CONTRACT DOCUMENTS

FOR

KOKEA CORPORATION YARD
BUILDING “B” IMPROVEMENTS

455 KOKEA STREET
HONOLULU, HAWAII 96817

TAX MAP KEY 1-5-020:016

FOR THE

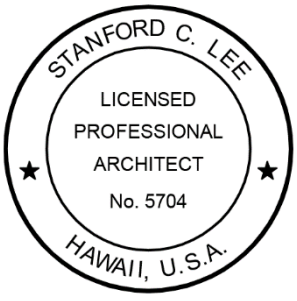
DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
HONOLULU, HAWAII

PROJECT NO.: VI-9-26-C
Solicitation No. RFB-DDC-2075507

ARCHITECT:	NEXT DESIGN LLC
STRUCTURAL ENGINEER:	JPB ENGINEERING, INC
ENVIRONMENTAL:	ENVIRONMETEO SERVICES, INC.

DATE: JANUARY 2025

ARCHITECT’S CERTIFICATION



Signature

April 2028
Expiration Date of the License

This work was prepared by me or
under my supervision

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RFB-DDC-2075507

NOTICE TO OFFERORS

COMPETITIVE SEALED BIDS (must be hardcopy) shall be received no later than 2:30 p.m. HST, December 2, 2026, in the Office of the Division of Purchasing, Department of Budget and Fiscal Services, City and County of Honolulu, City Hall, Room 115, 530 South King Street, Honolulu, Hawaii 96813 for:

KOKEA CORPORATION YARD
BUILDING "B" IMPROVEMENTS
PROJECT NO.: VI-9-26-C

Unless otherwise stated in the solicitation, competitive sealed bids shall be read aloud at the public bid opening held shortly after the deadline for offers, as amended.

Offerors shall be licensed in accordance with Chapter 444, HRS, relating to the licensing of Contractors.

Pursuant to Section 3-122-16.05 of the Hawaii Administrative Rules, a pre-bid conference shall be held for construction or design-build projects with a total estimated contract value of $500,000.00 or more. A pre-bid conference will be held at 455 Kokea Street, Honolulu, HI 96817 on November 5, 2026 at 10:00 a.m. All potential interested offerors, subcontractors, and union representatives are invited to attend.

Requests for clarification regarding this bid solicitation shall be directed to Romona Maeshiro of the Division of Purchasing by email to bfspurchasing@honolulu.gov. The CITY will accept requests for substitution submitted electronically to bfspurchasing@honolulu.gov. All requests shall be received no later than November 12, 2026. Requests received after this date may not be given consideration.

Following are modifications to the General Instructions to Offerors dated 02/09/2017:

- Delete Item (2) of Section 2.19(b), Notification of Addenda in its entirety.
- Delete subsection (a) of Section 8.4 in its entirety and replace with the following:

  "(a) Notarization

  Signatures appearing on bond forms (if applicable) must be notarized by a notary public."

- Add new Section 3.3 as follows:

  "3.3 Hawaii Bidder/Offeror Preference.

  The Hawaii Bidder/Offeror preference shall be applicable to this solicitation, for evaluation purposes only. Bidders/Offerors that wish to qualify for the five percent (5%) discount preference shall submit a completed Hawaii Bidder/Offeror Preference Certification form with its bid/offer. The five percent (5%) discount shall be applied to the Bidder's/Offeror's bid/offer price.

THIS IS A CITY AND COUNTY OF HONOLULU SOLICITATION. Bidders/Offerors shall not use any other Hawaii Bidder/Offeror Certification form except the form provided in the solicitation. Hawaii Bidder/Offeror Preference Certifications submitted for previous or other solicitations shall not be accepted.

The preference shall only apply if the total bid or offer price is less than $10,000,000.00. The preference shall only apply when at least one (1) qualified Bidder/Offeror competes against at least one (1) Bidder/Offeror that does not qualify for the preference. The preference shall not be applied if all bidders/offerors are Hawaii Bidders/Offerors.

Upon the City's written request, the Bidder/Offeror shall provide sufficient documentation to the City to demonstrate full compliance with this preference. The documentation must be provided within the time stated in the request.

Award shall be made at the Bidder's/Offeror's bid/offer price and not at the reduced evaluated price. During the contract period, failure to maintain the Hawaii Bidder/Offeror qualifications shall cause a reduction of price equal to the value of the preference applied and may constitute cause for debarment pursuant to Hawaii Revised Statutes §103D-702."

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SCHEDULE AND SIGNIFICANT DATES

MILESTONE	DATE
Pre-Bid Conference	November 5, 2026
Requests for Clarification/Substitution due date	November 12, 2026
Last Day for Issuance of Addenda	November 25, 2026
Bid Opening Date	December 2, 2026

for

PAULA A. YOUNGLING
Purchasing Administrator
City and County of Honolulu

CITY AND COUNTY OF HONOLULU

HAWAIʻI BIDDER/OFFEROR
PREFERENCE CERTIFICATION FORM
(AS DEFINED IN HAWAIʻI REVISED STATUTES §103D-1001)

I, _____, _____ of
(Name of Authorized Person on behalf of the Bidder/Offeror) (Position Title)

_____ (the "Hawai'i Bidder/Offeror"), certify the following
(Hawai'i Bidder's/Offeror's Legal Business Name)

under penalty of perjury that:

1. The Hawai'i Bidder/Offeror holds a valid commercial place of business located in the State of Hawai'i that has been staffed by the Hawai'i Bidder/Offeror or an employee of the Hawai'i Bidder/Offeror for not less than two (2) consecutive years immediately preceding the time and date set for the opening of bids or receipt of proposals; and

2. The bid or proposal in response to Solicitation No. RFB-DDC-2075507 is submitted under the name under which the Hawai'i Bidder/Offeror is authorized to do business in the State of Hawai'i; and

3. Not less than fifty-one percent (51%) of the total direct labor hours required for performance of the contract will be performed in the State of Hawai'i; and

4. The Hawai'i Bidder/Offeror will maintain these qualifications throughout contract performance; and

5. If the Hawai'i Bidder/Offeror is a joint venture, the Hawai'i Bidder/Offeror is composed entirely of parties meeting the requirements of paragraphs 1, 2, 3, and 4 above.

I hereby certify under penalty of perjury that the above statement is true. Any changes in eligibility shall be reported to the Officer-in-Charge or the contact person identified in the solicitation. I agree to maintain the above qualifications throughout contract performance. I acknowledge that failure to maintain the above qualifications triggers a reduction of price equal to the value of the preference applied and may be cause for debarment of the Hawai'i Bidder/Offeror pursuant to Hawai'i Revised Statutes §103D-702.

_____ _____
(Signature) (Date)

GENERAL INSTRUCTIONS TO OFFERORS

CITY AND COUNTY OF HONOLULU

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CHAPTER 1.0: GENERAL

1.1 Introduction.

These General Instructions to Offerors ("Instructions") state the City's policies relating to Request for Competitive Sealed Bids (RFB), Request for Competitive Sealed Proposals (RFP), and Request for Quotation (RFQ) solicitations.

Before submitting an offer, the Offeror shall be responsible for reading and examining the solicitation documents, these Instructions and all applicable requirements by law. Submission of an offer shall be deemed verification of such reading and examination. No Offeror shall in any way be relieved of any obligation with respect to its offer or the contract due to its failure or neglect to, familiarize itself with, and understand the work requirements, the Solicitation Documents, or existing conditions. No claim for additional compensation to the Offeror shall be allowed based on lack of knowledge or misunderstanding.

1.2 Application.

Any solicitation referencing these General instructions is subject to the Hawaii Revised Statutes ("HRS") §103D and the Hawaii Administrative Rules ("HAR") Title 3. In the case of inconsistencies, the HRS or HAR shall govern over the solicitation's provisions. Provisions from the HRS and HAR are presented for convenience only and may not be complete. Should the solicitation's provisions conflict with these General Instructions, the solicitation's provisions shall govern. Unless otherwise specified, these instructions are not intended to be incorporated into awarded contracts.

1.3 Definitions.

The terms used in this General Instructions to Offerors shall have the same meanings as defined in the City's General Terms and Conditions.

CHAPTER 2.0: SOLICITATION

2.1 Order of Precedence.

Whenever separate Scope of Work, City-provided Offer pages, Special Provisions, Exhibits, requirements, specifications or plans are referred to or attached hereto, they shall be considered a part of this solicitation document as if contained herein. Should any of the scope of work, City-provided offer pages special provisions, requirements, specifications or plans conflict with these Instructions to Offerors, they shall govern. The most recent addenda shall govern over all other previously issued addenda and other solicitation documents.

2.2 Attachments.

In the Vendor Self Service (VSS) eProcurement system, all attachments are incorporated and by reference made a part of the solicitation.

2.3 City's Estimates.

Any estimate provided by the City is for the convenience of the Offeror only and the City does not represent or warrant its accuracy. An Offeror should conduct its own review and analysis.

2.4 Pre-bid or Pre-proposal Conference.

Pre-bid or pre-proposal conference (pre-offer conference), if held, shall be announced in the solicitation document, or in an addendum. Unless specified otherwise in the solicitation, pre-offer conferences shall be non-mandatory. Nothing stated at the pre-offer conference shall change the solicitation unless a change is made by written addendum.

2.5 Examination of Site.

When applicable, the Offeror shall examine carefully the site of the proposed work before submitting an offer. The submission of an offer shall be considered as a warranty that the Offeror has made such examination and is satisfied with the conditions to be encountered in performing the work.

(a) Surface and subsurface conditions.

Where subsurface conditions are known to the City in respect to foundation or other design, the Offeror may inspect the records of the City and examine any sample that may be available. Where such information is shown in the plans, said information represents only the statement by the City as to the character of material which has been actually encountered by the City and is included only for the convenience of the Offeror. The City makes no representations as to the conditions which will actually be encountered by the Offeror.

Any subsurface information or hydrographic survey data furnished are for the Offeror's convenience only. The information and data furnished are the product of the Officer-in-Charge's interpretation of the facts gathered in investigations made at the specific locations indicated to aid in the design of the project, and the City assumes no responsibility whatsoever in respect to the sufficiency or accuracy of borings or of the log of test borings or other preliminary investigations, or of the interpretation thereof, and there is no guaranty, either expressed or implied, that the conditions indicated are representative of those existing throughout the work. In addition, no assurance is given that conditions found at the time of the

subsurface explorations, will be the conditions that prevail at the time of construction. The Offeror shall be solely responsible for all assumptions, deductions, or conclusions the Offeror may make or derive from the subsurface information or data furnished.

Making information concerning subsurface conditions available to Offerors is not to be construed in any way as a waiver of the Offeror's responsibility to examine the solicitation document and site. The Offeror must satisfy itself through its own investigations as to conditions to be encountered.

(b) Utilities, underground.

All underground water, gas, oil, telephone, electric, storm drain, sewer, and other pipes or conduits, shown on the plans, are only approximate in their locations. The Offeror shall make a personal investigation and inspection of the records and drawings possessed by owners of the utilities. The Offeror shall make satisfactory arrangements with the owners of the utilities for the relocation, maintenance and protection of existing utilities.

(c) Materials and equipment.

The City does not assume any responsibility for the availability of any materials or equipment required under this contract. Unless otherwise specified in the solicitation, the Offeror shall be considered as having taken into account when submitting an offer, the availability of materials or equipment required under the contract, except as provided for in applicable sections of the City's general conditions.

2.6 Price Items.

(a) Unless otherwise specified in the solicitation, prices offered shall be based on f.o.b. place of destination and shall include all applicable taxes, freight, delivery, handling and related charges. In the Vendor Self Service (VSS) eProcurement system, when a "Contract Amount" is requested, the Offeror shall enter the line item's lump sum price for the specified goods, services, or construction.

(b) Unless otherwise specified in the solicitation document, Offerors must provide a price for all items listed in the solicitation.

(c) When additive/deductive alternates are provided for in the solicitation, Offerors should enter a price for each and every item listed setting forth the amount to be added to or deducted from the Offeror's total basic price should such additive/deductive alternate be incorporated into the contract. Failure to enter a price for each and every item may result in the Offeror's offer not being considered for award, provided that if award is based on

the item or items on which offers have been submitted, the Offeror's offer may be considered for award.

(d) In case of discrepancy between prices written in words and those written in figures, the price written in words shall govern. Regarding pricing submitted in the Vendor Self Service (VSS) eProcurement system, the price submitted in the system shall govern. Notwithstanding the above, a unit price shall govern over an extended price.

(e) Offers in which prices are unbalanced, which contain omissions, erasures, alterations, or additions not called for, or irregularities of any kind shall be cause for rejection of an offer.

(f) Any illegible or otherwise unrecognizable price shall be cause for rejection of an offer.

2.7 Applicable Taxes.

Unless otherwise specified in the solicitation, the Offeror shall include in its unit price and be responsible for paying all taxes, which shall be applicable to the goods, services, or construction or the furnishing and sale thereof. Offerors are directed to contact the Department of Taxation of the State of Hawaii for assistance regarding the applicability of taxes.

2.8 Wages, Hours and Working Conditions.

(a) Services projects

When the offer is in excess of $25,000 for Services projects and a certification form is made a part of the solicitation, the form shall be completed, signed by the Offeror, and submitted with the Offeror's offer. Failure to submit the required certification may be grounds for disqualification of the Offeror's offer.

The certification form shall be used to certify that, if awarded the contract, the Offeror will comply with HRS §103-55, relating to Wages, hours and working conditions of employees of Contractor supplying services.

The certification form further certifies that the services to be performed will be performed under the following conditions:

(1) Wages. The services to be rendered shall be performed by employees paid at wages or salaries not less than the wages paid to public officers and employees for similar work.
(2) Compliance with Labor Laws. Contractor shall be responsible for and comply with all applicable labor laws of the Federal and State governments, including worker's compensation, unemployment compensation, payment of wages and safety standards.

(b) Construction projects

Offerors are advised of the applicability of HRS §104, "Wages and Hours of Employees on Public Works," projects and the City's applicable General Terms & Conditions, unless otherwise stated in the solicitation. Offerors shall incorporate compliance with all the provisions of HRS §104 and the City's applicable General Terms and Conditions into their offer.

(c) Vendor Self Service (VSS) eProcurement System

By submitting a bid in VSS, you are hereby accepting and acknowledging your compliance with the requirements of Section 2.8 and are not required to submit the certification form.

2.9 Insurance and Indemnification.

Offeror shall include in its price all costs to provide insurance and comply with the indemnification provisions as specified in the solicitation. Insurance and indemnification shall be required for all construction projects.

2.10 Performance and Payment Bonds.

Offeror shall include in its price, all costs to meet the bond requirements of a project.

(a) Goods or Services projects

Contract performance and payment bonds shall only be required for Goods or Services projects when specified in the solicitation.

(b) Construction projects

Contract performance and payment bonds shall be required for all Construction projects greater than $50,000.00 and shall be one hundred percent of the contract amount.

2.11 Bid Security.

When required, Offerors shall provide, at no cost to the City, an offer security. If an offer security is required and an Offeror fails to accompany its offer with an offer security, the offer shall be deemed non-responsive, except as provided in HAR §3-122-223 (d). For solicitations posted on the Vendor Self Services (VSS) eProcurement system, bid security, when required, shall be attached to the offerors electronic bid. The original bid bond shall be provided to the project buyer within five working days from the notification of intent to award. If the offeror fails to comply with this requirement, the offer may be rejected as non-responsive.

(a) Goods or Services. A bid security shall only be required when specified in the solicitation.

(b) Construction. A bid security shall NOT be required for Construction projects procured under HRS 103D-305 (RFQ solicitations). Bid security shall be required for all Construction projects procured under HRS 103D-302 and HRS 103D-303 that are ≥$25,000.00.

(c) Bid Security Amount. Bid security amount shall be equal to at least five percent of the Offeror's total bid amount.

(d) An acceptable bid security shall be limited to:
  (1) Surety bond in the form attached to the solicitation and underwritten by a company licensed to issue bonds in this State. Failure to utilize the City's surety bond forms shall not relieve the Offeror from liability or responsibility if it is discovered that the form utilized is not compliant with the HAR.
  (2) Legal tender; or
  (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 a bank, a savings institution, or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, and payable at sight or unconditionally assigned to the Director of The Department of Budget and Fiscal Services, City and County of Honolulu.
    i) These instruments may be utilized only to a maximum of $250,000.00.
    ii) If the required security amount totals over $250,000.00, more than one instrument not exceeding $250,000.00 each and issued by different financial institutions shall be accepted.

2.12 Brand Names, Model, Make or Method.

Where the solicitation document specifies one or more manufacturer's brand names or makes of materials, devices, equipment or system; it is indicating a quality, style, appearance, or performance, or method of construction. The Offeror shall base its offer on one of the specified brands, makes, or method, or on an alternate brand, make, or method which has expressly been found to be equal or better by the City in the solicitation or by written addendum to the solicitation.

If any item, make and model or part number listed in the solicitation is discontinued or made obsolete by the manufacturer, it is the offerors responsibility to provide the specified make and model number or offer an equal substitution for the item. Offeror shall follow the procedures set forth in 2.18 "Request for Substitution."

2.13 Supplemental Requirements for Construction Projects.

(a) Estimated Quantities

Unless otherwise specified, all quantities appearing in solicitation document for construction projects are approximate and are prepared for the comparison of offers only. The City does not, expressly or by implication, warrant that the actual quantities will correspond therewith. Offeror shall include in its prices offered, the entire cost of the performance of the contract, and it is understood and agreed that there is included in each lump sum or unit priced item, the entire cost of any and all items incidental to the performance of the work covered by such lump sum or unit priced item. When an Offeror is in doubt as to the proper item to which the anticipated cost of any item is to be allocated, the Offeror shall request clarification from the City, or shall include such cost in the lump sum or unit price offer for the item deemed most appropriate. Failure of the Offeror to request clarification shall bind the Offeror to complete such work at the prices submitted.

(1) Unit priced items: For unit priced items, payment to the Contractor will be made only for the actual quantities of work performed and accepted or of materials furnished and accepted in accordance with the solicitation document and subject to applicable sections of the City's General Terms and Conditions.

(2) Lump sum items: The quantities in any item for a lump sum offer item are approximate only and payment will be made only for the item in place complete, regardless of the amount of material, equipment, and labor necessary to complete the same in a proper and professional manner and in accordance with the contract documents. The Offeror shall verify these quantities in any manner deemed necessary or expedient.

(b) Joint Contractor; Subcontractor Listing

For RFB solicitations, offeror shall comply with HRS §103D-302, relating to the listing of joint contractors or subcontractors.

Specialty work. Joint contractors and subcontractors may perform only the specialty work for which they are listed. When additive/deductive alternates are made a part of the offer, Offeror shall indicate, if applicable, the additive/deductive alternate and the basic work to be performed by each joint contractor or subcontractor.

A listing that is incomplete, ambiguous, or erroneous may be cause for rejection of an offer. Offers which are not in compliance may be accepted if the City concludes that acceptance is in the best interest of the public 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 sum offer amount.

A subcontractor listing is not required for procurements made in accordance with HRS 103D-305 (RFQ solicitations).

(c) Allowances

Any allowance amount specified in the solicitation shall be considered an estimate of the amount required and shall be included in the Offeror's total sum offer. Offerors shall refer to the applicable sections of the City's General Terms and Conditions regarding Allowances for more information.

(d) Mobilization

Offerors shall refer to the applicable sections of the City's General Terms and Conditions regarding mobilization for more information.

(e) Employment of State Residents on Construction Projects.

Unless otherwise stated in the solicitation, offerors are advised of the applicability of HRS §103B, Employment of State Residents on Construction Procurement Contracts. HRS §103B requires the awarded Contractor to ensure that Hawaii Residents compose not less that eighty percent (80%) of the workforce employed to perform the contract. This requirement shall apply to subcontracts of $50,000.00 or more in connection with any construction contract procured under HRS §103D.

(f) Safety and Health Certification

Pursuant to HRS 396-18, all bids and proposals in excess of $100,000 for state construction jobs as defined in section 103D-104 shall include a signed certification from the offeror that a written safety and health plan for the job will be available and implemented by the notice to proceed date of the project. Pursuant to HRS 489E, Uniform Electronic Transactions Act, submittal of an electronic bid in excess of $100,000 shall be deemed to be this signed certification.

2.14 General Terms & Conditions.

The City's General Terms and Conditions shall be either incorporated by reference or by attachment to the solicitation. Offers submitted with any alterations to the City's General Terms and Conditions so made by the Offeror without approval by the City may be sufficient cause for rejection of the offer.

2.15 Source Selection for Federal Grants.

The City may solicit a Request for interest for the sourcing of federal grants pursuant to the requirements of HAR §3-122-16.31.

2.16 Multi-Step Competitive Sealed Bidding.

The City may solicit offers using the multi-step competitive sealed bidding method of source selection pursuant to HAR §3-122, Subchapter 6.5.

Solicitations using this method use two phases:

(a) Phase One

Phase One is conducted in accordance with HAR §3-122, Subchapter 6, with the exception of rules relating to the priced offer. Offerors submit unpriced technical proposals to be evaluated on criteria specified in the solicitation. The City may conduct discussions to clarify the unpriced technical proposals. If the priced offer is specified to be submitted in Phase One, they shall be submitted in a separately sealed envelope and will only be considered in Phase Two from offerors whose unpriced technical proposals are determined to be acceptable in Phase One.

(b) Phase Two

Phase Two is conducted in accordance with HAR §3-122, Subchapter 5, except as set forth in HAR §3-122, Subchapter 6.5. Offerors whose unpriced technical proposals are determined to be acceptable will have their sealed price offers opened (if required to be submitted in Phase One) or be requested to submit a sealed priced offer.

2.17 Request for Clarification.

If a prospective Offeror believes that any of the matters in, or related to, the solicitation are not sufficiently described or explained in the solicitation, or that any discrepancy exists between different parts of the solicitation, or that the full intent of the solicitation is not clear, then the Offeror shall submit a written request for clarification no later than the deadline stated in the solicitation document. The City is not obligated to respond to any request received after the deadline. In the Vendor Self Service (VSS) eProcurement system, the City will not respond to inquiries posted on the VSS Bulletin Board or Q&A list page of the solicitation.

Written request for clarifications shall be e-mailed to bfspurchasing@honolulu.gov or mailed hardcopy to:

City and County of Honolulu
Budget and Fiscal Services
Purchasing Administrator
530 South King Street, Room 115
Honolulu, Hawaii 96813

2.18 Request for Substitution.

Alternate brands, makes, methods and/or packaging may be qualified through the submittal of a written request for substitution for review and approval. An alternate brand, make, or method approved for one procurement or project is not to be considered as approved for any other procurement or project. Offeror shall submit a written request for substitution no later than the deadline stated in the solicitation document. Requests received after the deadline will be denied.

(a) Goods or Services projects.

The written request for substitution must state all features of the proposed substitution that differ from the brand, model, make, method, and/or packaging specified in the solicitation. The written request shall also include sufficient evidence to enable the City to evaluate each feature.

Written request for substitution shall be e-mailed to bfspurchasing@honolulu.gov, or mailed hardcopy to:

City and County of Honolulu
Budget and Fiscal Services
Purchasing Administrator
530 South King Street, Room 115
Honolulu, Hawaii 96813

(b) Construction Projects

The written request must be clearly marked SUBSTITUTION REQUEST on the envelope. Unless otherwise stated in the solicitation, six copies of the request must be submitted together with three sets of technical brochures which shall either be marked or be accompanied by three copies of a statement of variances. The statement of variances must list all features of the proposed substitution which differ from the solicitation, and must further certify that the substitute has no other variant features. The brochures must include sufficient evidence to enable the City to evaluate each feature listed as a variance. Should an unlisted variance be discovered after installation or delivery of the item, the Contractor shall immediately replace the item with the specified item at no cost to the City and without any extension to the contract completion time.

The written substitution request shall be submitted in the following format:

SECTION ITEM SPECIFIED SUBSTITUTE VARIANCE

(For a sample request form refer to General Terms and Conditions Exhibit P.)

If sufficient evidence to make a determination of acceptability of the proposed substitute does not accompany a request for substitution, the request shall be rejected unless the City allows further evidence to be submitted to qualify the same model and provided that such evidence is submitted prior to the specified deadline.

Substitution requests not complying with the above requirements may be rejected.

Any Offeror whose offer is based on a substitute item which has been approved by the City shall include in its price offer the additional cost required for all modifications in the contract and the cost of all additional diagrams and drawings required to accommodate the substitute item. The modifications referred to include the changes in design that may be required.

Written request for substitution shall be submitted by person, or mailed hardcopy to:

City and County of Honolulu
Budget and Fiscal Services
Purchasing Administrator
530 South King Street, Room 115
Honolulu, Hawaii 96813

(c) Approval and Rejection of Request for Substitution

All requests for substitution submitted prior to the deadline will be responded to.

(1) Approval of Request for substitution.
The City will publish all products approved for substitution via addendum.

(2) Rejection of a Request for substitution.
The City will provide offerors who submit a request for substitution that is rejected a letter detailing the rejection and/or post the rejection in an addendum.

2.19 Solicitation Addenda.

(a) Written Addendum

Oral interpretations or clarifications or changes or approved substitutions will be without legal effect. Only interpretations or clarifications or changes or approved substitutions provided by formal written addendum to the solicitation shall be binding.

(b) Notification of Addenda

(1) In the Vendor Self Service (VSS) eProcurement system, when an addendum is issued, email notifications will be sent to all offerors registered under the solicitation's specified commodity class.
(2) For all other RFB solicitations, notifications of addenda will be issued to all prospective Offerors that downloaded the solicitation document from the City.
(3) For RFPs, if the addendum is issued after the receipt of proposals, notifications will be sent to those Offerors who submitted proposals or who are "priority listed."

(c) Modification to Price Items

It shall be the responsibility of the Offeror to modify or withdraw its offer based on compliance with addenda.

2.20 Cancellation of Solicitation.

A solicitation may be canceled in whole or in part and at any time per HAR §3-122-96.

CHAPTER 3.0: PREFERENCES

This chapter may not apply to Federally funded procurements.

3.1 Applicability of Preferences.

The Apprenticeship preference may apply to solicitations in accordance with HRS §103-55.6.

All other preferences shall only apply to a solicitation when:

(a) An offer form or certificate for the preference is included in the solicitation document; and

(b) The solicitation indicates the applicability of the preference in the solicitation's offer pages, special instructions or special provisions.

3.2 Evaluation of Preferences.

(a) The evaluation of preferences shall be in accordance with HRS §103D Part X and HAR §3-124.

(b) Evaluation procedure and contract award. Solicitations allowing more than one preference shall be evaluated and awarded in accordance with HAR §3-124-25.

(c) Preferences shall be for evaluation purposes only. The award contract amount shall be the amount of the offer, exclusive of any preference.

CHAPTER 4.0: OFFER

4.1 Preparation of Offers.

(a) All offers shall comply with the following:

(1) Shall not include samples or descriptive literature unless expressly requested. Any unsolicited samples, descriptive literature, or attachments will not be examined or tested, and will not be deemed to vary any of the provisions of the solicitation.
(2) All costs to prepare and submit an offer shall be at the Offeror's expense. The City will not reimburse any offer costs or any best and final offer costs incurred by any Offeror, any prospective Offeror, or any other person.
(3) An offer shall be submitted by an individual, member, officer, or agent of the Offeror legally qualified and authorized to do so.
(4) Time is of the essence and the time for delivery is a part of the response and must be adhered to. Time, stated in the number of days, shall mean "calendar" days, and shall include weekends and holidays.

(b) Offers for solicitations that were posted in the Vendor Self Service (VSS) eProcurement system shall comply with HRS §489E. The Offeror's submission of an electronic offer confirms that the Offeror:

(1) Intends to be bound by the offer.
(2) Agrees to all terms, conditions, and provisions of the solicitation.
(3) In accepting the electronic terms, the offer is deemed equal to a signed certification.

(c) Offers for all other solicitations shall comply with the following:

(1) Shall be prepared using the solicitation documents provided by the City.
(2) Shall be prepared in ink or typewritten. Errors may be erased or crossed out, and corrections typewritten or printed in ink but must be initialed in ink by the person or persons signing the offer.
(3) Shall be signed in ink by the individual if offering as a sole proprietor, by one or more members of a partnership, by one or more members or officers of each entity in a joint venture, by one or more officers of a corporation, or by an agent of the Offeror legally qualified and acceptable to the City.

(d) Pursuant to HAR §3-122-21(4)(B), space is provided in solicitations for: brand name, model number and/or packaging. Offerors who leave these fields blank (physically and electronically) certify, by submitting their offer, that they are providing as specified. An offeror who inputs a brand name, model number, and/or packaging that is not pre-approved or approved during the solicitation may have their bid rejected as non-responsive. This paragraph shall not apply to service solicitations.

4.2 Certificate of Acceptance of Solicitation Requirements.

The Certificate of Acceptance of Solicitation Requirements when made a part of the solicitation shall be completed, signed by the Offeror, and submitted with the Offeror's offer. Failure to submit the required certification may be grounds for disqualification of the Offeror's offer.

The Offeror shall sign the Certificate of Acceptance of Solicitation Requirements to acknowledge that the Goods, Services, or Construction provided by the Offeror are in compliance with the Scope of Work specified in the solicitation. Deviations from the specified Scope of Work shall only be allowed by the approval of the City unless otherwise specified in the solicitation.

By submitting a bid in Vendor Self Service (VSS) eProcurement system, you are hereby accepting and acknowledging your acceptance of solicitation requirements and are not required to submit the certification form.

4.3 Certificate of Cost or Pricing Data.

When an offer in response to a Request for Competitive Sealed Proposal (RFP) solicitation is in excess of $100,000.00, the Offeror shall certify that the offer's cost or pricing data is accurate, complete, and current. Failure to submit the required certification may be grounds for rejection of the offer.

4.4 Proprietary or Confidential.

Offeror shall clearly label any proprietary information as confidential. Any information labeled as confidential will remain confidential to the extent provided by law. Offers submitted to the City shall become the property of the City.

4.5 Offer Submission.

(a) Offers for solicitations that were posted in the Vendor Self Service (VSS) eProcurement system: The offeror shall submit its offer electronically within the VSS system. Unless otherwise specified, the City shall only consider offers submitted in the VSS system for award. Offerors shall be responsible for registration and successful response submittal in VSS.

(b) Offers for all other solicitations: If the solicitation specifically requires hard copy offers, the offer should be sealed in an envelope. The solicitation

number, Offeror's name and address, and closing date of the solicitation should be printed on the outside of the envelope. The offer envelope must be time stamped and deposited at the Division of Purchasing.

4.6 Modification or Withdrawal of Offers.

An offer may be modified or withdrawn prior to the solicitation's close date and time.

CHAPTER 5.0: OPENING OF BIDS AND REGISTRATION OF PROPOSALS

5.1 Public bid opening of RFB and RFQ solicitations.

(a) Opening for RFB and RFQ solicitations that were posted in the Vendor Self Service (VSS) eProcurement system: After the solicitation's close date and time has passed, a bid tabulation will be available on the solicitation's detail page in VSS.

(b) Opening for all other RFB solicitations: The opening of offers shall be by a representative of the City, at the date and time stated in the solicitation, in the presence of all Offerors who attend. The opened offers shall be available for public inspection at the time of offer opening except to the extent that the Offeror designates trade secrets or other proprietary data to be confidential. Offerors shall ensure that material so designated as confidential shall be readily separable from the offer in order to facilitate public inspection of the non-confidential portion of the offer. Prices and makes and model or catalogue numbers of items offered, deliveries, and terms of payment shall be publicly available at the time of offer opening regardless of any designation to the contrary.

5.2 Opening of RFP Solicitations.

After the RFP submittal due date, proposals shall not be publicly opened. Proposals shall be open to public inspection after the notice of award has been posted.

If the RFP required submitting physical proposals they shall be opened in the presence of two or more procurement officials.

5.3 Late Offers and Late Modifications.

The City shall not accept offers and modifications after the solicitation close time and date.

5.4 Time for Acceptance of Offer.

Unless otherwise stated in the solicitation, an offer may be withdrawn only if the City fails to award the contract within:

(a) For City-funded projects or projects funded in whole or in part by the federal government; within sixty (60) days of the deadline for offers;

(b) For projects funded in whole or in part by the State, within one hundred fifty (150) days of the deadline for offers; and

(c) For improvement district projects, within three hundred (300) days of the deadline for offers.

CHAPTER 6.0: EVALUATION OF OFFERS

6.1 Waiver of Informalities.

The City may waive or accept minor informalities, mistakes or other defects in accordance with HAR §3-122-31.

6.2 Multiple or Alternate Offers.

Unless specifically provided for in the solicitation, multiple or alternate offers by the same offeror shall not be accepted and all such offers shall be rejected.

An offeror shall be considered to have submitted more than one offer if such offeror submits more than one offer under the same Taxpayer Identification Number (FEIN or SSN), same name, or through agents, or through joint ventures, partnerships or corporations in which such person has more than a twenty five percent interest in each of them, or through any combination thereof.

6.3 Conditioned Offers.

Offers that are conditioned may be deemed nonresponsive and rejected.

6.4 Limiting Acceptance to Entire Offer.

An Offeror may not limit acceptance to the entire offer, unless allowed by the solicitation:

(a) If the acceptance of an offer is so limited by the Offeror but not allowed, the offer will be determined to be not acceptable and rejected.

(b) If the acceptance of an offer is so limited by the Offeror and allowed, the purchasing agency shall not reject part of the offer and award on the remainder.

6.5 Anti-competitive Practices.

If there is any evidence indicating that two or more Offerors are in collusion to restrict competition or have otherwise engaged in anti-competitive practices relating to the procurement, the offers of all such Offerors shall be rejected and such evidence may be a cause for their suspension or debarment.

6.6 Suspended or Debarred List.

No contract will be awarded to any Offeror suspended or debarred by the Federal, State or City.

6.7 Unauthorized Communications

Except as otherwise authorized in the solicitation, offerors shall not communicate with the Contracting Officer, any member of an Evaluation Team or Selection Committee appointed by the Contracting Officer, or any other City officer, employee or agent directly serving the procurement activity.

6.8 Rejection of Offers.

The City reserves the right to reject any or all offers when in the City's opinion; such rejection will be in the best interest of the City. Offers may be rejected for the following reasons:

(a) Offeror lacks sufficient experience to perform the work contemplated;

(b) Offeror does not possess proper license, if required to cover the type of work contemplated, at the time of the offer submittal due date, unless otherwise specified in this solicitation;

(c) Offeror who has uncompleted work on contracts in force, or a record of unsatisfactory work performance or delays on completed contracts or on contracts in force which, in the judgment of the City, might hinder or prevent the prompt completion of additional work if awarded;

(d) Offeror who has complaints filed for abusive or threatening language or behavior during previous contracts toward any City Officer-in-Charge or his/her representative;

(e) Offeror who has had a previous contract terminated for default by the City;

(f) Offeror who has failed to comply or is delaying compliance with the requirements for final inspection or final payment of the City's General Terms and Conditions for any contract in force;

(g) Offeror is determined to be non-responsible;

(h) Offeror fails to pay, or satisfactorily settle, all bills overdue for labor and material on former City contracts prior to the offer submittal due date;

(i) The Offeror assisted in developing or preparing the specifications or work statements.

