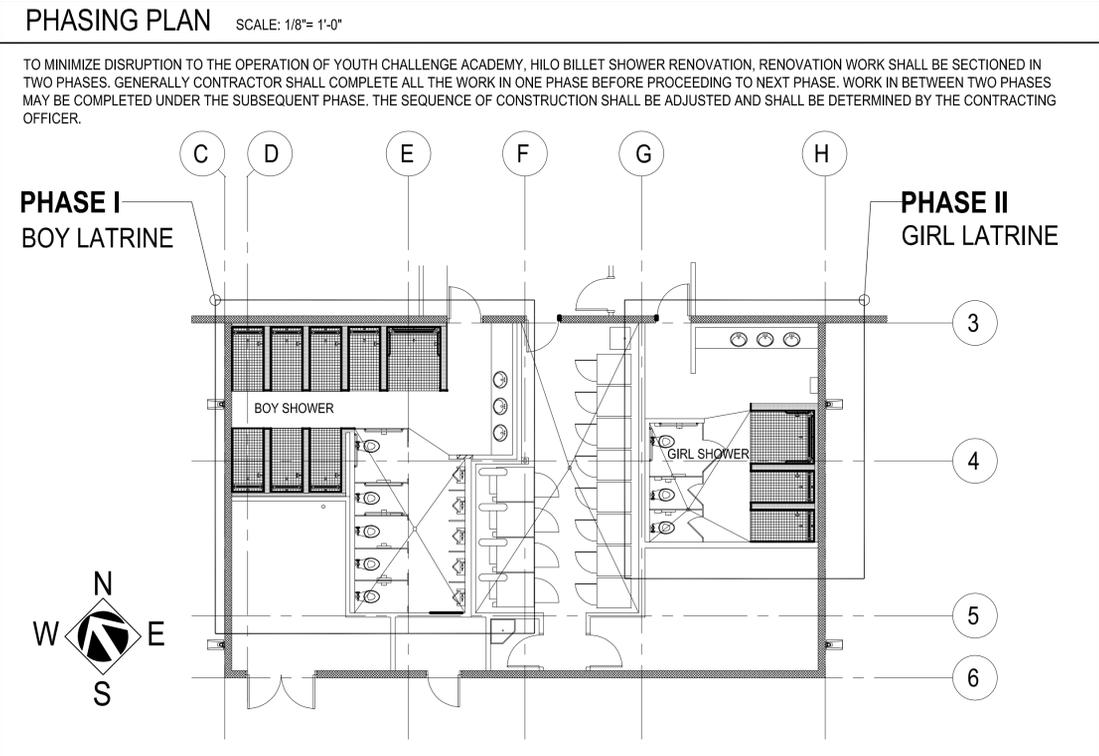
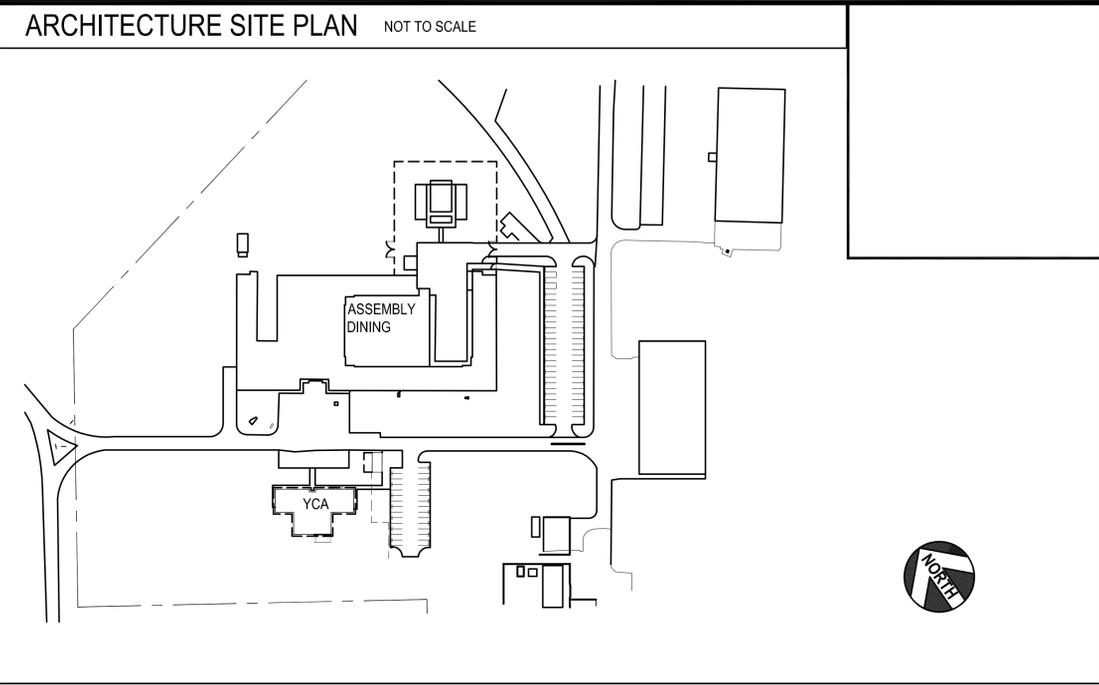
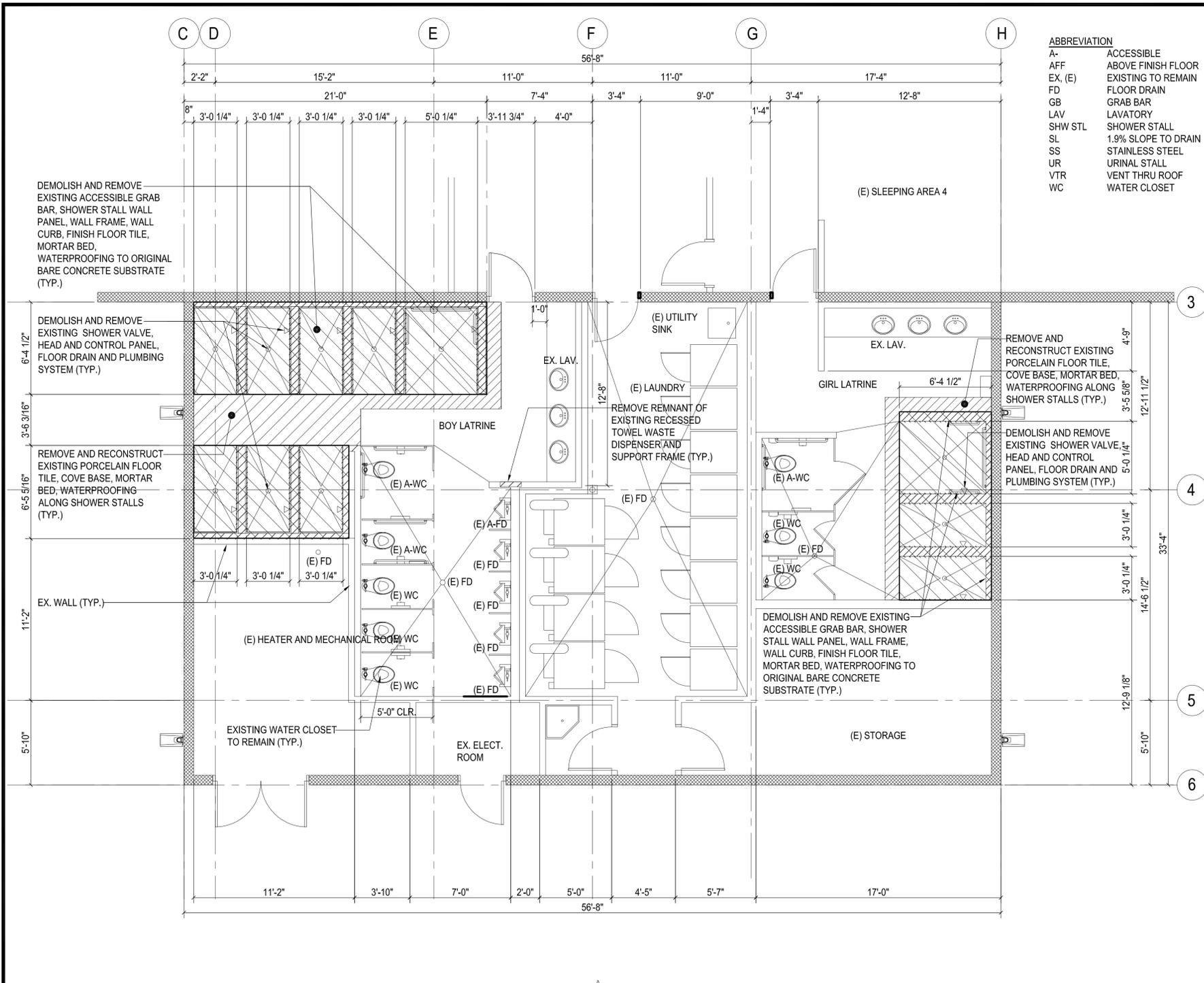


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| DEPARTMENT OF DEFENSE STATE OF HAWAII | | | | | |
| YCA HILO BILLET SHOWER RENOVATION 79-1020 HAUKAPILA STREET, KONA HAWAII 96750 TAX MAP KEY: (3) 7-9-013:017 | | | | | |
| TITLE SHEET | | | | | |
| LOU CHAN & ASSOCIATES, INC. | | JOB NO. | DRAWING NO. | | |
| DESIGN BY: LCC | CHECK BY: LCC | CA-1605-C2 | OT01 | | |
| DRAWN BY: NS | APPROVED BY: LCC | DATE | SHEET | | |
| | | FEBRUARY 2024 | 1 | | |
| SCALE: | AS NOTED | | OF 12 SHEETS | | |



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Signature
 LICENSE EXPIRATION DATE: 4/30/2024



A1 FLOOR DEMOLITION PLAN
 A11 SCALE: 1/4"= 1'-0"



DEMOLITION AND REMOVAL NOTES

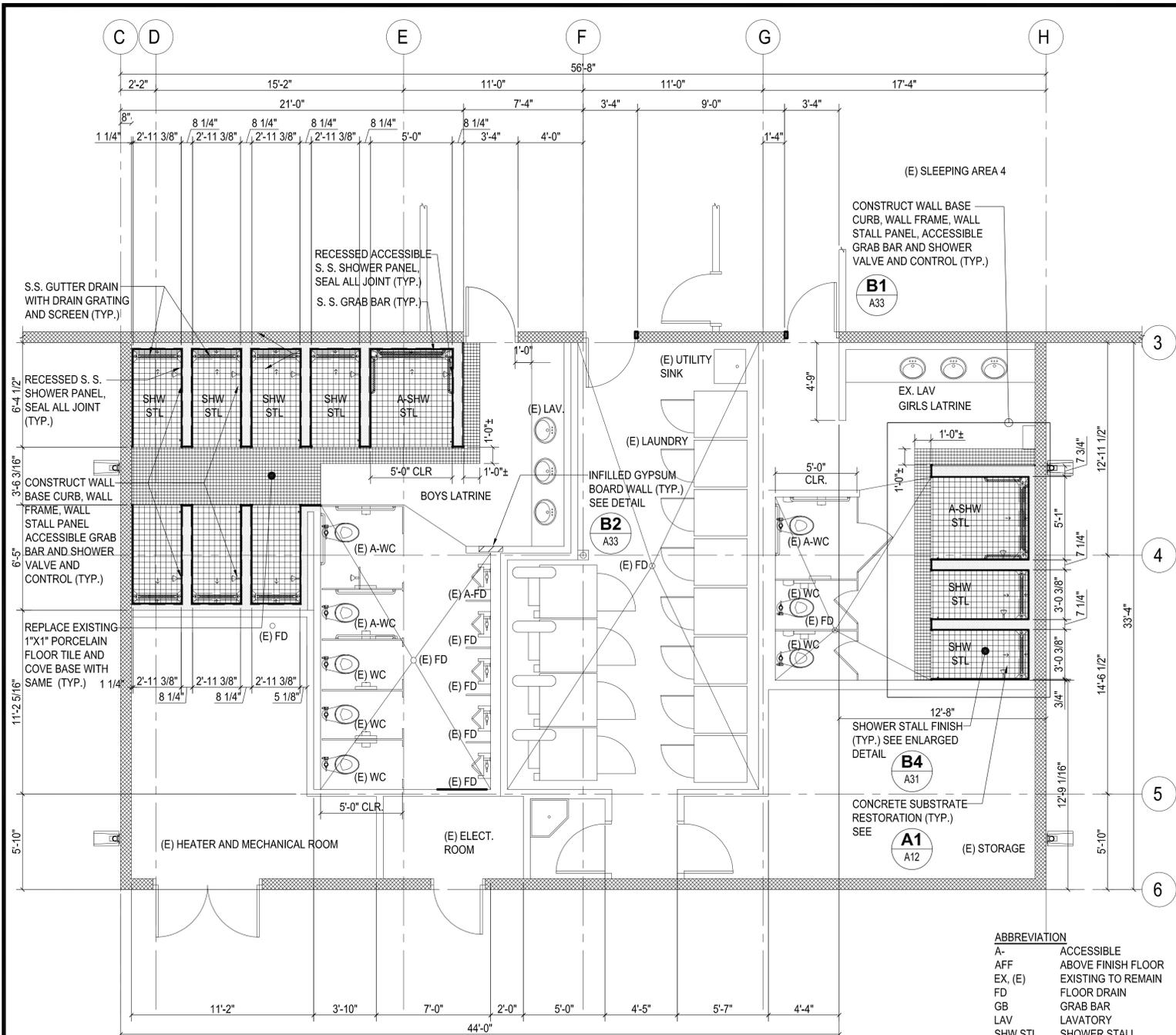
SHOWER STALL
 CONTRACTOR SHALL DEMOLISH, REMOVE AND DISPOSE OF EXISTING SHOWER STALLS INSIDE BOY AND GIRL LATRINES. DEMOLITION WORK SHALL INCLUDE, BUT NOT BE LIMITED TO SHOWER STALL PARTITION WALL, WALL FRAME, FINISH WALL PANELS, FINISH FLOORING SYSTEMS, WATERPROOFING MEMBRANE, FLASHING, SEALANT, WATER, DRAIN, VENT THRU ROOF PIPES AND PLUMBING SYSTEM.