(j) The offer does not conform in all material respects to the requirements of the solicitation.

(k) The proposed price is clearly unreasonable.

6.9 Cost Analysis Data

The City reserves the right to request cost data. Pursuant to HAR §3-122-35, this cost data will be used to determine if an offer is fair and reasonable. Information provided by the Offeror shall remain confidential and proprietary in accordance with HRS §92F-13(3).

CHAPTER 7.0: DISCUSSION & BEST AND FINAL OFFER

This chapter shall apply only to Request for Competitive Sealed Proposals (RFP) solicitations.

7.1 Priority Listed Offers.

The City may establish a Priority List consisting of at least three (3) Offerors. Those Offerors who are selected for the priority list are referred to as the "Priority-Listed Offerors (PLO)." The City will not publicly identify the PLO firms prior to the public posting of the notice of award.

When soliciting using a Design Build RFP, the three responsible, most qualified offerors shall be short-listed as PLO and notice will be given to all offerors as to which offerors are short-listed.

If the City issues addenda after the PLO firms are determined, the City will issue the addenda only to the PLO firms.

7.2 Discussions.

Discussions will be limited to only Priority-Listed Offerors (PLO). PLOs shall be accorded fair and equal treatment with respect to any opportunity for discussions and revisions of offers; however, offers may be selected without such discussion.

New proposals or amendments to the existing solicitation that, in the City's sole judgment, significantly change the nature of the procurement will not be permitted. Should the City believe it is in its best interest to go forward with a

significant change, then the solicitation may be cancelled and a new solicitation may be issued.

Non-Disclosure of offer contents. The contents of any offer shall not be disclosed so as to be available to competing Offerors during the discussion process.

7.3 Best and Final Offer (BAFO).

The City reserves the right to issue a request for Best and Final Offers (BAFOs). However the City is under no obligation to do so. The City may make its selection and Award based on the initial offers submitted.

If BAFOs are requested, the City shall inform the PLO firms and allow/request revised offers, including correction of any weaknesses, minor irregularities, errors, and/or deficiencies identified by the City. Adequate time shall be provided to PLO firms to revise their offers. Upon receipt of the BAFOs, the City will repeat the evaluation process. The evaluation process will consider the revised information, re-evaluate, and revise scores as appropriate.

CHAPTER 8.0: AWARD

8.1 RFB and RFQ Solicitations.

(a) Additive or Deductive Alternates

In the event additive or deductive alternates are included in the solicitation, the lowest offer will be determined after adding to or deducting from the total basic price, the alternate or alternates considered for award. Alternates, if any are awarded, shall be awarded in the order listed in the offer. Award of alternates shall be dependent upon the availability of funds.

(b) Low Tie Bids

In the case low tie bids from responsible and responsive Offerors are received, award may be made by the drawing of lots.

8.2 Exceeding Available Funds.

In the event all offers exceed available funds and where time or economic considerations preclude re-solicitation of a reduced scope of work, the City may negotiate an adjustment of the offer price, including changes in the solicitation requirements, with the lowest priced responsive and responsible Offeror, to bring the offer within the amount of available funds.

8.3 Verification of Responsibility of Offeror.

Prior to the award of the contract, the successful Offeror shall be registered as "Compliant" on the State of Hawaii Compliance Express System (http://vendors.ehawaii.gov) or submit the required tax clearances from the State Department of Taxation and Internal Revenue Service, the Certificate of Compliance with the State Department of Labor and Industrial Relations, and the Certificate of Good Standing with the Department of Commerce and Consumer Affairs Business Registration Division. The City may reject the offer if the Offeror fails to provide proof of compliance within the time permitted by the City. Offeror shall meet all licensing requirements of the solicitation.

8.4 Execution of Contract.

Upon notification of award, the successful Offeror shall obtain the contract from the Division of Purchasing, Department of Budget and Fiscal Services, for execution. The contract document shall be returned within ten days from the date of notification of the award, or within such time as the City may allow.

Failure to enter into the contract and to furnish satisfactory security, when required, may be cause for cancellation of the Offeror's award and forfeiture of the Offeror's offer security, if any, as liquidated damages and not as a penalty.

The contract documents are to be completed and executed by the Offeror in the following manner:

(a) Notarization

Signatures appearing on the contract forms and bond forms (if applicable) must be notarized by a notary public.

(b) Authorization

The City may require, in the case of a corporation, a corporate resolution authorizing the person(s) signing to execute the contract and bond. The City may require, in the case of a joint venture or partnership, a power of attorney authorizing the person(s) signing to execute the contract and bond. The surety, if applicable, may also be required to attach its corporate resolution or power of attorney authorizing the person(s) signing to execute the bond.

(c) Performance and Payment Bonds

Performance and payment bonds, if required, shall be delivered at the same time the contract is executed. Performance and payment bonds shall be in conformance with HAR §3-122-221, §3-122-222 and §3-122-227.

(d) Evidence of Insurance Coverages

If insurance coverages are required by the solicitation, evidence of insurance coverages shall be delivered at the same time the contract is executed.

8.5 Awards of Less than $100,000 and $250,000.

On any individual award totaling less than $100,000 for Goods or Services and less than $250,000 for construction, the City reserves the right to award the contract by Purchase Order. The purchase order shall be performed in accordance with the terms set forth in the solicitation.

8.6 Cancellation of Award.

The City reserves the right to cancel the award of any contract any time before the City signs the contract.

CHAPTER 9.0: DEBRIEFING, PROTEST, SUSPENSION AND DEBARMENT

9.1 Debriefing.

Debriefing shall apply only to Request for Competitive Sealed Proposal (RFP) solicitations. A written request for a debriefing shall be made within three (3) working days after the posting of the award.

9.2 Authority to Resolve Protested Solicitations and Awards.

The City shall resolve complaints and protest of awards in accordance with HAR §3-126-1 and HRS §103D-701.

9.3 Authority to Debar or Suspend.

The City may debar or suspend an Offeror for cause from consideration for award of contracts in accordance with the provisions of HRS §103D-702, and HAR §3-126-2.

9.4 Solicitation or Award in Violation of Law.

If a solicitation or award is found to be in violation of law, it shall be resolved in accordance with HAR §3-126-4.

RFB-DDC-2075507

OFFER

_____
Offeror's Legal Business Name

Director of Budget and Fiscal Services
Department of Budget and Fiscal Services
City and County of Honolulu
Honolulu, Hawaii 96813

The undersigned hereby proposes and agrees, if this Offer is accepted, to furnish and pay for all labor, materials, tools, equipment, and incidental work necessary to construct or install, in place complete, the work called for under and in accordance with the true intent of the Contract Documents for:

KOKEA CORPORATION YARD
BUILDING "B" IMPROVEMENTS

455 KOKEA STREET
HONOLULU, HAWAII 96817

TAX MAP KEY: 1-5-020:016
PROJECT NO. VI-9-26-C

on file in the Office of the Division of Purchasing, Department of Budget and Fiscal Services, City and County of Honolulu, and that the undersigned will take in payment therefore, the unit and/or unit sum prices itemized in the following Offer Schedule. It is reemphasized that all items in the Offer Schedule shall be considered as in place complete, in every respect.

Basic Bid

Item No.	Quantity	Description	Bid Amount
1.	Lump Sum	Kokea Corporation Yard Building "B" Improvements, complete in accordance with the drawings and specifications. The work is to include the demolition of the exterior storage shed.	$_____

Additive Alternate No. 1

Item No.	Quantity	Description	Bid Amount
2.	Lump Sum	Construct exterior storage shed in accordance with the drawings and specifications.	$_____

RECAPITULATION

BASIC BID
(Item No. 1, inclusive) $_____

BASIC BID
AND ADDITIVE ALTERNATE NO. 1
(Item Nos. 1 through 2, inclusive) $_____

The Undersigned also agrees as follows:

1. That the bids submitted on the various items in this Offer on which a Lump Sum bid is asked, include all materials, equipment, labor and all other incidental work required for the complete construction and installation of these improvements in accordance with the plans and specifications.

   That the quantities in any item on a Lump Sum bid in this Offer are approximate only and that payment will be made only for the item in place complete, regardless of amount of material, equipment and labor necessary to complete the same in a proper and workmanlike manner and in accordance with the plans and specifications. That the quantities shown distributed in the lump sum items are given only for the Offeror's convenience and for the purpose of making monthly estimates. The Offeror shall verify these quantities in any manner he deems necessary or expedient.

2. Award of the contract shall be made to the responsive, responsible bidder submitting the lowest BASIC BID. Furthermore, if available funds exceed the lowest BASIC BID, award shall instead be made to the responsive, responsible bidder submitting the lowest BASIC BID plus Additive Alternate(s) in the order listed in the Offer.

3. That the time of completion for the Basic Bid and all approved Alternates shall be within **365** consecutive calendar days from the Notice to Proceed and shall include provisions for the following:

   a. Submittals of shop drawings and materials for City review and approval. Submittals shall commence within 15 calendar days from the date of Notice To Proceed (NTP) and procurement of long lead items shall commence immediately after approval of required submittals.

   b. Approval of required permits including grading and building permits, NPDES permit, SMA permit, and any other permitting actions, as required. Approval of the necessary permits for this project is anticipated to take ___6___ months from the award of the contract. Construction onsite cannot commence until the approval of all necessary permits, unless otherwise directed by the Officer-in-Charge.

   NOTE: The construction performance period must provide consideration of the above. Offeror will be responsible for any labor escalation and material escalation during the

construction performance period provided that the NTP is issued within the 180 calendar day period after execution of the contract.

Please also refer to Paragraph 1.02 Notice To Proceed For Construction, PART 1 General, Section 01035 Construction Project Procedures, Division 1 – General Requirements of these Specifications, for additional information on the Notice To Proceed (NTP).

4. The Offeror will provide construction sign.

5. That if this Offer shall be accepted and the Undersigned shall fail to or neglect to contract as aforesaid, and to furnish the required bond to the City within ten (10) days from the date of receiving from the City, the contract prepared and ready for execution, the City may determine that the Offeror has abandoned the contract, and thereupon, forfeiture of the security accompanying his Offer shall operate and the same shall become the property of the City.

The Undersigned also agrees that if he is awarded this contract, he will enter into and execute the same and that he will furnish bonds in the amount as required by the General Instructions to Offerors.

The Undersigned certifies that he is licensed to undertake this project pursuant to Chapter 444, HRS, as amended, relating to licensing of contractors.

The Undersigned also agrees that the Director of Budget and Fiscal Services reserves the right to reject any or all bids and to waive any defect therein.

Enclosed herewith is

Surety bond	)
Legal tender	)
Certificate of deposit, share certificate,	) (Circle one)
Cashier's check, treasurer's check,	)
Teller's check, official check,	)
Certified check	)

for the sum of _____

_____DOLLARS ($_____), being not less than five per cent of the amount bid.

Respectfully submitted,

_____
Offeror's Legal Business Name

By: _____
Authorized Signature

_____
Print or Type Name and Title of Above

Dated: _____

Address of Offeror _____

_____

Telephone Number _____

Email Address: _____

In accordance with Section 103D-302 HRS, all offers shall include the name of *each* person or firm to be engaged by the Offeror as a joint contractor or subcontractor in the performance of the contract for construction, and the nature and scope of work to be performed by each joint contractor or subcontractor. “Subcontractor” is defined in HAR § 3-120-2. Offers that do not comply with this requirement may be evaluated in accordance with Section 103D-302(b) of the HRS.

It is the sole responsibility of the Offeror to review the requirements of this project and determine the appropriate contractor’s licenses that are required to complete the project. The Offeror acknowledges that as a general contractor (‘A’ or ‘B’ license), the Offeror is prohibited from undertaking any work solely or as part of a larger project which would require the Offeror to act as a specialty contractor (‘C’ license) in any area in which the Offeror has no specialty contractor’s license. The Offeror must have the appropriate specialty contractor’s license either obtained on its own, or obtained automatically under HAR §16-77-32.

In determining work that is to be performed by joint contractors or subcontractors, Offerors shall be familiar with among other things, HRS 444, relating to licensing of contractors and the Hawaii Administrative Rules, Title 16, Department of Commerce and Consumer Affairs, Chapter 77, Contractors.

Contractors that are suspended or debarred by the State of Hawaii, State Procurement Office (SPO) under HRS Chapter 103D, cannot be considered for award during the suspension or debarment.

Contractors or subcontractors that are suspended by the State of Hawaii, Department of Labor and Industrial Relations (DLIR) under HRS Chapter 104 are prohibited from performing **any work** on any State or County public works construction project.

When more than one (1) joint contractor or subcontractor is listed for a category of work, the Offeror shall identify the scope of work each will perform. Joint contractors or subcontractors shall also be listed for work to be completed under additives or alternates.

All work not within the scope of work of the listed joint contractor(s) or subcontractor(s), shall be performed by the Offeror.

Include the name of each person or firm to be engaged by the Offeror as joint contractor or subcontractor in the performance of the contract in the following table. Write in the complete name of the Joint Contractor or Subcontractor, the Contractor License Number (if applicable), and the Nature and Scope of work to be performed by each.

COMPLETE NAME OF JOINT CONTRACTOR OR SUBCONTRACTOR	CONTRACTOR LICENSE NUMBER	SPECIFIC DESCRIPTION OF THE NATURE AND SCOPE OF WORK

ACKNOWLEDGMENT OF LIQUIDATED DAMAGES PROVISION

PROJECT NAME AND NUMBER: **KOKEA CORPORATION YARD**
BUILDING "B" IMPROVEMENTS
VI-9-26-C

This is to certify that the undersigned understands and agrees to the provisions for Liquidated Damages, Section 3.16 of the General Terms and Conditions, City and County of Honolulu, and Section SP 3 of the Special Provisions, and that submittal of our bid constitutes acceptance of the provisions and amount of liquidated damages that may be assessed per calendar day as specified in the Special Provisions.

_____
Offeror's Legal Business Name

_____
Signature and Title

Date: _____

(Failure to submit this form with the bid may be cause for rejection.)

CERTIFICATION OF COMPLIANCE
WITH HRS 396-18, SAFETY AND HEALTH PROGRAMS
FOR CONTRACTOR BIDDING ON CITY JOBS

PROJECT NAME AND NUMBER: **KOKEA CORPORATION YARD**
BUILDING "B" IMPROVEMENTS
VI-9-26-C

This is to certify that the undersigned will comply with the requirements of HRS 396-18, as follows:

(A) Pursuant to HRS 396-18, all bids and offers in excess of $100,000 shall include a signed certification from the Offeror that a written safety and health plan for the job will be available and implemented by the notice to proceed dates of the project. The written safety and health plan shall include:

(1) A safety and health policy statement reflecting management commitment;

(2) A description of the safety and health responsibilities of all levels of management and supervisors on the job and a statement of accountability appropriate to each:

(3) The details of:

(a) The mechanism for employee involvement in job hazard analysis;
(b) Hazard identification, including periodic inspections and hazard correction and control;
(c) Accident and "near-miss" investigations; and
(d) Evaluations of employee training programs;

(4) A plan to encourage employees to report hazards to management as soon as possible and to require management to address these hazards promptly; and

(5) A certification by a senior corporate or company manager that the plan is true and correct.

(B) Failure to submit the required certification may be grounds for disqualification of the bid.

(C) Failure to have available on site or failure to implement the written safety and health plan by the project's notice to proceed date shall be considered willful noncompliance and be sufficient grounds to disqualify the award and terminate the contract.

_____
Offeror's Legal Business Name

_____
Signature and Title

Date: _____

CERTIFICATE OF ACCEPTANCE OF SOLICITATION REQUIREMENTS

It is understood and agreed that the undersigned acknowledges the following:

1. The Offeror has read this solicitation document including any addenda, in its entirety;

2. The Offeror understands and agrees to furnish, deliver, and perform the requirements of the solicitation in strict compliance with the solicitation document as amended, including any specifications, plans, and scope of work descriptions, without any exceptions, if awarded a contract;

3. The Offeror understands and agrees that no substitution or alternate brands may be furnished without the **written approval** of the City;

4. The Offeror understands that the Contractor shall resolve any noncompliance with the requirements of the awarded contract at the Contractor's own expense;

5. The Offeror will make all modifications or customizations to the brand and model being offered as necessary to meet all specifications, at no additional cost. Offeror guarantees that all modifications or customizations done to meet specifications shall not affect the quality or operation of the product; and

6. The Offeror understands that **FAILURE TO MEET CONTRACT REQUIREMENTS WILL CONSTITUTE A BREACH OF CONTRACT THAT MAY RESULT IN SUSPENSION OR DEBARMENT, AND THE EXERCISE OF RIGHTS AND REMEDIES AS PROVIDED BY LAW.** Contract requirements include any specifications, plans, and scope of work descriptions;

7. The undersigned is an authorized representative of the Offeror and can legally obligate the Offeror thereto.

Offeror's Legal Business Name: _____

Signature: _____

Print Name: _____

Title: _____

Date: _____

Phone: _____

SURETY BID BOND

Bond No. _____

KNOW TO ALL BY THESE PRESENTS:

That we, _____,
(Full Name or Legal Title of Offeror)
as Offeror, hereinafter called Principal, and _____,
(Name of 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 CITY AND COUNTY OF HONOLULU, as Owner, hereinafter called Owner, in the penal sum of _____
_____
(Required Amount of Bid Security)
Dollars ($_____), 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 by Number and Brief Description)

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 _____, _____.

(Seal) _____
Name of Principal (Offeror)

_____
Signature

_____
Title

(Seal) _____
Name of Surety

_____
Signature

_____
Title

CONTRACT NO. <Contract Number>

Solicitation No. <Solicitation Number>

THIS AGREEMENT (or "Agreement"), made and entered into on _____, by and between the CITY AND COUNTY OF HONOLULU, a municipal corporation existing under and by virtue of the laws of the State of Hawaii, with offices at Honolulu Hale, 530 South King Street, Honolulu, Hawaii 96813, hereinafter called the "CITY" (or "City"), and <CONTRACTOR NAME>, whose principal place of business is <contractor's address>, hereinafter called the "CONTRACTOR" (or "Contractor").

WITNESSETH THAT:

WHEREAS, the CITY desires to engage the CONTRACTOR for the <PROJECT NAME>; and

WHEREAS, a solicitation for bids and the selection of the CONTRACTOR were made in accordance with section 103D-302, Hawaii Revised Statutes ("HRS") and the related Hawaii Administrative Rules ("HAR"). The CONTRACTOR has been identified as the lowest responsible and responsive Offeror, whose offer meets the requirements and criteria set forth in the invitation; and

WHEREAS, the CONTRACTOR is willing and able to provide the services set forth in this AGREEMENT;

NOW, THEREFORE, the CITY and the CONTRACTOR, in consideration of the foregoing and of the mutual promises hereinafter set forth, the sufficiency and adequacy of which are hereby acknowledged, and intending to be legally bound, hereby mutually agree as follows:

1. This Contract and the following documents, appendices and exhibits collectively form the "AGREEMENT" or "Contract Documents", all of which are attached hereto and incorporated herein:

This Contract

Solicitation No. <Solicitation Number>

CONTRACTOR's Offer

The Contract Documents as listed hereinabove are in the order of controlling preference should there be any conflict in the terms.

2. The CONTRACTOR shall furnish all services, labor, goods, materials, supplies, equipment and other incidentals reasonably necessary for the successful completion of the work contemplated under this AGREEMENT (Work).

3. The CITY agrees to pay the CONTRACTOR for the satisfactory performance and completion of the Work in accordance with the payments schedule and provisions, all as set forth in the AGREEMENT. The total amount of this AGREEMENT shall not exceed <DOLLAR AMOUNT WRITTEN OUT> AND xx/100 DOLLARS ($xxx,xxx.xx), which is the maximum

SAMPLE

payable under this AGREEMENT and inclusive of all taxes. The CONTRACTOR shall not pass through any increases in taxes to the CITY.

4. The term of the Contract shall be the duration as provided in Solicitation No. <Solicitation Number>.

5. The CONTRACTOR will prosecute said work in an efficient manner so as entirely to complete and perform said work within the time set forth in Solicitation No. <Solicitation Number>.

[End of page, signatures on following page]

SAMPLE

IN WITNESS WHEREOF, this AGREEMENT is executed herein by the duly authorized officers or agents of the CITY and the CONTRACTOR.

CITY AND COUNTY OF HONOLULU	<CONTRACTOR NAME>
BY:	BY:
PRINTED NAME:	PRINTED NAME:
TITLE: Director, Department of Budget and Fiscal Services	TITLE:
DATE:	DATE:

APPROVED AS TO FORM AND
LEGALITY

_____

Deputy Corporation Counsel
City and County of Honolulu

SAMPLE

SPECIAL PROVISIONS

SP 1. GENERAL CONDITIONS. The "GENERAL TERMS AND CONDITIONS, CITY AND COUNTY OF HONOLULU" dated February 1, 2015, hereinafter referred to as the "GENERAL CONDITIONS" is incorporated herein by reference only and made a part of these specifications. Copies of the GENERAL CONDITIONS may be obtained from the Division of Purchasing, Department of Budget and Fiscal Services website at www.honolulu.gov/pur. Any provision of the GENERAL CONDITIONS not in conflict with the HAR shall be applicable to this Contract.

SP 2. DIFFERING SITE CONDITIONS FOR CONSTRUCTION PROJECTS. Delete Section 3.9 of the GENERAL CONDITIONS in its entirety and, in lieu thereof, insert:

"3.9 Differing Site Conditions for Construction Projects. Pursuant to HAR 3-125-11, the following shall apply to the procurement of construction under this contract:

Differing site conditions – price adjustments,

(A) Notification. The contractor shall promptly, and before such conditions are disturbed, notify the procurement officer of:

(i) Subsurface or latent physical conditions at the site differing materially from those indicated in this contract; or
(ii) 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.

(B) Adjustment of price or time for performance. After receipt of the notice, the procurement officer shall promptly investigate the site, and if it is found that the conditions do materially so differ and cause an increase in the contractor's cost of, or the time required for, performance of any part of the work under this contract, whether or not changed as a result of the conditions, an adjustment shall 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.

(C) Timeliness of claim. No claim of the contractor under this clause shall be allowed unless the contractor has given the notice required in this clause; provided, however, that the time prescribed therefore may be extended by the procurement officer in writing.

(D) No claim after final payment. No claim by the contractor for an adjustment there under shall be allowed if asserted after final payment under this contract.

(E) Knowledge. Nothing contained in this clause shall be grounds for an adjustment in compensation if the contractor had actual knowledge of the existence of such conditions prior to the submission of bids. [HAR 3-125-11(1)]"

SP 3. LIQUIDATED DAMAGES. When the Contractor fails to complete the work or any portion of the work within the time or times specified in the Contract or any extension thereof, it is agreed that the Contractor shall pay to the City the amount specified below.

Liquidated damage per calendar day: $500.00

The Contractor hereby agrees to pay the amount as liquidated damages, and not by way of penalty, to the City and further authorizes the City to deduct the amount of the damages from monies due the Contractor under the Contract, computed as previously mentioned. If the monies due the Contractor are insufficient or no monies are due the Contractor, the Contractor shall pay the City the difference or the entire amount, whichever may be the case, upon demand by the City.

SP 4. BID SCHEDULE OF VALUES DATA. Each Offeror should submit with its offer in a separate sealed envelope identified on the outside by Offeror's name, project title and marked "Bid Schedule of Values Data", a breakdown of its overall bid on the bid schedule of values data sheet provided with the offer.

This information is required for analytical purposes only and shall have no bearing upon the determination of the lowest responsive, responsible Offeror. Information will not be divulged to the public, however, the City and County of Honolulu will not be held responsible for information made public that is not submitted in a separately sealed envelope as directed at the time bids are submitted.

If the bid schedule of values data sheet is not provided with the offer, and if requested by the City, the Offeror shall provide this data within three (3) City business days.

SP 5. PAYMENTS AND FINAL PAYMENT. Proof of compliance with HRS 103D-328 and HRS 103D-310 may be through Hawaii Compliance Express (HCE) or by written clearance issued by the Hawaii Department of Taxation, Internal Revenue Service, Hawaii Department of Labor, and Hawaii Department of Commerce and Consumer Affairs.

SP 6. CONTRACTOR PERFORMANCE RECORDS. The City shall maintain records pertaining to the Contractor's performance on contracts with the City. The Contractor shall be required to participate in performance assessment activities during or after the performance of the Contract. Contractor performance records may be used to determine a Contractor's responsibility, qualifications, and eligibility for the award of future contracts with the City.

SP 7. ALLOWANCES. If the City listed allowances in the Offer section, the Contractor shall coordinate all work covered under the allowance. No demand for expenses or profit other than these included in the Contract Basic Bid shall be allowed. Allowances shall be used with the approval of the Officer-in-Charge. Any balance shall remain with the City.

SP 8. EXHIBIT L. REPORT OF EQUIPMENT PURCHASED WITH CONSULTANT OR CONSTRUCTION CONTRACTS. The City will not require the use of Exhibit L: Report of Equipment Purchased with Consultant or Construction Contracts form. As a result, the following sections of the GENERAL CONDITIONS shall be modified:

A. Delete Section 4.5, Payments, item (a) in its entirety and replace with the following:

‘’(a) Payments will be authorized by the Director after completion of performance or delivery and acceptance by the Director of all materials, goods, and services stipulated in the contract or Purchase Order and after the invoices, in triplicate, are received by the using agency, Attention: Fiscal Officer. The invoices must list the following information: contract and confirmation purchase order numbers (if any), item numbers, description of items, quantities, unit prices, and extended totals. Payments will be computed in accordance with any applicable unit prices bid. Payments will be made as soon thereafter as the regular course of business will allow; provided, however, that payments shall be made no later than thirty (30) calendar days following receipt of the statement for goods received and services completed.’’

B. Delete Section 5.4.6, Payment for Delivered Materials or Equipment, items (a) and (b) in their entirety and replace with the following:

‘’ (a) No payment for any material or equipment that is affixed, movable or removable, delivered to the site of the work under the contract will be made until said material or equipment is incorporated into the parts of the project required to be constructed under the contract. Payment for the delivered material or equipment shall be included in the monthly progress payment under the appropriate cost item.

(b) Specialized or Special Ordered Materials, Equipment. The Officer-in-Charge may, to the extent provided for in the contract, include in the monthly estimate for progress payment the delivered cost of specialized materials, special ordered materials or equipment usable only for the contract. Such inclusion in the monthly estimate will be allowed only if all costs are substantiated by evidence of delivery and payment, and only for such materials or equipment as are specifically described or referred to in the contract as being the subject matter for such inclusion in the monthly estimate for progress payment. Payment to the Contractor shall not terminate the Contractor's responsibility or ownership of such materials or equipment until incorporated in place and accepted by the Officer-in-Charge. The Contractor shall be responsible for the safekeeping of such specialized materials or equipment until incorporated into the work and accepted by the Officer-in-Charge. The amount included for payment under this subsection shall be subject to the retention requirement.’’

C. Delete Section 5.4.7 Final Payment, items (a)(1) and (a)(2) in their entirety.

D. Delete Exhibit L Report of Equipment Purchased with Construction Contracts, in its entirety.

SP 9. INDEMNITY. Delete Section 2.10, Indemnity, of the GENERAL CONDITIONS in its entirety and replace with the following:

“2.10 Indemnity

The Contractor shall perform the work as an independent contractor and shall indemnify and hold harmless the City, its departments, and all of their officers, employees or agents, from any and all deaths, injuries, losses and damages to persons or property, and any and all claims, demands, suits, action and liability therefor including reasonable attorney fees and cost of defense, caused by error, omissions, negligence or willful or intentional misconduct in the performance of the contract by the

Contractor or the Contractor's subcontractors, agents and employees, and this requirement shall survive the termination of contract."

SP 10. ANTI-DISCRIMINATION. In accordance with Section 1-11 of the Revised Ordinances of Honolulu 2021, as amended, the Contractor shall not engage in discriminatory practices for any work provided under this Agreement. Discriminatory practices are practices that discriminate on the basis of a classification protected by any federal, State, or City law, including retaliation for opposing discrimination or participation in an investigation or proceeding that alleges discrimination.

SP 11. HAWAII BIDDER/OFFEROR PREFERENCE. If the Contractor is subject to the Hawaii Bidder/Offeror preference and fails to maintain the requirements of a Hawaii Bidder/Offeror throughout the entirety of contract, the Contractor shall be subject to a reduction of price equal to the value of the preference applied. The City may also pursue debarment of the Contractor pursuant to Hawaii Revised Statutes §103D-702. Any changes in eligibility shall be reported to the Officer-in-Charge.

At any time during the contract, the City may request the Contractor to provide sufficient documentation to the City to demonstrate full compliance with the Hawaii Bidder/Offeror preference. The documentation must be provided within the time stated in the request.

RFB-DDC-2705507

BID SCHEDULE OF VALUES DATA

_____
Offeror's Legal Business Name

1. Each Offeror should submit with his Offer in a separate envelope identified on the outside by Offeror name, project name, and marked "Bid Schedule of Values Data", a breakdown of the overall bid showing the amounts included therein for the following work:

A.	Mobilization	$_____
B.	Demolition	$_____
C.	Hazardous materials abatement	$_____
D.	Roofing, materials, and installation	$_____
E.	Flashing, counter flashing, and coping, Materials and installation	$_____
F.	Walls, material, and installation	$_____
G.	Roof drains and downspouts	$_____
H.	Louvers	$_____
I.	Door and Frames	$_____
J.	Door hardware	$_____
	TOTAL SUM BASIC BID	$_____

A.	Demolition	$_____
B.	Concrete stem wall.	$_____
C.	Metal framing	$_____
D.	Roofing, materials, and installation	$_____
E.	Flashing, counter flashing, and coping,	

	Materials and installation	$_____
F.	Walls, material and installation	$_____
G.	Door and Frames	$_____
H.	Door hardware	$_____
I.	Louvers	$_____
J.	Signage	$_____
	TOTAL SUM ADDITIVE ALTERNATE NO. 1	$_____

2. This information is required for analytical purposes and shall have no bearing upon the determination of the lowest responsive, responsible Offeror, and will not be divulged to the public at bid opening.

3. If a breakdown of the items listed under item No. 1 is not provided with the offer, and if requested by the City, the Offeror shall provide this data within three (3) City business days.

4. The successful Offeror, upon request from the Officer-in-Charge, shall furnish a breakdown of the items listed under Item No. 1 above for Labor and Non-Labor cost.

CONSTRUCTION SIGN BOARD

Revised March 6, 2023



NOTES:

1. Use 48"x 96" aluminum coated material (ACM), front side laminated to a solid black polyethylene core trim to final size of 47”x 95”.
2. UV print sign directly to on ACM.
3. Insert appropriate names and agencies only.
4. City and County Seal shall be integrated into sign and printed directly to sign.
5. Color:
   Background Color: White
   Border Color: as indicated.
6. Letter Point Size are as indicated.
7. Lettering Style: Arial Black
8. Lettering shall be black.
9. Phone number listing on construction sign shall be Contractor's phone number.
10. An editable electronic file will be provided to Contractor including the graphics and sample text for the construction sign by the Officer–in-Charge.
11. Include text at bottom of sign "This project funded in whole or in part with funds provided by the U.S. Department of Housing and Urban Development(HUD)" only when project has funding from HUD.

WORK REQUIRED: Fabricate and erect in place a complete construction sign board as shown by the above drawing.
A full scale colored electronic file proof of sign board with proper size, spacing and format as shown above should be submitted to the Officer-in-Charge.

ERECTION: Sign shall be erected at location, as directed by Officer-in-Charge, adequately braced on the rear side only. It shall be maintained in good condition throughout the progress of work.
When in the opinion of the Officer-in-Charge, there is a need to relocate the projects sign because of progress of work, or for other reasons, the relocation shall be done as directed without cost to the City.

COMPLETION: Upon completion of project, the sign shall be removed by the Contractor and disposed of as directed by the Officer-in-Charge without cost to the City.



1 Pantone Color and Point size indicated in RED

DETAILED SPECIFICATIONS

DIVISION 1 – GENERAL REQUIREMENTS

SECTION 01010 – GENERAL REQUIREMENTS

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS: The General Terms and Conditions, City and County of Honolulu (not specifically attached), the Special Provisions, and all other applicable documents preceding these specifications shall govern all work specified hereinafter in all DIVISIONS AND SECTIONS.

1.02 APPLICABLE REGULATIONS: The Contractor shall comply with all local laws, ordinances, rules and regulations pertaining to such work and must obtain and pay for required permits, license and certificates and publish and post all notices required thereby.

1.03 DESCRIPTION OF WORK:

A. Scope of Work:

Building “B” replace metal roof and metal sidings, louvers, gutters and downspouts with new.

- B. These specifications are divided for convenience into titled divisions and sections as set forth in the TABLE OF CONTENTS preceding these specifications and shall not be considered an accurate or complete segregation of the several units of labor and materials. No responsibility, either direct or implied, is assumed by the City and County for omissions or duplications of the subject matter. The Contractor shall be held responsible for the complete work whenever or wherever the parts are described in one or more trade heads. Any mention in these sections or indication on the drawings of articles, materials, operations, or methods required that the Contractor furnish each item so mentioned or indicated, of the kind, type, or design and quality of each item so mentioned or indicated on the drawings, and that the Contractor furnish all labor, materials, equipment, incidentals, and supervision necessary to complete the work in accordance with the drawings and the true meaning and intent of these specifications, even though such mention of articles, materials, operations, methods, quality, qualifications, or conditions is not expressed in complete sentences.

Where devices or items or parts thereof are referred to in the singular, it is intended that such references shall apply to as many such devices, items, or parts as are required to properly complete the work.

Schedule of work included in these specifications sections are given for convenience and shall not be considered as a comprehensive list of items necessary to complete the work of any section.

The Contractor shall employ the usual standard practice of coordinating the work covered in each section with the work of other sections. The necessary information and the items, accessories, anchors, connections, patterns, templates, etc., shall be delivered when required, in order to prevent any delay in the progress and completion of the work.

1.04 PLANS AND SPECIFICATIONS:

These specifications are intended to cover all labor, materials, and standards of workmanship employed in the work indicated on the plans and called for in the specifications or reasonably implied therein. The plans and specifications complement one another. Any part of the work mentioned in one and not represented in the other shall be done the same as if it had been mentioned or represented in both.

The Contractor shall not alter the drawings and specifications. In the event of any error or discrepancies, the Contractor shall immediately notify the Officer-in-Charge (OIC) for clarification and instructions.

All figured dimensions take precedence over scaled measurements. No important dimension shall be determined by scale.

Specifications and drawings are prepared in abbreviated form and may 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.

Phrase “or equal” shall mean “or approved substitute.”

The term “Owner” shall mean “City.”
The terms “Architect” or “Engineer” shall mean “Officer-in-Charge.”

1.05 AS-BUILT DRAWINGS: The Contractor shall keep job site copies of the drawings and shall mark on one set, kept expressly for this purpose, all changes made or site conditions which differ from the contract set. Contractor shall stamp and sign each sheet of the complete set of contract drawings indicating it represent as-built condition. Contractor shall also submit an as-built specification set indicating specific products used and stamp and sign the cover sheet indicating as-built conditions.

1.06 OIC. REVIEW AND ACCEPTANCE: OIC. review and acceptance of all submittals and conditions shall be based on the information submitted and the visible condition observed. Acceptance shall be for general intent of the contract. Ultimate performance of the work or product to meet the contract requirements shall be the Contractor's responsibility.

1.07 EXISTING UTILITIES: Location of existing utilities and facilities shown are approximate only and are not guaranteed. The Contractor shall verify, in the field, the location of all existing utilities. The Contractor shall be fully responsible for any and all damages, injuries, deaths, expense, etc., to property, personnel and the public resulting from accidents to or from existing facilities and/or utilities.

Should existing utilities not shown on the plans be encountered in the field during the operation, the Contractor shall promptly notify the OIC for instructions. Failure to do so will make the Contractor liable for any and all damages arising from his operations. Upon the instructions of the OIC, the Contractor may be required to relocate or adjust the existing utilities. The Contractor shall not be compensated extra for any additional material required because of differences in location of existing utilities in the plan and in the field.

1.08 STORAGE OF MATERIALS, EQUIPMENT AND FABRICATING AREAS: Storage of materials, equipment and fabricating areas will not be permitted at the project sites.

1.09 RESTORATION OF EXISTING AREAS: All existing areas disturbed or damaged due to construction or ingress and egress to the site shall be repaired to match the existing. Restoration and maintenance of all affected areas shall be the Contractor's responsibility, including areas beyond construction limits. Lawn areas shall be re-cultivated, top soiled and then re-grassed. Other damaged areas shall be repaired with the same kind and type of material.

All restoration work shall conform to the applicable provisions of the DPR Standard Specifications for Landscaping, herein attached and the respective sections of the Standard Specifications of the Department of

Public Works referred to herein. All costs for the restoration work shall not be paid for directly but shall be considered incidental to the various items of the work.

1.10 REFERENCE STANDARDS AND ABBREVIATIONS: All work shall be done in accordance to the most current standards listed in the Special Provisions, Detailed Specifications, DPR Standard Specifications (not physically attached), and below as amended and/or amplified herein:

ASA: American Standard Association.

ASTM: American Society of Testing and Materials.

AISC: American Institute of Steel Construction.

ACI: American Concrete Institute.

ADA: Americans with Disabilities Act – Accessibility Guidelines for Buildings and Facilities.

GC: General Terms and Conditions, City and County of Honolulu.

BC: Latest approved building, electrical, plumbing and energy codes of the City and County of Honolulu.

SS: Standard Specifications for Public Works Construction, Department of Public Works, City and County of Honolulu.

SD: Standard Details of the Department of Public Works, City and County of Honolulu, dated September 1984, including Plumbing Codes for the City and County of Honolulu.

BWS: Board of Water Supply, City and County of Honolulu, Water System Standards, Vol. 1, and Approved Material List and Standard Details for Water System Construction, Vol. 2, dated 2002, and Water System External Corrosion Control Standards, Vol. 3, dated 1991. Do all work in accordance with the above standards as amended and amplified herein.

OIC: The Director of the Department of Design and Construction or a representative of the Director acting within the scope of the duties and authority assigned and delegated to him as such representative.

DDC-CI: Department of Design and Construction, Construction Inspector.

END OF SECTION

DIVISION 1 – GENERAL REQUIREMENTS

SECTION 01015 – CONTRACTOR USE OF PREMISES

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS: The General Terms and Conditions, City and County of Honolulu (not specifically attached), the Special Provisions, and all other applicable documents preceding these specifications shall govern all work specified hereinafter in all DIVISIONS AND SECTIONS.

1.02 SPECIAL NOTICE:

A. The Contractor will submit a request to the Officer-in-Charge, when he determines that sufficient materials are available at the job site for this work to begin without any break in the construction period to wait for delivery of additional items. No onsite work will begin until the Officer-in-Charge, concurs and approves this request from the Contractor. Once on site work commences, the Contractor, if need be, shall air freight at his own cost, all materials and equipment needed at the jobsite in order to complete the work within the project completion time.

B. Within twenty-five (25) calendar days of the date that work is projected to start at the job site, the Contractor shall submit for approval, a performance schedule to include all construction and phasing activities related to this project, to the Officer-in-Charge, as required by paragraph (e) Payment and Performance Schedules, Item 5. Performance, Chapter 5 – Construction Contract Provisions Supplement of the General Terms and Conditions, City and County of Honolulu. This schedule shall clearly identify when temporary utility connections will occur and/or when City operations shall be affected.

All Contractors must be familiar with the project site and familiarize themselves with existing conditions and the amount and kind of work to be performed relating to methods of construction and labor under which the work will be performed.

Unless otherwise specifically indicated, it is the intent of this project that all City functions shall continue during this construction contract. These City functions include, but are not limited to activities such as park programs, public safety functions such as police, fire, ambulance, performance events such as those at the Blaisdell

Center, and public service offices such as for real property, road maintenance, City administration, satellite city halls, etc.

The Contractor must employ whatever reasonable methods and means necessary to carry out his work so as not to cause any objectionable interruption or interference to the normal operations of the City and County of Honolulu. The Contractor shall schedule its objectionable operations to be performed during City's non-working hours at no additional cost to the City. Objectionable operations are work that causes interruption and interference to the normal operations of the City and may include (1) scheduled events, (2) demolition work, (3) work such as drilling, grinding, tamping, and saw cutting and/or using equipment emanating loud noise, (4) non-containable dust inducing operations, and (5) use of liquid that emits offensive and/or irritating odor or fumes. The Contractor shall include in his total lump sum bid all additional costs related to the foregoing matter. The Contractor shall not be required to pay for the cost of inspection for overtime work during non-working hours that the City requests the Contractor work because of objectionable operations. All other costs of inspection for overtime work shall be paid for by the Contractor.

C. Contractor shall maintain a safe passageway to and from the building for the City and County personnel and the public at all times.

D. Contractor shall call the Construction Management Branch of the Facilities Division, Department of Design and Construction, telephone number 768-8457, and give five (5) working days notice before starting any work.

1.03 PROTECTION OF PROPERTY: The Contractor shall continually maintain adequate protection of all his work from damage and shall protect all property at the project site, including buildings, equipment, furniture, grounds, vegetation, materials, utility systems located at the job site, etc. The Contractor shall repair, replace or pay the expense of repair or damages resulting from his fault or negligence.

PART 2 – PRODUCTS (NONE)

PART 3 – EXECUTION (NONE)

END OF SECTION

DIVISION 1 – GENERAL REQUIREMENTS

SECTION 01035 – CONSTRUCTION PROJECT PROCEDURES

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS: The General Terms and Conditions, City and County of Honolulu (not specifically attached), the Special Provisions, and all other applicable documents preceding these specifications shall govern all work specified hereinafter in all DIVISIONS AND SECTIONS.

1.02 NOTICE TO PROCEED FOR CONSTRUCTION:

In accordance with paragraph 5.2.2 Commencement Requirements, Chapter 5. Construction Contract Provisions Supplement, of The General Terms and Conditions, City and County of Honolulu, it is the intent of the City to issue a Notice to Proceed (NTP) within one hundred eighty (180) calendar days of execution of the construction contract.

Reference also, Paragraph 3 of the OFFER, relating to the construction period for the construction contract.

1.03 MATERIAL SUBMITTALS: Upon issuance of the NTP, the Contractor shall immediately begin processing submittals of shop drawings, catalog cuts, samples, etc., for approval.

1.04 PAYMENT FOR DELIVERED MATERIALS: After issuance of the NTP, the following delivered material or equipment which costs are substantiated by evidence of payment by the Contractor or its subcontractors may be allowed progress payment up to ninety percent of the delivered cost in accordance with paragraph 5.4.6, Payment for Delivered Materials or Equipment, Chapter 5, Construction Contract Provisions Supplement, of the General Terms and Conditions, City and County of Honolulu.

PART 2 – PRODUCTS (NONE)

PART 3 – EXECUTION

3.01 INSTALLATION: Unless otherwise noted, all installation/application of equipment/material shall be done in accordance with manufacturer's written instructions and recommendations. All equipment shall include operation and maintenance manuals.

END OF SECTION

DIVISION 1 – GENERAL REQUIREMENTS

SECTION 01060 – REGULATORY REQUIREMENTS

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS: The General Terms and Conditions, City and County of Honolulu (not specifically attached), the Special Provisions, and all other applicable documents preceding these specifications shall govern all work specified hereinafter in all DIVISIONS AND SECTIONS.

1.02 LICENSED OFFERORS:

All prospective offerors must hold a current A or B contractor's license from the State of Hawaii. No offer will be accepted from any unlicensed offeror.

Please also note in the Offer, the requirement for listing of all joint contractors or subcontractors.

PART 2 – PRODUCTS (NONE)

PART 3 – EXECUTION (NONE)

END OF SUBJECT

DIVISION 1 – GENERAL REQUIREMENTS

SECTION 01300 – SUBMITTALS

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS: The General Terms and Conditions, City and County of Honolulu (not specifically attached), the Special Provisions, and all other applicable documents preceding these specifications shall govern all work specified hereinafter in all DIVISIONS AND SECTIONS.

1.02 SUBMITTALS:

A. Substitution of Materials and Equipment: Substitution requests shall be in accordance with Paragraph 2.18(b) Request for Substitution, Chapter 2.0 SOLICITATION, of the General Instructions to Offerors.

B. Shop Drawing/Material Submittal:

1. Submittal Schedule: Submit two (2) copies of schedule. Arrange the following in tabular format:

a. Scheduled date for submittal

b. Specification Section number and title

c. Description of work covered

d. Scheduled date for City's final release and approval

2. Submittal Identification:

   a. To avoid rejection and to expedite each submittal, the General Contractor shall have a rubber stamp made up in the following format:

      (JOB TITLE)
      (JOB NO.)

      THIS SUBMITTAL HAS BEEN CHECKED BY THIS GENERAL CONTRACTOR AND IS CERTIFIED CORRECT AND IN COMPLIANCE WITH CONTRACT DRAWINGS AND SPECIFICATIONS

      SUBMITTAL # _____
      SPEC. SEC. # AND NAME _____
      SUBCONTRACTOR NAME _____
      SUPPLIER NAME _____
      MANUFACTURER NAME _____

      _____
      CONTRACTOR'S NAME

      CERTIFIED BY _____
      (Contractor's Signature)

   b. This stamp "filled in" should appear on the title sheet of each shop drawing, on a cover sheet of the submittals in an 8 ½" x 11" format or on one face of a cardstock tag (minimum 3" x 6") tied to each sample. The tag on the samples should state what the sample is so that if the tag is accidentally separated from the sample, they can be matched up again. The back of this page will be used by the Officer-in-Charge for his receipt, approval, and log stamp and for any comments that relate to the sample.

3. Submittal Format: Submittals shall be transmitted with a letter in the format as shown on the attached submittal sample at the end of this section. All non-applicable data shall be blocked out and minor deviations from specifications and plans shall be clearly marked and justified. Unless otherwise indicated in the applicable specification sections, the Contractor shall present the submittal items according to the following:

a. Certification of Compliance: The original and two (2) copies of the signed manufacturer's certificate indicating compliance to the provisions of the specifications and certifying that the material does not contain asbestos. The Certificate of Compliance shall be on an 8½" x 11" sheet.

b. Product Data: Six (6) copies of product data, such as a manufacturer's data, Manufacturer's Safety Data Sheet (MSDS) and catalog cuts that indicate conformance to the provisions of the specifications regarding materials, appearance, and finishes. Product data shall conform to an 8½" x 11" format.

c. Samples: Three (3) samples of each material as indicated in the applicable specification sections. Samples required by specification sections for color, texture, or finish selection and/or approval, shall be no smaller than 3" x 3" and of the actual material to be used. Catalog cuts, photographs, or otherwise "similar" representations are not acceptable submittals.

   Each sample shall be properly labeled, cross-referencing the specification item; as well as planned location (i.e., New Weight Room, etc.).

d. Shop Drawings: Ten (10) prints of drawings indicating how specific portions of the work are to be fabricated or installed by the Contractor. Drawings are either confirmation of conditions detailed in the construction documents, clarification, or planned conditions not readily indicated in the construction documents, that maintain the design intent. Shop drawings shall be cross-referenced to corresponding items in construction documents. As much as possible, shop drawings should conform to an 8 ½" x 11" format (i.e., capable of being folded to 8 ½" x 11" for filing), but in no case shall exceed 24" x 36" size sheets.

e. Guarantee/Warranties: The original and three (3) copies of a written guarantee, signed as directed in the applicable specification section, for the scope of work and duration indicated in the applicable specification section. Unless otherwise indicated in the applicable specification section, guarantee periods shall be for one (1) year and start at the time of acceptance by the City. Guarantees shall conform to an 8 ½" x 11" format.

f. Test Reports: Six (6) copies of test reports for any material used in this contract shall be submitted when specified or required by the Officer-in-Charge.

g. Maintenance Data and Operating Instructions: Six (6) copies of maintenance data and operating instructions shall be submitted at the conclusion of the equipment installation. The manual shall include instructions for operating, maintenance, repair, recommended inspection points and periods for inspection in a practical, complete, and comprehensive manner. The information shall be arranged in a logical, orderly sequence, including a general description of the equipment and significant technical characteristics. Tests, adjustment, and calibration information shall include illustrations, diagrams, and step-by-step procedures.

4. Electronic Submittal Format: Electronic submittals may be made at the discretion of the Officer-in-Charge. The intent of the Electronic Submittal Format is to expedite the construction process; therefore it is at the discretion of the Officer-in-Charge to eliminate the Electronic Format if at any time the process is not a benefit to the project. Requirements of the Electronic Submittal shall adhere to the format requirements above and to the following:

   a. Electronic submittals are to be sent as a single file.

   b. 8 ½”x11” and 11”x17” format submittals are the only allowed Electronic Submittal.

   c. Submittals shall be transmitted with the Submittal Identification and a letter as shown on the attached submittal sample at the end of this section.

   d. Submittals are to be transmitted via email; File Transfer Protocol (FTP) transmissions are not acceptable. Compressed file formats such as “ZIP” files are not allowed. Attachment file sizes shall not be larger than 20 megabytes (mb). It is the responsibility of the Sender (entity sending the Electronic Submittal) to confirm the receiving entity has received the Electronic Submittal. The Officer-in-Charge will provide email addresses of persons authorized to receive emailed submittals.

e. The Electronic Submittal Format process is not intended for the Certification of Compliance, Samples, Guarantee/Warranties and the Maintenance Data and Operating Instructions submittals.

1.03 AS-BUILT DRAWINGS: The Contractor shall maintain at the job site two (2) sets of full-size contract drawings, marking them in red to show all variations between the construction actually provided and that indicated or specified in the contract documents, including buried or concealed construction. Where a choice of material or method is permitted herein or where variations in scope or character of work from that of the original contract are authorized, the drawings shall be marked to define the construction actually provided. Where equipment installation is involved, the size, manufacturer's name, model number, power input or output characteristic applicable shall be shown on the as-built drawings.

The representation of such change shall conform to standard drafting practice and shall include such supplementary notes, legends, and details as necessary to clearly portray the as-built construction. If drawings are prepared on Computer Aided Drafting (CAD) system, drawings are to be prepared using software compatible with the City and County of Honolulu, Department of Design and Construction, Facilities Division software, review with Officer-In-Charge. The file shall be provided to the City on compact disks (CD).

The drawings shall be maintained and updated on a daily basis. The Contractor shall stamp, sign, and date each sheet with the following stamp:

AS-BUILT DRAWINGS

This certifies that the dimensions and details shown on this sheet reflect the dimensions and details, and specifications as constructed in the field.

_____

CONTRACTOR'S NAME

_____

Signature Date

Monthly and final payments to the Contractor shall be subject to prior approval of these drawings. Upon completion of the work, both sets of marked-up drawings shall be delivered to the Officer-in-Charge and shall

be subject to the approval of the Officer-in-Charge before acceptance of the project shall be considered.

1.04 COMPLETION FOLDER: Upon completion of the work, the Contractor shall deliver to the Officer-in-Charge three (3) sets of a completion folder containing the information listed below. The listed items may be requested elsewhere and shall be in addition to that request.

A. Project Personnel – A listing of the Contractor's personnel and position.

B. Subcontractor/Vendor – A listing of the subcontractors and vendors and work description.

C. Emergency Notification – A listing of persons to call for emergency.

D. Guarantees – A copy of guarantees and warranties.

E. Equipment – An inventory listing of the equipment.

F. Instruction/Operation Manuals – A listing of the instruction and operation manuals provided.

G. Additional Material – A listing of the additional project material (paint, carpet, etc.), quantity, and location material delivered to.

(SHOP DRAWING/MATERIAL SUBMITTAL – SAMPLE)

DATE: _____

Director
Department of Design and Construction
City and County of Honolulu
650 South King Street, 11th Floor
Honolulu, Hawaii 96813

Director:

Subject: _____

_____

We herewith submit for your approval the following item(s) for the subject project:

NO. OF COPIES	ITEM	SUPPLIER OR SUBCONTRACTOR

Your early review and approval of the above item(s) will be greatly appreciated.

_____
SIGNATURE

NOTE: 1. Please use own letterhead.
2. Submit original and two (2) copies of letter.

END OF SECTION

SECTION 01310 – CONSTRUCTION SCHEDULES

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS: The General Terms and Conditions, City and County of Honolulu (not specifically attached), the Special Provisions, and all other applicable documents preceding these specifications shall govern all work specified hereinafter in all DIVISIONS AND SECTIONS.

1.02 RELATED DOCUMENTS:

A. Related requirements specified elsewhere:

1. Conditions of the Contract.
2. Section 01300: Submittals

1.03 SUBMITTALS:

A. Provide projected Construction Schedules for all Work that is part of this Contract, revise periodically.

1.04 FORM OF SCHEDULES: The overall master construction schedule shall be in a detailed precedence-style critical path method (CPM) or primavera type format satisfactory to the Officer-In-Charge which shall also: (1) provide a graphic representation of all activities and events that will occur during performance of the Work; (2) identify each phase of construction and occupancy; and (3) set forth dates that are critical in ensuring the timely and orderly completion of the Work in accordance with the requirements of the Contract Documents. In addition to the overall master schedule, the Contractor shall, on a weekly basis, present a "three-week schedule.

1.05 CONTENT OF SCHEDULES:

A. Provide complete sequence of construction by activity.

1. Decision dates for:

a. Products specified by allowances.
b. Selection of finishes.

2. Product procurement and delivery dates.
3. Dates for beginning, and completion of each element of construction.

1.06 UPDATING:

A. Show all changes occurring since previous submission of updated schedule.

B. Indicate progress of each activity, show completion dates.

C. Include:

1. Major changes in scope.
2. Activities modified since the previous update.
3. Revised projections due to changes.
4. Other identifiable changes.

1.07 SUBMITTALS:

A. Submit initial schedules (one (1) xerox vellum and five (5) prints) within ten (10) days after date of Notice to Proceed.

1. Officer-In-Charge will review schedules and return review copy within ten (10) days after receipt.
2. If required, resubmit as directed.

B. Submit updated schedules accurately depicting progress to first day of each month. Updates require one (1) Xerox vellum and five (5) prints or as directed by Officer-In-Charge.

PART 2 - PRODUCTS (NONE)

PART 3 - EXECUTION (NONE)

END OF SECTION

DIVISION 1 – GENERAL REQUIREMENTS

SECTION 01340 – PRODUCT DATA

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS: The General Terms and Conditions, City and County of Honolulu (not specifically attached), the Special Provisions, and all other applicable documents preceding these specifications shall govern all work specified hereinafter in all DIVISIONS AND SECTIONS.

1.02 EQUIPMENT INVENTORY DATA: The Contractor shall provide the following equipment data to the Officer-in-Charge prior to the issuance of a Final Acceptance Notice:

	Equipment	Data Required
A.	NONE	NONE

PART 2 – PRODUCT (NONE)

PART 3 – EXECUTION (NONE)

END OF SECTION

SECTION 01400 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS: The General Terms and Conditions, City and County of Honolulu (not specifically attached), the Special Provisions, and all other applicable documents preceding these specifications shall govern all work specified hereinafter in all DIVISIONS AND SECTIONS.

1.02 SUMMARY:

A. Section includes administrative and procedural requirements for quality assurance and quality control.

B. Testing and inspection services are required to verify compliance with the requirements specified or indicated. These services do not relieve the Contractor of responsibility for compliance with the Contract Document requirements.

1. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and quality-control procedures that facilitate compliance with the Contract Document requirements.
2. Requirements for the Contractor to provide quality-assurance and quality-control services required by the City, or authorities having jurisdiction are not limited by provisions of this Section.

1.03 DEFINITIONS:

A. Experienced: When used with an entity or individual, "experienced," unless otherwise further described, means having successfully completed a minimum of five (5) previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

B. Field Quality-Control Tests: Tests and inspections that are performed on-site for installation of the Work and for completed Work.

C. Mockups: Full-size physical assemblies that are constructed on-site either as freestanding temporary built elements or as part of permanent construction. Mockups are constructed to verify selections made under Sample submittals; to demonstrate aesthetic effects and qualities of materials and execution; to review coordination, testing, or operation; to show the interface between dissimilar materials; and to demonstrate compliance with specified installation tolerances. Mockups are not Samples. Unless otherwise indicated, approved mockups establish the standard by which the Work will be judged.

1. Integrated Exterior Mockups: Mockups of the exterior envelope constructed on-site as freestanding temporary built elements or as part of permanent construction, consisting of multiple products, assemblies, and subassemblies.

D. Preconstruction Testing: Tests and inspections performed specifically for Project before products and materials are incorporated into the Work, to verify performance or compliance with specified criteria.

E. Product Tests: Tests and inspections that are performed by a nationally recognized testing laboratory (NRTL) according to 29 CFR 1910.7, by a testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program (NVLAP), or by a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.

F. Source Quality-Control Tests: Tests and inspections that are performed at the source; for example, plant, mill, factory, or shop.

G. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as a testing agency.

H. Quality-Assurance Services: Activities, actions, and procedures performed before and during the execution of the Work to guard against defects and deficiencies and substantiate that the proposed construction will comply with requirements.

I. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate those actual products incorporated into the Work and completed construction comply with requirements. The contractor’s quality-control services do not include contract administration activities performed by the Architect of Record.

1.04 DELEGATED-DESIGN SERVICES:

A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of the Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.

1.05 CONFLICTING REQUIREMENTS:

A. Conflicting Standards and Other Requirements: If compliance with two or more standards or requirements are specified and the standards or requirements establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer conflicting requirements that are different, but apparently equal, to Architect for direction before proceeding.

B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to the Officer-In-Charge for a decision before proceeding.

1.06 ACTION SUBMITTALS:

A. Delegated-Design Services Submittal: In addition to Shop Drawings, Product Data, and other required submittals, submit a statement signed and sealed by the responsible design professional, for each product and system specifically assigned to the Contractor to be designed or certified by a design professional, indicating that the products and systems are in compliance with performance and design criteria indicated. Include a list of codes, loads, and other factors used in performing these services.

1.07 INFORMATIONAL SUBMITTALS:

A. Contractor's Statement of Responsibility: When required by authorities having jurisdiction, submit a copy of the written statement of responsibility submitted to authorities having jurisdiction before starting work.

B. Testing Agency Qualifications: For testing agencies specified in the "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.

C. Permits, Licenses, and Certificates: For the City's record, 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 the performance of the Work.

1.08 REPORTS AND DOCUMENTS:

A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:

1. Date of issue.
2. Project title and number.
3. Name, address, telephone number, and email address 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. Record temperature and weather conditions at the time of sample taking and testing, and inspection.
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.

B. Manufacturer's Technical Representative's Field Reports: Prepare written information documenting the manufacturer's technical representative's tests and inspections specified in other Sections. Include the following:

1. Statement on the condition of substrates and their acceptability for installation of the product.
2. Statement that products at the Project site comply with requirements.
3. Summary of installation procedures being followed, whether they comply with requirements, and, if not, what corrective action was taken.
4. Results of operational and other tests and a statement of whether observed performance complies with requirements.
5. Other required items are indicated in individual Specification Sections.

C. Factory-Authorized Service Representative's Reports: Prepare written information documenting the manufacturer's factory-authorized service representative's tests and inspections specified in other Sections. Include the following:

1. Statement that equipment complies with requirements.
2. Results of operational and other tests and a statement of whether observed performance complies with requirements.
3. Other required items are indicated in individual Specification Sections.

1.09 QUALITY ASSURANCE:

A. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.

B. Manufacturer Qualifications: A firm experienced in manufacturing products or systems 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. As applicable, procure products from manufacturers able to meet qualification requirements, warranty requirements, and technical or factory-authorized service representative requirements.

C. Fabricator Qualifications: 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.

D. Installer Qualifications: Experienced in installing, erecting, applying, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.

E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in the jurisdiction where the Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar in material, design, and extent to those indicated for this Project.

F. Specialists: Certain Specification Sections require that specific construction activities shall be performed by entities who are recognized experts in those

operations. Specialists shall satisfy the qualification requirements indicated and shall be engaged for the activities indicated.

1. Requirements of authorities having jurisdiction shall supersede requirements for specialists.

G. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspection indicated, as documented according to ASTM E329; and with additional qualifications specified in individual Sections; and, where required by authorities having jurisdiction, that is acceptable to authorities.

H. Manufacturer's Technical Representative Qualifications: An authorized representative of the manufacturer who is trained and approved by the manufacturer to observe and inspect the installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

I. Factory-Authorized Service Representative Qualifications: An authorized representative of the manufacturer who is trained and approved by the manufacturer to inspect the installation of the manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

J. Preconstruction Testing: Where a testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following:

1. Contractor responsibilities include the following:

    a. Provide test specimens representative of proposed products and construction.
    b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
    c. Build laboratory mockups at the testing facility using personnel, products, and methods of construction indicated for the completed Work.
    d. When testing is complete, remove test specimens and test assemblies, and mockups.

2. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to the Officer-In-Charge, with a copy to the Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.

K. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:

1. Build mockups of the size indicated.

2. Build mockups in the location indicated or, if not indicated, as directed by Officer-In-Charge.
3. Notify the Officer-In-Charge seven (7) days in advance of dates and times when mockups will be constructed.
4. Employ supervisory personnel who will oversee mockup construction. Employ workers that will be employed to perform the same tasks during the construction at Project.
5. Demonstrate the proposed range of aesthetic effects and workmanship.
6. Obtain the Officer-In-Charge's approval of mockups before starting corresponding work, fabrication, or construction.
7. Allow seven (7) days for the initial review and each re-review of each mockup.
8. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
9. Demolish and remove mockups when directed unless otherwise indicated.

1.10 QUALITY CONTROL:

A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.

1. Owner will furnish the Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of the types of testing and inspection they are engaged to perform.
2. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to the Contractor, and the Contract Sum will be adjusted by Change Order.

B. Contractor Responsibilities: Tests and inspections not explicitly assigned to the City are Contractor's responsibility. Perform additional quality-control activities, whether specified or not, to verify and document that the Work complies with requirements.

1. Engage a qualified testing agency to perform quality-control services.

    a. Contractor shall not employ the same entity engaged by the City and County of Honolulu unless agreed to in writing by the City and County of Honolulu.

2. Notify testing agencies at least Twenty-four (24) hours in advance of the time when Work that requires testing or inspection will be performed.
3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
4. Testing and inspection 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.

C. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.

D. Testing Agency Responsibilities: Cooperate with the Officer-In-Charge and the Architect of Record, and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.

1. Notify Officer-In-Charge and Contractor promptly of irregularities or deficiencies observed in the Work during the performance of its services.
2. Determine the locations from which test samples will be taken and in which in-situ tests are conducted.
3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through the Contractor.
5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
6. Do not perform the duties of the Contractor.

E. 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 as specified in Section 01300, "Submittals."

F. Manufacturer's Technical Services: Where indicated, engage a manufacturer's technical representative to observe and inspect the Work. Manufacturer's technical representative's services include participation in preinstallation conferences, examination of substrates and conditions, verification of materials, observation of Installer activities, inspection of completed portions of the Work, and submittal of written reports.

G. Associated Contractor Services: Cooperate with agencies and representatives 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 inspection. Assist the 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 the testing agency.
6. Security and protection for samples and for testing and inspection equipment at the Project site.

H. Coordination: Coordinate a sequence of activities to accommodate required quality-assurance and quality-control services with a minimum of delay and to

avoid the necessity of removing and replacing construction to accommodate testing and inspection.

1. Schedule times for tests, inspections, obtaining samples, and similar activities.

1.11 SPECIAL TESTS AND INSPECTIONS:

A. Special Tests and Inspections: Engage a qualified testing agency, and special inspector to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of the City, as indicated in the Statement of Special Inspections attached to this Section, and as follows:

1. Verifying that the manufacturer maintains detailed fabrication and quality-control procedures and reviewing the completeness and adequacy of those procedures to perform the Work.
2. Notifying the Officer-In-Charge and Contractor promptly of irregularities and deficiencies observed in the Work during the performance of its services.
3. Submitting a certified written report of each test, inspection, and similar quality-control service to the Officer-In-Charge with a copy to the Contractor and to authorities having jurisdiction.
4. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
5. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
6. Retesting and reinspecting corrected work.

PART 2 - PRODUCTS (NONE)

PART 3 - EXECUTION

3.01 TEST AND INSPECTION LOG:

A. Test and Inspection Log: Prepare a record of tests and inspections. Include the following:

1. Date test or inspection was conducted.
2. Description of the Work tested or inspected.
3. Date test or inspection results were transmitted to Officer-in-Charge.
4. Identification of testing agency or special inspector conducting test or inspection.

B. Maintain log at the Project site. Post changes and revisions as they occur. Provide access to the test and inspection log for the Officer-In-Charge's reference during normal working hours.

1. Submit the log at Project closeout as part of Project Record Documents.

3.02 REPAIR AND PROTECTION:

A. General: On completion of testing, inspection, sample taking, and similar services, repair damaged construction and restore substrates and finishes.

1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Comply with the Contract Document requirements for cutting and patching in Section 01730 "Execution."

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.

END OF SECTION

DIVISION 1 – GENERAL REQUIREMENTS

SECTION 01450 – SERVICE OF MANUFACTURER'S REPRESENTATIVE

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS: The General Terms and Conditions, City and County of Honolulu (not specifically attached), the Special Provisions, and all other applicable documents preceding these specifications shall govern all work specified hereinafter in all DIVISIONS AND SECTIONS.

1.02 SCOPE: The services of the Manufacturer's Representative shall be required for the products as called for in other sections of these specifications.

1.03 RELATED WORK: Individual requirements are described in pertinent other sections of these specifications.

1.04 QUALITY ASSURANCE: The Manufacturer's Representative shall be competent, thoroughly trained and experienced in the work and shall be completely familiar with the product or equipment, the specified requirements and the methods needed for the proper performance of the product or equipment.

1.05 SUBMITTALS:

A. Qualifications: Submit, if requested by the Officer-in-Charge, the qualifications and experience of the Manufacturer's Representative.

B. Report: Submit a written report by the Manufacturer's Representative attesting that the product or equipment was installed in accordance with the Manufacturer's instructions and that the City's personnel have been properly instructed in its operation and/or maintenance.

1.06 GENERAL REQUIREMENTS: Obtain the Manufacturer's Representative service and be responsible for the Manufacturer's Representative.

PART 2 – PRODUCTS (NOT APPLICABLE)

PART 3 – EXECUTION

3.01 SERVICES OF MANUFACTUERER'S REPRESENTATIVE

A. The Manufacturer's Representative shall be present as often as he deems necessary to assure the proper performance of the product or equipment.

B. The service for the product or equipment shall include but not be limited to:

1. Inspection: Examine the areas and conditions under which the product or equipment is to be installed and report to the Contractor any unsatisfactory conditions for corrections by the Contractor.

2. Preparation: Check for defects and completeness of product, equipment, and parts.

3. Tests: Test any condition, which may affect the performance of the product or equipment.

4. Installation: Render assistance to the Contractor as required and ensure that manufacturer's installation instructions are being understood and followed.

5. Instructions to Personnel: Instruct the operating personnel in the aspects of installed product maintenance.

6. Operations and Maintenance Manual: Demonstrate the contents of the operations and maintenance manual if required to be submitted under Section 01300 – SUBMITTALS.

7. Follow-Up: Provide follow-up service in case of problems involving product related to possible product failure, incompatibility with other products or conditions, or maintenance problems during guarantee time.

END OF SECTION

DIVISION 1 – GENERAL REQUIREMENTS

SECTION 01500 – CONSTRUCTION FACILITIES AND TEMPORARY UTILITIES

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS: The General Terms and Conditions, City and County of Honolulu (not specifically attached), the Special Provisions, and all other applicable documents preceding these specifications shall govern all work specified hereinafter in all DIVISIONS AND SECTIONS.

1.02 SECTION INCLUDES:

A. Temporary Utilities: Electricity, lighting, ventilation, telephone service, water, and sanitary facilities.

B. Temporary Controls: Barriers, fencing, protection of the work, security and temporary fire protection.

C. Construction Facilities: Access, parking, and progress cleaning.

1.03 REFERENCE: HIOSH-Occupational Safety and Health Standards, State of Hawaii.

1.04 REGULATORY REQUIREMENTS: Comply with DOSH, including but not limited to Part 3 – Construction Standards.

1.05 TEMPORARY VENTILATION: Ventilate enclosed areas to assist cure of materials to dissipate humidity, and to prevent accumulation of dust, fumes, and vaporous organisms.

1.06 SANITARY FACILITIES:

A. Temporary Toilet Facilities: Contractor may use the public toilet within the building.

1.07 BARRIERS:

A. Provide barriers, covers and flashers to prevent unauthorized entry to construction areas and to prevent existing facilities and adjacent properties from damage from construction operations.

B. Protect non-owned vehicular traffic, stored materials, site and structures from damage.

C. The Contractor shall take precaution to protect people and property from injury and damage. Contractor shall augment the barricades as required to delineate the work areas and provide the appropriate signage and hazard lights, as directed by the Officer-in-Charge. Signs shall be neat, enamel painted and fabricated by personnel normally engaged in the sign industry.

D. The Contractor shall be responsible for Contractor's security and protection of Contractor's property, including mobilization yard barriers.

E. Provide protection for plant life designated to remain. Replace damaged plant life.

F. Barricades, in general, shall be neat, as required for protection and adequately anchored and braced.

1.08 PROTECTION OF INSTALLED WORK:

A. Protect installed work and provide special protection where specified in individual specification sections.

B. Provide temporary and removable protection for installed products. Control activity in immediate work area to minimize damage.

1.09 SECURITY: Provide security and facilities to protect work from unauthorized entry, vandalism, or theft.

1.10 TEMPORARY FIRE PROTECTION: Provide fire protection and prevention in accordance with DOSH, Chapter 113.

1.11 ACCESS AND PARKING AREAS:

A. Access: Arrange Contractor's access to project site with the Officer-in-Charge and make changes as work progresses.

B. Parking: Contractor's employees, agency and subcontractors and their employees, shall make their arrangements for parking with the Officer-in-Charge. Contractor and their subs may need to find additional parking on the street-metered stalls.