CONCRETE FLOOR SLAB AND CEILING
 DEMOLITION SHALL INCLUDE, SAW CUTTING, EXCAVATING EXISTING CONCRETE SLAB FOR RAISED CONCRETE CURB AND UNDERGROUND PLUMBING WORK. CUTTING AND MODIFY EXISTING CEILING AND FRAME FOR VENTILATION WORK. REMOVE EXISTING WALL MOUNTED LIGHTING, UNUSED AND ABANDONED WIRING, DISMANTLE AND REMOVE ALL ABANDONED METAL SUPPORTS, WOOD BLOCKING, COVER, CONCRETE CURBS, DUCT AND PIPE SUPPORTS, PROVIDE TEMPORARY SHORINGS, SUPPORTS, BRACING AND ENCLOSURE TO EXISTING DECK, DUCTING AND MECHANICAL EQUIPMENT FOR THE REMOVAL WORK AS REQUIRED. CONTRACTOR SHALL VERIFY THE EXISTENCE AND CONDITION OF EXISTING SHOWER UNDERLAYMENT, WATERPROOFING, MORTAR BED, REMOVE, CLEAN AND REPAIR LOOSE, DAMAGED, AND UNSUITABLE UNDER FLOOR MATERIAL TO PROVIDE A PROPER SUBSTRATE FOR BUILT-UP SLOPED MORTAR BED AND SHOWER STALL FLOOR.

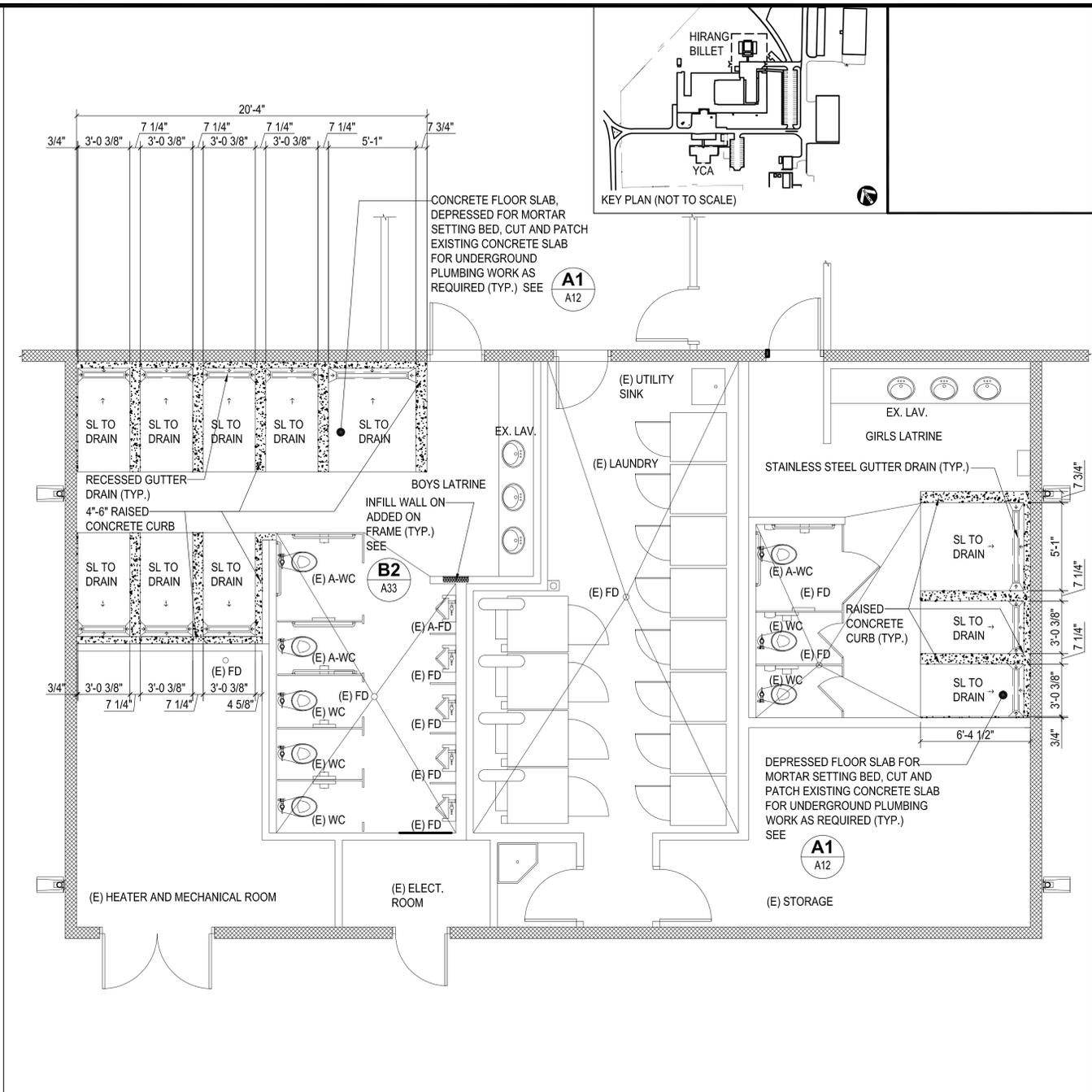
EXISTING FLOOR TILE AND WALL BASE
 CONTRACTOR SHALL CHIP OFF AND REMOVE EXISTING DAMAGED AND LOOSE PORCELAIN FLOOR TILE AND CURVED COVE BASE FOR REPLACEMENT, PORTION OF EXISTING PORCELAIN FLOOR TILE AND CURVED COVE BASE AT FLOOR TILE TRANSITION BETWEEN EXISTING AND NEW FLOOR TILE FOR A SMOOTH AND LEVELED TRANSITION.

SALVAGE, REUSE AND REINSTALLATION WORK
 EXISTING ITEMS CALLED OUT TO REMAIN SHALL BE COVERED AND PROTECTED IN PLACE. EXISTING FURNITURE, EQUIPMENT AND MOVABLE ITEMS IN THE WAY OF RENOVATION SHALL BE REMOVED AND RELOCATED TO AREAS DESIGNATED BY THE CONTRACTING OFFICER. ITEMS CALLED OUT TO BE REUSED AND/OR REINSTALLED INCLUDING LIGHTING AND PLUMBING WORK, CEILING AND WORK ACCESS PANELS SHALL BE DISMANTLED AND SAVED FOR REINSTALLATION. BUILT-IN AND FIXED ITEMS TO BE SALVAGED DURING CONSTRUCTION SHALL BE DISMANTLED, CLEANED, PLACED IN PROTECTIVE WRAPPING OR BOXES AND STORED IN AREA(S) DESIGNATED BY THE CONTRACTING OFFICER. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITION, CAREFULLY DISMANTLE, REMOVE AND STORE ITEMS TO A SAFE AND PROTECTED AREA UNTIL REINSTALLATION.

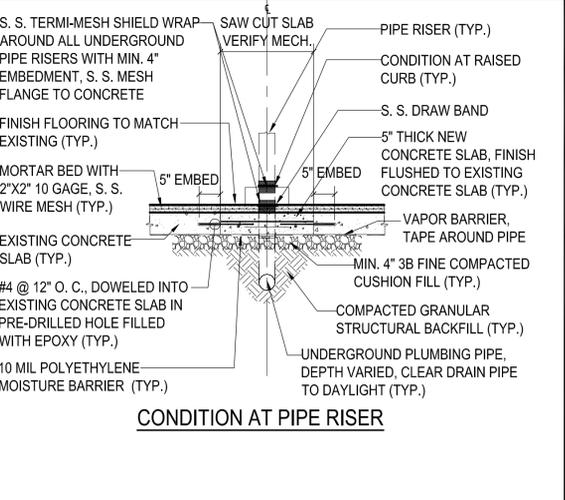
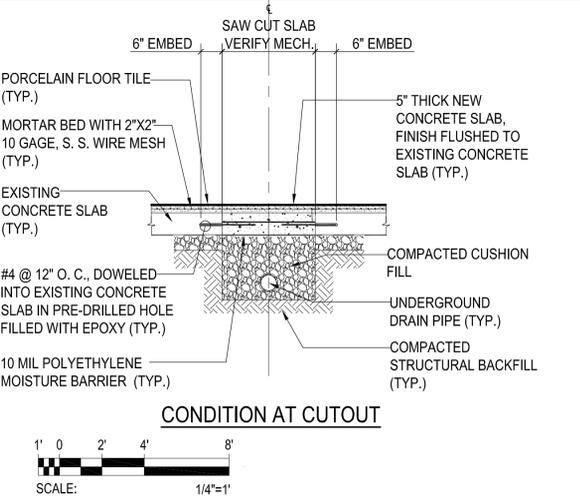
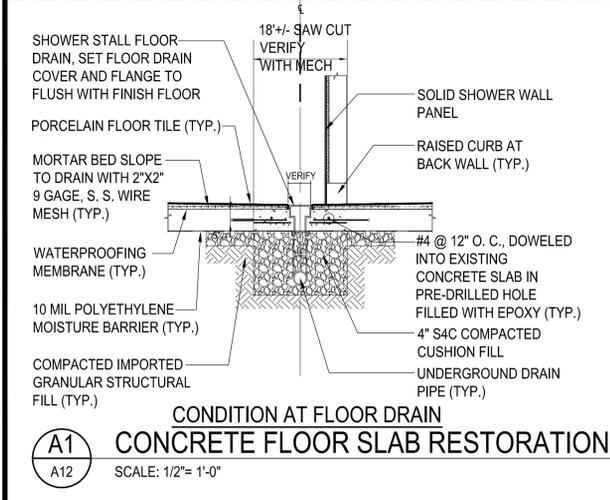
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| DEPARTMENT OF DEFENSE STATE OF HAWAII YCA HILO BILLET SHOWER RENOVATION 79-1020 HAUKAPILA STREET, KONA HAWAII 96750 TAX MAP KEY: (3) 7-9-013:017 | | | | | |
| FLOOR DEMOLITION PLAN | | | | | |
| LOU CHAN & ASSOCIATES, INC. DESIGN BY: LCC DRAWN BY: NS | | CHECK BY: LCC APPROVED BY: LCC | | JOB NO. CA-1605-C2 DATE: FEBRUARY 2024 SCALE: AS NOTED | |
| | | | | DRAWING NO. A11 SHEET 3 OF 12 SHTS. | |



B1 FLOOR RENOVATION PLAN
 SCALE: 1/4"=1'-0"
 1" 0 2' 4' 8'
 SCALE: 1/4"=1'



B3 SHOWER STALL FLOOR RENOVATION PLAN
 SCALE: 1/4"=1'-0"
 1" 0 2' 4' 8'
 SCALE: 1/4"=1'



| REVISION NO. | SYMBOL | DESCRIPTION | SHT. OF | DATE | APPROVED DDD |
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DEPARTMENT OF DEFENSE
STATE OF HAWAII