1.12 STAGING AND WORK AREAS: There will be a limited, confined staging area in the proximity of the jobsite, provided by the City.

1.13 PROGRESS CLEANING AND WASTE REMOVAL:

A. Comply with the General Terms and Conditions.

B. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly fashion.

C. Remove debris and rubbish from pipe chases, and other closed or remote spaces, prior to enclosing space.

D. Clean areas prior to start of surface finishing, and continue cleaning to eliminate dust.

E. Contractor shall remove waste materials, debris, and rubbish from the site daily and legally dispose off-site, or as requested by the Officer-in-Charge.

F. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

1.14 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS:

A. Remove temporary utilities, equipment, facilities, and materials prior to Substantial Completion inspection.

B. Clean and repair damage caused by installation or use of temporary work.

C. Restore existing facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.

1.15 SAFETY MEASURES: Comply with the amended Section 3307 Protection of Adjoining Property of the 2018 International Building Code, by addition of a second paragraph which reads as follows:

"The Contractor doing the excavation or fill shall be responsible to implement safety measures, to include but not limited to safety nets, retaining walls or fences, and berms or trenches, to prevent falling rocks, boulders, soil, debris and other dangerous objects from falling, sliding or flowing onto adjoining properties, streets or natural watercourses, or

otherwise causing injury or damage to persons or property in fulfillment of the Revised Ordinances of Honolulu (ROH) 1991."

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01533 - BARRICADES

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS: The General Terms and Conditions, City and County of Honolulu (not specifically attached), the Special Provisions, and all other applicable documents preceding these specifications shall govern all work specified hereinafter in all DIVISIONS AND SECTIONS.

1.02 DESCRIPTION OF WORK: Provide barricades as required, and as acceptable to the Officer-in-Charge (OIC), to prevent people from entering the project area and to protect enclosed property.

1.03 GENERAL REQUIREMENTS:

A. The Contractor shall take precaution to protect people and property from injury and damage. The Contractor shall augment the barricades as required to delineate the work areas and provide the appropriate signage and hazard lights, as directed by the OIC. Signs shall be neat, enamel painted and fabricated by personnel normally engaged in the sign industry.

B. The Contractor shall be responsible for their own security and protection of their property, including mobilization yard barricades.

C. Barricades, in general, shall be neat, as required for protection and adequately anchored and braced.

D. Security shall be maintained against access onto the work areas at all times except the Contractor shall allow for authorized City personnel.

END OF SECTION

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01560 - ENVIRONMENTAL CONTROLS

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS: The General Terms and Conditions, City and County of Honolulu (not specifically attached), the Special Provisions, and all other applicable documents preceding these specifications shall govern all work specified hereinafter in all DIVISIONS AND SECTIONS.

1.02 ENVIRONMENTAL PROTECTION: With the exception of those measures set forth elsewhere in these specifications, environmental protection shall consist of the prevention of environmental pollution as the result of construction operations under this contract. For the purpose of this specification, environmental pollution is defined as the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare, unfavorably alter ecological balances of importance to human life, affect other species of importance to man, or degree the utilization of the environment for aesthetic and recreational purposes.

1.03 APPLICABLE REGULATIONS: In order to provide for abatement and control of environmental pollution arising from the construction activities of the Contractor and his subcontractors in the performance of this contract, the work performed shall comply with the intent of the applicable Federal, State and local laws and regulations concerning environmental pollution control and abatement, including, but not limited to, the following regulations:

1. State of Hawaii, Department of Health, Administrative Rules, Chapter 55, WATER POLLUTION CONTROL; Chapter 54, WATER QUALITY STANDARDS.

2. State of Hawaii, Department of Health, Administrative Rules, Chapter 59, AMBIENT AIR QUALITY; Chapter 60.1, AIR POLLUTION CONTROL LAW.

3. State of Hawaii, Department of Health, Administrative Rules, Chapter 42, VEHICULAR NOISE CONTROL; Chapter 46, COMMUNITY NOISE CONTROLS.

4. Other regulations as noted on the drawings.

PART 2 - PRODUCTS

NONE

PART 3 - EXECUTION

3.01 AIR POLLUTION CONTROL:

A. Emission: The Contractor shall not be allowed to operate equipment and vehicles that show excessive emissions of exhaust gases until corrective repairs or adjustments are made, as determined by the Officer-in-Charge.

B. Dust: The Contractor, for the duration of the contract, shall maintain all excavations, haul roads, permanent access roads, plant sites, waste disposal areas, borrow areas, and all other work areas within or without the project limits free from dust which would cause a hazard to the work, or the operations of other contractors, or to persons' property. Contractor shall also control dust occurring from construction activities such as rough grading and grinding/cutting concrete or masonry. Industrial-accepted methods of stabilization suitable for the area involved, such as sprinkling or similar methods will be permitted. Chemical or oil treating shall not be used.

C. Burning shall not be permitted.

3.02 WATER POLLUTION CONTROL:

A. Wastes: The Contractor shall not deposit at the site or in its vicinity, solid waste or discharge liquid waste, such as fuels, lubricants, bituminous waste, untreated sewage and other pollutants, which may contaminate any surface water or ground water.

B. Spillages: Care shall be taken to ensure that no petroleum products, bituminous materials, or other hazardous substances, including debris, are allowed to fall, flow, leach, or otherwise enter any surface or ground water.

C. Erosion: Contractor shall provide any necessary temporary drainage, dikes, and similar facilities to prevent erosion damage to the site. Run-off shall be controlled to prevent damage to surrounding area.

3.03 DISPOSAL:

A. Construction waste, such as crates, boxes, building materials, pipes and other rubbish shall be disposed of at the County Disposal areas. Large

size objects shall be reduced to a size acceptable by the County Specifications. Other areas or methods proposed by the Contractor will be approved only if the Officer-in-Charge determines that their effect on the environment is equal to or less than those described herein.

B. Removal of wastes shall be a continuous on-going operation. Wastes and debris shall not be allowed to accumulate in large open piles.

C. Wind-blown wastes and debris shall be collected by the Contractor and disposed as described above.

END OF SECTION

SECTION 01715 – EXISTING CONDITIONS – LIMITED ASBESTOS AND LEAD PAINT SURVEY REPORT

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS: The General Terms and Conditions, City and County of Honolulu (not specifically attached), the Special Provisions, and all other applicable documents preceding these specifications shall govern all work specified hereinafter in all DIVISIONS AND SECTIONS.

1.02 SUMMARY:

A. This section includes the results of the City's survey for Asbestos Lead Paint Survey Report is provided for the Contractor's information.

1.03 ASBESTOS:

A. The structure or structures to be renovated or modified under this contract were surveyed for the presence of asbestos containing building materials (ACBM), using AHERA requirements. A copy of the initial survey report, as well as any subsequent supplemental survey report(s) if performed, are included in this Section.

1. The report(s) are included, even when no ACBM was found, for the Contractor's information. Review the attached report(s) for the basis on which the negative ACBM finding was made. Contractor may perform further surveys at its own expense, if ACBM not shown in the report(s) is suspected in the areas of the building(s) in which work will be performed. If ACBM is found, notify the Officer-In-Charge immediately. The City will reimburse the Contractor for the testing cost if ACBM is found.

2. If there is ACBM outside of the areas in which work will be performed, this ACBM shall not be disturbed in any way.

B. If applicable, notify employees, Subcontractors and all other persons engaged on the project of the presence of asbestos in the existing buildings in accordance with the requirements of Chapter 110, Article 12-110-2 (f) (1) (B) of the Occupational Safety and Health Standards, State of Hawaii.

C. In the event that work is required in any building or buildings on the site other than the one(s) designated within this project scope, request copies of the asbestos survey report(s) for such building(s) from the Officer-In-Charge. Based on the information contained in the additional survey(s), notify affected personnel per paragraph 1.02 B.

1.04 LEAD CONTAINING PAINT:

A. Inform employees, Subcontractors and all other persons engaged in the project that lead containing paints (LCP) is present in the existing building(s) and at the job site. Follow the requirements of Title 12 (Department of Labor and Industrial Relations), Subtitle 8 (Division of Occupational Safety and Health), Chapter 148 (Lead Exposure in Construction), Hawaii Administrative Rules.

B. Review the attached lead testing data which identify locations LCP was found. Lead testing was for design purposes only, and the results do not satisfy any of the requirements of Chapter 12-148.

PART 2 - PRODUCTS (NONE)

PART 3 - EXECUTION

3.01 SURVEY ATTACHED:

A. Asbestos and Lead paint survey.

END OF SECTION

EnvironMETeo Services, Inc.
Environmental / Industrial Health & Safety

Project Specific Asbestos and Lead Paint Survey Report

For:

Next Design, LLC

1003 Bishop Street, Suite 2000

Honolulu, Hawaii 96813

at

Building B

DFM Kokea Yard

455 Kokea Street

Honolulu, Hawaii 96817

Project:

DFM Kokea Yard PBEM Building B Envelope Improvements

Submitted by:

EnvironMETeo (EMET) Services Inc.

94-520 Ukee Street, Suite A

Waipahu, Hawaii 96797

Report Date: March 31, 2025

EMET ID: 2411391

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EnvironMETeo (EMET) Services, Inc. Waipio Gentry Business Park 94-520 Uke'e Street, Suite A Waipahu, Hawaii, USA 96797-4200
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Certification of Report

We certify that this report is based on a physical survey of EMET scope of work areas as impacted by this project at DFM Kokea Yard, located at 455 Kokea Street, Honolulu, Hawaii. The survey included an inspection for asbestos-containing materials (ACM) and lead paint on surfaces/building components.

The survey was conducted by EnvironMETeo Services, Inc. (EMET) on March 11, 2025 and was limited to the following scope of work:

Asbestos/Lead Paint Investigation

1. Inspection, evaluation, and sample collection of suspect asbestos-containing materials by EPA-accredited inspectors in accordance with H.A.R. 11-501 from the following:

   Building B

   - siding, louvers, and soffits
   - roof and roof insulation

2. Lead paint inspection by EPA-accredited inspectors from the areas indicated in item 1.

The survey results are based on analyses of samples of suspect materials collected from visually and physically accessible areas/materials.

Bulk samples of suspect asbestos-containing materials taken during the survey were analyzed for asbestos content by a National Institute of Standards and Technology (NIST) accredited laboratory under the National Voluntary Laboratory Accreditation Program (NVLAP) for asbestos fiber analysis. Laboratory analyses performed by Polarized Light Microscopy (PLM) for asbestos identification are in accordance with U.S. Environmental Protection Agency (EPA) Test Method 600/R-93/116.

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Painted surfaces were tested for lead concentrations using an X-Ray Fluorescence (XRF) spectrum analyzer, a testing methodology approved by the EPA and the U.S. Department of Housing and Urban Development (HUD).

Approximately 10 percent of each type of typical light fixtures was visually inspected on site by an inspector to determine if the ballasts contained PCBs and if the lamps contain Mercury.

EMET makes no warranty and assumes no liability for the inappropriate use or misuse of this document.



Bronson Groendyke
Asbestos Building Inspector
Hawaii State Certification # HIASB-4452
Lead Based Paint Risk Assessor
Hawaii State Certification # PB-1099

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Summary

EnvironMETeo Services, Inc. (EMET) conducted a survey for asbestos-containing materials (ACM) and lead paint on surfaces/building components at the Kokea Yard Building B, located at 455 Kokea Street, Honolulu, Hawaii, on March 11, 2025. Bronson Groendyke of EMET conducted the survey in accordance with Hawaii Administrative Rules (H.A.R) 11-501 as well as EMET's scope of work. The survey was requested and authorized by Stanford Lee of Next Design, LLC and was performed in preparation for planned renovations.

This report is for informational purposes only and should only be used as such. This report is not a specification and should not be used as such.

Asbestos Summary

The following materials were identified as ACM or are assumed to be ACM:

ACM

- black caulking at window frame around window at northeast corner of the building, approx. 40 lf
- roofing materials on the main roof of the building, assumed ACM*

*The main roof of the building cannot be safely accessed without a manlift. Suspect materials found on the main roof must be handled as ACM until properly tested.

Known or assumed ACM to be disturbed by renovation or demolition must be removed prior to the renovation or demolition by a Hawaii-certified Asbestos Abatement Contractor in accordance with HAR 11-501 and 11-502. A certified Asbestos Project Monitor should also be retained to provide oversight of abatement activity and ensure compliance with state and federal regulations during the abatement of ACM.

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Lead Paint Summary

Based on XRF test results, lead-based paint (LBP) was detected on the following painted components.

LBP

- orange paint on concrete curb
- beige paint on metal rafter

Paints on the following painted surfaces contain lead in a concentration of less than 1.0 mg/cm^2. The paints on theses surfaces are lead-containing paint (LCP). Paints on testing combinations similar to those identified with LBP or LCP should also be treated as LBP or LCP, respectively.

LCP

- beige paint on metal railing
- black paint on metal door
- black paint on metal door frame
- black paint on metal louvers
- gray paint on metal eaves
- beige paint on metal beams

Some of the painted surfaces tested using the XRF analyzer may have paint with lead at concentrations below the instrument level of detection (0.01 mg/cm^2).

Workers disturbing paint which may cause exposure to airborne lead must abide by the OSHA Lead in Construction standard.

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Asbestos-Containing Material

The State of Hawaii, OSHA, and EPA define ACM as any material containing more than one percent asbestos by area. This definition can be found in the following regulations:

- Hawaii Administrative Rules (HAR), Title 11, Department of Health, Chapter 501 (11-501), *Asbestos Requirements.*

- 29 CFR 1926.1101 Occupational Safety and Health Administration (OSHA), *Asbestos Standards for the Construction Industry.*

- EPA 40 CFR Part 61, Subpart M - National Emission Standards for Hazardous Air Pollutants (NESHAP), Final Rule revised July 20, 2004, *National Emission Standard for Asbestos.*

Asbestos Bulk Sampling

A total of 21 samples of suspect ACM were collected and analyzed. The samples were placed in plastic containers with a unique identification number assigned to each sample and entered on a field data sheet. The sample locations were indicated on the field drawings shown in Appendix B.

Samples were collected of the following observed suspect asbestos-containing material:

Suspect Materials

white caulking at door frame	black caulking at door frame
gypsum wallboard/mudjoint wall and ceiling system	black caulking at window frame
black caulking at louvers	white caulking at small louvers
white caulking at wall flashing	-

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The silver foil padded roof insulation found at the interior on the underside of the roof and the silicone caulking on the window panes were deemed not suspect for asbestos content by EMET's inspector.

Asbestos Analyses

Bulk samples were analyzed for asbestos using Polarized Light Microscopy (PLM) for the identification of asbestos, in accordance with EPA Test Method 600/R-93/116. Laboratory analytical data sheets are provided in Appendix A.

Based on the visual inspection and laboratory results of the samples collected, the following materials were identified as ACM or are assumed to be ACM as a result of this survey.

ACM Details

Material Description	Observed Quantity	Material Location	Condition; Friable/Non-Friable
black caulking at window frame	40 lf	perimeter window frames at the northeast corner of the building; see Sketch 391-B-1	not damaged, not friable
gypsum wallboard/ mudjoint wall system (mudjoint is ACM)	30 sf	walls next to sink in Room 7; see Sketch 281-B-1	not damaged, not friable
roofing materials	unknown	on the main roof (not accessible without manlift)	unknown, ASSUMED ACM

Any materials found on the main roof not characterized by this report must be assumed to be ACM until properly tested and proven otherwise.

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Known or assumed ACM to be disturbed by renovation or demolition must be removed prior to the renovation or demolition by a Hawaii-certified Asbestos Abatement Contractor in accordance with HAR 11-501.

A certified Asbestos Project Monitor should also be retained to provide oversight of abatement activity and ensure compliance with state and federal regulations during the abatement of ACM.

Lead Paint

U.S. Department of Housing and Urban Development (HUD) *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing*, 2012 Edition, defines lead-based paint (LBP) as paint with a lead content greater than or equal to 1.0 milligrams per square centimeter (mg/cm^2). The concentration 1.0 mg/cm^2 is equivalent to 5000 parts per million (ppm) and 0.5 percent weight (% wt.). EPA regulation 40 CFR Part 745 *Lead-based Paint Activities* similarly defines LBP as stated in HUD regulations.

OSHA regulates any activity disturbing paint that contains lead (referred to as lead-containing paint or LCP), even if the lead content is below the EPA/HUD standard for lead-based paint.

XRF test results of painted surfaces equal to or greater than 1.0 mg/cm^2 are defined as LBP in accordance with EPA and HUD regulations.

Lead Paint Sampling and Analyses

Painted surfaces were analyzed for lead using an XRF analyzer. A total of 48 analyses of painted surfaces/building components and calibrations were performed. A unique identification number was assigned to each test location and entered on a field data sheet.

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The ID number, location, description, and lead concentration of each sample is indicated in the XRF analyzer test results, which are provided in Appendix C.

The test results indicate that LBP is present on the following tested surfaces:

LBP Details

XRF Number and Location	Testing Combination (component/substrate)	Condition	Color
66, exterior	curb / concrete	peeling	orange
88, exterior, paint and thinner storage	rafter / metal	intact	beige

The paints on the following tested surfaces/building components are confirmed to contain lead in concentrations of less than 1.0 mg/cm^2. The paints on these surfaces are LCP. Testing combinations similar to those identified with LBP or LCP should also be treated as having LBP or LCP, respectively.

LCP Details

Location	Testing Combination (component/substrate)	Condition	Color
exterior	railing / metal	intact	beige
exterior	door / metal	intact	black
exterior	door frame / metal	intact	black
exterior	louvers / metal	intact	black
exterior	eave / metal	intact	gray
exterior	beam / metal	intact	beige

Workers disturbing paint which may cause airborne exposure to lead must abide by the OSHA Lead in Construction standard.

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Some of the painted surfaces tested may have paint with lead at concentrations below the instrument level of detection (0.01 mg/cm^2).

Painted surfaces may vary in paint type, color, and condition. Any damaged painted surfaces may vary significantly from area to area in terms of the condition and degree of damage. The results provide the lead content of all paint layers in a tested surface, as there may be more than one layer of paint on the tested surface.

Limitations

This hazardous materials survey was performed to identify suspect materials in areas scheduled for planned renovations. Original building plans and specifications and those for past renovations, if any, were not available for review.

Because of these limitations, the highly variable nature of building construction, and the limits to the survey as defined by EMET's scope of work, the potential remains for undiscovered hazardous materials.

This report is for informational purposes only and should only be used as such. This report is not a specification and should not be used as such.

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Appendix A

Asbestos Survey Report

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Building Information Sheet

Job Code /EMET ID	Client Name	Inspection date
2411391	Next Design LCC	3/11/2025

Building Number	Building Name	No. of Floors Surveyed
B	BUILDING B	1

Location

455 Kokea St.
Honolulu, HI 96817

No. of Other Levels Surveyed: 1

Building Construction Type

STEEL FRAME

Structural Concrete with: Metal Decks, Flat Slab, Beam/Joist or Waffle Slabs; Structural Tees
Steel Frame
Wood Frame
Load Bearing Masonry

Building Use		% Floor Space
Use #1	WAREHOUSE	100
Use #2		
Use #3		

Academic Classes, Administration Offices, Food Services, Dormitory, Mechanical Spaces, Gymnasium, Laboratory, Library, Residential or Other (Specify)

ACBM PRESENT?

YES

YES = PRESENT
NO = NOT PRESENT
ASM = ASSUMED

Inspector Identification

Name: Bronson Groendyke
State of HI Certification No. HIASB-4452
State of HI Certification Expiration Date: 3/14/2025
Building Inspector Certification Exp. Date: 11/25/2025

Specific areas surveyed

perimeter walls and roof

Inspector Comments

EMET could not safely access the main roof without a lift. Suspect materials encountered on the main roof should be assumed to be ACM until properly tested.

EMET's scope of work was limited to the areas listed above in Specific Areas Surveyed. This report is not a specification for the removal of asbestos-containing material and should not be used as such. Results of the presence or absence of asbestos are based on the survey and on analyses of the suspect materials encountered. Original building plans and specifications were not available for review. Therefore, because of these limitations and the highly variable nature of building construction, the potential remains for undiscovered ACM. EMET makes no warranty and assumes no liability for the inappropriate use or misuse of this document.

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Unified Homogeneous/Sample Area ACM - Space and Salient Cross Reference

Building ID and Name

B | BUILDING B

For the ACM - Space Identified as:

391-B-1

Building Location

455 Kokea St.
Honolulu, HI 96817

EMET ID

2411391

Inspection Date(s): 3/11/2025

Unified Sample Area	Homogeneous Sample Area or Salient Description	Comments	ACBM Present			Material Type*			Response Action	Estimated Cost to Remove
			Suspected	Confirmed	Friable	T	DC	PD		
391-B-1A	WHITE CAULKING AT DOOR FRAME			NO ACM						
391-B-1B	BLACK CAULKING AT DOOR FRAME			NO ACM						
391-B-1C	GYPSUM WALLBOARD/MUDJOINT WALL AND CEILING			NO ACM						
391-B-1D	BLACK CAULKING AT WINDOW FRAME			ACM	NO	M	ND	PD	8	$1200
391-B-1E	SILICONE CAULKING ON WINDOW PANE	deemed not suspect ACM by certified Asbestos Building Inspector	NO							
391-B-1F	BLACK CAULKING AT LOUVRES			NO ACM						

*** Refers to Material Type and Damage Conditions**

T = Material Type:	DC = Damage Condition:	PD = Potential Damage Condition:
S = Surfacing	ND = No Damage	NPD = No Potential Damage
M = Miscellaneous	D = Damaged	PD = ACBM w/ Potential Damage
T = Thermal Systems	SD = Significant Damage	PSD = Potential Significant Damage

**** Recommended Response Actions:**

1. Isolate area and restrict access. Remove or repair ASAP.
2. Continue Operations and Maintenance (O&M) program. Remove or repair ASAP or reduce potential for disturbance.

3-5. Repair, continue O&M. Lower number indicates higher priority if all repair cannot be done immediately.

6-7. Continue O&M. Take preventive measures to reduce disturbance. Number indicates priority for removal.

8. Continue O&M until major renovation or demolition requires removal under NESHAPS, or until hazard assessment factors change.

Note: An O&M program may include enclosure and encapsulation.

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Unified Homogeneous/Sample Area ACM - Space and Salient Cross Reference

Building ID and Name

B | BUILDING B

For the ACM - Space Identified as:

391-B-1

Building Location

455 Kokea St.
Honolulu, HI 96817

EMET ID

2411391

Inspection Date(s): 3/11/2025

Unified Sample Area	Homogeneous Sample Area or Salient Description	Comments	ACBM Present			Material Type*			Response Action	Estimated Cost to Remove
			Suspected	Confirmed	Friable	T	DC	PD		
391-B-1G	WHITE CAULKING AT SMALL LOUVRES			NO ACM						
391-B-1H	WHITE CAULKING AT WALL FLASHING			NO ACM						
391-B-1I	SILVER PADDED FOIL ROOF INSULATION	deemed not suspect ACM by certified Asbestos Building Inspector	NO							

*** Refers to Material Type and Damage Conditions**

T = Material Type:	DC = Damage Condition:	PD = Potential Damage Condition:
S = Surfacing	ND = No Damage	NPD = No Potential Damage
M = Miscellaneous	D = Damaged	PD = ACBM w/ Potential Damage
T = Thermal Systems	SD = Significant Damage	PSD = Potential Significant Damage

**** Recommended Response Actions:**

1. Isolate area and restrict access. Remove or repair ASAP.
2. Continue Operations and Maintenance (O&M) program. Remove or repair ASAP or reduce potential for disturbance.

3-5. Repair, continue O&M. Lower number indicates higher priority if all repair cannot be done immediately.

6-7. Continue O&M. Take preventive measures to reduce disturbance. Number indicates priority for removal.

8. Continue O&M until major renovation or demolition requires removal under NESHAPS, or until hazard assessment factors change.

Note: An O&M program may include enclosure and encapsulation.

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Sample Area Report - Area Master

EMET ID	Building Number and Name		Inspection Date
2411391	B	BUILDING B	3/11/2025

Material ID and Description		Document Number	Unified Sample Area Number
391-B-1A	WHITE CAULKING AT DOOR FRAME		391-B-1A

Drawing/Sketch Number:

A Sample Area should contain material of one, and only one, composition or matrix. An exception can be made in the case of layered applications of materials, such as occurs with a Three Coat Plaster system, that generally matches the same physical locations. Special care must be taken while collecting samples of layered materials, to enable the analysis to discern the several matrices present. Such conditions should be described in detail on the Sample Notes form for the analyst.

Unified Sample Area/Homogeneous Material

WHITE CAULKING AT DOOR FRAME

Location of Confirmed, Assumed, or New ACM within Building

Not Applicable

SAMPLING STRATEGY DATA

Ceiling Height #1		#2	
Square Feet of Ceiling Materials			
Square Feet of Wall Materials			
Square Feet of Floor Surface			
Linear Feet of TSI			
Square Feet of Structural Steel Coatings (including over-spray)			
Square Feet of Other ACM			
Linear Feet of Other ACM			
Total square and/or linear feet of ACM in this Sample Space:			

RISK ASSESSMENT DETERMINATION

Physical Condition	Potential Damage	Water Damage
- -	- -	- -

Visible	Reachable	Texture
- -	- -	- -

Barriers	Ventilation	If Yes	Friable Surface	
- -	- -	- -	- -	- -

Air Movement	Proximity to Repair Items	Activity
- -	- -	- -

SAMPLE ANALYSIS SUMMARY SECTION

Total Number of Samples Collected	3
Samples Collected by	EMET
Sample Numbers	391-B-1A1, 391-B-1A2, 391-B-1A3
Total Number of Samples Analyzed	3
Samples Analyzed by	EMET
ASBESTOS-CONTAINING MATERIAL ?	**NO**
Number of Salient Designations:	

PHOTOGRAPH



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Sample Log and Notes

Building Number and Name		EMET ID
B	BUILDING B	2411391

Sample Area/Lot Number and Name	
391-B-1A	WHITE CAULKING AT DOOR FRAME

Sample Number	% Asbestos	Description of Sampled Material	Sample Location
391-B-1A1	0	WHITE CAULKING AT DOOR FRAME	See Sketch 391-B-1
391-B-1A2	0	WHITE CAULKING AT DOOR FRAME	See Sketch 391-B-1
391-B-1A3	0	WHITE CAULKING AT DOOR FRAME	See Sketch 391-B-1

Inspector's Name	Signature	Date Samples Collected
Bronson Groendyke		3/11/2025

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LABORATORY REPORT

Asbestos Bulk Sample Analysis by Polarized Light Microscopy
in accordance with 40 CFR Part 763 Appendix E to Subpart E

Client: Next Design LCC

Address: 1003 Bishop Street, Suite 2000
Honolulu, HI 96813

Building: BUILDING B

Address: 455 Kokea St.
Honolulu, HI 96817

NVLAP LAB CODE 101807-0

Approved Signatory:

Sample/Homogeneous Area: 391-B-1A Analysis Date: 3/17/2025 Report Date: 3/17/2025

Lab ID	Sample ID	Color	Homogeneity	Asbestos Detected	Asbestos (Type) Area %	Fibrous Components Area %	Non-fibrous Components Area %	Comments
391-001	391-B-1A1	white	Yes	No	-	-	misc. part.	
					-	-	100	
391-002	391-B-1A2	white	Yes	No	-	-	misc. part.	
					-	-	100	
391-003	391-B-1A3	white	Yes	No	-	-	misc. part.	
					-	-	100	

Accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) for the scope specific under Lab Code 101807-0.
State of Hawaii Asbestos Requirements mandates all samples to be collected by a certified Asbestos Inspector in accordance with § 11-501, 11-502, and 11-504. Results of samples collected by someone other than a certified Asbestos Inspector may be invalid.
Note: EPA, OSHA, and HIOSH define “asbestos-containing material” as any material or product which contains more than one percent asbestos.

*Laboratory test report may not be used to claim product endorsement by NVLAP or any other agency of the U.S. Government. *Laboratory test report relates only to items tested. *Asbestos fiber percentage is approximate - performed by visual observation only, unless otherwise indicated.	*This method is not reliable for analysis of tile or other materials when fiber size is less than 10 microns and/or below detection limit (appr. 1%) of current PLM techniques. *Samples analyzed as received by the laboratory, interpretation is responsibility of the client.

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Sample Area Report - Area Master

EMET ID	Building Number and Name		Inspection Date
2411391	B	BUILDING B	3/11/2025
	Material ID and Description		
Document Number	391-B-1B	BLACK CAULKING AT DOOR FRAME	Unified Sample Area Number
	Drawing/Sketch Number		
			391-B-1B

A Sample Area should contain material of one, and only one, composition or matrix. An exception can be made in the case of layered applications of materials, such as occurs with a Three Coat Plaster system, that generally matches the same physical locations. Special care must be taken while collecting samples of layered materials, to enable the analysis to discern the several matrices present. Such conditions should be described in detail on the Sample Notes form for the analyst.

Unified Sample Area/Homogeneous Material

BLACK CAULKING AT DOOR FRAME

Location of Confirmed, Assumed, or New ACM within Building

Not Applicable

SAMPLING STRATEGY DATA

Ceiling Height #1		#2	
Square Feet of Ceiling Materials			
Square Feet of Wall Materials			
Square Feet of Floor Surface			
Linear Feet of TSI			
Square Feet of Structural Steel Coatings (including over-spray)			
Square Feet of Other ACM			
Linear Feet of Other ACM			
Total square and/or linear feet of ACM in this Sample Space:			

RISK ASSESSMENT DETERMINATION

Physical Condition	Potential Damage	Water Damage
- -	- -	- -
Visible	**Reachable**	**Texture**
- -	- -	- -
Barriers	**Ventilation** / **If Yes**	**Friable Surface**
- -	- - / - -	- - / - -
Air Movement	**Proximity to Repair Items**	**Activity**
- -	- -	- -

SAMPLE ANALYSIS SUMMARY SECTION

Total Number of Samples Collected	3
Samples Collected by	EMET
Sample Numbers	391-B-1B1, 391-B-1B2, 391-B-1B3
Total Number of Samples Analyzed	3
Samples Analyzed by	EMET
ASBESTOS-CONTAINING MATERIAL ?	**NO**
Number of Salient Designations:	

PHOTOGRAPH



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Sample Log and Notes

Building Number and Name		EMET ID
B	BUILDING B	2411391

Sample Area/Lot Number and Name	
391-B-1B	BLACK CAULKING AT DOOR FRAME

Sample Number	% Asbestos	Description of Sampled Material	Sample Location
391-B-1B1	0	BLACK CAULKING AT DOOR FRAME	See Sketch 391-B-1
391-B-1B2	0	BLACK CAULKING AT DOOR FRAME	See Sketch 391-B-1
391-B-1B3	0	BLACK CAULKING AT DOOR FRAME	See Sketch 391-B-1

Inspector's Name	Signature	Date Samples Collected
Bronson Groendyke		3/11/2025

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LABORATORY REPORT

Asbestos Bulk Sample Analysis by Polarized Light Microscopy
in accordance with 40 CFR Part 763 Appendix E to Subpart E

NVLAP®

Client: Next Design LCC

Building: BUILDING B

NVLAP LAB CODE 101807-0

Address: 1003 Bishop Street, Suite 2000
Honolulu, HI 96813

Address: 455 Kokea St.
Honolulu, HI 96817

Approved Signatory:

Sample/Homogeneous Area: 391-B-1B Analysis Date: 3/17/2025 Report Date: 3/17/2025

Lab ID	Sample ID	Color	Homogeneity	Asbestos Detected	Asbestos (Type) Area %	Fibrous Components Area %	Non-fibrous Components Area %	Comments
391-004	391-B-1B1	black	Yes	No	-	-	misc. part.	
					-	-	100	
391-005	391-B-1B2	black	Yes	No	-	-	misc. part.	
					-	-	100	
391-006	391-B-1B3	black	Yes	No	-	-	misc. part.	
					-	-	100	

Accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) for the scope specific under Lab Code 101807-0.
State of Hawaii Asbestos Requirements mandates all samples to be collected by a certified Asbestos Inspector in accordance with § 11-501, 11-502, and 11-504. Results of samples collected by someone other than a certified Asbestos Inspector may be invalid.
Note: EPA, OSHA, and HIOSH define “asbestos-containing material” as any material or product which contains more than one percent asbestos.

*Laboratory test report may not be used to claim product endorsement by NVLAP or any other agency of the U.S. Government. *Laboratory test report relates only to items tested. *Asbestos fiber percentage is approximate - performed by visual observation only, unless otherwise indicated.	*This method is not reliable for analysis of tile or other materials when fiber size is less than 10 microns and/or below detection limit (appr. 1%) of current PLM techniques. *Samples analyzed as received by the laboratory, interpretation is responsibility of the client.

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Sample Area Report - Area Master

EMET ID	Building Number and Name		Inspection Date
2411391	B	BUILDING B	3/11/2025

Material ID and Description		Unified Sample Area Number
391-B-1C	GYPSUM WALLBOARD/MUDJOINT WALL AND CEILING	391-B-1C

Document Number	Drawing/Sketch Number	

A Sample Area should contain material of one, and only one, composition or matrix. An exception can be made in the case of layered applications of materials, such as occurs with a Three Coat Plaster system, that generally matches the same physical locations. Special care must be taken while collecting samples of layered materials, to enable the analysis to discern the several matrices present. Such conditions should be described in detail on the Sample Notes form for the analyst.