YCA HILO BILLET SHOWER RENOVATION
79-1020 HAUKAPILA STREET, KONA HAWAII 96750
TAX MAP KEY: (3) 7-9-013:017

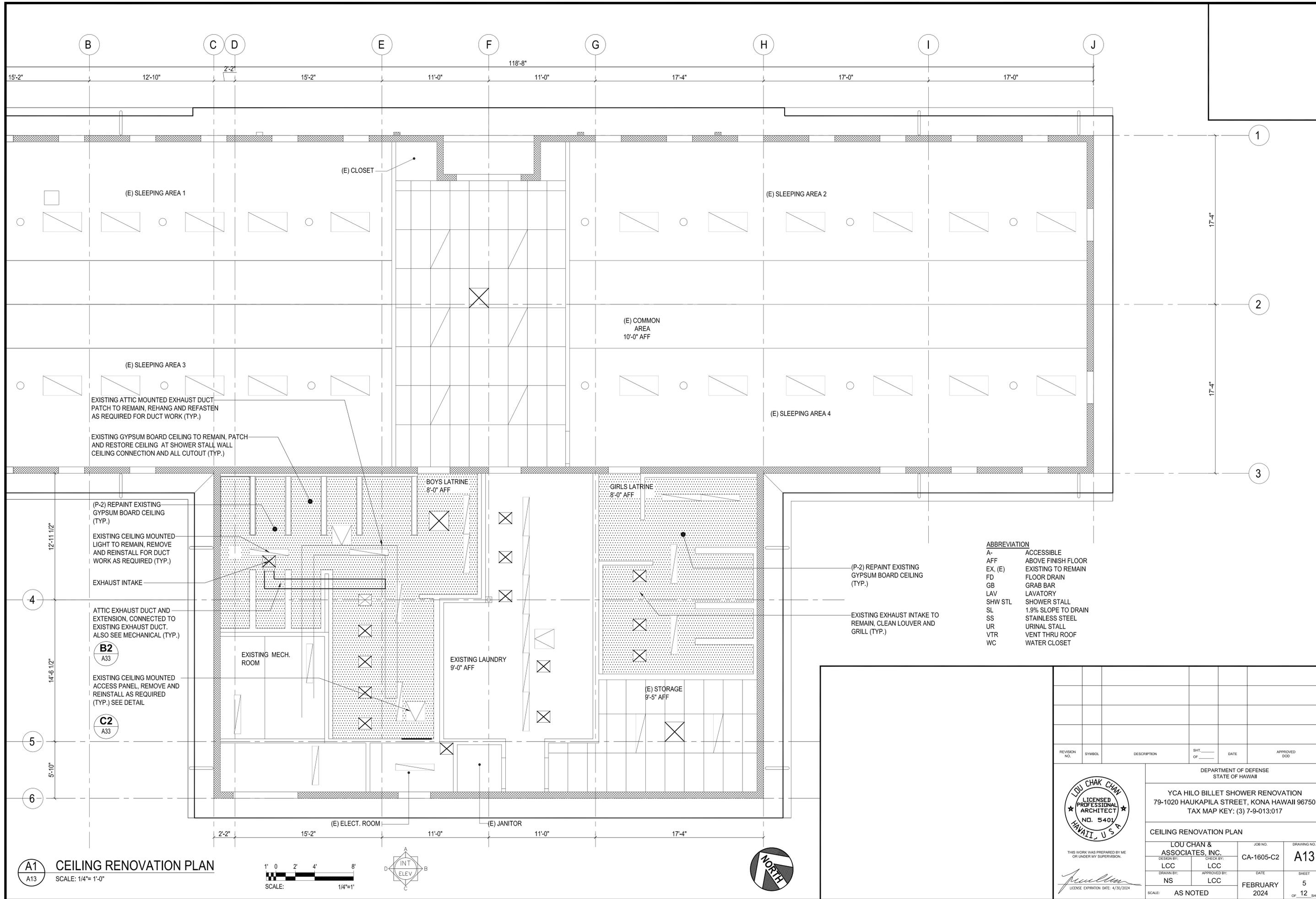
FLOOR RENOVATION PLAN

LOU CHAN & ASSOCIATES, INC.
 DESIGN BY: LCC
 DRAWN BY: NS
 CHECKED BY: LCC
 APPROVED BY: LCC

JOB NO. CA-1605-C2
 DRAWING NO. A12
 DATE: FEBRUARY 2024
 SHEET 4 OF 12 SHTS.

AS NOTED

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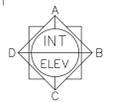
ABBREVIATION

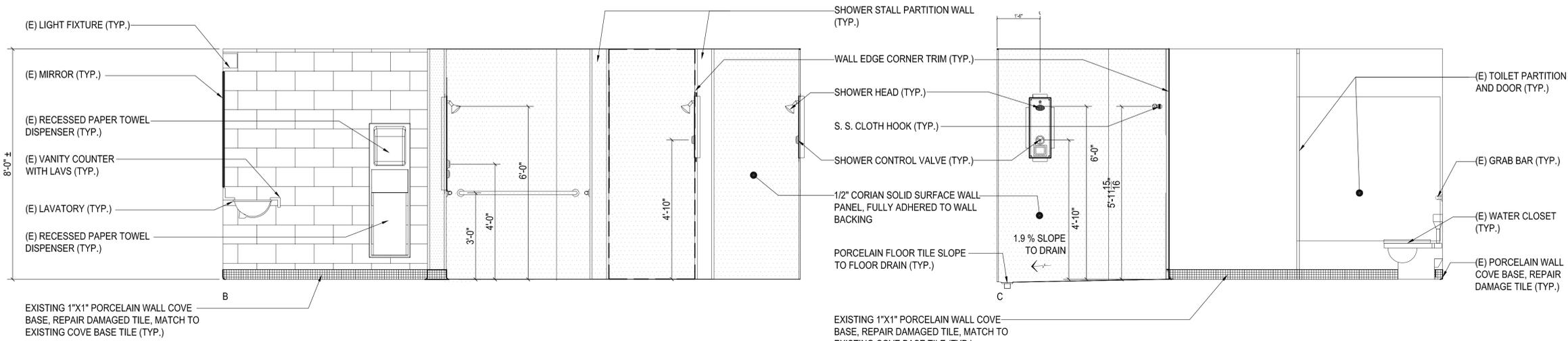
| | |
|---------|---------------------|
| A- | ACCESSIBLE |
| AFF | ABOVE FINISH FLOOR |
| EX, (E) | EXISTING TO REMAIN |
| FD | FLOOR DRAIN |
| GB | GRAB BAR |
| LAV | LAVATORY |
| SHW STL | SHOWER STALL |
| SL | 1.9% SLOPE TO DRAIN |
| SS | STAINLESS STEEL |
| UR | URINAL STALL |
| VTR | VENT THRU ROOF |
| WC | WATER CLOSET |

| REVISION NO. | SYMBOL | DESCRIPTION | SHT. OF | DATE | APPROVED DDD |
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| | | DEPARTMENT OF DEFENSE STATE OF HAWAII YCA HILO BILLET SHOWER RENOVATION 79-1020 HAUKAPILA STREET, KONA HAWAII 96750 TAX MAP KEY: (3) 7-9-013:017 | |
| LOU CHAN & ASSOCIATES, INC. DESIGN BY: LCC DRAWN BY: NS | | JOB NO. CA-1605-C2 CHECK BY: LCC APPROVED BY: LCC DATE: FEBRUARY 2024 | |
| SCALE: AS NOTED | | SHEET 5 OF 12 SHTS. | |

A1 CEILING RENOVATION PLAN
A13 SCALE: 1/4" = 1'-0"

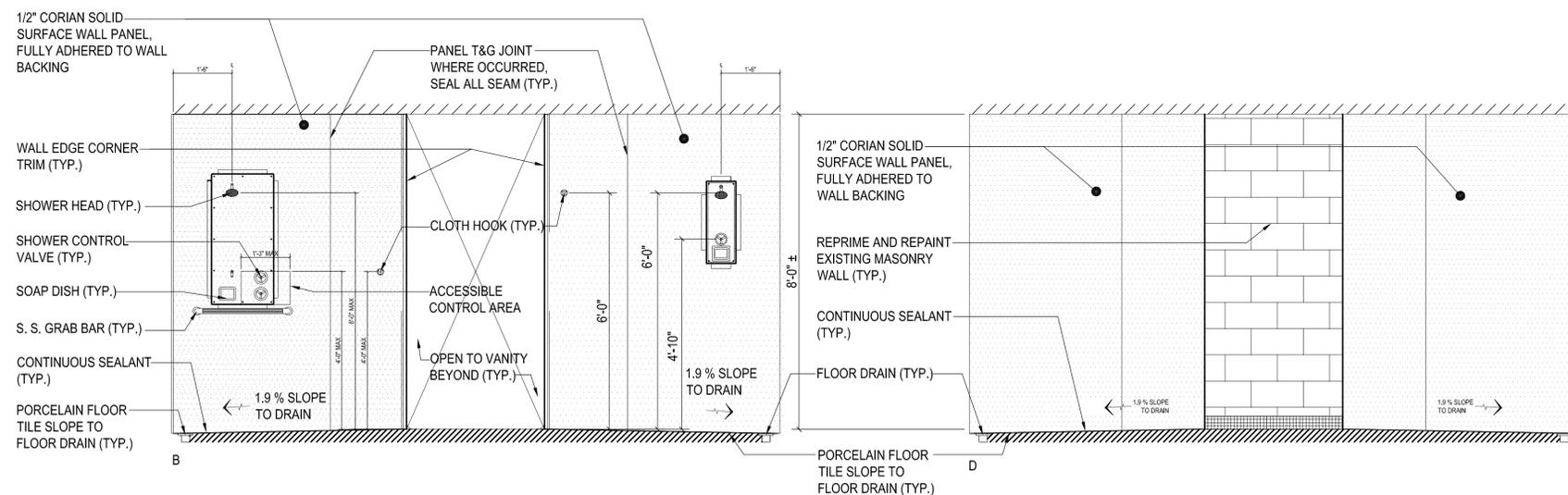
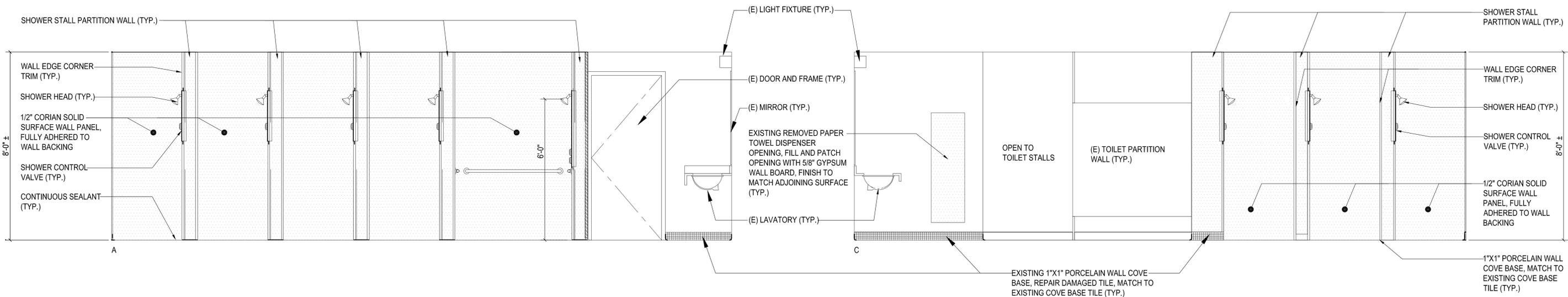




ABBREVIATION

| | |
|---------|---------------------|
| A- | ACCESSIBLE |
| EX, (E) | EXISTING TO REMAIN |
| FD | FLOOR DRAIN |
| GB | GRAB BAR |
| LAV | LAVATORY |
| SHW STL | SHOWER STALL |
| SL | 1.9% SLOPE TO DRAIN |
| SS | STAINLESS STEEL |
| UR | URINAL STALL |
| VTR | VENT THRU ROOF |
| WC | WATER CLOSET |

C1 GIRL SHOWER ELEVATIONS



A1 BOY SHOWER ELEVATIONS



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DEPARTMENT OF DEFENSE
STATE OF HAWAII

YCA HILO BILLET SHOWER RENOVATION
79-1020 HAUKAPILA STREET, KONA HAWAII 96750
TAX MAP KEY: (3) 7-9-013:017

ELEVATIONS

LOU CHAN & ASSOCIATES, INC.