Unified Sample Area/Homogeneous Material

GYPSUM WALLBOARD/MUDJOINT WALL AND CEILING

Location of Confirmed, Assumed, or New ACM within Building

Not Applicable

SAMPLING STRATEGY DATA

Ceiling Height #1		#2	
Square Feet of Ceiling Materials			
Square Feet of Wall Materials			
Square Feet of Floor Surface			
Linear Feet of TSI			
Square Feet of Structural Steel Coatings (including over-spray)			
Square Feet of Other ACM			
Linear Feet of Other ACM			
Total square and/or linear feet of ACM in this Sample Space:			

RISK ASSESSMENT DETERMINATION

Physical Condition	Potential Damage	Water Damage
- -	- -	- -

Visible	Reachable	Texture
- -	- -	- -

Barriers	Ventilation	If Yes	Friable Surface	
- -	- -	- -	- -	- -

Air Movement	Proximity to Repair Items	Activity
- -	- -	- -

SAMPLE ANALYSIS SUMMARY SECTION

Total Number of Samples Collected	3
Samples Collected by	EMET
Sample Numbers	391-B-1C1, 391-B-1C2, 391-B-1C3
Total Number of Samples Analyzed	3
Samples Analyzed by	EMET
ASBESTOS-CONTAINING MATERIAL ?	**NO**
Number of Salient Designations:	

PHOTOGRAPH



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Sample Log and Notes

Building Number and Name		EMET ID
B	BUILDING B	2411391

Sample Area/Lot Number and Name	
391-B-1C	GYPSUM WALLBOARD/MUDJOINT WALL AND CEILING

Sample Number	% Asbestos	Description of Sampled Material	Sample Location
391-B-1C1	0	GYPSUM WALLBOARD/MUDJOINT WALL AND CEILING	See Sketch 391-B-1
391-B-1C2	0	GYPSUM WALLBOARD/MUDJOINT WALL AND CEILING	See Sketch 391-B-1
391-B-1C3	0	GYPSUM WALLBOARD/MUDJOINT WALL AND CEILING	See Sketch 391-B-1

Inspector's Name	Signature	Date Samples Collected
Bronson Groendyke		3/11/2025

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LABORATORY REPORT

Asbestos Bulk Sample Analysis by Polarized Light Microscopy
in accordance with 40 CFR Part 763 Appendix E to Subpart E

NVLAP®

Client: Next Design LCC

Building: BUILDING B

NVLAP LAB CODE 101807-0

Address: 1003 Bishop Street, Suite 2000
Honolulu, HI 96813

Address: 455 Kokea St.
Honolulu, HI 96817

Approved Signatory:

Sample/Homogeneous Area: 391-B-1C Analysis Date: 3/17/2025 Report Date: 3/17/2025

Lab ID	Sample ID	Color	Homogeneity	Asbestos Detected	Asbestos (Type) Area %	Fibrous Components Area %	Non-fibrous Components Area %	Comments
391-007	391-B-1C1	white	Yes	No	-	cellulose, glass	misc. part.	
					-	5	95	
391-008	391-B-1C2	white	Yes	No	-	cellulose, glass	misc. part.	
					-	5	95	
391-009	391-B-1C3	white	Yes	No	-	cellulose, glass	misc. part.	
					-	5	95	

Accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) for the scope specific under Lab Code 101807-0.
State of Hawaii Asbestos Requirements mandates all samples to be collected by a certified Asbestos Inspector in accordance with § 11-501, 11-502, and 11-504. Results of samples collected by someone other than a certified Asbestos Inspector may be invalid.
Note: EPA, OSHA, and HIOSH define “asbestos-containing material” as any material or product which contains more than one percent asbestos.

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Sample Area Report - Area Master

EMET ID	Building Number and Name		Inspection Date
2411391	B	BUILDING B	3/11/2025
	Material ID and Description		
Document Number	391-B-1D	BLACK CAULKING AT WINDOW FRAME	Unified Sample Area Number
	Drawing/Sketch Number		
	391-B-1	391-B-1	391-B-1D

A Sample Area should contain material of one, and only one, composition or matrix. An exception can be made in the case of layered applications of materials, such as occurs with a Three Coat Plaster system, that generally matches the same physical locations. Special care must be taken while collecting samples of layered materials, to enable the analysis to discern the several matrices present. Such conditions should be described in detail on the Sample Notes form for the analyst.

Unified Sample Area/Homogeneous Material

BLACK CAULKING AT WINDOW FRAME

Location of Confirmed, Assumed, or New ACM within Building

See Sketch 391-B-1

around the window frames at the northeast corner of the building

SAMPLING STRATEGY DATA

Ceiling Height #1		#2	
Square Feet of Ceiling Materials			
Square Feet of Wall Materials			
Square Feet of Floor Surface			
Linear Feet of TSI			
Square Feet of Structural Steel Coatings (including over-spray)			
Square Feet of Other ACM			
Linear Feet of Other ACM	40		
Total square and/or linear feet of ACM in this Sample Space:	±40		

RISK ASSESSMENT DETERMINATION

Physical Condition	Potential Damage	Water Damage
None	Moderate	None
Visible	**Reachable**	**Texture**
More than 10%	Within reach	smooth
Barriers	**Ventilation**	**If Yes**
None	No	
Friable Surface		
No	Category II	
Air Movement	**Proximity to Repair Items**	**Activity**
High	Less than 1 ft.	Moderate

PHOTOGRAPH



SAMPLE ANALYSIS SUMMARY SECTION

Total Number of Samples Collected	3
Samples Collected by	EMET
Sample Numbers	391-B-1D1, 391-B-1D2, 391-B-1D3
Total Number of Samples Analyzed	3
Samples Analyzed by	EMET
ASBESTOS-CONTAINING MATERIAL ?	**YES**
Number of Salient Designations:	

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Sample Log and Notes

Building Number and Name		EMET ID
B	BUILDING B	2411391

Sample Area/Lot Number and Name	
391-B-1D	BLACK CAULKING AT WINDOW FRAME

Sample Number	% Asbestos	Description of Sampled Material	Sample Location
391-B-1D1	5	BLACK CAULKING AT WINDOW FRAME	See Sketch 391-B-1
391-B-1D2	5	BLACK CAULKING AT WINDOW FRAME	See Sketch 391-B-1
391-B-1D3	5	BLACK CAULKING AT WINDOW FRAME	See Sketch 391-B-1

Inspector's Name	Signature	Date Samples Collected
Bronson Groendyke		3/11/2025

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LABORATORY REPORT

Asbestos Bulk Sample Analysis by Polarized Light Microscopy
in accordance with 40 CFR Part 763 Appendix E to Subpart E

NVLAP®

Client: Next Design LCC

Building: BUILDING B

NVLAP LAB CODE 101807-0

Address: 1003 Bishop Street, Suite 2000
Honolulu, HI 96813

Address: 455 Kokea St.
Honolulu, HI 96817

Approved Signatory:

Sample/Homogeneous Area: 391-B-1D Analysis Date: 3/17/2025 Report Date: 3/17/2025

Lab ID	Sample ID	Color	Homogeneity	Asbestos Detected	Asbestos (Type) Area %	Fibrous Components Area %	Non-fibrous Components Area %	Comments
391-010	391-B-1D1	gray, black	Yes	Yes	chrysotile	-	misc. part.	
					5	-	95	
391-011	391-B-1D2	gray, black	Yes	Yes	chrysotile	-	misc. part.	
					5	-	95	
391-012	391-B-1D3	gray, black	Yes	Yes	chrysotile	-	misc. part.	
					5	-	95	

Accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) for the scope specific under Lab Code 101807-0.
State of Hawaii Asbestos Requirements mandates all samples to be collected by a certified Asbestos Inspector in accordance with § 11-501, 11-502, and 11-504. Results of samples collected by someone other than a certified Asbestos Inspector may be invalid.
Note: EPA, OSHA, and HIOSH define “asbestos-containing material” as any material or product which contains more than one percent asbestos.

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Sample Area Report - Area Master

EMET ID	Building Number and Name		Inspection Date
2411391	B	BUILDING B	

Material ID and Description		Document Number	Unified Sample Area Number
391-B-1E	SILICONE CAULKING ON WINDOW PANE		391-B-1E

Drawing/Sketch Number:

A Sample Area should contain material of one, and only one, composition or matrix. An exception can be made in the case of layered applications of materials, such as occurs with a Three Coat Plaster system, that generally matches the same physical locations. Special care must be taken while collecting samples of layered materials, to enable the analysis to discern the several matrices present. Such conditions should be described in detail on the Sample Notes form for the analyst.

Unified Sample Area/Homogeneous Material

SILICONE CAULKING ON WINDOW PANE

deemed not suspect ACM by certified Asbestos Building Inspector

Location of Confirmed, Assumed, or New ACM within Building

Not Applicable

SAMPLING STRATEGY DATA

Ceiling Height #1		#2	
Square Feet of Ceiling Materials			
Square Feet of Wall Materials			
Square Feet of Floor Surface			
Linear Feet of TSI			
Square Feet of Structural Steel Coatings (including over-spray)			
Square Feet of Other ACM			
Linear Feet of Other ACM			
Total square and/or linear feet of ACM in this Sample Space:			

RISK ASSESSMENT DETERMINATION

Physical Condition	Potential Damage	Water Damage

Visible	Reachable	Texture

Barriers	Ventilation	If Yes	Friable Surface	

Air Movement	Proximity to Repair Items	Activity

SAMPLE ANALYSIS SUMMARY SECTION

Total Number of Samples Collected	N/A
Samples Collected by	
Sample Numbers	
Total Number of Samples Analyzed	
Samples Analyzed by	
ASBESTOS-CONTAINING MATERIAL ?	
Number of Salient Designations:	

PHOTOGRAPH



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Sample Area Report - Area Master

EMET ID	Building Number and Name		Inspection Date
2411391	B	BUILDING B	3/11/2025
	Material ID and Description		
Document Number	391-B-1F	BLACK CAULKING AT LOUVRES	Unified Sample Area Number
	Drawing/Sketch Number		
			391-B-1F

A Sample Area should contain material of one, and only one, composition or matrix. An exception can be made in the case of layered applications of materials, such as occurs with a Three Coat Plaster system, that generally matches the same physical locations. Special care must be taken while collecting samples of layered materials, to enable the analysis to discern the several matrices present. Such conditions should be described in detail on the Sample Notes form for the analyst.

Unified Sample Area/Homogeneous Material

BLACK CAULKING AT LOUVRES

Location of Confirmed, Assumed, or New ACM within Building

Not Applicable

SAMPLING STRATEGY DATA

Ceiling Height #1		#2	
Square Feet of Ceiling Materials			
Square Feet of Wall Materials			
Square Feet of Floor Surface			
Linear Feet of TSI			
Square Feet of Structural Steel Coatings (including over-spray)			
Square Feet of Other ACM			
Linear Feet of Other ACM			
Total square and/or linear feet of ACM in this Sample Space:			

RISK ASSESSMENT DETERMINATION

Physical Condition	Potential Damage	Water Damage
- -	- -	- -
Visible	**Reachable**	**Texture**
- -	- -	- -
Barriers	**Ventilation** / **If Yes**	**Friable Surface**
- -	- - / - -	- - / - -
Air Movement	**Proximity to Repair Items**	**Activity**
- -	- -	- -

SAMPLE ANALYSIS SUMMARY SECTION

Total Number of Samples Collected	3
Samples Collected by	EMET
Sample Numbers	391-B-1F1, 391-B-1F2, 391-B-1F3
Total Number of Samples Analyzed	3
Samples Analyzed by	EMET
ASBESTOS-CONTAINING MATERIAL ?	**NO**
Number of Salient Designations:	

PHOTOGRAPH



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Sample Log and Notes

Building Number and Name		EMET ID
B	BUILDING B	2411391

Sample Area/Lot Number and Name	
391-B-1F	BLACK CAULKING AT LOUVRES

Sample Number	% Asbestos	Description of Sampled Material	Sample Location
391-B-1F1	0	BLACK CAULKING AT LOUVRES	See Sketch 391-B-1
391-B-1F2	0	BLACK CAULKING AT LOUVRES	See Sketch 391-B-1
391-B-1F3	0	BLACK CAULKING AT LOUVRES	See Sketch 391-B-1

Inspector's Name	Signature	Date Samples Collected
Bronson Groendyke		3/11/2025

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LABORATORY REPORT

Asbestos Bulk Sample Analysis by Polarized Light Microscopy
in accordance with 40 CFR Part 763 Appendix E to Subpart E

NVLAP®

Client: Next Design LCC

Building: BUILDING B

NVLAP LAB CODE 101807-0

Address: 1003 Bishop Street, Suite 2000
Honolulu, HI 96813

Address: 455 Kokea St.
Honolulu, HI 96817

Approved Signatory:

Sample/Homogeneous Area: 391-B-1F | Analysis Date: 3/17/2025 | Report Date: 3/17/2025

Lab ID	Sample ID	Color	Homogeneity	Asbestos Detected	Asbestos (Type) Area %	Fibrous Components Area %	Non-fibrous Components Area %	Comments
391-013	391-B-1F1	black	Yes	No	-	-	misc. part.	
					-	-	100	
391-014	391-B-1F2	black	Yes	No	-	-	misc. part.	
					-	-	100	
391-015	391-B-1F3	black	Yes	No	-	-	misc. part.	
					-	-	100	

Accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) for the scope specific under Lab Code 101807-0.
State of Hawaii Asbestos Requirements mandates all samples to be collected by a certified Asbestos Inspector in accordance with § 11-501, 11-502, and 11-504. Results of samples collected by someone other than a certified Asbestos Inspector may be invalid.
Note: EPA, OSHA, and HIOSH define “asbestos-containing material” as any material or product which contains more than one percent asbestos.

*Laboratory test report may not be used to claim product endorsement by NVLAP or any other agency of the U.S. Government. *Laboratory test report relates only to items tested. *Asbestos fiber percentage is approximate - performed by visual observation only, unless otherwise indicated.	*This method is not reliable for analysis of tile or other materials when fiber size is less than 10 microns and/or below detection limit (appr. 1%) of current PLM techniques. *Samples analyzed as received by the laboratory, interpretation is responsibility of the client.

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Sample Area Report - Area Master

EMET ID	Building Number and Name		Inspection Date
2411391	B	BUILDING B	3/11/2025

Material ID and Description		Unified Sample Area Number
391-B-1G	WHITE CAULKING AT SMALL LOUVRES	391-B-1G

Document Number:

Drawing/Sketch Number:

A Sample Area should contain material of one, and only one, composition or matrix. An exception can be made in the case of layered applications of materials, such as occurs with a Three Coat Plaster system, that generally matches the same physical locations. Special care must be taken while collecting samples of layered materials, to enable the analysis to discern the several matrices present. Such conditions should be described in detail on the Sample Notes form for the analyst.

Unified Sample Area/Homogeneous Material

WHITE CAULKING AT SMALL LOUVRES

Location of Confirmed, Assumed, or New ACM within Building

Not Applicable

SAMPLING STRATEGY DATA

Ceiling Height #1		#2	
Square Feet of Ceiling Materials			
Square Feet of Wall Materials			
Square Feet of Floor Surface			
Linear Feet of TSI			
Square Feet of Structural Steel Coatings (including over-spray)			
Square Feet of Other ACM			
Linear Feet of Other ACM			
Total square and/or linear feet of ACM in this Sample Space:			

RISK ASSESSMENT DETERMINATION

Physical Condition	Potential Damage	Water Damage
- -	- -	- -

Visible	Reachable	Texture
- -	- -	- -

Barriers	Ventilation	If Yes	Friable Surface	
- -	- -	- -	- -	- -

Air Movement	Proximity to Repair Items	Activity
- -	- -	- -

SAMPLE ANALYSIS SUMMARY SECTION

Total Number of Samples Collected	3
Samples Collected by	EMET
Sample Numbers	391-B-1G1, 391-B-1G2, 391-B-1G3
Total Number of Samples Analyzed	3
Samples Analyzed by	EMET
ASBESTOS-CONTAINING MATERIAL ?	**NO**
Number of Salient Designations:	

PHOTOGRAPH



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Sample Log and Notes

Building Number and Name		EMET ID
B	BUILDING B	2411391

Sample Area/Lot Number and Name	
391-B-1G	WHITE CAULKING AT SMALL LOUVRES

Sample Number	% Asbestos	Description of Sampled Material	Sample Location
391-B-1G1	0	WHITE CAULKING AT SMALL LOUVRES	See Sketch 391-B-1
391-B-1G2	0	WHITE CAULKING AT SMALL LOUVRES	See Sketch 391-B-1
391-B-1G3	0	WHITE CAULKING AT SMALL LOUVRES	See Sketch 391-B-1

Inspector's Name	Signature	Date Samples Collected
Bronson Groendyke		3/11/2025

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LABORATORY REPORT

Asbestos Bulk Sample Analysis by Polarized Light Microscopy
in accordance with 40 CFR Part 763 Appendix E to Subpart E

NVLAP®

Client: Next Design LCC

Building: BUILDING B

NVLAP LAB CODE 101807-0

Address: 1003 Bishop Street, Suite 2000
Honolulu, HI 96813

Address: 455 Kokea St.
Honolulu, HI 96817

Approved Signatory:

Sample/Homogeneous Area: 391-B-1G Analysis Date: 3/17/2025 Report Date: 3/17/2025

Lab ID	Sample ID	Color	Homogeneity	Asbestos Detected	Asbestos (Type) Area %	Fibrous Components Area %	Non-fibrous Components Area %	Comments
391-016	391-B-1G1	white	Yes	No	-	-	misc. part.	
					-	-	100	
391-017	391-B-1G2	white	Yes	No	-	-	misc. part.	
					-	-	100	
391-018	391-B-1G3	white	Yes	No	-	-	misc. part.	
					-	-	100	

Accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) for the scope specific under Lab Code 101807-0.
State of Hawaii Asbestos Requirements mandates all samples to be collected by a certified Asbestos Inspector in accordance with § 11-501, 11-502, and 11-504. Results of samples collected by someone other than a certified Asbestos Inspector may be invalid.
Note: EPA, OSHA, and HIOSH define “asbestos-containing material” as any material or product which contains more than one percent asbestos.

*Laboratory test report may not be used to claim product endorsement by NVLAP or any other agency of the U.S. Government. *Laboratory test report relates only to items tested. *Asbestos fiber percentage is approximate - performed by visual observation only, unless otherwise indicated.	*This method is not reliable for analysis of tile or other materials when fiber size is less than 10 microns and/or below detection limit (appr. 1%) of current PLM techniques. *Samples analyzed as received by the laboratory, interpretation is responsibility of the client.

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Sample Area Report - Area Master

EMET ID	Building Number and Name		Inspection Date
2411391	B	BUILDING B	3/11/2025
Material ID and Description			
Document Number	391-B-1H	WHITE CAULKING AT WALL FLASHING	Unified Sample Area Number
Drawing/Sketch Number			
			391-B-1H

A Sample Area should contain material of one, and only one, composition or matrix. An exception can be made in the case of layered applications of materials, such as occurs with a Three Coat Plaster system, that generally matches the same physical locations. Special care must be taken while collecting samples of layered materials, to enable the analysis to discern the several matrices present. Such conditions should be described in detail on the Sample Notes form for the analyst.

Unified Sample Area/Homogeneous Material

WHITE CAULKING AT WALL FLASHING

Location of Confirmed, Assumed, or New ACM within Building

Not Applicable

SAMPLING STRATEGY DATA

Ceiling Height #1		#2	
Square Feet of Ceiling Materials			
Square Feet of Wall Materials			
Square Feet of Floor Surface			
Linear Feet of TSI			
Square Feet of Structural Steel Coatings (including over-spray)			
Square Feet of Other ACM			
Linear Feet of Other ACM			
Total square and/or linear feet of ACM in this Sample Space:			

RISK ASSESSMENT DETERMINATION

Physical Condition	Potential Damage	Water Damage
- -	- -	- -
Visible	**Reachable**	**Texture**
- -	- -	- -
Barriers	**Ventilation** / **If Yes**	**Friable Surface**
- -	- - / - -	- - / - -
Air Movement	**Proximity to Repair Items**	**Activity**
- -	- -	- -

SAMPLE ANALYSIS SUMMARY SECTION

Total Number of Samples Collected	3
Samples Collected by	EMET
Sample Numbers	391-B-1H1, 391-B-1H2, 391-B-1H3
Total Number of Samples Analyzed	3
Samples Analyzed by	EMET
ASBESTOS-CONTAINING MATERIAL ?	**NO**
Number of Salient Designations:	

PHOTOGRAPH



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Sample Log and Notes

Building Number and Name		EMET ID
B	BUILDING B	2411391

Sample Area/Lot Number and Name	
391-B-1H	WHITE CAULKING AT WALL FLASHING

Sample Number	% Asbestos	Description of Sampled Material	Sample Location
391-B-1H1	0	WHITE CAULKING AT WALL FLASHING	See Sketch 391-B-1
391-B-1H2	0	WHITE CAULKING AT WALL FLASHING	See Sketch 391-B-1
391-B-1H3	0	WHITE CAULKING AT WALL FLASHING	See Sketch 391-B-1

Inspector's Name	Signature	Date Samples Collected
Bronson Groendyke		3/11/2025

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LABORATORY REPORT

Asbestos Bulk Sample Analysis by Polarized Light Microscopy
in accordance with 40 CFR Part 763 Appendix E to Subpart E

NVLAP®

Client: Next Design LCC

Building: BUILDING B

NVLAP LAB CODE 101807-0

Address: 1003 Bishop Street, Suite 2000
Honolulu, HI 96813

Address: 455 Kokea St.
Honolulu, HI 96817

Approved Signatory:

Sample/Homogeneous Area: 391-B-1H | Analysis Date: 3/17/2025 | Report Date: 3/17/2025

Lab ID	Sample ID	Color	Homogeneity	Asbestos Detected	Asbestos (Type) Area %	Fibrous Components Area %	Non-fibrous Components Area %	Comments
391-019	391-B-1H1	white	Yes	No	-	-	misc. part.	
					-	-	100	
391-020	391-B-1H2	white	Yes	No	-	-	misc. part.	
					-	-	100	
391-021	391-B-1H3	white	Yes	No	-	-	misc. part.	
					-	-	100	

Accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) for the scope specific under Lab Code 101807-0.
State of Hawaii Asbestos Requirements mandates all samples to be collected by a certified Asbestos Inspector in accordance with § 11-501, 11-502, and 11-504. Results of samples collected by someone other than a certified Asbestos Inspector may be invalid.
Note: EPA, OSHA, and HIOSH define “asbestos-containing material” as any material or product which contains more than one percent asbestos.

*Laboratory test report may not be used to claim product endorsement by NVLAP or any other agency of the U.S. Government. *Laboratory test report relates only to items tested. *Asbestos fiber percentage is approximate - performed by visual observation only, unless otherwise indicated.	*This method is not reliable for analysis of tile or other materials when fiber size is less than 10 microns and/or below detection limit (appr. 1%) of current PLM techniques. *Samples analyzed as received by the laboratory, interpretation is responsibility of the client.

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Sample Area Report - Area Master

EMET ID	Building Number and Name		Inspection Date
2411391	B	BUILDING B	

Material ID and Description		Document Number	Unified Sample Area Number
391-B-1I	SILVER PADDED FOIL ROOF INSULATION		391-B-1I

Drawing/Sketch Number:

A Sample Area should contain material of one, and only one, composition or matrix. An exception can be made in the case of layered applications of materials, such as occurs with a Three Coat Plaster system, that generally matches the same physical locations. Special care must be taken while collecting samples of layered materials, to enable the analysis to discern the several matrices present. Such conditions should be described in detail on the Sample Notes form for the analyst.

Unified Sample Area/Homogeneous Material

SILVER PADDED FOIL ROOF INSULATION

deemed not suspect ACM by certified Asbestos Building Inspector

Location of Confirmed, Assumed, or New ACM within Building

Not Applicable

throughout interior at underside of roof

SAMPLING STRATEGY DATA

Ceiling Height #1		#2	
Square Feet of Ceiling Materials			
Square Feet of Wall Materials			
Square Feet of Floor Surface			
Linear Feet of TSI			
Square Feet of Structural Steel Coatings (including over-spray)			
Square Feet of Other ACM			
Linear Feet of Other ACM			
Total square and/or linear feet of ACM in this Sample Space:			

RISK ASSESSMENT DETERMINATION

Physical Condition	Potential Damage	Water Damage

Visible	Reachable	Texture

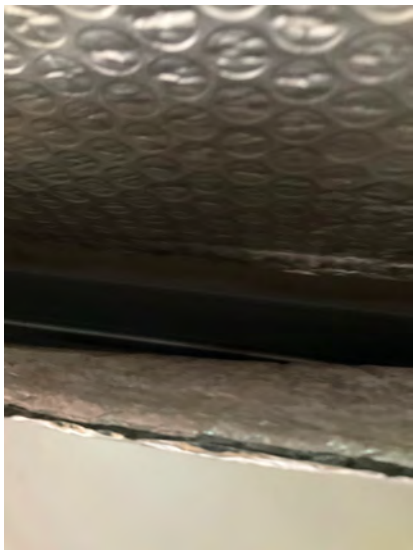
Barriers	Ventilation	If Yes	Friable Surface	

Air Movement	Proximity to Repair Items	Activity

SAMPLE ANALYSIS SUMMARY SECTION

Total Number of Samples Collected	N/A
Samples Collected by	
Sample Numbers	
Total Number of Samples Analyzed	
Samples Analyzed by	
ASBESTOS-CONTAINING MATERIAL ?	
Number of Salient Designations:	

PHOTOGRAPH



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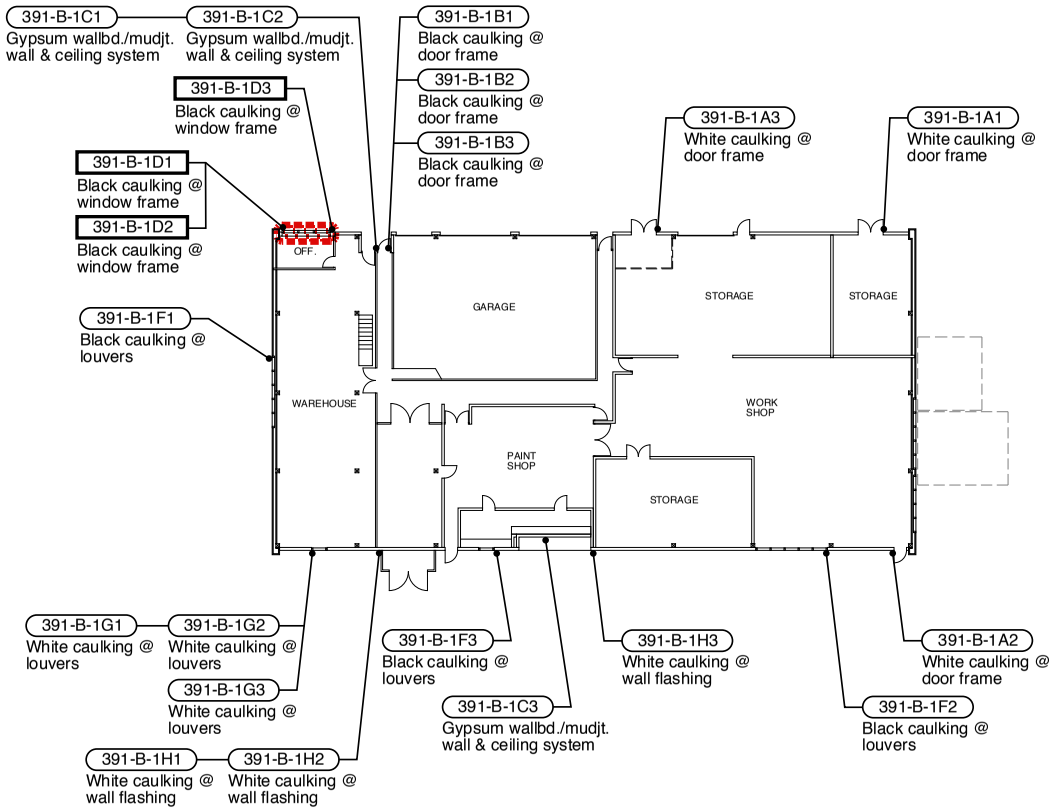
Appendix B

Asbestos Survey Sample Locations Sketch

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(808) 671-8383…Telephone emet@emetservices.com...E-mail

ASBESTOS SAMPLE LOCATION PLAN

BLDG #	NAME OF PROJECT SITE	ADDRESS	SKETCH #
B	DEPARTMENT OF FACILITY MAINTENANCE	455 KOKEA STREET HONOLULU, HI 96817	391-B-1 1 OF 1



LEGEND

ACM: SAMPLE #

NON-ACM: SAMPLE #

NORTH

ASBESTOS-CONTAINING MATERIALS (ACM)* :

*ACM are described in this Legend in **boldface** text; Non-ACM (listed here only if layered with ACM) are described in plain text.

SAMPLE AREA 391-B-1D: BLACK CAULKING @ WINDOW FRAME

*ASBESTOS-CONTAINING MATERIAL (ACM) IS DEFINED AS ANY MATERIAL CONTAINING > 1 % ASBESTOS.

THIS SURVEY WAS LIMITED IN SCOPE TO SPECIFIC AREAS AFFECTED BY PLANNED RENOVATION ACTIVITIES ONLY; THEREFORE, THIS REPORT MAKES NO WARRANTY FOR AREAS OF THE BUILDING WHICH WERE NOT INCLUDED IN THE SCOPE OF THE SURVEY.

PUBLIC BUILDING & ELECTRICAL MAINTENANCE
BUILDING "B" - FLOOR PLAN
NOT TO SCALE

EMET I.D. #2411391

Appendix C

Lead Paint Test Results

EnvironMETeo (EMET) Services, Inc. Waipio Gentry Business Park 94-520 Uke'e Street, Suite A Waipahu, Hawaii, USA 96797-4200
(808) 671-8383…Telephone emet@emetservices.com...E-mail

Laboratory Report

Painted Surfaces Total Elemental Lead Analyses
by X-Ray Fluorescence

EMET ID: 2411391

Test Date: March 11, 2025

DFM Kokea Yard
PBEM Building B Envelope Improvements

XRF#	Location	Side	Component	Substrate	Condition	Color	Lead Pb (mg/cm²)	Lead-Based Paint	Confirmed Lead-Containing Paint
49	Calibration						1.19 ± 0.10		
50	Calibration						1.18 ± 0.10		
51	Calibration						1.18 ± 0.10		
52	Exterior	South	siding	metal	poor	beige	<LOD ± 0.01	no	no
53	Exterior, Storage Shed	South	wall	wood	peeling	brown	<LOD ± 0.01	no	no
54	Exterior, Storage Shed	South	door	wood	peeling	brown	<LOD ± 0.01	no	no
55	Exterior, Mechanical Shed	South	wall	wood	intact	gray	<LOD ± 0.01	no	no
56	Exterior, Mechanical Shed	South	door frame	wood	intact	gray	<LOD ± 0.01	no	no
57	Exterior, Mechanical Shed	South	door	wood	intact	gray	<LOD ± 0.01	no	no
58	Exterior, platform	South	frame	metal	intact	beige	<LOD ± 0.01	no	no
59	Exterior, platform	South	railing	metal	intact	beige	0.04 ± 0.02	no	yes
60	Exterior	East	siding	metal	poor	beige	<LOD ± 0.01	no	no
61	Exterior	East	door frame	metal	intact	black	<LOD ± 0.01	no	no
62	Exterior	East	door	metal	intact	black	<LOD ± 0.01	no	no
63	Exterior	East	roll-up door	metal	intact	beige	<LOD ± 0.01	no	no
64	Exterior	East	roll-up door frame	metal	intact	black	<LOD ± 0.01	no	no
65	Exterior	East	door	metal	intact	black	0.15 ± 0.03	no	yes
66	**Exterior**	**East**	**curb**	**concrete**	**peeling**	**orange**	**3.66 ± 0.24**	**yes**	**yes**
67	Exterior	East	door frame	metal	intact	black	0.07 ± 0.03	no	yes
68	Exterior	East	ceiling	gypboard	intact	white	<LOD ± 0.01	no	no
69	Exterior	East	siding	metal	poor	beige	<LOD ± 0.01	no	no
70	Exterior	East	downspout	metal	intact	white	<LOD ± 0.01	no	no
71	Exterior	East	window frame	metal	poor	black	<LOD ± 0.01	no	no
72	Exterior	North	siding	metal	poor	beige	<LOD ± 0.01	no	no
73	Exterior	North	louvre	metal	poor	black	0.07 ± 0.02	no	yes
74	Exterior	West	siding	metal	poor	beige	<LOD ± 0.01	no	no
75	Exterior	West	louvre	metal	intact	black	0.09 ± 0.03	no	yes
76	Exterior	West	wall	CMU	intact	beige	<LOD ± 0.01	no	no
77	Exterior	West	door frame	metal	intact	black	0.07 ± 0.02	no	yes
78	Exterior	West	door	metal	intact	black	<LOD ± 0.01	no	no
79	Exterior	West	downspout	metal	intact	white	<LOD ± 0.01	no	no
80	Exterior	West	post	metal	peeling	beige	<LOD ± 0.01	no	no
81	Exterior	West	wall	gypboard	intact	white	<LOD ± 0.01	no	no
82	Exterior	West	ceiling	gypboard	intact	white	<LOD ± 0.01	no	no
83	Exterior	West	pipe	metal	peeling	red	<LOD ± 0.01	no	no
84	Exterior	West	door	metal	intact	black	<LOD ± 0.01	no	no
85	Exterior	West	foundation	concrete	peeling	brown	<LOD ± 0.01	no	no
86	Exterior, paint & thinner storage	West	eave	metal	intact	gray	0.08 ± 0.03	no	yes
87	Exterior, paint & thinner storage	West	beam	metal	intact	beige	0.57 ± 0.10	no	yes
88	**Exterior, paint & thinner storage**	**West**	**rafter**	**metal**	**intact**	**beige**	**1.51 ± 0.10**	**yes**	**yes**
89	Exterior	West	eyebrow roof	metal	intact	gray	<LOD ± 0.01	no	no
90	Exterior	West	eyebrow roof	metal	intact	gray	<LOD ± 0.01	no	no
91	Interior	East	wall	gypboard	intact	white	<LOD ± 0.01	no	no
92	Interior	East	wall	gypboard	intact	white	<LOD ± 0.01	no	no
93	Interior	East	siding	metal	intact	gray	<LOD ± 0.01	no	no
94	Calibration						1.15 ± 0.10		
95	Calibration						1.19 ± 0.10		
96	Calibration						1.06 ± 0.10		

"**Lead**" column indicates the detected lead content in paint film in mg/cm² (milligrams per square centimeter).
<LOD = less than instrument level of detection, 0.01 mg/cm².

Lead-based paint (LBP) is defined as paint with a lead content greater than or equal to 1.0 milligrams per square centimeter (mg/cm²).

Occupational Safety and Health Administration (OSHA) regulates activities disturbing paint that contains any amount of lead (lead-containing paint or LCP), even if the content is below the HUD standard.

Serial #112969, Model XL3t

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Appendix D

Certifications

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(808) 671-8383…Telephone emet@emetservices.com...E-mail

United States Department of Commerce
National Institute of Standards and Technology

Certificate of Accreditation to ISO/IEC 17025:2017

NVLAP LAB CODE: 101807-0

EnvironMETeo Services Inc.

Waipahu, HI

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

Asbestos Fiber Analysis

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique on ISO/IEC 17025).

2024-07-01 through 2025-06-30

Effective Dates

For the National Voluntary Laboratory Accreditation Program

STATE OF HAWAI'I

DEPARTMENT OF HEALTH

Lead-Based Paint Activities Firm Certification

THIS IS TO CERTIFY THAT

EnvironMETeo Services, Inc.

has fulfilled the requirements of Chapter 11-41 Hawaii Administrative Rules and the Toxic Substance Control Act (TSCA) Section 402(a)(2), and has received certification as a firm pursuant to §11-41-4, HAR to conduct lead-based paint activities in Hawaii.

This certification is valid from the date of issuance and expires on **JUNE 19, 2027**.