DESIGN BY: LCC CHECK BY: LCC

DRAWN BY: NS APPROVED BY: LCC

SCALE: AS NOTED

JOB NO. CA-1605-C2

DRAWING NO. A21

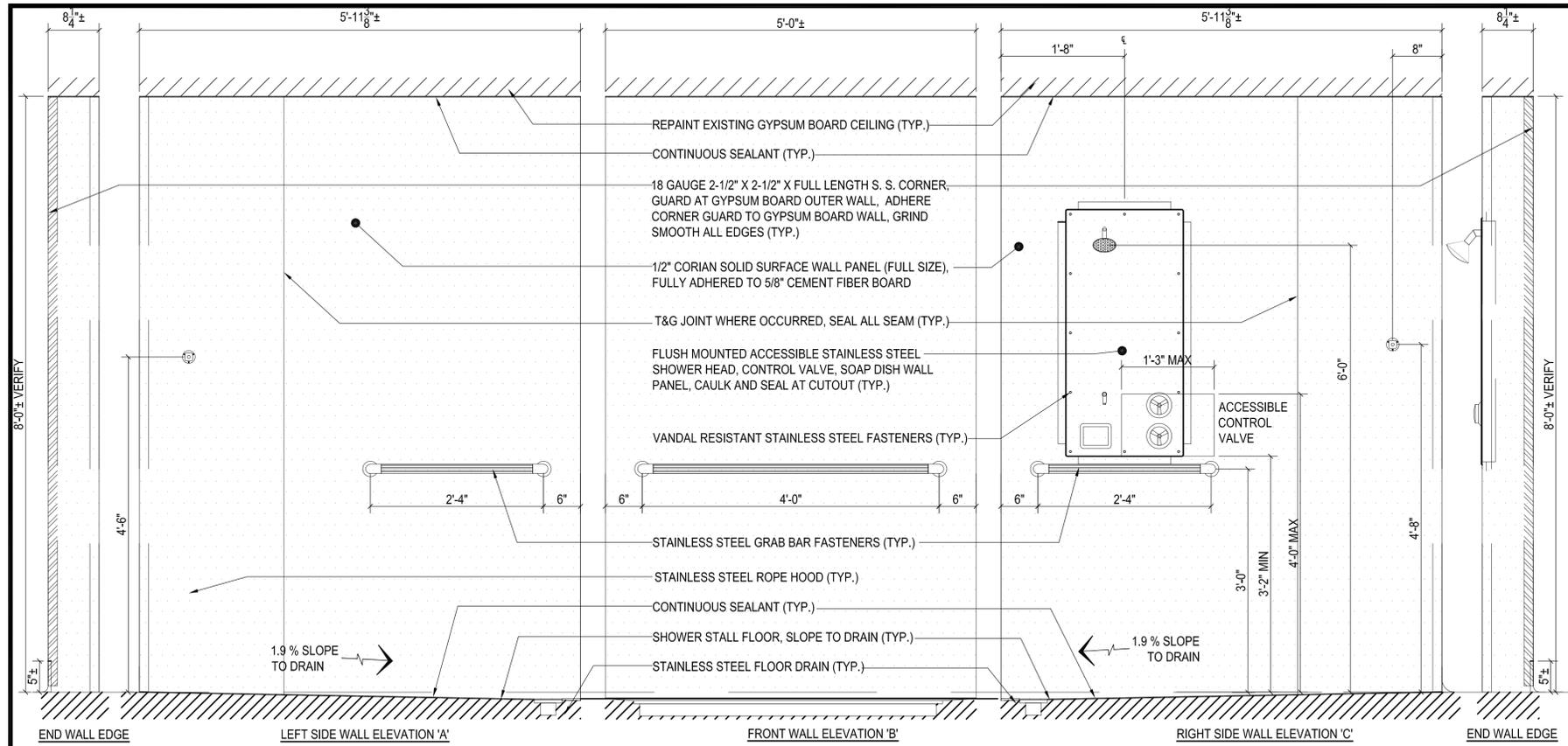
DATE: FEBRUARY 2024

SHEET 6 OF 12 SHTS.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

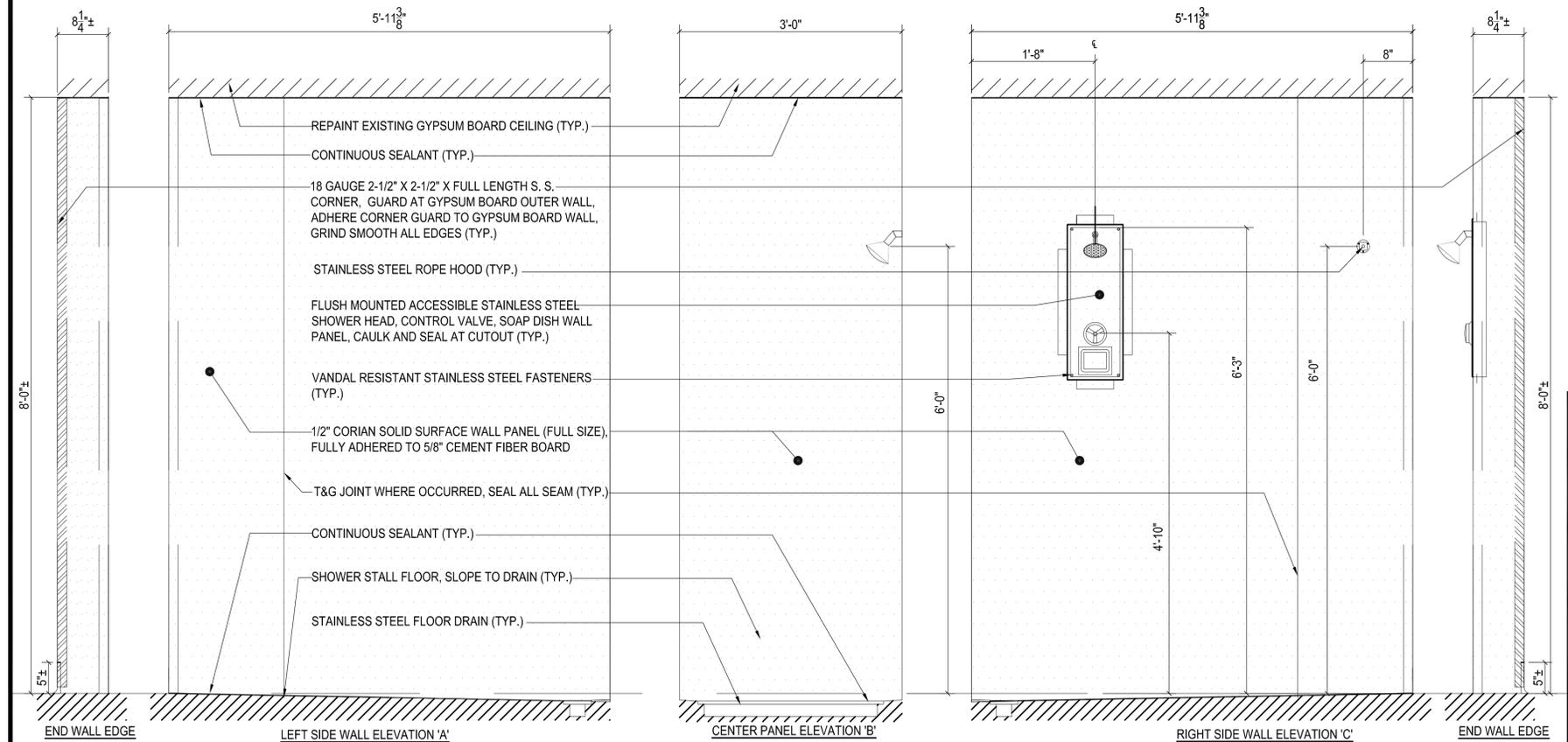
LOU CHAN CHAN
LICENSED PROFESSIONAL ARCHITECT
NO. 5401
HAWAII, U.S.A.

LICENSE EXPIRATION DATE: 4/30/2024

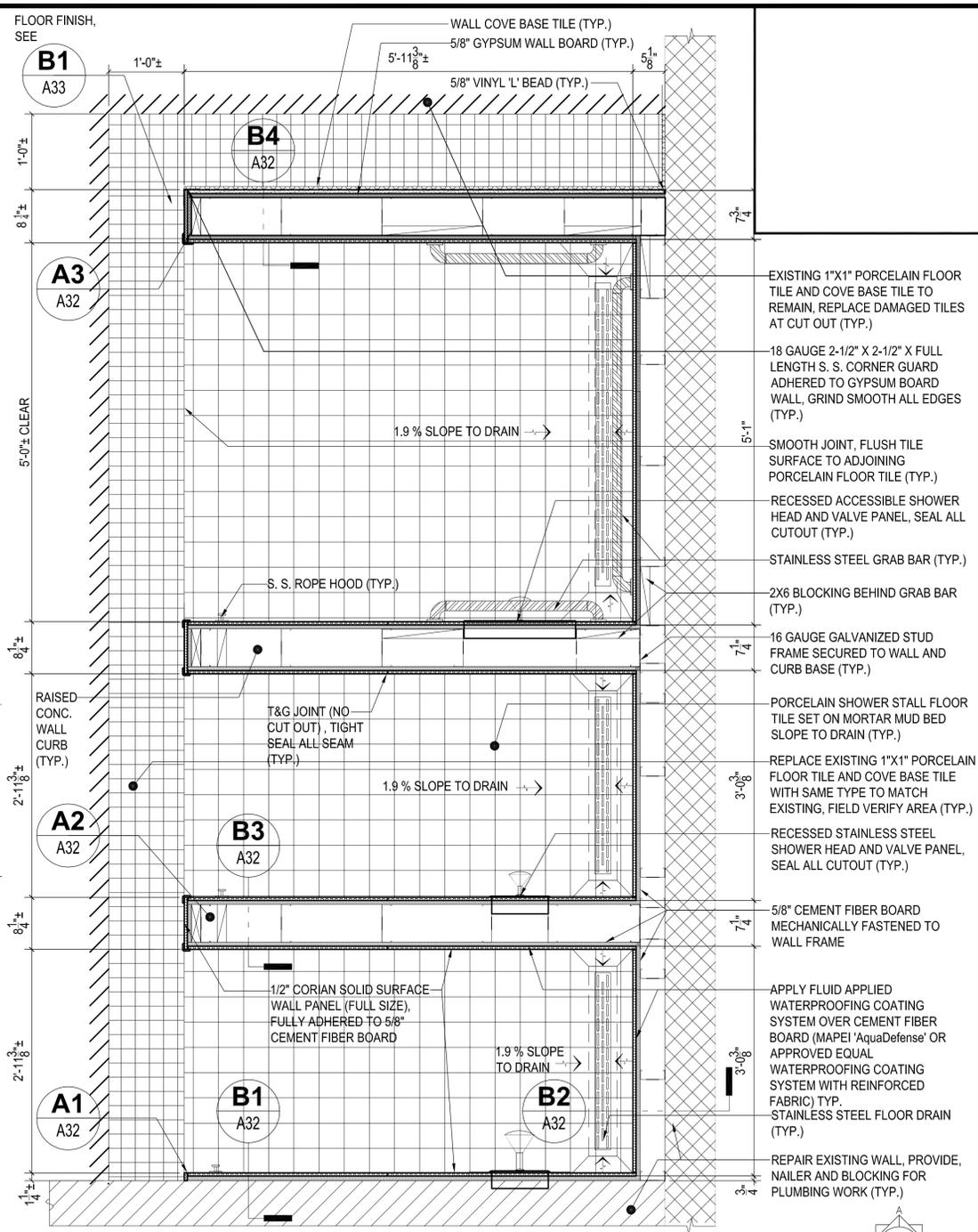


SHOWER STALL PANEL NOTE:
 SHOWER PANEL SHALL BE WATER MOISTURE AND MILDEW RESISTANT SOLID PANEL WITH SMOOTH SURFACE BY CORIAN OR APPROVED EQUAL FULLY ADHERED TO CEMENT FIBER BOARD SUBSTRATE. WALL PANEL SHALL BE SEAMLESS, FABRICATED FULL SIZE IN ONE PIECE WITHOUT SPlicing AND JOINT. IF JOINTS ARE REQUIRED DUE TO MANUFACTURER SIZE LIMITATION, SEAM SHALL BE LIMITED TO T&G JOINT AND VERTICALLY INSTALLED WITHOUT CUTTING AND NOTCHING AT EDGES, JOINTS SHALL BE KEPT TO MINIMUM AND TIGHTLY SEALED. ALL GAPS AND VOIDS, CONNECTING JOINTS SHALL BE FILLED AND SEALED WITH MANUFACTURER APPROVED OR DESIGNATED SEALANT.

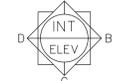
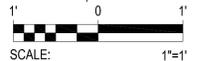
C1 ACCESSIBLE SHOWER STALL ELEVATION
 A31 SCALE: 1" = 1'-0"



A1 TYPICAL SHOWER STALL ELEVATION
 A31 SCALE: 1" = 1'-0"



B4 ENLARGED GIRL SHOWER PLAN, BOY SIMILAR
 A31 SCALE: 1" = 1'-0"

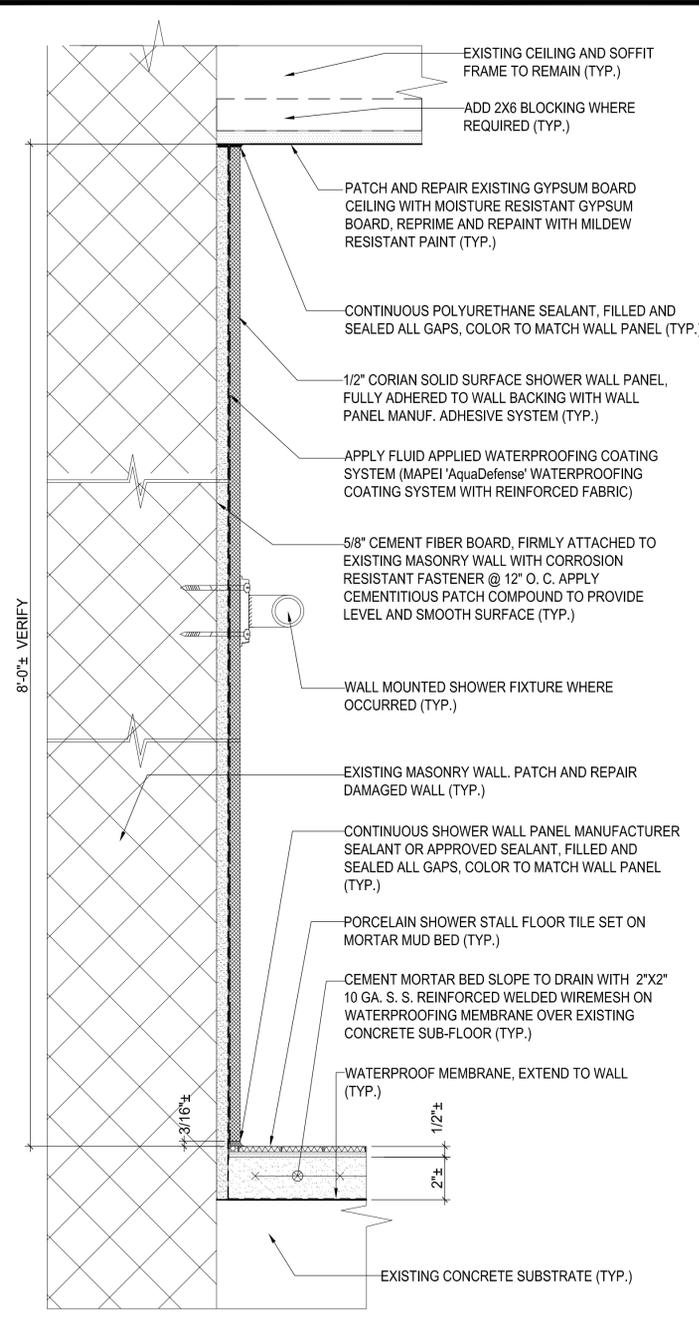


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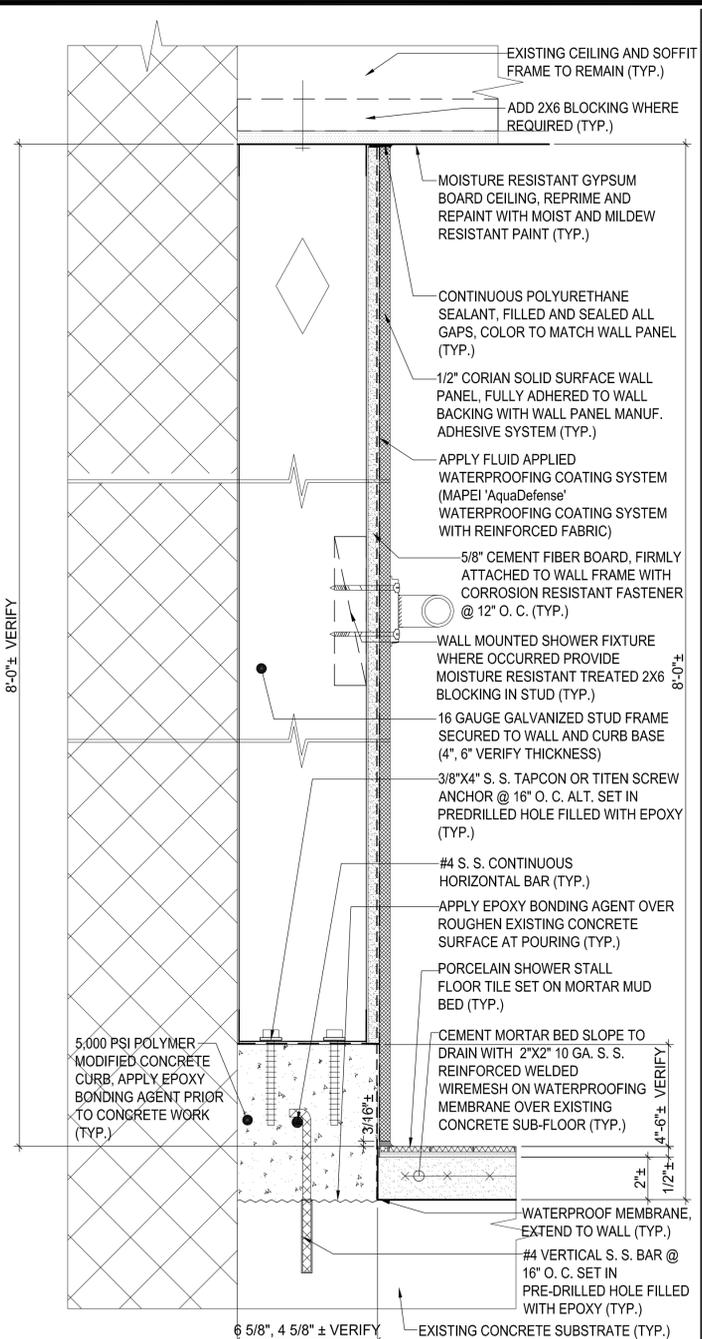
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| DEPARTMENT OF DEFENSE STATE OF HAWAII | | | | | |
| YCA HILO BILLET SHOWER RENOVATION 79-1020 HAUKAPILA STREET, KONA HAWAII 96750 TAX MAP KEY: (3) 7-9-013-017 | | | | | |
| ENLARGED SHOWER PLAN AND DETAILS | | | | | |
| LOU CHAN & ASSOCIATES, INC. | | JOB NO. CA-1605-C2 | | DRAWING NO. A31 | |
| DESIGN BY: LCC | CHECK BY: LCC | DATE FEBRUARY 2024 | SHEET 7 OF 12 SHTS. | | |
| DRAWN BY: NS | APPROVED BY: LCC | SCALE: AS NOTED | | | |



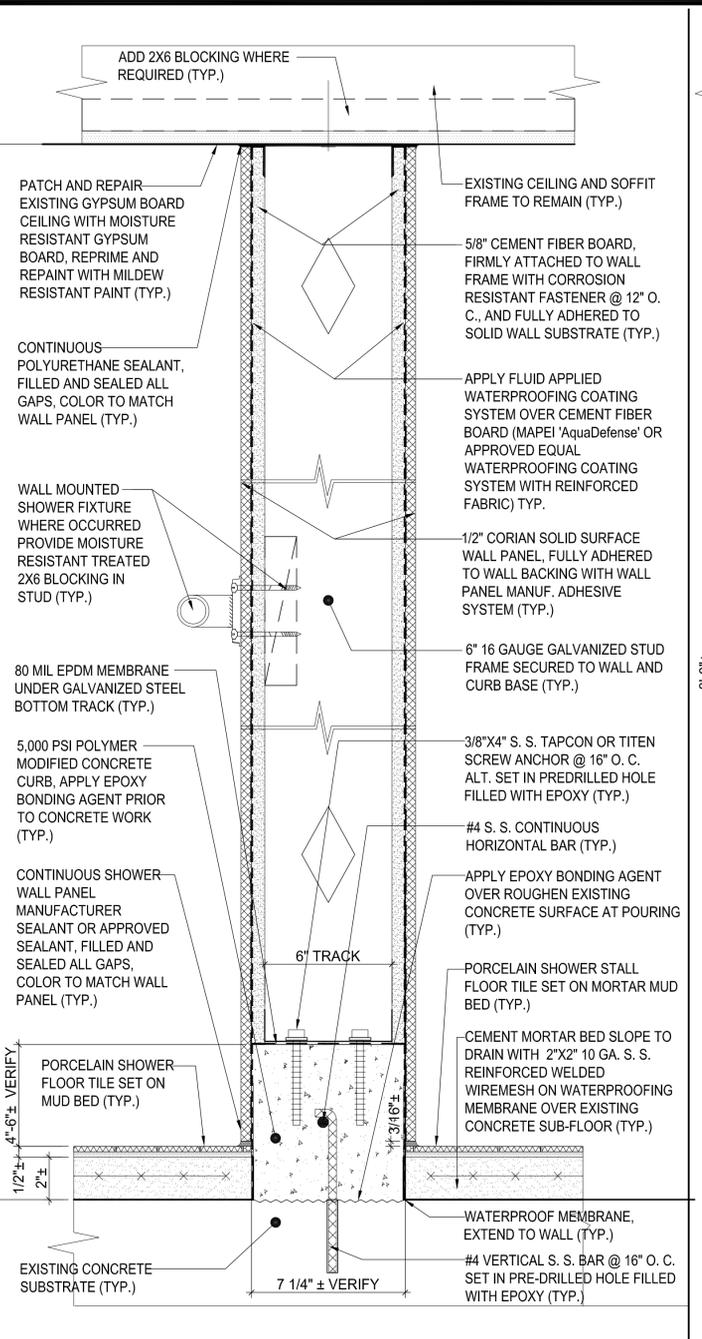
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
 LICENSE EXPIRATION DATE: 4/30/2024



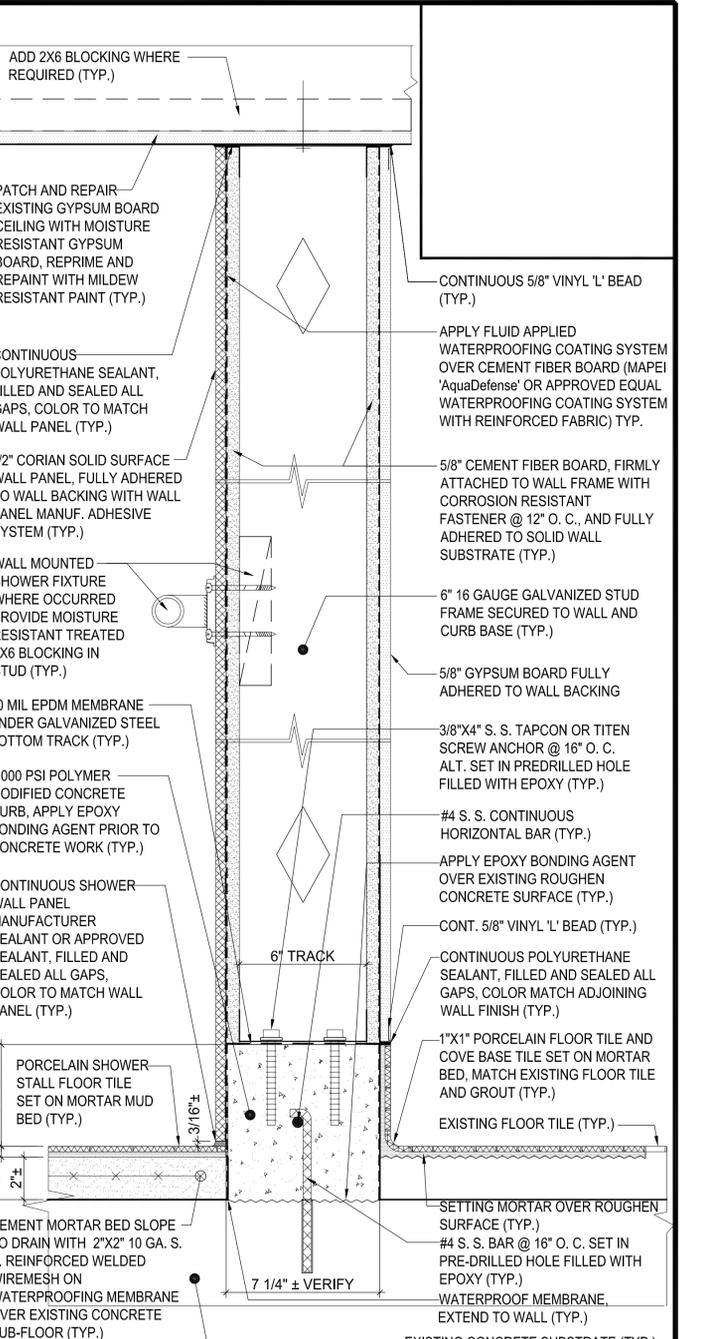
B1 SHOWER STALL AT CMU WALL
 A32 SCALE: 3" = 1'-0"
 SCALE: 3"=1'



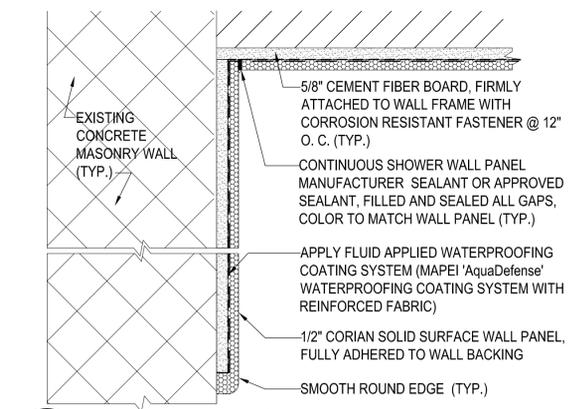
B2 SHOWER STALL AT STUD FRAME
 A32 SCALE: 3" = 1'-0"
 SCALE: 3"=1'



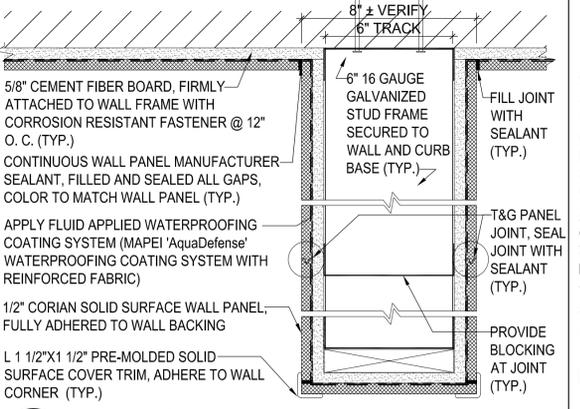
B3 SHOWER PARTITION BETWEEN STALLS
 A32 SCALE: 3" = 1'-0"
 SCALE: 3"=1'