Date of Issue: **APRIL 8, 2024**
Certification # **PBF-0024**

FOR DIRECTOR OF HEALTH

NON-TRANSFERABLE

REVOCABLE FOR CAUSE



State of Hawai'i
Asbestos Certification

Training Course Exp. Dates

W	n/a	**MP**	n/a
CS	n/a	**PD**	n/a
INS	11/25/25	**PM**	04/05/25

W= Worker
CS= Cont./Sup.
INS= Inspector
PD= Project Designer
MP= Mgmt. Planner
PM= Project Monitor

Groendyke
Bronson J.
EnvironMETeo Services, Inc.
HIASB-4452
State Exp. Date 03/14/2025

State of Hawai'i
Lead Based Paint Activities Certification

Expiration Dates:

Inspector-	n/a
Supervisor-	n/a
Risk Assessor-	05/01/2025
Project Designer-	n/a
Worker-	n/a



Groendyke
Bronson J.
Certification #- PB-1099

End of Report

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SECTION 01730 - EXECUTION

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS: The General Terms and Conditions, City and County of Honolulu (not specifically attached), the Special Provisions, and all other applicable documents preceding these specifications shall govern all work specified hereinafter in all DIVISIONS AND SECTIONS.

1.02 SUMMARY:

A. Section includes general administrative and procedural requirements governing the execution of the Work, including, but not limited to, the following:

1. Construction layout.
2. Field engineering and surveying.
3. Installation of the Work.
4. Cutting and patching.
5. Progress cleaning.
6. Protection of installed construction.

B. Related Requirements:

1. Section 01770 "Project Closeout" for submitting the final property survey with Project Record Documents, recording of City-accepted deviations from indicated lines and levels, replacing defective work, and final cleaning.

1.03 INFORMATIONAL SUBMITTALS:

A. Certificates: Submit certificate signed by land surveyor or professional engineer certifying that location and elevation of improvements comply with requirements.

B. Landfill Receipts: Submit copy of receipts issued by a landfill facility, licensed to accept hazardous materials, for hazardous waste disposal.

C. Certified Surveys: Submit two (2) copies signed by land surveyor.

1.04 QUALITY ASSURANCE:

A. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.

1. Structural Elements: When cutting and patching structural elements, notify the Officer-in-Charge of locations and details of cutting and await directions from the Officer-in-Charge before proceeding. Shore, brace, and support structural elements during cutting and patching. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or increase deflection.

2. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.

3. Other Construction Elements: Do not cut and patch other construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety.

4. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner without approval by the Officer-in-Charge that will reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

B. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for the installation of products and equipment.

PART 2 - PRODUCTS

2.01 MATERIALS:

A. General: Comply with requirements specified in other Sections.

1. For projects requiring compliance with sustainable design and construction practices and procedures, use products for patching that comply with sustainable design requirements.

B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.

1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to the Officer-in-Charge for the visual and functional performance of in-place materials.

PART 3 - EXECUTION

3.01 EXAMINATION:

A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities, mechanical and electrical systems, and other construction affecting the Work.

1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; underground electrical services; and other utilities.

2. Furnish location data for work related to the Project that must be performed by public utilities serving the Project site.

B. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.

1. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
2. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
3. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.

C. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.02 PREPARATION:

A. Existing Utility Information: Furnish information to local utility that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with Officer-In-Charge..

B. Field Measurements: Take field measurements as required to fit the work properly. Recheck measurements before installing each product. 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 to avoid delaying the Work.

C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.

D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of the Contractor, submit a request for information to Officer-In-Charge.

3.03 CONSTRUCTION LAYOUT:

A. Verification: Before proceeding to lay out the Work, verify the layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify the Officer-In-Charge promptly.

B. General: Engage a land surveyor to lay out the Work using accepted surveying practices.

1. Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of the Project.
2. Establish limits on the use of the Project site.
3. Establish dimensions within the tolerances indicated. Do not scale Drawings to obtain the required dimensions.
4. Inform installers of lines and levels to which they must comply.
5. Check the location, level, and plumb, of every major element as the Work progresses.
6. Notify the Officer-In-Charge when deviations from required lines and levels exceed allowable tolerances.
7. 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 layout site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and rim and invert elevations.

D. Building Lines and Levels: Locate and layout control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two or more locations.

E. 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 Officer-In-Charge and City's consultants.

3.04 FIELD ENGINEERING:

A. Identification: The City will identify existing benchmarks, control points, and property corners.

B. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.

C. Benchmarks: Establish and maintain a minimum of three (3) permanent benchmarks on the 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.

D. Certified Survey: On completion of foundation walls, major site improvements, and other work requiring field-engineering services, prepare a certified survey showing dimensions, locations, angles, and elevations of construction and sitework.

3.05 INSTALLATION:

A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.

1. Make vertical work plumb and make horizontal work level.
2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
3. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.

B. Comply with the manufacturer's written instructions and recommendations for installing products in the applications indicated.

C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.

D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.

E. Sequence the Work and allow adequate clearances to accommodate the movement of construction items on site and placement in permanent locations.

F. Tools and Equipment: Where possible, select tools or equipment that minimize the production of excessive noise levels.

G. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other portions of the Work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.

H. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify the size and type required for load conditions.

1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by the Officer-in-Charge.
2. Allow for building movement, including thermal expansion and contraction.
3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to

be embedded in concrete or masonry. Deliver such items to the Project site in time for installation.

I. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.

J. Remove and replace damaged, defective, or non-conforming Work.

3.06 CUTTING AND PATCHING:

A. Cutting and Patching, General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.

1. Cut in-place construction to provide for the installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.

B. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during installation or cutting and patching operations, by methods and with materials so as not to void existing warranties.

C. Temporary Support: Provide temporary support for work to be cut.

D. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Project that might be exposed during cutting and patching operations.

E. Adjacent Occupied Areas: Where interference with the use of adjoining areas or interruption of free passage to adjoining areas is unavoidable, coordinate cutting and patching according to requirements.

F. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to minimize interruption to occupied areas.

G. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with the original Installer; comply with the original Installer's written recommendations.

1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.

4. Excavating and Backfilling: Comply with requirements in applicable Sections where required by cutting and patching operations.
5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal the remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
6. Proceed with patching after construction operations requiring cutting are complete.

H. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following the performance of other work. Patch with durable seams that are as invisible as practicable. Provide materials and comply with installation requirements specified in other Sections, where applicable.

1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate the physical integrity of the installation.
2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will minimize evidence of patching and refinishing.
3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
5. Exterior Building Enclosure: Patch components in a manner that restores the enclosure to a weathertight condition and ensures thermal and moisture integrity of the building enclosure.

I. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

3.07 PROGRESS CLEANING:

A. General: Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.

1. Comply with requirements in NFPA 241 for the removal of combustible waste materials and debris.
2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F (27 deg C).
3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.

a. Use containers intended for holding waste materials of type to be stored.

4. Coordinate progress cleaning for joint-use areas where the Contractor and other contractors are working concurrently.

B. Site: Maintain the 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 the 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 the manufacturer or fabricator of the product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use 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 in Finished Areas: Clean exposed surfaces and protect them as necessary to ensure freedom from damage and deterioration at the time of Substantial Completion.

G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways. Comply with waste disposal requirements in Section 01560 "Environmental Controls.

H. 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.

I. 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.

J. Limiting Exposures: Supervise construction operations to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.08 STARTING AND ADJUSTING:

A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.

B. Adjust equipment for proper operation. Adjust operating components for proper operation without binding.

C. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

D. Manufacturer's Field Service: Comply with qualification requirements in Section 01400 Quality Requirements.

3.09 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. Protection of Existing Items: Provide protection and ensure that existing items to remain undisturbed by construction are maintained in condition that existed at commencement of the Work.

C. Comply with manufacturer's written instructions for temperature and relative humidity.

END OF SECTION

SECTION 01740 - WARRANTIES

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS: The General Terms and Conditions, City and County of Honolulu (not specifically attached), the Special Provisions, and all other applicable documents preceding these specifications shall govern all work specified hereinafter in all DIVISIONS AND SECTIONS.

1.02 SUMMARY:

A. This Section includes administrative and procedural requirements for warranties required by the Contract Documents, including manufacturers' standard warranties on products and special warranties.

1. Refer to the General Conditions for terms of the Contractor's period for correction of the Work.

B. Related Sections: The following Sections contain requirements that relate to this Section:

1. Division 1 Section "Submittals" specifies procedures for submitting warranties.
2. Division 1 Section "Contract Closeout" specifies contract closeout procedures.
3. Divisions 2 through 16 Sections for specific requirements for warranties on products and installations specified to be warranted.
4. Certifications and other commitments and agreements for continuing services to the City are specified elsewhere in the Contract Documents.

C. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products. Manufacturer's disclaimers and limitations on product warranties do not relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor.

D. Separate Prime Contracts: Each prime contractor is responsible for warranties related to its own contract.

1.03 DEFINITIONS:

A. Standard product warranties are preprinted written warranties published by individual manufacturers for particular products and are specifically endorsed by the manufacturer to the City.

B. Special warranties are written warranties required by or incorporated in the Contract Documents, either to extend time limits provided by standard warranties or to provide greater rights for the City.

1.04 WARRANTY REQUIREMENTS:

A. Related Damages and Losses: When correcting failed or damaged warranted construction, remove and replace construction that has been damaged as a result of such failure or must be removed and replaced to provide access for correction of warranted construction.

B. Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.

C. Replacement Cost: Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of the Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether the City has benefited from use of the Work through a portion of its anticipated useful service life.

D. City's Recourse: Expressed warranties made to the City are in addition to implied warranties and shall not limit the duties, obligations, rights, and remedies otherwise available under the law. Expressed warranty periods shall not be interpreted as limitations on the time in which the City can enforce such other duties, obligations, rights, or remedies.

1. Rejection of Warranties: The City reserves the right to reject warranties and to limit selection to products with warranties not in conflict with requirements of the Contract Documents.

E. Where the Contract Documents require a special warranty, or similar commitment on the Work or part of the Work, the City reserves the right to refuse to accept the Work, until the Contractor presents evidence that entities required to countersign such commitments are willing to do so.

1.05 SUBMITTALS:

A. Submit written warranties to the Officer-In-Charge prior to the date certified for Substantial Completion. If the Officer-In-Charge Certificate of Substantial Completion designates a commencement date for warranties other than the date of Substantial Completion for the Work, or a designated portion of the Work, submit written warranties upon request of the Officer-In-Charge.

1. When a designated portion of the Work is completed and occupied or used by the City, by separate agreement with the Contractor during the construction period, submit properly executed warranties to the Officer-In-Charge within fifteen (15) days of completion of that designated portion of the Work.

B. When the Contract Documents require the Contractor, or the Contractor and a subcontractor, supplier or manufacturer to execute a special warranty, prepare a written document that contains appropriate terms and identification, ready for execution by the required parties. Submit a draft to the City, through the Officer-In-Charge for approval prior to final execution.

C. Forms for special warranties are included at the end of this Section. Prepare a written document utilizing the appropriate form, ready for execution by the Contractor, or by the Contractor, subcontractor, supplier, or manufacturer. Submit a draft to the City, through the Officer-In-Charge for approval prior to final execution.

1. Refer to Divisions 2 through 16 Sections for specific content requirements and particular requirements for submitting special warranties.

D. Form of Submittal: At Final Completion compile two (2) copies of each required warranty properly executed by the Contractor, or by the Contractor, subcontractor, supplier, or manufacturer. Organize the warranty documents into an orderly sequence based on the table of contents of the Project Manual.

E. Bind warranties and bonds in heavy-duty, commercial-quality, durable 3-ring, vinyl-covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch (115-by-280-mm) paper.

1. Provide heavy paper dividers with celluloid covered tabs for each separate warranty. Mark the 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 the Installer.

2. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project title or name, and name of the Contractor.

3. When warranted construction requires operation and maintenance manuals, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.

PART 2 - PRODUCTS (NONE)

PART 3 - EXECUTION (NONE)

END OF SECTION

SECTION 01749 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS: The General Terms and Conditions, City and County of Honolulu (not specifically attached), the Special Provisions, and all other applicable documents preceding these specifications shall govern all work specified hereinafter in all DIVISIONS AND SECTIONS.

1.02 SUMMARY:

A. Section includes administrative and procedural requirements for the following:

1. Disposing of non-hazardous demolition and construction waste.

1.03 DEFINITIONS:

A. Construction Waste: Building, structure, and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.

B. Demolition Waste: Building, structure, and site improvement materials resulting from demolition operations.

C. Disposal: Removal of demolition or construction waste and subsequent salvage, sale, recycling, or deposit in landfill, incinerator acceptable to Officer-In-Charge, or designated spoil areas on the City's property.

D. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.

E. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.

F. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

1.04 ACTION SUBMITTALS:

A. Waste Management Plan: Submit plan within 7 days of date established for the Notice to Proceed.

1.05 INFORMATIONAL SUBMITTALS:

A. Waste Reduction Progress Reports: Concurrent with each Application for Payment, submit report. Include the following information:

1. Generation point of waste.
2. Total quantity of waste in tons (tonnes).

3. Total quantity of waste recovered (salvaged plus recycled) as a percentage of total waste.

B. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

1.06 QUALITY ASSURANCE:

A. Waste Management Coordinator Qualifications: Experienced with a record of successful waste management coordination of projects with similar requirements.

1.07 WASTE MANAGEMENT PLAN:

A. General: Develop a waste management plan according to requirements in this Section. Plan shall consist of waste identification, waste reduction work plan, and cost/revenue analysis. Indicate quantities by weight or volume, but use same units of measure throughout waste management plan.

B. Waste Identification: Indicate anticipated types and quantities of waste generated by the Work. Include estimated quantities and assumptions for estimates.

C. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed of in landfill or incinerator. Include points of waste generation, total quantity of each type of waste, quantity for each means of recovery, and handling and transportation procedures.

1. Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.
2. Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location where materials separation will be performed.

PART 2 - PRODUCTS NONE

PART 3 - EXECUTION

3.01 PLAN IMPLEMENTATION:

A. General: Implement approved waste management plan. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.

B. Waste Management Coordinator: Engage a waste management coordinator to be responsible for implementing, monitoring, and reporting status of waste management work plan.

C. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work.

D. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

1. Comply with Section 01500 "Construction Facilities and Temporary Utilities" for controlling dust and dirt, environmental protection, and noise control.

3.02 DISPOSAL OF WASTE:

A. General: Except for items or materials to be salvaged or recycled, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to Officer-In-Charge.

1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. Burning: Do not burn waste materials.

END OF SECTION

SECTION 01770 - PROJECT CLOSEOUT

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS: The General Terms and Conditions, City and County of Honolulu (not specifically attached), the Special Provisions, and all other applicable documents preceding these specifications shall govern all work specified hereinafter in all DIVISIONS AND SECTIONS.

1.02 RELATED DOCUMENTS:

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

1.03 SUMMARY:

A. This Section specifies administrative and procedural requirements for project closeout, including but not limited to:

1. Inspection procedures.
2. Project record document submittal.
3. Operating and maintenance manual submittal.
4. Submittal of warranties.
5. Final cleaning.

B. Closeout requirements for specific construction activities are included in the appropriate Sections in Divisions-2 through -16.

C. These requirements do not relieve the Contractor of specific requirements by the City and County of Honolulu as spelled out in the agreement and/or conditions of the contract.

1.04 SUBSTANTIAL COMPLETION:

A. Preliminary Procedures: Before requesting inspection for certification of Substantial Completion, complete the following. List exceptions in the request.

1. In the Application for Payment that coincides with, or first follows, the date Substantial Completion is claimed, show 100 percent completion for the portion of the Work claimed as substantially complete. Include supporting documentation for completion as indicated in these Contract Documents and a statement showing an accounting of changes to the Contract Sum.

a. If 100 percent completion cannot be shown, include a list of incomplete items, the value of incomplete construction, and reasons the Work is not complete.

2. Advise the Officer-In-Charge of pending insurance change-over requirements.

3. Submit specific warranties, workmanship bonds, maintenance agreements, final certifications and similar documents.
4. Obtain and submit releases enabling the Officer-In-Charge unrestricted use of the Work and access to services and utilities; include occupancy permits, operating certificates and similar releases.
5. Submit record drawings, maintenance manuals, final project photographs, damage or settlement survey, property survey, and similar final record information.
6. Deliver tools, spare parts, extra stock, and similar items.
7. Make final change-over of permanent locks and transmit keys to the Officer-In-Charge. Advise the Officer-In-Charge's personnel of change-over in security provisions.
8. Complete start-up testing of systems, and instruction of the Officer-In-Charge's operating and maintenance personnel. Discontinue or change over and remove temporary facilities from the site, along with construction tools, mock-ups, and similar elements.
9. Complete final clean up requirements, including touch-up painting. Touch-up and otherwise repair and restore marred exposed finishes.

B. Inspection Procedures: On receipt of a request for inspection, the Officer-In-Charge will either proceed with inspection or advise the Contractor of unfilled requirements. The Officer-in-Charge will prepare the Certificate of Substantial Completion following inspection or advise the Contractor through the City's Consultant of construction that must be completed or corrected before the certificate will be issued.

1. The Officer-in-Charge will repeat inspection when requested and assured that the Work has been substantially completed.
2. Results of the completed inspection will form the basis of requirements for final acceptance.

1.05 FINAL ACCEPTANCE:

A. Preliminary Procedures: Before requesting final inspection for certification of final acceptance and final payment, complete the following. List exceptions in the request.

1. Submit the final payment request with releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.
2. Submit an updated final statement, accounting for final additional changes to the Contract Sum.
3. Submit a certified copy of the Officer-in-Charge's final inspection list of items to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance, and the list has been endorsed and dated by the Officer-in-Charge.
4. Submit final meter readings for utilities, a measured record of stored fuel, and similar data as of the date of Substantial Completion, or when the Officer-In-Charge took possession of and responsibility for corresponding elements of the Work.

5. Submit consent of surety to final payment.
6. Submit a final liquidated damages settlement statement.
7. Submit evidence of final, continuing insurance coverage complying with insurance requirements.

B. Reinspection Procedure: The Officer-in-Charge will reinspect the Work upon receipt of notice that the Work, including inspection list items from earlier inspections, has been completed, except items whose completion has been delayed because of circumstances acceptable to the Officer-in-Charge.

1. Upon completion of reinspection, the Officer-In-Charge will prepare a certificate of final acceptance, or advise the Contractor of Work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance.
2. If necessary, reinspection will be repeated.

1.06 RECORD DOCUMENT SUBMITTALS:

A. General: Do not use record documents for construction purposes; protect from deterioration and loss in a secure, fire-resistive location; provide access to record documents for the City's Consultants' reference during normal working hours.

B. Record Drawings: Maintain a clean, undamaged set of blue or black line white-prints of Contract Drawings and Shop Drawings. Mark the set to show the actual installation where the installation varies substantially from the Work as originally shown. Mark whichever drawing is most capable of showing conditions fully and accurately; where Shop Drawings are used, record a cross-reference at the corresponding location on the Contract Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date.

1. Mark record sets with red erasable pencil; use other colors to distinguish between variations in separate categories of the Work.
2. Mark new information that is important to the City, but was not shown on Contract Drawings or Shop Drawings.
3. Note related Change Order numbers where applicable.
4. Organize record drawing sheets into manageable sets, bind with durable paper cover sheets, and print suitable titles, dates and other identification on the cover of each set.

C. Record Specifications: Maintain one complete copy of the Project Manual, including addenda, and one copy of other written construction documents such as Change Orders and modifications issued in printed form during construction. Mark these documents to show substantial variations in actual Work performed in comparison with the text of the Specifications and modifications. Give particular attention to substitutions, selection of options and similar information on elements that are concealed or cannot otherwise be readily discerned later by direct observation. Note related record drawing information and Product Data.

1. Upon completion of the Work, submit record Specifications to the Officer-In-Charge for the City's records.

D. Record Product Data: Maintain one copy of each Product Data submittal. Mark these documents to show significant variations in actual Work performed in comparison with information submitted. Include variations in products delivered to the site, and from the manufacturer's installation instructions and recommendations. Give particular attention to concealed products and portions of the Work which cannot otherwise be readily discerned later by direct observation. Note related Change Orders and mark-up of record drawings and Specifications.

1. Upon completion of mark-up, submit complete set of record Product Data to the Officer-In-Charge for the City's records.

E. Record Sample Submitted: Immediately prior to the date or dates of Substantial Completion, the Contractor will meet at the site with the Officer-In-Charge to determine which of the submitted Samples that have been maintained during progress of the Work are to be transmitted to the City for record purposes. Comply with delivery to the City's Sample storage area.

F. Miscellaneous Record Submittals: Refer to other Specification Sections for requirements of miscellaneous record-keeping and submittals in connection with actual performance of the Work. Immediately prior to the date or dates of Substantial Completion, complete miscellaneous records and place in good order, properly identified and bound or filed, ready for continued use and reference. Submit to the Officer-In-Charge for the City's records.

G. Maintenance Manuals: Organize operating and maintenance data into suitable sets of manageable size. Bind properly indexed data in individual heavy-duty 2-inch, 3-ring vinyl-covered binders, with pocket folders for folded sheet information. Mark appropriate identification on front and spine of each binder. Include the following types of information:

1. Emergency instructions.
2. Spare parts list.
3. Copies of warranties.
4. Inspection procedures.
5. Shop Drawings and Product Data.

PART 2 - PRODUCTS (NONE)

PART 3 - EXECUTION

3.01 CLOSEOUT PROCEDURES:

A. Operating and Maintenance Instructions: Arrange for each installer of equipment that requires regular maintenance to meet with the City's personnel to provide instruction in proper operation and maintenance. If installers are not experienced in procedures, provide instruction by manufacturer's representatives. Include a detailed review of the following items:

1. Maintenance manuals.
2. Record documents.

3. Spare parts and materials.
4. Identification systems.
5. Control sequences.
6. Hazards.
7. Cleaning.
8. Warranties and bonds.
9. Maintenance agreements and similar continuing commitments.

3.02 FINAL CLEANING:

A. General: General cleaning during construction is required by the General Conditions.

B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program. Comply with manufacturer's instructions.

1. Complete the following cleaning operations before requesting inspection for Certification of Substantial Completion.

a. Remove labels that are not permanent labels.
b. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compound and other substances that are noticeable vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials.
c. Clean exposed exterior and interior hard-surfaced finishes to a dust-free condition, free of stains, films and similar foreign substances. Restore reflective surfaces to their original reflective condition. Leave concrete floors broom clean. Vacuum carpeted surfaces.
d. Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication and other substances. Clean plumbing fixtures to a sanitary condition. Clean light fixtures and lamps.
e. Clean the site, including landscape development areas, of rubbish, litter and other foreign substances. Sweep paved areas broom clean; remove stains, spills and other foreign deposits. Rake grounds that are neither paved nor planted, to a smooth even-textured surface.

C. Pest Control: Engage an experienced exterminator to make a final inspection, and rid the Project of rodents, insects and other pests.

D. Removal of Protection: Remove temporary protection and facilities installed for protection of the Work during construction.

E. Compliance: Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the City's property. Do not discharge volatile, harmful or dangerous materials into drainage systems. Remove waste materials from the site and dispose of in a lawful manner.

1. Where extra materials of value remaining after completion of associated Work have become the City's property, arrange for disposition of these materials as directed.

END OF SECTION

SECTION 01782 – OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS: The General Terms and Conditions, City and County of Honolulu (not specifically attached), the Special Provisions, and all other applicable documents preceding these specifications shall govern all work specified hereinafter in all DIVISIONS AND SECTIONS.

1.02 SUMMARY

A. Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:

1. Operation and maintenance documentation directory manuals.
2. Emergency manuals.
3. Systems and equipment operation manuals.
4. Systems and equipment maintenance manuals.
5. Product maintenance manuals.

1.03 CLOSEOUT SUBMITTALS

A. Submit operation and maintenance manuals indicated. Provide content for each manual as specified in individual Specification Sections, and as reviewed and approved at the time of Section submittals. Submit reviewed manual content formatted and organized as required by this Section.

1. Officer-in-Charge will comment on whether the content of operation and maintenance submittals is acceptable.
2. Where applicable, clarify and update reviewed manual content to correspond to revisions and field conditions.

B. Format: Submit operation and maintenance manuals as noted in section 01300 – Submittals.

C. Final Manual Submittal: Submit each manual in final form prior to requesting inspection for Substantial Completion and at least 15 days before commencing demonstration and training. Officer-In-Charge will return a copy with comments.

1. Correct or revise each manual to comply with Commissioning Authority's comments. Submit copies of each corrected manual within 15 days of receipt of Commissioning Authority's comments and prior to commencing demonstration and training.

D. Comply with Section 01770 "Project Closeout" for schedule for submitting operation and maintenance documentation.

1.04 FORMAT OF OPERATION AND MAINTENANCE MANUALS

A. Manuals, Electronic Files: Submit manuals in the form of a multiple-file composite electronic PDF file for each manual type required.

1. Electronic Files: Use electronic files prepared by the manufacturer where available. Where scanning of paper documents is required, configure scanned files for minimum readable file size.
2. File Names and Bookmarks: Bookmark individual documents based on file names. Name document files to correspond to system, subsystem, and equipment names used in the manual directory and table of contents. Group documents for each system and subsystem into individual composite bookmarked files, then create a composite manual, so that resulting bookmarks reflect the system, subsystem, and equipment names in a readily navigated file tree. Configure electronic manual to display bookmark panel on opening file.

B. Manuals, Paper Copy: Submit manuals in the form of hard copy, bound and labeled volumes.

1. Binders: Heavy-duty, three-ring, vinyl-covered, [loose-leaf] [post-type] binders, in thickness necessary to accommodate contents, sized to hold 8-1/2-by-11-inch (215-by-280-mm) paper; with a clear plastic sleeve on the spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.

2. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.

a. If oversize drawings are necessary, fold drawings to the same size as text pages and use as foldouts.
b. If drawings are too large to be used as foldouts, fold, and place drawings in labeled envelopes and bind envelopes in the rear of the manual. At appropriate locations in the manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

1.05 REQUIREMENTS FOR EMERGENCY, OPERATION, AND MAINTENANCE MANUALS

A. Organization of Manuals: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:

1. Title page.
2. Table of contents.
3. Manual contents.

B. Title Page: Include the following information:

1. Subject matter included in the manual.

2. Name and address of Project.
3. Name and address of City Agency or Department.
4. Date of submittal.
5. Name and contact information for Contractor.
6. Name and contact information for Construction Manager.
7. Name and contact information for Officer-in-Charge.
8. Name and contact information for Commissioning Authority.
9. Names and contact information for major consultants to the Architect that designed the systems contained in the manuals.
10. Cross-reference to related systems in other operation and maintenance manuals.

C. Table of Contents: List each product included in the manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.

D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.

E. Identification: In the documentation directory and in each operation and maintenance manual, identify each system, subsystem, and piece of equipment with same designation used in the Contract Documents. If no designation exists, assign a designation according to ASHRAE Guideline 4, "Preparation of Operating and Maintenance Documentation for Building Systems."

1.06 EMERGENCY MANUALS

A. Emergency Manual: Assemble a complete set of emergency information indicating procedures for use by emergency personnel and by City's operating personnel for the types of emergencies indicated.

B. Content: Organize manual into a separate section for each of the following:

1. Type of emergency.
2. Emergency instructions.
3. Emergency procedures.

C. Type of Emergency: Where applicable for each type of emergency indicated below, include instructions and procedures for each system, subsystem, piece of equipment, and component:

1. Fire.
2. Flood.
3. Gas leak.
4. Water leak.
5. Power failure.
6. Water outage.
7. System, subsystem, or equipment failure.
8. Chemical release or spill.

D. Emergency Instructions: Describe and explain warnings, trouble indications, error messages, and similar codes and signals. Include responsibilities of the City's operating personnel for notification of the Installer, supplier, and manufacturer to maintain warranties.

E. Emergency Procedures: Include the following, as applicable:

1. Instructions on stopping.
2. Shutdown instructions for each type of emergency.
3. Operating instructions for conditions outside normal operating limits.
4. Required sequences for electric or electronic systems.
5. Special operating instructions and procedures.

1.07 SYSTEMS AND EQUIPMENT OPERATION MANUALS

A. Systems and Equipment Operation Manual: Assemble a complete set of data indicating the operation of each system, subsystem, and piece of equipment not part of a system. Include information required for daily operation and management, operating standards, and routine and special operating procedures.

B. Content: In addition to requirements in this Section, including operation data required in individual Specification Sections and the following information:

1. System, subsystem, and equipment descriptions. Use designations for systems and equipment indicated on Contract Documents.
2. Performance and design criteria if the Contractor has delegated design responsibility.
3. Operating standards.
4. Operating procedures.
5. Operating logs.
6. Wiring diagrams.
7. Control diagrams.
8. Piped system diagrams.
9. Precautions against improper use.
10. License requirements including inspection and renewal dates.

C. Descriptions: Include the following:

1. Product name and model number. Use designations for products indicated on Contract Documents.
2. Manufacturer's name.
3. Equipment identification with serial number of each component.
4. Equipment function.
5. Operating characteristics.
6. Limiting conditions.
7. Performance curves.
8. Engineering data and tests.
9. Complete nomenclature and number of replacement parts.

D. Operating Procedures: Include the following, as applicable:

1. Startup procedures.
2. Equipment or system break-in procedures.
3. Routine and normal operating instructions.
4. Regulation and control procedures.
5. Instructions on stopping.
6. Normal shutdown instructions.
7. Seasonal and weekend operating instructions.
8. Required sequences for electric or electronic systems.
9. Special operating instructions and procedures.

E. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.

F. Piped Systems: Diagram piping as installed and identify color coding where required for identification.

1.08 SYSTEMS AND EQUIPMENT MAINTENANCE MANUALS

A. Systems and Equipment Maintenance Manuals: Assemble a complete set of data indicating maintenance of each system, subsystem, and piece of equipment not part of a system. Include manufacturers' maintenance documentation, preventive maintenance procedures, and frequency, repair procedures, wiring and systems diagrams, lists of spare parts, and warranty information.

B. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranties and bonds, as described below.

C. Manufacturers' Maintenance Documentation: Include the following information for each component part or piece of equipment:

1. Standard maintenance instructions and bulletins; include only sheets pertinent to the product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.

    a. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.

2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
3. Identification and nomenclature of parts and components.
4. List of items recommended to be stocked as spare parts.

D. Maintenance Procedures: Include the following information and items that detail essential maintenance procedures:

1. Test and inspection instructions.
2. Troubleshooting guide.
3. Precautions against improper maintenance.
4. Disassembly; component removal, repair, and replacement; and reassembly instructions.
5. Aligning, adjusting, and checking instructions.
6. Demonstration and training video recording, if available.

E. Maintenance and Service Schedules: Include service and lubrication requirements, a list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.

F. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.

G. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect the validity of warranties or bonds.

1. Include procedures to follow and required notifications for warranty claims.

H. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with the information contained in record Drawings to ensure correct illustration of the completed installation.

1.09 PRODUCT MAINTENANCE MANUALS

A. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.

B. Content: Organize the manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.

C. Product Information: Include the following, as applicable:

1. Product name and model number.
2. Manufacturer's name.
3. Color, pattern, and texture.
4. Material and chemical composition.

5. Reordering information for specially manufactured products.

D. Maintenance Procedures: Include the manufacturer's written recommendations and the following:

1. Inspection procedures.
2. Types of cleaning agents to be used and methods of cleaning.
3. List of cleaning agents and methods of cleaning detrimental to the product.
4. Schedule for routine cleaning and maintenance.
5. Repair instructions.

E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.

F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

1. Include procedures to follow and required notifications for warranty claims.

PART 2 - PRODUCTS (NONE)

PART 3 - EXECUTION (NONE)

END OF SECTION

DIVISION 3 - CONCRETE

SECTION 03730 – CONCRETE REHABILITATION

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

The General Terms and Conditions, City and County of Honolulu (not specifically attached), the Special Provisions, and all other applicable documents preceding these specifications shall govern all work specified in all DIVISIONS AND SECTIONS.

1.02 SUMMARY

A. Section Includes: This specification describes the patching or overlay of interior and/or exterior horizontal surfaces with a polymer- modified, portland cement mortar/concrete. mechanically seamed, standing seam metal roof system.

1. This specification describes the patching or overlay of interior and/or exterior horizontal surfaces with a polymer- modified, portland cement mortar/concrete. mechanically seamed, standing seam metal roof system.

1.03 SUBMITTALS

A. Submit in accordance with SECTION 01300 - SUBMITTALS.

B. Product Data: For each type of product indicated and appropriate Material Safety Data Sheets (MSDS).

1.04 QUALITY ASSURANCE

A. Manufacturing Qualifications: The manufacturer of the specified product shall be ISO 9001 certified and have in existence a recognized ongoing quality assurance program independently audited on a regular basis.

B. Contractor Qualifications: Contractor shall be qualified in the field of concrete repair and protection with a successful track record of 5 years or more. Contractor shall maintain qualified personnel who have received product training by a manufacturer's representative

C. Install materials in accordance with all safety and weather conditions required by manufacturer or as modified by applicable rules and regulations of local, state and federal authorities having jurisdiction. Consult Material Safety Data Sheets for complete handling recommendations.ly with applicable provisions of AISC's "Code of Standard Practice for Steel Buildings and Bridges."

1.05 JOB CONDITIONS

A. Environmental Conditions: Do not apply material if it is raining or snowing or if such conditions appear to be imminent.

B. Protection: Precautions should be taken to avoid damage to any surface near the work zone due to mixing and handling of the specified material.

1.06 WARRANTY

A. Provide manufacturer's 10 year standard material warranty from date of final acceptance. Provide installer's written labor warranty against defects of workmanship for a period of 10 years from the date of final acceptance.

B. Warranty Exclusions: Failure resulting from excess movement, structural cracks or defects, faulty construction, faulty design, misuse of structure, settlement, accident, fire, or other casualty or physical damage.

C. The Contractor's Surety shall not be held liable beyond two (2) years, from the Project Acceptance date.

PART 2 - PRODUCTS

2.01 MANUFACTURER

A. Horizontal Repairs: SikaQuick 2500 or approved substitute, as manufactured by Sika Corporation, is considered to conform to the requirements of this specification.

B. Vertical and Overhead Repairs: SikaQuick VOH or approved substitute, as manufactured by Sika Corporation, is considered to conform to the requirements of this specification.

C. SikaDur 32-Hi-Mod or approved substitute as manufactured by Sika Corporation, is considered to conform to the requirements of this specification.

D. Sika Armatec 110 or approved substitute as manufactured by Sika Corporation, is considered to conform to the requirements of this specification.

E. Galvashield XP or approved substitute as manufactured by Vector Corrosion Technologies, is considered to conform to the requirements of this specification.

F. Weld Connections: Comply with AWS D1.1 for welding procedure specifications, tolerances, appearance, and quality of welds and for methods used in correcting welding work.

PART 3 - EXECUTION

3.01 MIXING AND APPLICATION

A. Mechanically mix in an appropriately sized mortar mixer or with a Sika jiffy paddle and low speed (400-600 rpm) drill. Pour approximately 3/4 of a gallon of Latex R into the mixing container. Add 1 bag of SikaQuick 2500 or SikaQuick VOH while continuing to mix. Mix to a uniform consistency for a maximum of three minutes.

B. Placement Procedure: At the time of application, the substrate should be saturated surface dry with no standing water. Mortar and/or concrete must be scrubbed into substrate filling all pores and voids. While the scrub coat is still plastic, force material against edge of repair, working toward center. If the repair area is too large to fill while scrub coat is still wet use Sika Armatec 110 EpoCem in lieu of scrub coat. After filling, consolidate, then screed. Allow mortar or concrete to set to desired stiffness, then finish with trowel, manual or power, for smooth surface. Broom or burlap drag for rough surface. Repair area should match adjacent surface areas. Areas where the depth of the repair is less than 1-inch shall be repaired with portland cement mortar. In areas where the depth of the repair is greater than 1 inch, the repair shall be made with portland cement concrete.

C. As per ACI recommendations for polymer-modified portland cement concrete, curing is required. Moist cure with wet burlap and polyethylene, a fine mist of water or a water-based* compatible curing compound. Moist curing should commence immediately after finishing and continue for 48 hours. Protect newly applied material from rain, sun, and wind until compressive strength is 70% of the 28-day compressive strength. Setting time is dependent on temperature and humidity.

   *Pretesting of curing compound is recommended.

D. Adhere to all procedures, limitations and cautions for the portland cement mortar in the manufacturers current printed technical data sheet and literature.

E. Finish surfaces of exposed mortar to match adjacent existing finish or match existing texture/veneer where occurs.

F. Where repair occurs at exposed masonry, scour repair mortar to align and match masonry grout joints.

3.02 CLEANING

A. The uncured polymer-modified, portland cement mortar can be cleaned from tools with water. The cured polymer -modified portland cement mortar can only be removed mechanically.

B. Leave finished work and work area in a neat, clean condition without evidence of spillovers onto adjacent areas.

END OF SECTION

DIVISION 5 - METALS

SECTION 05120 - STRUCTURAL STEEL

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

The General Terms and Conditions, City and County of Honolulu (not specifically attached), the Special Provisions, and all other applicable documents preceding these specifications shall govern all work specified in all DIVISIONS AND SECTIONS.

1.02 SUMMARY

This Section includes fabrication and erection of structural steel work, as shown on drawings including schedules, notes, and details showing size and location of members, typical connections, and types of steel required.

1.03 SUBMITTALS

A. Submit in accordance with SECTION 01300 - SUBMITTALS.

B. Product Data: For each type of product indicated.

C. Shop Drawings: Show fabrication of structural-steel components.

D. Mill Test Reports.

E. Source quality-control test reports.

1.04 QUALITY ASSURANCE

A. Fabricator Qualifications: A qualified fabricator who participates in the AISC Quality Certification Program and is designated an AISC-Certified Plant, Category Sbd.

B. Welding: Qualify procedures and personnel according to AWS D1.1, "Structural Welding Code--Steel."

C. Comply with applicable provisions of AISC's "Code of Standard Practice for Steel Buildings and Bridges."

PART 2 - PRODUCTS

2.01 STRUCTURAL STEEL MATERIALS

A. W-Shapes: ASTM A992/A992M.

B. Channels, Angles-Shapes: ASTM A36/A36M.

C. Plate and Bar: ASTM A36/A36M.

D. Cold-Formed Hollow Structural Sections: ASTM A500/A500M, Grade B, structural tubing.

E. Steel Pipe: ASTM A53/A53M, Type E or S, Grade B.

F. Welding Electrodes: Comply with AWS requirements.

2.02 BOLTS, CONNECTORS, AND ANCHORS

A. High-Strength Bolts, Nuts, and Washers: ASTM F3125/F3125M, Type 1, heavy hex steel structural bolts; ASTM A563/A563M heavy hex carbon-steel nuts; and ASTM F436/F436M hardened carbon-steel washers.

B. Shear Connectors: ASTM A108, Grades 1015 through 1020, headed-stud type, cold-finished carbon steel; AWS D1.1, Type B.

C. Threaded Rods: ASTM A36/A36M.

2.03 PRIMER

A. Primer: SSPC-Paint 25, Type II, iron oxide, zinc oxide, raw linseed oil, and alkyd.

B. Fabricator's standard lead- and chromate-free, nonasphaltic, rust-inhibiting primer.

2.04 GROUT

Nonmetallic, Shrinkage-Resistant Grout: ASTM C1107/C1107M, factory-packaged, nonmetallic aggregate grout, noncorrosive, nonstaining, mixed with water to consistency suitable for application and a 30-minute working time.

2.05 FABRICATION

A. Structural Steel: Fabricate and assemble in shop to greatest extent possible. Fabricate according to AISC's "Code of Standard Practice for Steel Buildings and Bridges" and AISC's "Load and Resistance Factor Design Specification for Structural Steel Buildings."

B. Shear Connector: Prepare steel surfaces as recommended by manufacturer of shear connectors. Use automatic end welding of headed-stud shear connectors according to AWS D1.1 and manufacturer's written instructions.

2.06 FABRICATION

A. High-Strength Bolts: Shop install high-strength bolts according to RCSC's "Specification for Structural Joints Using High-Strength Bolts" for type of bolt and type of joint specified.

B. Weld Connections: Comply with AWS D1.1 for welding procedure specifications, tolerances, appearance, and quality of welds and for methods used in correcting welding work.

2.07 SHOP PRIMING

A. Shop prime steel surfaces except the following:

1. Surfaces embedded in concrete or mortar. Extend priming of partially embedded members to a depth of 2-inches.

2. Surfaces to be field welded.

3. Surfaces to be high-strength bolted with slip-critical connections.

4. Surfaces to receive sprayed fire-resistive materials.

5. Galvanized surfaces.

B. Surface Preparation: Clean surfaces to be painted. Remove loose rust and mill scale and spatter, slag, or flux deposits. Prepare surfaces according to the following specifications and standards:

SSPC-SP 3, "Power Tool Cleaning."

C. Priming: Immediately after surface preparation, apply primer according to manufacturer's written instructions and at rate recommended by SSPC to provide a dry film thickness of not less than 1-1/2 mils. Use priming methods that result in full coverage of joints, corners, edges, and exposed surfaces.

2.08 GALVANIZING

Hot-dip galvanize all exterior items and other items as indicated to be galvanized to comply with ASTM A123/A123M or ASTM A153/A153M as applicable.

2.09 MISCELLANEOUS MATERIALS

Galvanizing Repair Paint: SSPC-Paint 20, high-zinc-dust-content paint for regalvanizing welds in steel.

2.10 SOURCE QUALITY CONTROL

A. Correct deficiencies in work that test reports and inspections indicate do not comply with the Contract Documents.

B. In addition to visual inspection, shop-welded shear connectors will be tested and inspected according to requirements in AWS D1.1 for stud welding.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examination: Verify elevations of concrete-and masonry-bearing surfaces and locations of anchor rods, bearing plates, and other embedment, with steel erector present, for compliance with requirements. Proceed with installation only after unsatisfactory conditions have been corrected.

B. Set structural steel accurately in locations and to elevations indicated and according to AISC's "Code of Standard Practice for Steel Buildings and Bridges" and "Load and Resistance Factor Design Specification for Structural Steel Buildings."

C. Base Plates: Clean concrete and masonry bearing surfaces of bone-reducing materials, and roughen surfaces prior to setting base plates. Clean bottom surface of base plates.

1. Set base plates for structural members on wedges, shims, or setting nuts as required.

2. Weld plate washers to top of base plate.

3. Snug-tighten anchor rods after supported members have been positioned and plumbed. Do not remove wedges or shims but, if protruding, cut off flush with edge of base plate before packing with grout.

4. Promptly pack grout solidly between bearing surfaces and base plates so no voids remain. Neatly finish exposed surface; protect grout and allow to cure. Comply with manufacturer's written installation instructions for shrinkage-resistant grouts.

D. Fit exposed connections accurately together. Weld connections that are not be left as exposed joints but cannot be shop welded. Do not weld, cut, or abrade surfaces of exterior units that have been hot-dip galvanized after fabrication.

E. Maintain erection tolerances of structural steel within AISC's "Code of Standard Practice for Steel Buildings and Bridges."

3.02 FIELD CONNECTIONS

A. High-Strength Bolts: Shop install high-strength bolts according to RCSC's "Specifications for Structural Joints Using High-Strength Bolts" for type of bolt and type of joint specified.

B. Weld Connections: Comply with AWS D1.1 for welding procedure specifications, tolerance, appearance, and quality of welds and for methods used in correction welding work. Comply with AISC's "Code of Standard Practice for Steel Buildings and Bridges." and "Load and Resistance Factor Design Specification for Structural Steel Buildings" for bearing, adequacy of temporary connections, alignment, and removal of paint on surfaces adjacent to field welds.

3.03 FIELD QUALITY CONTROL

A. Testing Agency: State will engage a qualified independent testing and inspecting agency to inspect field welds and high-strength bolted connections.

B. Bolted Connections: Shop-bolted connections will be tested and inspected according to RCSC's "Specification for Structural Joints Using High-Strength Bolts".

C. Welded Connections: Field welds will be visually inspected according to AWS D1.1. In addition to visual inspection, field welds will be tested according to AWS D1.1 and the following inspection procedures, at testing agency's option:

1. Liquid Penetrant Inspection: ASTM E165/E165M.

2. Magnetic Particle Inspection: ASTM E709; performed on root pass and on finished weld. Cracks or zones of incomplete fusion or penetration will not be accepted.

3. Ultrasonic Inspection: ASTM E164.

4. Radiographic Inspection: ASTM E94/E94M.

D. Correct deficiencies in work that test reports and inspections indicate do not comply with Contract Documents.

3.04 TOUCH UP

A. Touch up surfaces and finishes after erection.

1. Painted Surfaces: Clean field welds, bolted connections, and abraded areas and touch up paint with the same materials as used for shop painting.

2. Galvanized Surfaces: Clean filed welds, bolted connections, and abraded areas and repair galvanizing to comply with ASTM A780/A780M.

END OF SECTION

DIVISION 5 - METALS

SECTION 05400 – COLD-FORMED METAL FRAMING

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

The General Terms and Conditions, City and County of Honolulu (not specifically attached), the Special Provisions, and all other applicable documents preceding these specifications shall govern all work specified in all DIVISIONS AND SECTIONS

1.02 SUMMARY

A. Section Includes:

1. Load-bearing wall framing

2. Exterior non-load-bearing wall framing.

3. Interior non-load-bearing wall framing, for framing that exceeds height limitations of standard, nonstructural metal framing.

1.03 SUBMITTALS

A. Submit in accordance with SECTION 01300 - SUBMITTALS.

B. Cold-formed steel framing materials.

C. Warranty: Submit warranty as stipulated in item entitled "WARRANTY" hereinbelow.

1.04 DELIVERY, STORAGE, AND HANDLING

A. Protect and store cold-formed steel framing from corrosion, moisture staining, deformation, and other damage during delivery, storage, and handling as required in AISI S202.

1.05 WARRANTY

Contractor's Warranty:

A. Submit warranty covering labor and materials against defects resulting from the use of defective or inferior materials, equipment, or workmanship for a period of 2 years from the project acceptance date. This warranty does not extend to defects caused by ordinary wear and tear, improper use, abuse, or negligence on the part of the City.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Subject to compliance with requirements, provide cold-formed steel framing products by ClarkDietrich or approved substitute; as specified in other Part 2 articles.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine substrates, areas, conditions, and abutting structural framing for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION

A. Cold-formed steel framing may be shop or field fabricated for installation, or it may be field assembled.

B. Install cold-formed steel framing in accordance with ASTM C1007, AISI S200 and manufacturer's written instructions unless more stringent requirements are indicated.

C. Install shop- or field-fabricated, cold-formed framing and securely anchor to supporting structure.

1. Screw, bolt, or weld wall panels at horizontal and vertical junctures to produce flush, even, true-to-line joints with maximum variation in plane and true position between fabricated panels not exceeding 1/16 inch.

D. Install cold-formed steel framing and accessories plumb, square, and true to line, and with connections securely fastened.

1. Cut framing members by sawing or shearing; do not torch cut.

2. Fasten cold-formed steel framing members by welding, screw fastening, clinch fastening, or riveting. Wire tying of framing members is not permitted.

a. Comply with AWS D1.3/D1.3M requirements and procedures for welding, appearance and quality of welds, and methods used in correcting welding work.

b. Locate mechanical fasteners, install in accordance with Shop Drawings, and comply with requirements for spacing, edge distances, and screw penetration.

E. Install framing members in one-piece lengths unless splice connections are indicated for track or tension members.

F. Install temporary bracing and supports to secure framing and support loads equal to those for which structure was designed. Maintain braces and supports in place, undisturbed, until entire integrated supporting structure has been completed and permanent connections to framing are secured.

G. Do not bridge building expansion joints with cold-formed steel framing. Independently frame both sides of joints.

H. Install insulation, specified in Section 07210 "Thermal Insulation," in framing-assembly members, such as headers, sills, boxed joists, and multiple studs at openings, that are inaccessible on completion of framing work.

I. Fasten hole-reinforcing plate over web penetrations that exceed size of manufacturer's approved or standard punched openings.

END OF SECTION

DIVISION 7 – THERMAL AND MOISTURE PROTECTION

SECTION 07210 - THERMAL INSULATION

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS: The General Terms and Conditions, City and County of Honolulu (not specifically attached), the Special Provisions, and all other applicable documents preceding these specifications shall govern all work specified in all DIVISIONS AND SECTIONS.

1.02 SUMMARY:

A. Section Includes:

1. Glass-fiber blanket encapsulated insulation.
2. Mineral-wool blanket encapsulated insulation.

1.03 ACTION SUBMITTALS:

A. Product Data: For the following:

1. Glass-fiber blanket encapsulated insulation.
2. Mineral-wool blanket encapsulated insulation.

1.04 INFORMATIONAL SUBMITTALS:

A. Installer's Certification: Listing type, manufacturer, and R-value of insulation installed in each element of the building thermal envelope.

1. Sign, date, and post the certification in a conspicuous location on Project site.

B. Product test reports.

C. Research reports.

PART 2 - PRODUCTS

2.01 General: At no time shall exposed or unencapsulated insulation be used or installed on this project. All insulation shall be sealed or encapsulated prior to installation including all exposed edges per manufacturer's instructions to prevent the release of friable fibers.

A. Contractor shall take all the necessary precautions to limit the dispersal of friable fibers at the job site.

2.02 GLASS-FIBER BLANKET ENCAPSULATED INSULATION:

A. Glass-Fiber Blanket Encapsulated Insulation, Polypropylene-Scrim-Kraft Faced: ASTM C665, Type II (nonreflective faced), Class A (faced surface with a flame-spread index of 25 or less); Category 1 (membrane is a vapor barrier).

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. CertainTeed Corporation; Saint-Gobain North America.
b. Johns Manville; a Berkshire Hathaway company.
c. Knauf Insulation.
d. Owens Corning.
e. Or approved substitute.

2. Labeling: Provide identification of mark indicating R-value of each piece of insulation 12 inches (305 mm) and wider in width.

B. Glass-Fiber Blanket Encapsulated Insulation, Kraft Faced: ASTM C665, Type II (nonreflective faced), Class C (faced surface not rated for flame propagation); Category 1 (membrane is a vapor barrier).

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. CertainTeed Corporation; Saint-Gobain North America.
b. Johns Manville; a Berkshire Hathaway company.
c. Knauf Insulation.
d. Owens Corning.
e. Or approved substitute.

2. Labeling: Provide identification of mark indicating R-value of each piece of insulation 12 inches (305 mm) and wider in width.

C. Glass-Fiber Blanket Encapsulated Insulation, Reinforced-Foil Faced: ASTM C665, Type III (reflective faced), Class A (faced surface with a flame-spread index of 25 or less); Category 1 (membrane is a vapor barrier), faced with foil scrim, foil-scrim kraft, or foil-scrim polyethylene.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. CertainTeed Corporation; Saint-Gobain North America.
b. Johns Manville; a Berkshire Hathaway company.
c. Knauf Insulation.
d. Owens Corning.
e. Or approved substitution.

2. Labeling: Provide identification of mark indicating R-value of each piece of insulation 12 inches (305 mm) and wider in width.

D. Glass-Fiber Blanket Encapsulated Insulation, Foil Faced: ASTM C665, Type III (reflective faced), Class B (faced surface with a flame-propagation resistance of 0.12 W/sq. cm); Category 1 (membrane is a vapor barrier), faced with foil scrim, foil-scrim kraft, or foil-scrim polyethylene.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

   a. CertainTeed Corporation; Saint-Gobain North America.
   b. Johns Manville; a Berkshire Hathaway company.
   c. Knauf Insulation.
   d. Owens Corning.
   e. Or approved substitute.

2. Labeling: Provide identification of mark indicating R-value of each piece of insulation 12 inches (305 mm) and wider in width.

2.03 MINERAL-WOOL BLANKET ENCAPSULATED INSULATION:

A. Mineral-Wool Blanket Encapsulated Insulation, Reinforced-Foil Faced: ASTM C665, Type III (reflective faced); Category 1 (membrane is a vapor barrier), faced with foil scrim, foil-scrim kraft, or foil-scrim polyethylene.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

   a. Thermafiber, Inc.; an Owens Corning company.
   b. Or approved substitute.

2. Flame-Spread Index: Not more than 25 when tested in accordance with ASTM E84.
3. Smoke-Developed Index: Not more than 50 when tested in accordance with ASTM E84.
4. Labeling: Provide identification of mark indicating R-value of each piece of insulation 12 inches (305 mm) and wider in width.

2.04 ACCESSORIES:

A. Insulation for Miscellaneous Voids:

1. Glass-Fiber Encapsulated Insulation: ASTM C764, Type II, loose fill; with maximum flame-spread and smoke-developed indexes of 5, per ASTM E84.
2. Spray Polyurethane Foam Insulation: ASTM C1029, Type II, closed cell, with maximum flame-spread and smoke-developed indexes of 75 and 450, respectively, per ASTM E84.

B. Insulation Anchors, Spindles, and Standoffs: As recommended by the manufacturer.

C. Adhesive for Bonding Insulation: Product compatible with insulation and air and water barrier materials, and with demonstrated capability to bond insulation securely to substrates without damaging insulation and substrates.

D. Eave Ventilation Troughs: Preformed, rigid fiberboard or plastic sheets designed and sized to fit between roof framing members and to provide ventilation between insulated attic spaces and vented eaves.

PART 3 - EXECUTION

3.01 INSTALLATION, GENERAL:

A. Only encapsulated insulation will be permitted for installation.

B. Limit the dispersal of friable fibers as recommended by the manufacturer.

C. Comply with the insulation manufacturer's written instructions applicable to products and applications.

D. Install insulation that is undamaged, dry, and unsoiled and that has not been left exposed to ice, rain, or snow at any time.

E. Install insulation with manufacturer's R-value label exposed after insulation is installed.

F. Extend insulation to envelop the entire area to be insulated. Fit tightly around obstructions and fill voids with insulation. Remove projections that interfere with placement.

G. Provide sizes to fit applications and selected from the manufacturer's standard thicknesses, widths, and lengths. Apply a single layer of insulation units unless multiple layers are otherwise shown or required to make up the total thickness or to achieve the R-value.

H. Clean up and dispose of friable fibers as recommended by the manufacturer.

3.02 INSTALLATION OF CAVITY-WALL INSULATION:

A. Mineral-Wool Board Encapsulated Insulation: Install insulation fasteners 4 inches (100 mm) from each corner of board insulation, at center of board, and as recommended by manufacturer. Seal penetrations puncturing the encapsulating membrane. Use sealing product as recommended by manufacturer.

1. Fit courses of insulation between masonry wall ties and other obstructions, with edges butted tightly in both directions, and with faces flush.
2. Press units firmly against inside substrates.

3.03 INSTALLATION OF INSULATION IN FRAMED CONSTRUCTION:

A. Blanket Encapsulated Insulation: Install in cavities formed by framing members according to the following requirements:

1. Use insulation widths and lengths that fill the cavities formed by framing members. If more than one length is required to fill the cavities, provide lengths that will produce a snug fit between ends.
2. Place insulation in cavities formed by framing members to produce a friction fit between the edges of insulation and adjoining framing members.
3. Maintain 3-inch (76-mm) clearance of insulation around recessed lighting fixtures not rated for or protected from contact with insulation.
4. Attics: Install eave ventilation troughs between roof framing members in insulated attic spaces at vented eaves.
5. For metal-framed wall cavities where cavity heights exceed 96 inches (2438 mm), support faced blankets by taping flanges of insulation to flanges of metal studs.
6. For wood-framed construction, install blankets according to ASTM C1320 and as follows:

    a. With faced blankets having stapling flanges, lap blanket flange over flange of adjacent blanket to maintain continuity of vapor retarder once finish material is installed over it.

7. Vapor-Retarder-Faced Blankets: Tape joints and ruptures in vapor-retarder facings, and seal each continuous area of insulation to ensure airtight installation.

    a. Exterior Walls: Set units with facing placed toward as indicated on Drawings.
    b. Interior Walls: Set units with facing placed as indicated on Drawings.

B. Miscellaneous Voids: Install insulation in miscellaneous voids and cavity spaces where required to prevent gaps in insulation using the following materials:

1. Glass-Fiber Encapsulated Insulation: Compact to approximately 40 percent of normal maximum volume equaling a density of approximately 2.5 lb/cu. ft. (40 kg/cu. m).
2. Spray Polyurethane Insulation: Apply according to manufacturer's written instructions.

END OF SECTION

DIVISION 7 – THERMAL AND MOISTURE PROTECTION

SECTION 07413 - FORMED METAL ROOF AND WALL PANELS

PART 1 - GENERAL:

1.01 GENERAL REQUIREMENTS: The General Terms and Conditions, City and County of Honolulu (not specifically attached), the Special Provisions, and all other applicable documents preceding these specifications shall govern all work specified in all DIVISIONS AND SECTIONS.

1.02 SUMMARY:

A. Section Includes:

1. Exposed-fastener, lap-seamed, metal roof and wall panels.

1.03 ACTION SUBMITTALS:

A. Product Data: For each type of product.

B. Shop Drawings: Include fabrication and installation layouts of metal panels; details of edge conditions, joints, panel profiles, corners, anchorages, attachment system, trim, flashings, closures, and accessories; and special details.

C. Samples: For each type of metal panel indicated.

1.04 INFORMATIONAL SUBMITTALS:

A. Product test reports.

1.05 CLOSEOUT SUBMITTALS:

A. Maintenance data.

1.06 QUALITY ASSURANCE:

A. Installer Qualifications: Installers and supervisors who are trained and approved by the manufacturer.

B. UL-Certified, Portable Roll-Forming Equipment: UL-certified, portable roll-forming equipment capable of producing metal panels warranted by the manufacturer to be the same as factory-formed products. Maintain UL certification of portable roll-forming equipment for the duration of work.

1.07 WARRANTY:

A. Special Warranty: Manufacturer's standard form in which the manufacturer agrees to repair or replace components of metal panel systems that fail in materials or workmanship within the specified warranty period.

1. Warranty Period: Two years from the date of Substantial Completion.

B. Special Warranty on Panel Finishes: Manufacturer's standard form in which the manufacturer agrees to repair finish or replace metal panels that show evidence of deterioration of factory-applied finishes within the specified warranty period.

1. Finish Warranty Period: 10 years from the date of Substantial Completion.

PART 2 - PRODUCTS

2.01 PERFORMANCE REQUIREMENTS:

A. Structural Performance: Provide metal panel systems capable of withstanding the effects of the following loads, based on testing according to ASTM E1592:

1. Wind Loads: As indicated on Drawings.
2. Deflection Limits: For wind loads, no greater than 1/240 of the span.

B. Water Penetration under Static Pressure: No water penetration when tested according to ASTM E1646at the following test-pressure difference:

1. Test-Pressure Difference: 2.86 lbf/sq. ft. ((137 Pa)).

C. Hydrostatic-Head Resistance: No water penetration when tested according to ASTM E2140.

D. Wind-Uplift Resistance: Provide metal roof panel assemblies that comply with UL 580 for wind-uplift-resistance class indicated.

1. Uplift Rating: UL 90.

E. Impact Rating: Provide metal roof panel assemblies that comply with UL 2218 for the evaluation of impact resistance.

1. Impact Resistance Rating: Class 4.

2.02 PRE FABRICATED METAL ROOF PANEL:

A. Provide Factory-formed metal roof panels designed to be installed by lapping side edges of adjacent panels and mechanically attaching panels to supports using exposed fasteners inside laps. Include accessories required for weathertight installations.

1. Profile: Major longitudinal ribs, 3/4” (45 mm) deep, spaced 9” (229 mm) on center: minor longitudinal ribs centered between major ribs.
2. Size: 36” (914 mm) cover width, lengths as indicated on drawings.

B. Material:

1. Galvalume steel sheet conforming to ASTM A792, AZ55 coating for bare; AZ50 coating for painted; 26 gauge sheet thickness.

2. Galvanized Steel Sheet: ASTM A653, G90 steel sheet, zinc coated galvanized by hot dip process, structural quality.

C. Manufacturer: McElroy Metal, Inc., Max-Rib metal roof and wall panels or approved substitution.

D. Finish:

1. Exterior: Prefinished Galvalume. Color to be Regal White or approved Substitution.
2. Interior: Total thickness of minimum 1.0 Mil, “Off-White” Polyester Interior Finish or approved Substitution.
3. Provide factory applied clear rust inhibitor to cut ends of each panel.

E. All pre-finished trims, flashings, gutters and downspouts shall be the same color and from the same roof panel manufacturer.

2.03 MISCELLANEOUS MATERIALS:

A. Miscellaneous Metal Subframing and Furring: ASTM C645; cold-formed, metallic coated steel sheet, ASTM A653/A653M, G90 (Z275) hot-dip galvanized coating designation or ASTM A792/A792M, Class AZ50 (Class AZM150) aluminum-zinc alloy coating designation unless otherwise indicated. Provide manufacturer's standard sections as required for support and alignment of metal panel system.

B. Panel Accessories: Provide components required for a complete, weathertight panel system including trim, copings, fascias, mullions, sills, corner units, clips, flashings, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal panels unless otherwise indicated.

1. Closures: Provide closures at eaves and ridges, fabricated of same metal as metal panels.
2. Backing Plates: Provide metal backing plates at panel end splices, fabricated from material recommended by the manufacturer.
3. Closure Strips: Closed-cell, expanded, cellular, rubber or crosslinked, polyolefin-foam or closed-cell laminated polyethylene; minimum 1-inch-(25-mm-) thick, flexible closure strips; cut or pre-molded to match metal panel profile. Provide closure strips where indicated or necessary to ensure weathertight construction.

C. Flashing and Trim: Provide flashing and trim formed from same material as metal roof panels as required to seal against weather and to provide finished appearance. Locations include, but are not limited to, eaves, rakes, corners, bases, framed openings, ridges, fasciae, and fillers. Finish flashing and trim with same finish system as adjacent metal panels.

Gutters and Downspouts: Formed from same type of material as roof panels. The minimum gauge of the metal shall be according to SMACNA's "Architectural Sheet Metal Manual." The exterior finish type and color to match metal roof, or if there are no metal roof panels, the exterior finish will be as selected by the

Officer-In-Charge. The interior finish of the gutters and downspouts shall be the "Off-White" polyester finish.

Where it is indicated that the gutters will be made of stainless steel, the stainless-steel grade shall be 316. The exterior and interior finish shall be unfinished. The minimum gauge of the metal shall be according to SMACNA's "Architectural Sheet Metal Manual."

D. Panel Fasteners: Self-tapping 316 stainless steel screws designed to withstand design loads. Provide exposed fasteners with heads matching color of metal panels by means of plastic caps or factory-applied coating. Provide EPDM or PVC sealing washers for exposed fasteners.

E. Panel Sealants: Provide sealant types recommended by the manufacturer that are compatible with panel materials, are non-staining, and do not damage panel finish.

1. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene compound sealant tape with release-paper backing; 1/2 inch (13 mm) wide and 1/8 inch (3 mm) thick.
2. Joint Sealant: ASTM C920; as recommended in writing by metal panel manufacturer.
3. Butyl-Rubber-Based, Solvent-Release Sealant: ASTM C1311.

2.04 FABRICATION:

A. Fabricate and finish metal panels and accessories at the factory, by manufacturer's standard procedures and processes, as necessary to fulfill indicated performance requirements demonstrated by laboratory testing. Comply with indicated profiles and with dimensional and structural requirements.

B. Provide panel profile, including major ribs and intermediate stiffening ribs, if any, for the full length of the panel.

C. Fabricate metal panel joints with factory-installed captive gaskets or separator strips that provide a weathertight seal and prevent metal-to-metal contact, and that minimize noise from movements.

D. Sheet Metal Flashing and Trim: Fabricate flashing and trim to comply with the manufacturer's recommendations and recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to the design, dimensions, metal, and other characteristics of the item indicated.

2.05 FINISHES:

A. Panels and Accessories:

1. Two-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent polyvinylidene fluoride (PVDF) resin by weight in color coat.
2. Concealed Finish: 1.0 Mil, "Off-White" Polyester Interior Finish.

PART 3 - EXECUTION

3.01 PREPARATION:

A. Miscellaneous Supports: Install subframing, furring, and other miscellaneous panel support members and anchorages according to ASTM C754 and metal

3.02 INSTALLATION OF METAL ROOF PANELS:

A. General: Install metal panels to profiles, patterns and drainage indicated and required for leak-free performance. Provide for structural and thermal movement of work. Seal joints for leak-free metal installation.

1. Shim or otherwise plumb substrates receiving metal panels.
2. Flash and seal metal panels at perimeter of all openings. Fasten with self-tapping screws.
3. Do not begin installation until air or water-resistive barriers and flashings that will be concealed by metal panels are installed.
4. Locate and space fasteners in uniform vertical and horizontal alignment.
5. Install flashing and trim as metal panel work proceeds.
6. Install continuous length panels if possible. If splices are required, locate panel splices over, but not attached to, structural supports and only with prior Officer-In-Charge's approval.
7. Align bottoms of metal panels and fasten with blind rivets, bolts, or self-tapping screws.
8. Fasten flashings and trim around openings and similar elements with self-tapping screws.
9. Provide weathertight EPDM Flashing for pipe- and conduit-penetrating panels.
10. Fix panels at location depicted on reviewed shop drawings.
11. Allow for required panel clearance at penetrations for thermal movement.
12. Align pipe penetrations to occur in the flat of the metal panel. Report and have corrected improperly placed penetrations before proceeding with panel installation. Remove and replace metal panels which have improperly placed penetration flashings.
13. Allow for required panel clearance at penetrations for thermal movement.
14. Fasteners: Conceal fasteners where possible in exposed work. Cover and seal fasteners and anchors for watertight and leak-free metal installation.
15. Sealant-Type Joints: Provide sealant-type joint where indicated. Form joints to conceal sealant. Comply with Division 7 Joint Sealants Section for sealant installation.

B. Metal Installation.

1. Install metal panels plumb, true and in correct alignment with structural framing, in accordance with shop drawings and manufacturer's printed installation instructions.
2. Install metal panels using manufacturer's concealed fastening system or non-corroding fasteners color-matched to panel.

3. Install trim using concealed fasteners where possible; sight-exposed non-corroding fasteners color-matched to trim are permitted on vertical surfaces only.

C. Installation Tolerances:

1. Variation from Plumb: Maximum 1/8" (3.2 mm) in 20 feet (6.096 m).
2. Variation from Level: Maximum 1/8" (3.2 mm) in 20 feet (6.096 m).
3. Variation from True Plane: Maximum 1/8" (3.2 mm) in 20 feet (6.096 m).

D. Accessory Installation: Install accessories with positive anchorage to the building and weathertight mounting, and provide for thermal expansion. Coordinate installation with flashings and other components.

E. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, and set units true to line and level. Install work with laps, joints, and seams that are permanently watertight.

3.03 FIELD QUALITY REQUIREMENTS:

A. Manufacturer’s Field Services: Provide manufacturer’s field service consisting of product use recommendations and periodic site visit for inspection of product installation in accordance with manufacturer’s instructions.

3.04 PROTECTION:

A. Protect installed product’s finished surfaces from damage during construction.

B. Protect installed product’s finished surfaces form damage from subsequent construction activities.

C. Replace products have damage other than minor finish damage.

D. Repair products having minor damage to finish in accordance with panel Manufacturer’s recommendations.

E. The Officer-In-Charge shall be the sole judge of acceptability of repair to damaged finishes. Replace products having rejected repairs.

3.05 CLEANING:

A. Remove metal shavings, metal trimmings, and unused fasteners from the work area each day.

B. Remove temporary protective coverings and strippable films, if any, as metal panels are installed, unless otherwise indicated in manufacturer's written installation instructions. On completion of metal panel installation, clean finished surfaces as recommended by metal panel manufacturer. Maintain a clean condition during construction.

C. Repair or replace damaged installed products.

D. Clean installed products in accordance with the manufacturer's instructions prior to the City's acceptance.

E. Remove construction debris from the project site and legally dispose of the debris.

END OF SECTION

SECTION 07620 - SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS: The General Terms and Conditions, City and County of Honolulu (not specifically attached), the Special Provisions, and all other applicable documents preceding these specifications shall govern all work specified in all DIVISIONS AND SECTIONS.

1.02 SUMMARY:

A. Section Includes:

1. Formed roof-drainage sheet metal fabrications.
2. Formed high-slope roof sheet metal fabrications.
3. Formed wall sheet metal fabrications.
4. Wire Strainer.

1.03 PREINSTALLATION MEETINGS:

A. Preinstallation Conference: Conduct conference at Project site.

1.04 ACTION SUBMITTALS:

A. Product Data: For each of the following:

1. Underlayment.
2. Elastomeric sealant.
3. Butyl sealant.
4. Epoxy seam sealer.

B. Shop Drawings: For sheet metal flashing and trim.

1. Include plans, elevations, sections, and attachment details.
2. Detail fabrication and installation layouts, expansion-joint locations, and keyed details. Distinguish between shop- and field-assembled Work.
3. Include identification of material, thickness, weight, and finish for each item and location in Project.
4. Include details for forming, including profiles, shapes, seams, and dimensions.
5. Include details for joining, supporting, and securing, including layout and spacing of fasteners, cleats, clips, and other attachments. Include pattern of seams.
6. Include details of termination points and assemblies.
7. Include details of expansion joints and expansion-joint covers, including showing direction of expansion and contraction from fixed points.
8. Include details of roof-penetration flashing.
9. Include details of special conditions.
10. Include details of connections to adjoining work.

C. Samples: For each exposed product and for each color and texture specified, 12 inches (300 mm) long by actual width.

1.05 INFORMATIONAL SUBMITTALS:

A. Product Certificates: For each type of coping and roof edge flashing that is FM approved.

B. Evaluation Reports: For copings and roof edge flashing, from an agency acceptable to authority having jurisdiction showing compliance with ANSI/SPRI/FM 4435/ES-1.

C. Sample warranty.

1.06 CLOSEOUT SUBMITTALS:

A. Maintenance data.

B. Special warranty.

1.07 QUALITY ASSURANCE:

A. Fabricator Qualifications: Skilled workers who custom fabricate sheet metal flashing and trim similar to that required for this Project and whose products have a record of successful in-service performance.