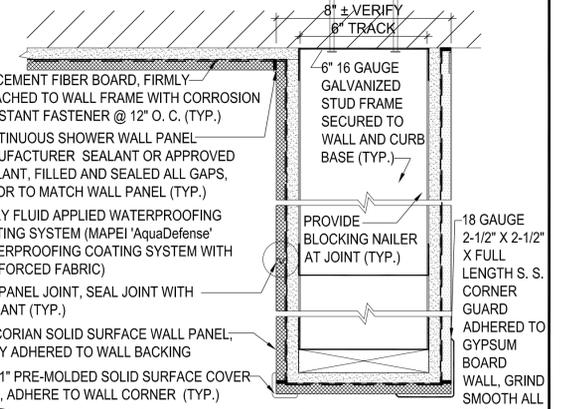
B4 SHOWER STALL AT OUTER WALL
 A32 SCALE: 3" = 1'-0"
 SCALE: 3"=1'



A1 STALL SECTION AT CMU WALL
 A32 SCALE: 3" = 1'-0"
 SCALE: 3"=1'



A2 WALL SECTION BETWEEN STALLS
 A32 SCALE: 3" = 1'-0"
 SCALE: 3"=1'



A3 STALL SECTION AT OUTER WALL
 A32 SCALE: 3" = 1'-0"
 SCALE: 3"=1'

| REVISION NO. | SYMBOL | DESCRIPTION | SHT. OF | DATE | APPROVED DCD |
|--------------|--------|-------------|---------|------|--------------|
| | | | | | |

DEPARTMENT OF DEFENSE
STATE OF HAWAII

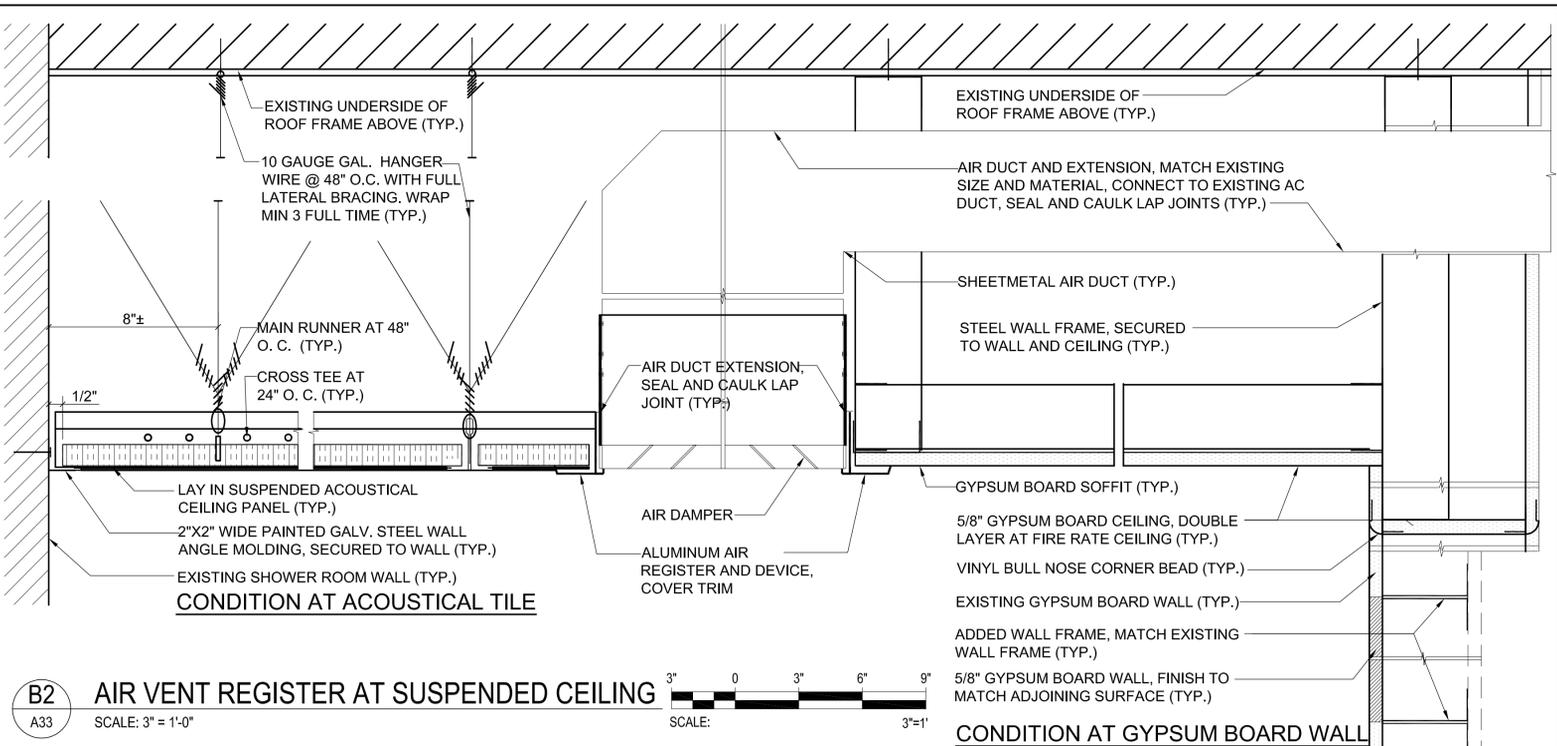
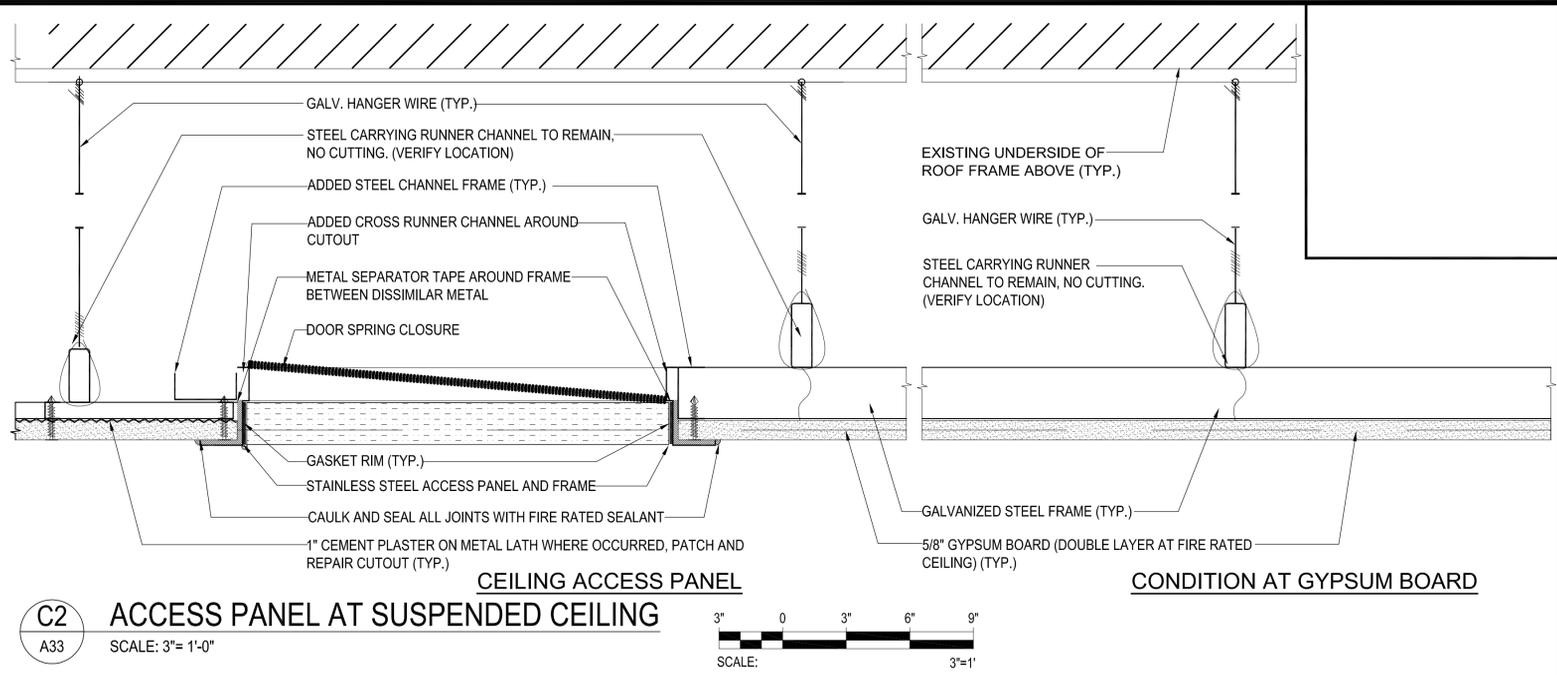
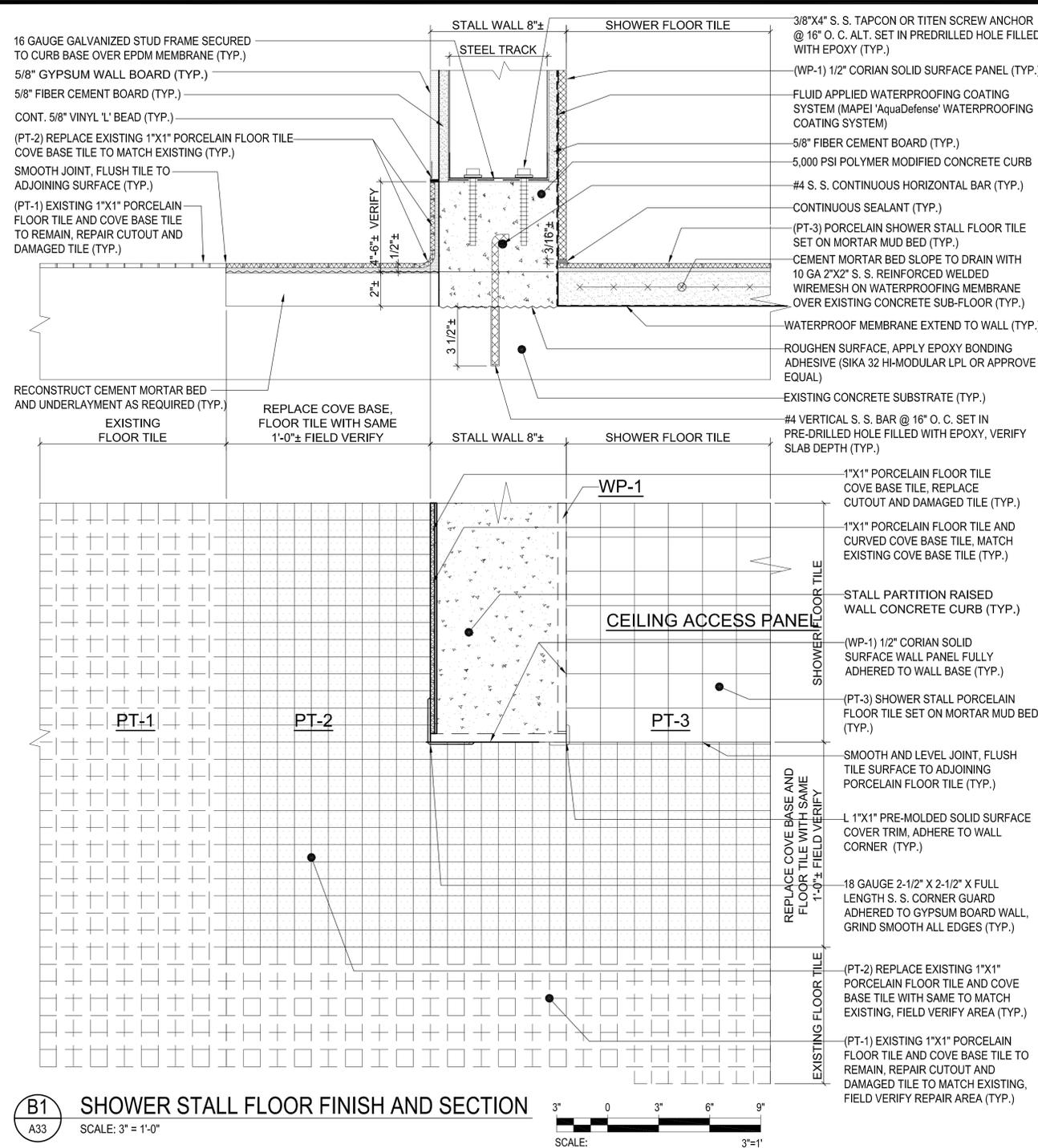
YCA HILO BILLET SHOWER RENOVATION
79-1020 HAUKAPILA STREET, KONA HAWAII 96750
TAX MAP KEY: (3) 7-9-013:017

DETAILS

| | | | |
|-----------------------------|-----|---------------|--------------|
| LOU CHAN & ASSOCIATES, INC. | | JOB NO. | DRAWING NO. |
| DESIGN BY: | LCC | CA-1605-C2 | A32 |
| CHECK BY: | LCC | | |
| DRAWN BY: | NS | | |
| APPROVED BY: | LCC | | |
| | | DATE | SHEET |
| | | FEBRUARY 2024 | 8 |
| | | | OF 12 SHEETS |

SCALE: AS NOTED

FILE: _____ DRAWER: _____ FOLDER: _____



| ROOM FINISH SCHEDULE | | | | | |
|-------------------------|-----------------------------------------------------------|--------------------------------------------------------|---------------------------------------------------|----------------------------------------------|------------------------------------------------------------------|
| PAINTING | | | | | |
| AREA DESCRIPTION | WORK DESCRIPTION | MATERIAL | MANUFACTURER | REMARK | |
| P-1 | BOYS AND GIRLS SHOWER ROOM | PAINT SHOWER ROOM WALL AND OTHER RENOVATED AREAS | SEMI GLOSS WITH MILDEW RESISTANT PRIMER AND PAINT | SHERWIN WILLIAMS | MATCH EXISTING WALL FINISH |
| P-2 | BOYS AND GIRLS SHOWER ROOM | PAINT SHOWER ROOM CEILING AND OTHER RENOVATED AREAS | SEMI GLOSS WITH MILDEW RESISTANT PRIMER AND PAINT | SHERWIN WILLIAMS | MATCH EXISTING CEILING FINISH |
| SHOWER STALL FLOORING | | | | | |
| PT-1 | SHOWER ROOM FLOOR FINISH AND COVE BASE | REPAIR EXISTING DAMAGED 1"x1" FLOOR AND COVE BASE TILE | 1"x1" PORCELAIN FLOOR AND COVE BASE TILE | DALTILE KEYSTONES MEDLEY PATTERN | MATCH EXISTING COLOR AND SIZE, FINISH FLUSH TO ADJOINING SURFACE |
| PT-2 | SHOWER ROOM FLOOR FINISH/COVE BASE ADJOINING SHOWER STALL | REPLACE EXISTING 1"x1" FLOOR AND COVE BASE TILE | 1"x1" PORCELAIN FLOOR AND COVE BASE TILE | DALTILE KEYSTONES MEDLEY PATTERN | MATCH EXISTING COLOR AND SIZE, FINISH FLUSH TO ADJOINING SURFACE |
| PT-3 | SHOWER STALL FLOOR FINISH | INSTALL 2"x2" PORCELAIN FLOOR TILE | 2"x2" PORCELAIN FLOOR TILE | DALTILE KEYSTONES D204 ARTISAN BROWN SPECKLE | REPLACE MORTAR BED, UNDERLAYMENT AND WATERPROOFING MEMBRANE |
| SHOWER STALL WALL PANEL | | | | | |
| WP-1 | SHOWER STALL | SHOWER STALL SOLID WALL PANEL | 1/2" WITCH HAZEL PANEL | CORIAN | FULLY ADHERE TO WALL SUBSTRATE |

- ### FINISH NOTES
- PAINT BOY'S AND GIRL'S SHOWER ROOM AND CEILING AFFECTED BY RENOVATION WORK. REPAINT SHOWER ROOM INTERIOR CEILING COMPLETE. SUBMITTAL FOR MATCHING EXISTING WALL FINISH SHALL INCLUDE MATERIAL SAMPLES TOGETHER WITH ACTUAL MATERIAL REMOVED FROM THE WORK AREA.
 - SUBMIT SAMPLE FOR ALL FINISH WORKS, INCLUDING ACTUAL SAMPLE AND COLOR FOR REVIEW AND APPROVAL PRIOR TO ORDERING OF MATERIAL. SELECTION OF COLOR OF FINISH WORK INCLUDING TILE, SHOWER WALL PANEL, GROUT MAY CHANGE DURING THE REVIEW. ALL PAINT AND FINISH COLORS SHALL BE APPROVED BY THE CONTRACTING OFFICER BEFORE ORDERING.
 - MANUFACTURERS AND COLORS LISTED IN THE SCHEDULE INDICATE THE DESIGN INTENT OF COLOR AND FINISH. OTHER MANUFACTURERS WITH EQUAL OR BETTER PRODUCT AND MATCHING COLOR AND FINISH ARE ACCEPTABLE.
 - PAINT ALL PIPES AND CONDUITS TO MATCH COLOR OF ADJOINING SURFACES.
 - SHOWER WALL PANEL SHALL BE MILDEW AND MOIST RESISTANT, SOLID PANEL IN FULL HEIGHT AND WIDTH FROM CEILING TO FINISH FLOOR. JOINT IF PROVIDED DUE TO SIZE LIMITATION SHALL BE IN T&G, TIGHTLY FIT AND SEALED, NO CUTTING AND CORING AT JOINT.

| REVISION NO. | SYMBOL | DESCRIPTION | SHT. OF | DATE | APPROVED DOD |
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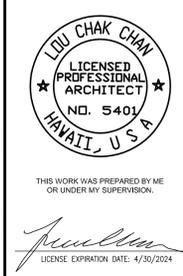
DEPARTMENT OF DEFENSE
STATE OF HAWAII

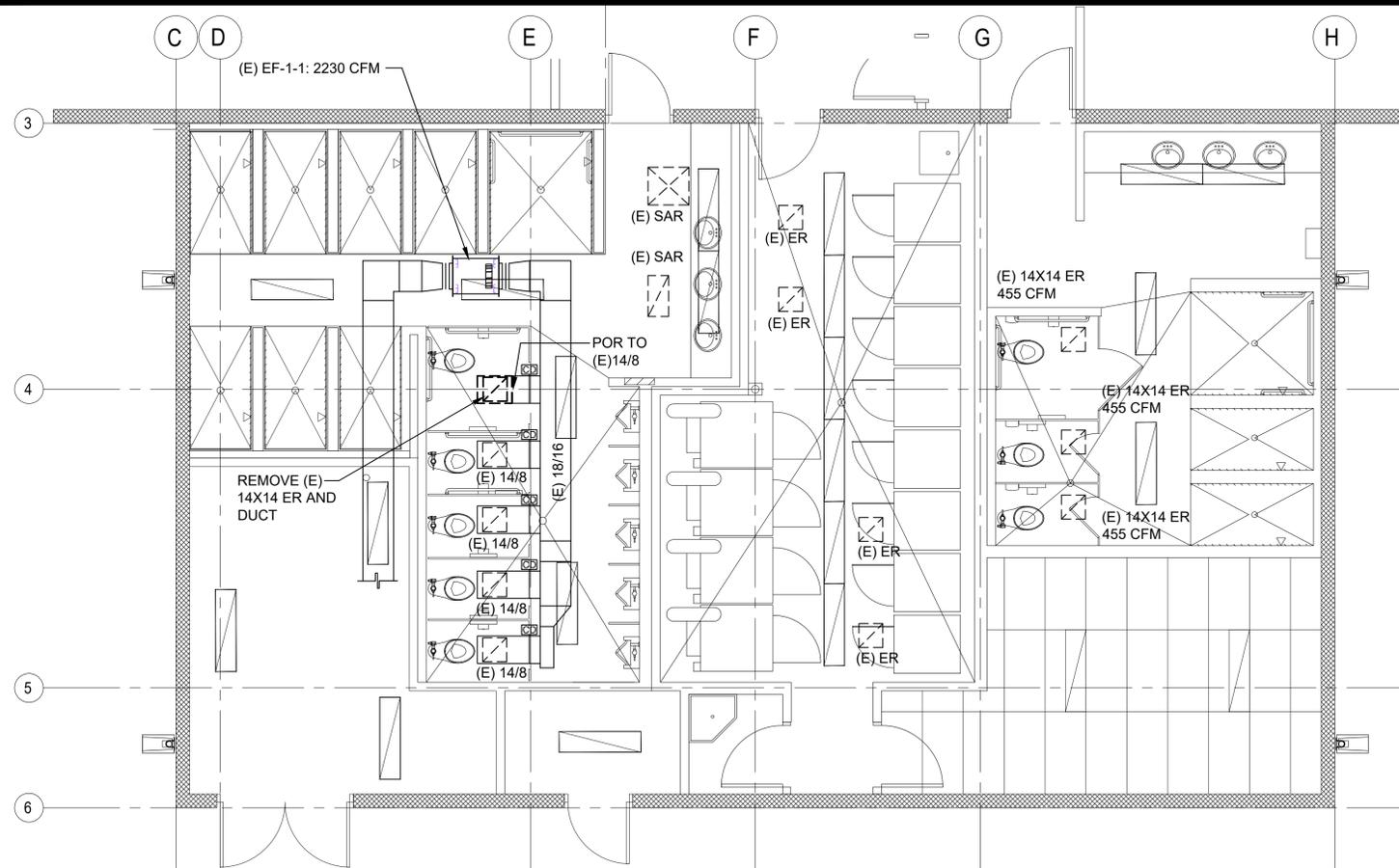
YCA HILO BILLET SHOWER RENOVATION
79-1020 HAUKAPILA STREET, KONA HAWAII 96750
TAX MAP KEY: (3) 7-9-013:017

FINISH SCHEDULE AND CEILING DETAILS

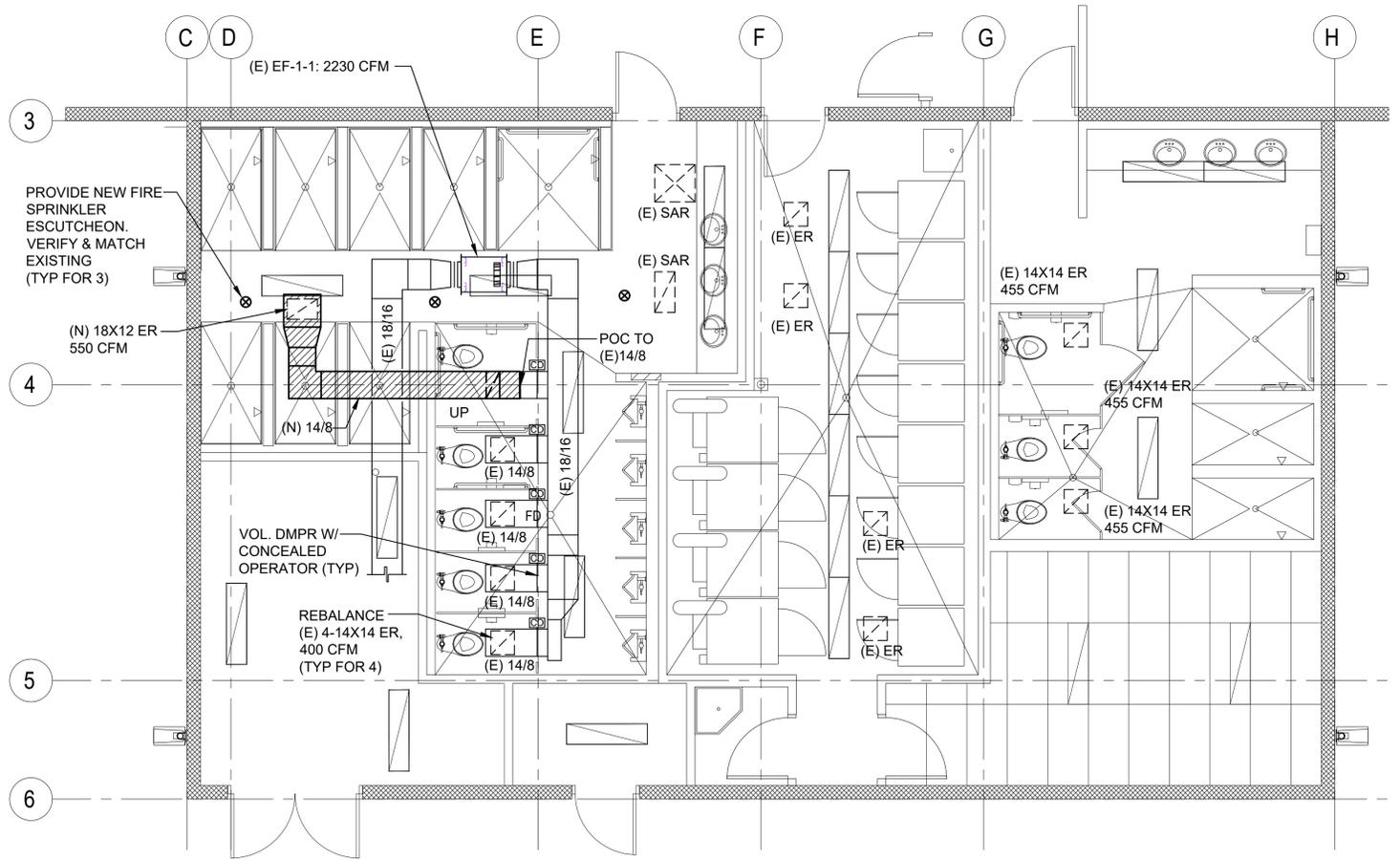
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| LOU CHAN & ASSOCIATES, INC. | | JOB NO. | DRAWING NO. |
| DESIGN BY: | CHECK BY: | CA-1605-C2 | A33 |
| LCC | LCC | | |
| DRAWN BY: | APPROVED BY: | DATE | SHEET |
| NS | LCC | FEBRUARY 2024 | 9 |
| SCALE: AS NOTED | | | OF 12 SHTS. |

FILE: _____ DRAWER: _____ FOLDER: _____

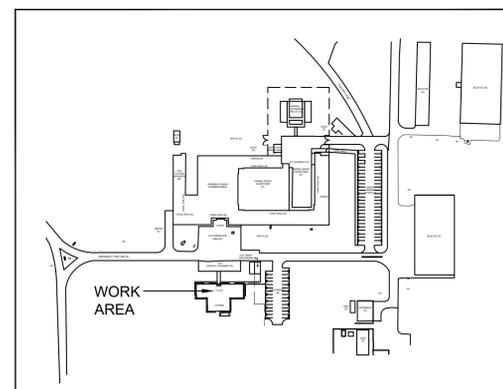
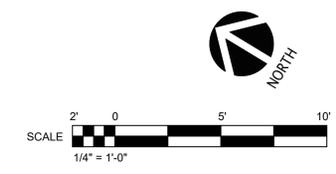




VENTILATION REMOVAL FLOOR PLAN
SCALE: 1/4" = 1'-0"



VENTILATION FLOOR PLAN
SCALE: 1/4" = 1'-0"



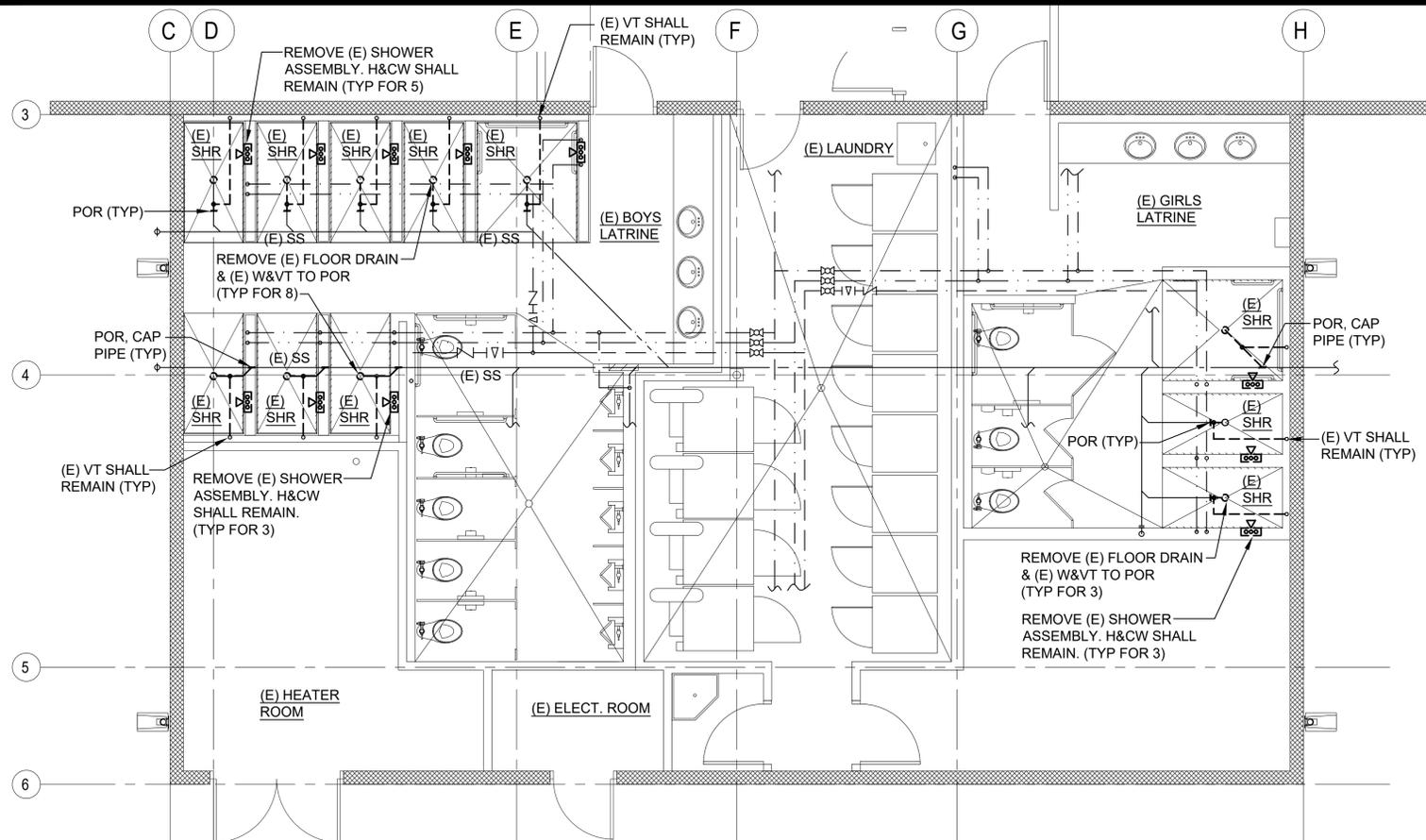
KEY PLAN
NOT TO SCALE

| REVISION NO. | SYMBOL | DESCRIPTION | SHT. OF | DATE | APPROVED DDD |
|--------------|--------|-------------|---------|------|--------------|
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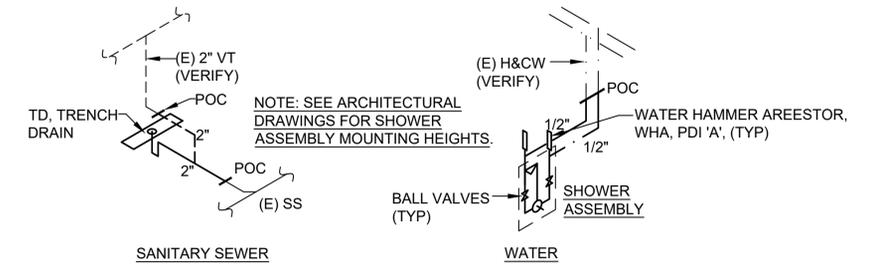
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|-----------------------------------------------------------|--------------|---------------|--------------|--|--|
| DEPARTMENT OF DEFENSE STATE OF HAWAII | | | | | |
| YCA HILO BILLET SHOWER RENOVATION HILO, HAWAII, HAWAII | | | | | |
| VENTILATION FLOOR PLANS | | | | | |
| LOU CHAN & ASSOCIATES, INC. | | JOB NO. | DRAWING NO. | | |
| DESIGN BY: | CHECK BY: | CA-1605-C2 | M02 | | |
| AEP | AEP | | | | |
| DRAWN BY: | APPROVED BY: | DATE | SHEET | | |
| AEP | LCC | FEBRUARY 2024 | 11 | | |
| SCALE: | AS NOTED | | OF 12 SHEETS | | |



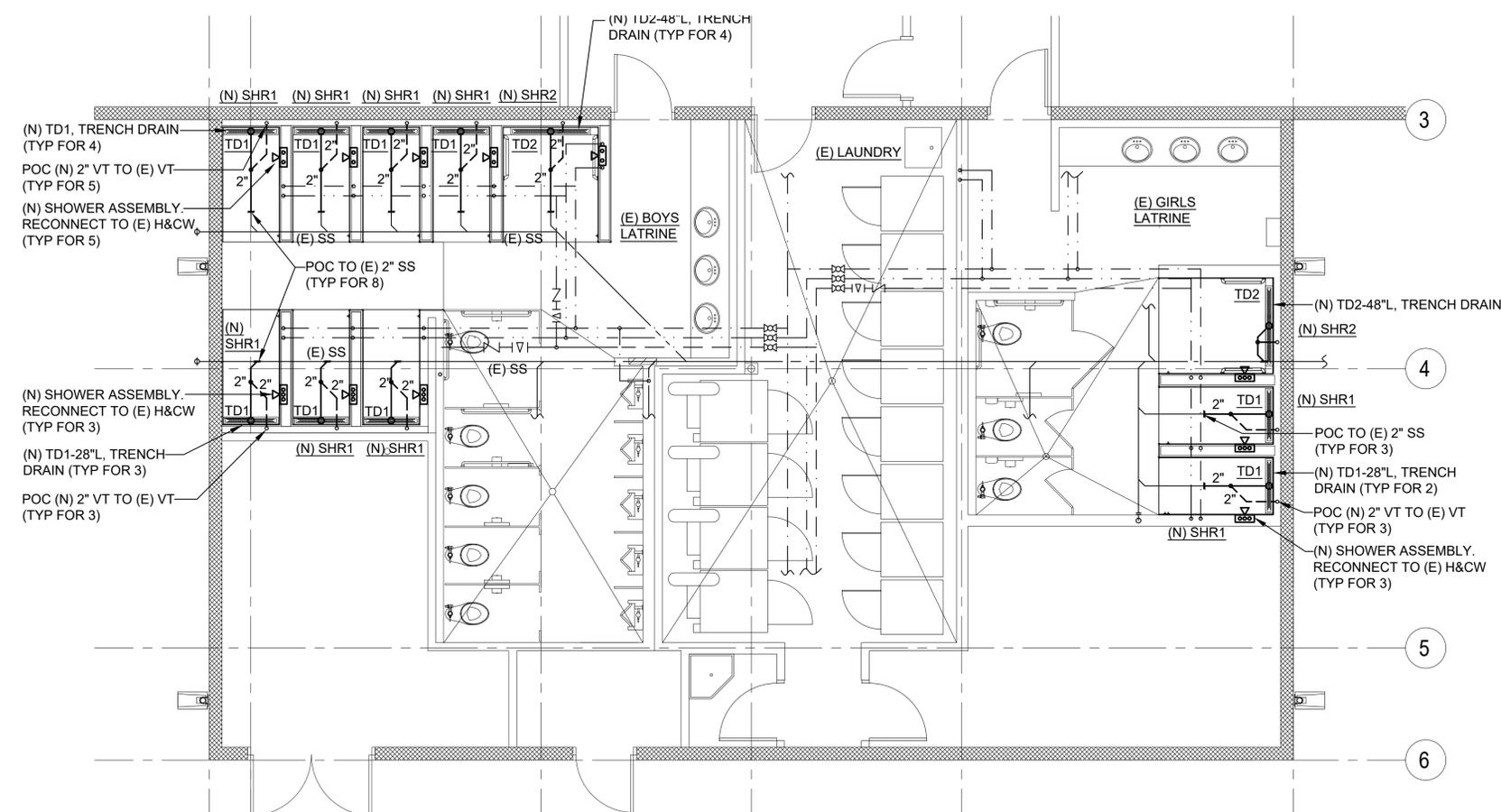
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
 LICENSE EXPIRATION DATE: 4/30/2024



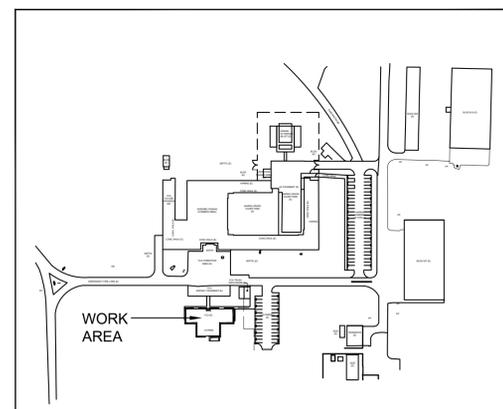
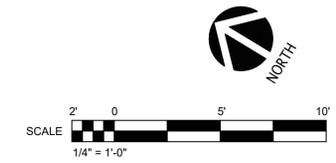
PLUMBING REMOVAL FLOOR PLAN
SCALE: 1/4" = 1'-0"



PLUMBING DIAGRAMS
NO SCALE



PLUMBING FLOOR PLAN
SCALE: 1/4" = 1'-0"



KEY PLAN
NOT TO SCALE

| REVISION NO. | SYMBOL | DESCRIPTION | SHT. OF | DATE | APPROVED DDD |
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|-----------------------------------------------------------|---------------------|-----------------------|----------------|
| DEPARTMENT OF DEFENSE STATE OF HAWAII | | | |
| YCA HILO BILLET SHOWER RENOVATION HILO, HAWAII, HAWAII | | | |
| PLUMBING FLOOR PLANS | | | |
| LOU CHAN & ASSOCIATES, INC. | | JOB NO. | DRAWING NO. |
| DESIGN BY: AEP | CHECK BY: AEP | CA-1605-C2 | M03 |
| DRAWN BY: AEP | APPROVED BY: LCC | DATE FEBRUARY 2024 | SHEET 12 |
| SCALE: AS NOTED | | DATE | SHTS. OF 12 |
| LICENSE EXPIRATION DATE: 4/30/2024 | | | |

FILE:..... DRAWER:..... FOLDER:.....