1.08 WARRANTY:

A. Special Warranty on Finishes: Manufacturer agrees to repair finish or replace sheet metal flashing and trim that shows evidence of deterioration of factory-applied finishes within specified warranty period.

1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:

a. Color fading more than 5 Delta units when tested in accordance with ASTM D2244.
b. Chalking in excess of a No. 8 rating when tested in accordance with ASTM D4214.
c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.

2. Finish Warranty Period: Twenty (20) years from date of Substantial Completion.

PART 2 - PRODUCTS

2.01 PERFORMANCE REQUIREMENTS:

A. General: Sheet metal flashing and trim assemblies, including cleats, anchors, and fasteners, shall withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Completed sheet metal flashing and trim shall not rattle, leak, or loosen, and shall remain watertight.

B. Sheet Metal Standard for Flashing and Trim: Comply with NRCA's "The NRCA Roofing Manual: Architectural Metal Flashing, Condensation and Air Leakage Control, and Reroofing" and SMACNA's "Architectural Sheet Metal Manual" requirements for dimensions and profiles shown unless more stringent requirements are indicated.

C. SPRI Wind Design Standard: Manufacture and install roof edge flashings tested in accordance with ANSI/SPRI/FM 4435/ES-1 and capable of resisting the following design pressure:

D. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes to prevent buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

2.02 SHEET METALS:

A. General: Protect mechanical and other finishes on exposed surfaces from damage by applying strippable, temporary protective film before shipping.

B. Aluminum Sheet: ASTM B209 (ASTM B209M), alloy as standard with manufacturer for finish required, with temper as required to suit forming operations and performance required; with smooth, flat surface.

1. Alclad Finish: Metallurgically bonded surfacing alloy on both sides, forming aluminum sheet with reflective luster.

2. Color Anodic Finish, Coil Coated: AAMA 611, AA-M12C22A42/A44, Class I, 0.018 mm or thicker.

a. Color: Match roofing color.
b. Color Range: Noticeable variations in same piece are unacceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

3. Exposed Coil-Coated Finish:

a. Two-Coat Fluoropolymer: AAMA 2605. Fluoropolymer finish containing not less than 70 percent polyvinylidene fluoride (PVDF) resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions for seacoast and severe environments.

4. Color: Match roofing color.

5. Concealed Finish: Pretreat with manufacturer's standard white or light-colored acrylic or polyester backer finish, consisting of prime coat and wash coat with minimum total dry film thickness of 0.5 mil (0.013 mm).

C. Lead Sheet: ASTM B749 lead sheet.

2.03 UNDERLAYMENT MATERIALS:

A. Felt: ASTM D226/D226M, Type II (No. 30), asphalt-saturated organic felt; nonperforated.

B. Slip Sheet: Rosin-sized building paper, 3 lb/100 sq. ft. (0.16 kg/sq. m) minimum.

2.04 MISCELLANEOUS MATERIALS:

A. General: Provide materials and types of fasteners**,** protective coatings, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation and as recommended by manufacturer of primary sheet metal **or** manufactured item unless otherwise indicated.

B. Fasteners: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads and recommended by manufacturer of primary sheet metal or manufactured item.

1. General: Blind fasteners or self-drilling screws, gasketed, with hex-washer head.

a. Exposed Fasteners: Heads matching color of sheet metal using plastic caps or factory-applied coating. Provide metal-backed EPDM or PVC sealing washers under heads of exposed fasteners bearing on weather side of metal.
b. Blind Fasteners: High-strength aluminum or stainless steel rivets suitable for metal being fastened.

2. Fasteners for Aluminum Sheet: Aluminum or Series 300 stainless steel.

C. Sealant Tape: Pressure-sensitive, 100 percent solids, polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape 1/2 inch (13 mm) wide and 1/8 inch (3 mm) thick.

D. Elastomeric Sealant: ASTM C920, elastomeric silicone polymer sealant; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.

E. Butyl Sealant: ASTM C1311, single-component, solvent-release butyl rubber sealant; polyisobutylene plasticized; heavy bodied for hooked-type expansion joints with limited movement.

F. Epoxy Seam Sealer: Two-part, noncorrosive, aluminum seam-cementing compound, recommended by aluminum manufacturer for exterior nonmoving joints, including riveted joints.

G. Bituminous Coating: Cold-applied asphalt emulsion in accordance with ASTM D1187/D1187M.

H. Asphalt Roofing Cement: ASTM D4586, asbestos free, of consistency required for application.

2.05 FABRICATION, GENERAL:

A. Custom fabricate sheet metal flashing and trim to comply with details indicated and recommendations in cited sheet metal standard that apply to design, dimensions, geometry, metal thickness, and other characteristics of item required.

1. Fabricate sheet metal flashing and trim in shop to greatest extent possible.

2. Fabricate sheet metal flashing and trim in thickness or weight needed to comply with performance requirements, but not less than that specified for each application and metal.

3. Form sheet metal flashing and trim to fit substrates without excessive oil-canning, buckling, and tool marks; true to line, levels, and slopes; and with exposed edges folded back to form hems.

4. Conceal fasteners and expansion provisions where possible. Do not use exposed fasteners on faces exposed to view.

B. Fabrication Tolerances:

1. Fabricate sheet metal flashing and trim that is capable of installation to a tolerance of 1/4 inch in 20 feet (6 mm in 6 m) on slope and location lines indicated on Drawings and within 1/8-inch (3-mm) offset of adjoining faces and of alignment of matching profiles.

C. Expansion Provisions: Form metal for thermal expansion of exposed flashing and trim.

1. Form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with butyl sealant concealed within joints.

D. Sealant Joints: Where movable, nonexpansion-type joints are required, form metal in accordance with cited sheet metal standard to provide for proper installation of elastomeric sealant.

E. Fabricate cleats and attachment devices of sizes as recommended by cited sheet metal standard for application, but not less than thickness of metal being secured and anchored from compatible, noncorrosive material.

F. Seams:

1. Fabricate nonmoving seams with flat-lock seams. Edges to be seamed, form seams, and sealed with material compatible to flashing or gutter.
2. Seams for Aluminum: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with epoxy seam sealer. Rivet joints where necessary for strength.

2.06 ROOF-DRAINAGE SHEET METAL FABRICATIONS:

A. Hanging Gutters:

1. Fabricate to cross section required, complete with end pieces, outlet tubes, and other accessories as required.
2. Fabricate in minimum 96-inch- (2400-mm-) long sections.
3. Furnish flat-stock gutter brackets and flat-stock gutter spacers and straps fabricated from same metal as gutters, of size recommended by cited sheet metal standard, but with thickness not less than dimension indicated on Drawings.
4. Fabricate expansion joints, expansion-joint covers and gutter accessories from same metal as gutters.
5. Accessories: Continuous, removable leaf screen with sheet metal frame and hardware cloth screen, Wire-ball downspout strainer.
1. Gutters with Girth up to 15 Inches (380 mm): Fabricate from the following materials:

a. Aluminum: 0.032 inch (0.81 mm) thick.

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2.07 STEEP-SLOPE ROOF SHEET METAL FABRICATIONS:

A. Drip Edges: Fabricate from the following materials:

1. Aluminum: 0.032 inch (0.81 mm) thick.

2.08 WALL SHEET METAL FABRICATIONS:

A. Opening Flashings in Frame Construction: Fabricate head, sill and similar flashings to extend 4 inches (100 mm) beyond wall openings. Form head and sill flashing with 2-inch- (50-mm-) high. Fabricate from the following materials:

1. Aluminum: 0.032 inch (0.81 mm) thick.

2.09 WIRE STRAINER:

A. Material: Stainless Steel, Type 304.

B. Gage: Manufacturer's standard, heavy duty.

C. Fasteners: None.

D. Installation: Per manufacturer's instructions.

PART 3 - EXECUTION

3.01 INSTALLATION OF UNDERLAYMENT:

A. Felt Underlayment: Install felt underlayment, wrinkle free, using adhesive to minimize use of mechanical fasteners under sheet metal flashing and trim.

1. Install in shingle fashion to shed water.
2. Lap joints not less than 2 inches (50 mm).

B. Install slip sheet, wrinkle free, over underlayment before installing sheet metal flashing and trim.

1. Install in shingle fashion to shed water.
2. Lapp joints not less than 4 inches (100 mm).

3.02 INSTALLATION, GENERAL:

A. Install sheet metal flashing and trim to comply with details indicated and recommendations of cited sheet metal standard that apply to installation characteristics required unless otherwise indicated on Drawings.

1. Install fasteners, protective coatings, separators, sealants, and other miscellaneous items as required to complete sheet metal flashing and trim system.
2. Install sheet metal flashing and trim true to line, levels, and slopes. Provide uniform, neat seams with minimum exposure of sealant.
3. Anchor sheet metal flashing and trim and other components of the Work securely in place, with provisions for thermal and structural movement.
4. Install sheet metal flashing and trim to fit substrates and to result in watertight performance.
5. Install continuous cleats with fasteners spaced not more than 12 inches (300 mm) o.c.
6. Space individual cleats not more than 12 inches (300 mm) apart. Attach each cleat with at least two fasteners. Bend tabs over fasteners.
7. Install exposed sheet metal flashing and trim with limited oil-canning, and free of buckling and tool marks.
8. Do not field cut sheet metal flashing and trim by torch.

B. Metal Protection: Where dissimilar metals contact each other, or where metal contacts pressure-treated wood or other corrosive substrates, protect against

galvanic action or corrosion by painting contact surfaces with bituminous coating or by other permanent separation as recommended by sheet metal manufacturer or cited sheet metal standard.

1. Coat concealed side of uncoated-aluminum sheet metal flashing and trim with bituminous coating where flashing and trim contact wood, ferrous metal, or cementitious construction.
2. Underlayment: Where installing sheet metal flashing and trim directly on cementitious or wood substrates, install underlayment and cover with slip sheet.

C. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim.

1. Space movement joints at maximum of 10 feet (3 m**)** with no joints within 24 inches (600 mm) of corner or intersection.
2. Form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with sealant concealed within joints.
3. Use lapped expansion joints only where indicated on Drawings.

D. Fasteners: Use fastener sizes that penetrate substrate not less than recommended by fastener manufacturer to achieve maximum pull-out resistance.

E. Conceal fasteners and expansion provisions where possible in exposed work and locate to minimize possibility of leakage. Cover and seal fasteners and anchors as required for a tight installation.

F. Seal joints as required for watertight construction.

1. Use sealant-filled joints unless otherwise indicated.

a. Embed hooked flanges of joint members not less than 1 inch (25 mm) into sealant.
b. Form joints to completely conceal sealant.
c. When ambient temperature at time of installation is between 40 and 70 deg F (4 and 21 deg C), set joint members for 50 percent movement each way.
d. Adjust setting proportionately for installation at higher ambient temperatures.

1) Do not install sealant-type joints at temperatures below 40 deg F (4 deg C).

G. Rivets: Rivet joints in uncoated aluminum or zinc where necessary for strength.

3.03 INSTALLATION OF ROOF-DRAINAGE SYSTEM:

A. Install sheet metal roof-drainage items to produce complete roof-drainage system in accordance with cited sheet metal standard unless otherwise indicated. Coordinate installation of roof perimeter flashing with installation of roof-drainage system.

B. Hanging Gutters:

1. Join sections with riveted joints sealed with sealant.
2. Provide for thermal expansion.
3. Attach gutters at eave or fascia to firmly anchor them in position.
4. Provide end closures and seal watertight with sealant.
5. Slope to downspouts.
6. Install gutter with expansion joints at locations indicated on Drawings, but not exceeding, 50 feet (15.2 m) apart. Install expansion-joint caps.
7. Install continuous gutter screens on gutters with noncorrosive fasteners, removable for cleaning gutters.

C. Downspouts:

1. Join sections with 1-1/2-inch (38-mm) telescoping joints.
2. Provide hangers with fasteners designed to hold downspouts securely to walls.
3. Provide elbows at base of downspout to direct water away from building.

3.04 INSTALLATION OF ROOF FLASHINGS:

A. Install sheet metal flashing and trim to comply with performance requirements, sheet metal manufacturer's written installation instructions, and cited sheet metal standard.

1. Provide concealed fasteners where possible, and set units true to line, levels, and slopes.
2. Install work with laps, joints, and seams that are permanently watertight and weather resistant.

B. Roof Edge Flashing:

1. Install roof edge flashings in accordance with ANSI/SPRI/FM 4435/ES-1.
2. Anchor to resist uplift and outward forces in accordance with recommendations in cited sheet metal standard unless otherwise indicated. Interlock bottom edge of roof edge flashing with continuous cleat anchored to substrate at staggered 3-inch (75-mm) centers.
3. Anchor to resist uplift and outward forces in accordance with recommendations in FM Global Property Loss Prevention Data Sheet 1-49 for FM Approvals' listing for required windstorm classification.

C. Counterflashing: Coordinate installation of counterflashing with installation of base flashing.

1. Insert counterflashing in reglets or receivers and fit tightly to base flashing.
2. Extend counterflashing 4 inches (100 mm) over base flashing.
3. Lap counterflashing joints minimum of 4 inches (100 mm).

3.05 INSTALLATION OF WALL FLASHINGS:

A. Install sheet metal wall flashing to intercept and exclude penetrating moisture in accordance with cited sheet metal standard unless otherwise indicated. Coordinate installation of wall flashing with installation of wall-opening components such as windows, doors, and louvers.

B. Opening Flashings in Frame Construction: Install continuous head, sill and similar flashings to extend as indicated on Drawings.

3.06 INSTALLATION TOLERANCES:

A. Installation Tolerances: Shim and align sheet metal flashing and trim within installed tolerance of 1/4 inch in 20 feet (6 mm in 6 m) on slope and location lines indicated on Drawings and within 1/8-inch (3-mm) offset of adjoining faces and of alignment of matching profiles.

3.07 CLEANING:

A. Clean exposed metal surfaces of substances impairing the finish.

B. Clean off excess sealants.

3.08 PROTECTION:

A. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed unless otherwise indicated in manufacturer's written installation instructions.

B. Replace sheet metal flashing and trim that have been damaged or that have deteriorated beyond successful repair by finish touchup or similar minor repair procedures, as determined by the Officer-in-Charge.

END OF SECTION

SECTION 07920 – JOINT SEALANTS

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS: The General Terms and Conditions, City and County of Honolulu (not specifically attached), the Special Provisions, and all other applicable documents preceding these specifications shall govern all work specified in all DIVISIONS AND SECTIONS.

1.02 SUMMARY:

A. Section includes:

1. Silicone joint sealants.
2. Urethane joint sealants.

1.03 ACTION SUBMITTALS:

A. Product Data: For each type of product.

B. Samples: For each kind and color of joint sealant required.

C. Joint-Sealant Schedule: Include the following information:

1. Joint-sealant manufacturer and product name.
2. Joint-sealant formulation.
3. Joint-sealant color.

PART 2 - PRODUCTS

2.01 SILICONE JOINT SEALANTS:

A. Urethane, Immersible, S, NS, 50, T, NT, I: Immersible, single-component, non-sag, plus 50 percent and minus 50 percent movement capability, traffic- and nontraffic-use, urethane joint sealant; ASTM C920, Type S, Grade NS, Class 50, Uses T, NT, and I.

1. Products: Subject to compliance with requirements, provide one of the following:

a. Bondaflex; PUR 2 NS
b. Pecora Corporation; 311NS
c. Sika; Sikaflex-1a
d. Tremco Incorporated; Dymonic 100
e. W.R. Meadows; Pourthane NS
f. Or approved substitute.

2.02 JOINT-SEALANT BACKING:

A. Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin), Type O (open-cell material), Type B (bicellular material with a surface skin), or any of the preceding types, as approved in writing by the joint-sealant manufacturer for joint application indicated, and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.

B. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer.

2.03 MISCELLANEOUS MATERIALS:

A. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials.

B. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.01 PREPARATION:

A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:

1. Remove laitance and form-release agents from concrete.
2. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion.

B. Joint Priming: Prime joint substrates where recommended by the joint-sealant Manufacturer or as indicated by pre-construction joint-sealant-substrate tests and prior experience.

C. Masking Tape: Using masking tape where required to prevent contact of sealant or primer with adjoining surfaces.

3.02 INSTALLATION OF JOINT SEALANTS:

A. General: Comply with ASTM C 1193, and joint-sealant manufacturer's written installation instructions for products and applications indicated unless more stringent requirements apply.

B. Install sealant backings of kind indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.

C. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.

D. Install sealants using proven techniques that comply with the following and at the same time backings are installed:

1. Place sealants so they directly contact and fully wet joint substrates.
2. Completely fill recesses in each joint configuration.
3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

E. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants to form smooth, uniform beads of configuration indicated. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.

1. Provide concave joint profile per Figure 8A in ASTM C 1193 unless otherwise indicated.

3.03 FIELD QUALITY CONTROL:

A. Field-Adhesion Testing: Field test joint-sealant adhesion to joint substrates as follows:

1. Extent of Testing: Test completed and cured sealant joints as follows:

a. Perform ten tests for the first 1000 feet (300 m) of joint length for each kind of sealant and joint substrate.
b. Perform one test for each 1000 feet (300 m) of joint length thereafter or one test per each floor per elevation.

2. Test Method: Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1 in ASTM C 1193 or Method A, Tail Procedure, in ASTM C 1521.

B. Evaluation of Field-Adhesion-Test Results: Sealants not evidencing adhesive failure from testing or noncompliance with other indicated requirements will be considered satisfactory. Remove sealants that fail to adhere to joint substrates during testing or to comply with other requirements. Retest failed applications until test results prove sealants comply with indicated requirements.

3.04 JOINT-SEALANT SCHEDULE:

A. Joint-Sealant Application: Exterior joints in vertical surfaces and horizontal nontraffic surfaces.

1. Joint Locations:

a. Construction joints in cast-in-place concrete.

2. Joint Sealant: Silicone, nonstaining, NS.

3. Joint Sealant Color: As selected by the Officer-in-Charge from manufacturer's full range of colors.

B. Joint Sealant Application: Interior joints in vertical surfaces and horizontal nontraffic surfaces not subject to significant movement.

1. Joint Locations:

a. Control joints on exposed interior surfaces of exterior walls.
b. Perimeter joints between interior wall surfaces and frames of interior doors and windows.
c. Other joints as indicated on Drawings.

2. Joint Sealant: Acrylic.
3. Joint Sealant Color: As selected by the Officer-In-Charge from manufacturer's full range of colors.

C. Joint Sealant Application: Mildew-resistant interior joints in vertical surfaces and horizontal nontraffic surfaces.

1. Joint Locations:

a. Joints between plumbing fixtures and adjoining walls, floors, and counters.
b. Tile control and expansion joints where indicated.
c. Other joints as indicated on Drawings.

2. Joint Sealant: Silicone mildew-resistant, acid curing, NS.
3. Joint Sealant Color: As selected by the Officer-In-Charge from manufacturer's full range of colors.

D. Joint Sealant Application: Concealed mastics.

1. Joint Locations:

a. Aluminum thresholds.
b. Sill plates.
c. Other joints as indicated on Drawings.

2. Joint Sealant: Butyl-rubber based.
3. Joint Sealant Color: As selected by the Officer-In-Charge from manufacturer's full range of colors.

END OF SECTION

DIVISION 8 – DOORS AND WINDOWS

SECTION 08113 - HOLLOW METAL DOORS AND FRAMES

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS: The General Terms and Conditions, City and County of Honolulu (not specifically attached), the Special Provisions, and all other applicable documents preceding these specifications shall govern all work specified in all DIVISIONS AND SECTIONS.

1.02 SUMMARY:

A. Section includes:

1. Exterior standard steel doors and frames.

1.03 ACTION SUBMITTALS:

A. Product Data: For each type of product.

B. Shop Drawings: Include the following:

1. Elevations of each door type.
2. Details of doors, including vertical- and horizontal-edge details and metal thicknesses.
3. Frame details for each frame type, including dimensioned profiles and metal thicknesses.

C. Product Schedule: For hollow-metal doors and frames, prepared by or under the supervision of supplier, using same reference numbers for details and openings as those on Drawings. Coordinate with final door hardware schedule.

1.04 INFORMATIONAL SUBMITTALS:

A. Product test reports.

B. Field quality control reports.

1.05 CLOSEOUT SUBMITTALS:hh

A. Record Documents: For fire-rated doors, list of door numbers and applicable room name and number to which door accesses.

PART 2 - PRODUCTS

2.01 MANUFACTURERS:

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Ceco Door; ASSA ABLOY.
2. Curries Company; ASSA ABLOY.
3. Custom Metal Products.
4. Steelcraft; an Allegion brand.
5. Or approved substitute.

2.02 EXTERIOR STANDARD STEEL DOORS AND FRAMES:

A. Construct hollow-metal doors and frames to comply with standards indicated for materials, fabrication, hardware locations, hardware reinforcement, tolerances, and clearances, and as specified.

B. Heavy-Duty Doors and Frames: ANSI/SDI A250.8, Level 2; ANSI/SDI A250.4, Level B at locations indicated on the drawings.

1. Doors:

a. Type: As indicated in the Door and Frame Schedule.
b. Thickness: 1-3/4”
c. Face: Metallic-coated steel sheet, minimum thickness of 0.042 inch with minimum A60 coating.
d. Edge Construction: Model 2, Seamless.
e. Edge Bevel: Provide manufacture’s standard bevel or square edges.
f. Top Edge Closer: Close top edges of doors with flush closures of the same material as face sheets. Seal joints against water penetration.
g. Bottom Edges: Close bottom edges of doors with end closures or channels of same material as face sheets. Provide weep-hole openings in bottoms of exterior doors to permit moisture to escape.
h. Core: Manufacturer’s standard.

2. Frames:

a. Materials: Uncoated steel sheet, minimum thickness of 0.053 inch with a minimum A60 coating.

2.03 FRAME ANCHORS:

A. Jamb Anchors:

1. Type: Anchors of minimum size and type required by applicable door and frame standard, and suitable for performance level indicated.
2. Quantity: Minimum of three anchors per jamb, with one additional anchor for frames with no floor anchor. Provide one additional anchor for each 24 inches (610 mm) of frame height above 7 feet (2.1 m).
3. Postinstalled Expansion Anchor: Minimum 3/8-inch- (9.5-mm-) diameter bolts with expansion shields or inserts, with manufacturer's standard pipe spacer.

B. Floor Anchors: Provide floor anchors for each jamb and mullion that extends to floor.

C. Floor Anchors for Concrete Slabs with Underlayment: Adjustable-type anchors with extension clips, allowing not less than 2-inch (51-mm) height adjustment. Terminate bottom of frames at top of underlayment.

D. Material: ASTM A879/A879M, Commercial Steel (CS), 04Z (12G) coating designation; mill phosphatized.

1. For anchors built into exterior walls, steel sheet complying with ASTM A1008/A1008M or ASTM A1011/A1011M; hot-dip galvanized according to ASTM A153/A153M, Class B.

2.04 MATERIALS:

A. Recycled Content of Steel Products: Postconsumer recycled content plus one-half of preconsumer recycled content not less than 25 percent.

B. Cold-Rolled Steel Sheet: ASTM A1008/A1008M, Commercial Steel (CS), Type B; suitable for exposed applications.

C. Hot-Rolled Steel Sheet: ASTM A1011/A1011M, Commercial Steel (CS), Type B; free of scale, pitting, or surface defects; pickled and oiled.

D. Metallic-Coated Steel Sheet: ASTM A653/A653M, Commercial Steel (CS), Type B.

E. Inserts, Bolts, and Fasteners: Hot-dip galvanized according to ASTM A153/A153M.

F. Power-Actuated Fasteners in Concrete: Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials, with clips or other accessory devices for attaching hollow-metal frames of type indicated.

G. Mineral-Fiber Insulation: ASTM C665, Type I (blankets without membrane facing); consisting of fibers manufactured from slag or rock wool; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively; passing ASTM E136 for combustion characteristics.

2.05 FABRICATION:

A. Hollow-Metal Frames: Fabricate in one piece except where handling and shipping limitations require multiple sections. Where frames are fabricated in sections, provide alignment plates or angles at each joint, fabricated of metal of same or greater thickness as frames.

1. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated.
2. Door Silencers: Except on weather-stripped frames, drill stops to receive door silencers as follows. Keep holes clear during construction.

a. Single-Door Frames: Drill stop in strike jamb to receive three door silencers.

b. Double-Door Frames: Drill stop in head jamb to receive two door silencers.

B. Hardware Preparation: Factory prepare hollow-metal doors and frames to receive templated mortised hardware, and electrical wiring; include cutouts, reinforcement, mortising, drilling, and tapping according to ANSI/SDI A250.6, the Door Hardware Schedule, and templates.

1. Reinforce doors and frames to receive nontemplated, mortised, and surface-mounted door hardware.
2. Comply with BHMA A156.115 for preparing hollow-metal doors and frames for hardware.

2.06 STEEL FINISHES:

A. Prime Finish: Clean, pretreat, and apply manufacturer's standard primer.

1. Shop Primer: Manufacturer's standard, fast-curing, lead- and chromate-free primer complying with ANSI/SDI A250.10; recommended by primer manufacturer for substrate; compatible with substrate and field-applied coatings despite prolonged exposure.

PART 3 - EXECUTION

3.01 PREPARATION:

A. Remove welded-in shipping spreaders installed at factory. Restore exposed finish by grinding, filling, and dressing, as required to make repaired area smooth, flush, and invisible on exposed faces. Touch up factory-applied finishes where spreaders are removed.

B. Drill and tap doors and frames to receive nontemplated, mortised, and surface-mounted door hardware.

3.02 INSTALLATION:

A. Hollow-Metal Frames: Comply with ANSI/SDI A250.11.

1. Set frames accurately in position; plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces without damage to completed Work.

a. Where frames are fabricated in sections, field splice at approved locations by welding face joint continuously; grind, fill, dress, and make splice smooth, flush, and invisible on exposed faces. Touch-up finishes.
b. Install frames with removable stops located on secure side of opening.

2. Fire-Rated Openings: Install frames according to NFPA 80.
3. Floor Anchors: Secure with postinstalled expansion anchors.

a. Floor anchors may be set with power-actuated fasteners instead of postinstalled expansion anchors if so indicated and approved on Shop Drawings.

4. Solidly pack mineral-fiber insulation inside frames.
5. Masonry Walls: Coordinate installation of frames to allow for solidly filling space between frames and masonry with grout or mortar.
6. In-Place Concrete or Masonry Construction: Secure frames in place with postinstalled expansion anchors.
7. Installation Tolerances: Adjust hollow-metal frames to the following tolerances:

    a. Squareness: Plus or minus 1/16 inch (1.6 mm), measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
    b. Alignment: Plus or minus 1/16 inch (1.6 mm), measured at jambs on a horizontal line parallel to plane of wall.
    c. Twist: Plus or minus 1/16 inch (1.6 mm), measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
    d. Plumbness: Plus or minus 1/16 inch (1.6 mm), measured at jambs at floor.

8. Hollow-Metal Doors: Fit and adjust hollow-metal doors accurately in frames, within clearances specified below.
9. Non-Fire-Rated Steel Doors: Comply with ANSI/SDI A250.8.
10. Retain "Fire-Rated Doors" and "Smoke-Control Doors" subparagraphs below if required.
11. Fire-Rated Doors: Install doors with clearances according to NFPA 80.
12. Smoke-Control Doors: Install doors according to NFPA 105.

3.03 FIELD QUALITY CONTROL:

A. Inspection Agency: Engage a qualified inspector to perform inspections and to furnish reports to the O.I.C.

B. Inspections:

1. Fire-Rated Door Inspections: Inspect each fire-rated door according to NFPA 80, Section 5.2.
2. Egress Door Inspections: Inspect each door equipped with panic hardware, each door equipped with fire exit hardware, each door located in an exit enclosure, each electrically controlled egress door, and each door equipped with special locking arrangements according to NFPA 101, Section 7.2.1.15.

C. Repair or remove and replace installations where inspections indicate that they do not comply with specified requirements.

D. Reinspect repaired or replaced installations to determine if replaced or repaired door assembly installations comply with specified requirements.

E. Prepare and submit separate inspection report for each fire-rated door assembly indicating compliance with each item listed in NFPA 80 and NFPA 101.

3.04 REPAIR:

A. Prime-Coat Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat and apply touchup of compatible air-drying, rust-inhibitive primer.

B. Touchup Painting: Cleaning and touchup painting of abraded areas of paint are specified in painting Sections.

END OF SECTION

SECTION 08919 - FIXED LOUVERS

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS: The General Terms and Conditions, City and County of Honolulu (not specifically attached), the Special Provisions, and all other applicable documents preceding these specifications shall govern all work specified in all DIVISIONS AND SECTIONS.

1.02 SUMMARY:

A. Section includes fixed extruded-aluminum louvers.

1.03 ACTION SUBMITTALS:

A. Product Data: For each type of product.

1. For louvers specified to bear AMCA seal, include printed catalog pages showing specified models with appropriate AMCA Certified Ratings Seals.

B. Shop Drawings: For louvers and accessories. Include plans, elevations, sections, details, and attachments to other work. Show frame profiles and blade profiles, angles, and spacing.

C. Samples: For each type of metal finish required.

1.04 INFORMATIONAL SUBMITTALS:

A. Product Test Reports: Based on tests performed according to AMCA 500-L.

B. Sample warranties.

1.05 WARRANTY:

A. Special Finish Warranty: Manufacturer agrees to repair or replace components on which finishes fail in materials or workmanship within specified warranty period.

1. Warranty Period: Ten (10) years from date of Substantial Completion.

PART 2 - PRODUCTS

2.01 PERFORMANCE REQUIREMENTS:

A. Structural Performance: Louvers shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated without permanent deformation of louver components, noise or metal fatigue caused by louver-blade rattle or flutter, or permanent damage to fasteners and anchors. Wind pressures shall be considered to act normal to the face of the building.

1. Wind Loads: Determine loads based on a uniform pressure of 30 lbf/sq. ft. (1436 Pa), acting inward or outward.

B. Seismic Performance: Louvers, including attachments to other construction, shall withstand the effects of earthquake motions determined according to ASCE/SEI 7.

C. Louver Performance Ratings: Provide louvers complying with requirements specified, as demonstrated by testing manufacturer's stock units identical to those provided, except for length and width according to AMCA 500-L.

2.02 FIXED EXTRUDED-ALUMINUM LOUVERS:

A. Horizontal, Wind-Driven-Rain-Resistant Louver:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Air Balance; a division of MESTEK, Inc.

b. Air Flow Company, Inc.

c. Airline Louvers; a division of Mestek, Inc.

d. Airolite Company, LLC (The).

e. Architectural Louvers; Harray, LLC.

f. Construction Specialties, Inc.

g. Ruskin Company.

h. Or approved substitute.

2. Louver Depth: See Drawings louver depth.

3. Frame and Blade Nominal Thickness: Not less than 0.080 inch (2.03 mm) for blades and 0.080 inch (2.03 mm) for frames.

4. Louver Performance Ratings:

a. Free Area: Not less than 5.0 sq. ft. (0.46 sq. m) for 48-inch- (1220-mm-) wide by 48-inch- (1220-mm-) high louver.

b. Air Performance: Not more than 0.10-inch wg (25-Pa) static pressure drop at 600-fpm (3.0-m/s) free-area intake velocity.

c. Wind-Driven Rain Performance: Not less than 80> percent effectiveness when subjected to a rainfall rate of 3 inches (75 mm) per hour and a wind speed of 29 mph (13 m/s) per hour, and a wind speed of 50 mph (22.4 m/s)] at a core-area intake velocity of 300 fpm (1.5 m/s).

2.03 LOUVER SCREENS:

A. General: Provide screen at each exterior louver.

1. Screen Location for Fixed Louvers: Interior face.

2. Screening Type: Bird screening.

B. Louver Screen Frames: Same type and form of metal as indicated for louver to which screens are attached.

C. Louver Screening for Aluminum Louvers:

1. Bird Screening: Stainless steel, 1/2-inch- (13-mm-) square mesh, 0.047-inch (1.19-mm) wire.

2. Screen Frame: Removable.

3. Frame Type: Manufacturer's standard for screen frame.

4. Intermediate Support: Evenly spaced as needed based upon louver width.

2.04 MATERIALS:

A. Aluminum Extrusions: ASTM B221 (ASTM B221M), Alloy 6063-T5, T-52, or T6.

B. Aluminum Sheet: ASTM B209 (ASTM B209M), Alloy 3003 or 5005, with temper as required for forming, or as otherwise recommended by metal producer for required finish.

C. Fasteners: Use non-corrosive types and sizes to suit unit installation conditions.

1. Use tamper-resistant screws exposed fasteners unless otherwise indicated.

2. For fastening aluminum, use aluminum or 300 series stainless-steel fasteners.

a. Evenly spaced per manufacturer's recommendation.

D. Blocking/ Shim: Provide treated blocking and shims as necessary primed for finish coating or pre-fabricated non-corrosive shim members allowing for incremental adjustment in height.

E. Bituminous Paint: Cold-applied asphalt emulsion complying with ASTM D1187/D1187M.

2.05 FABRICATION:

A. Fabricate frames, including integral sills, to fit in openings of sizes indicated, with allowances made for fabrication and installation tolerances, adjoining material tolerances, and perimeter sealant joints.

B. Join frame members to each other and to fixed louver blades with fillet welds threaded fasteners, or both, as standard with louver manufacturer unless otherwise indicated or size of louver assembly makes bolted connections between frame members necessary.

2.06 ALUMINUM FINISHES:

A. Color Anodic Finish: AA-M12C22A32/A34, Class II, 0.010 mm or thicker.

1. Color: As noted on drawings.

a. Submit range of color(s) for selection.

PART 3 - EXECUTION

3.01 INSTALLATION:

A. Locate and place louvers level, plumb, and at indicated alignment with adjacent work.

B. Use concealed anchorages where possible. Provide brass or lead washers fitted to screws where required to protect metal surfaces and to make a weathertight connection.

C. Provide perimeter reveals and openings of uniform width for sealants and joint fillers, as indicated.

D. Protect unpainted galvanized- and nonferrous-metal surfaces that are in contact with concrete, masonry, or dissimilar metals from corrosion and galvanic action by applying a heavy coating of bituminous paint or by separating surfaces with waterproof gaskets or nonmetallic flashing.

3.02 ADJUSTING:

A. Restore louvers damaged during installation and construction, so no evidence remains of corrective work. If results of restoration are unsuccessful, as determined by the Officer-In-Charge, remove the damaged units and replace with new units.

B. Touch up and paint areas adjacent to louvers to match color of adjacent surface color.

END OF SECTION

DIVISION 9 – FINISHES

SECTION 09113 – EXTERIOR PAINTING

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS: The General Terms and Conditions, City and County of Honolulu (not specifically attached), the Special Provisions, and all other applicable documents preceding these specifications shall govern all work specified in all DIVISIONS AND SECTIONS.

1.02 SUMMARY

A. Section Includes:

1. Primers.
2. Finish coatings.

1.03 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Samples: For each type of topcoat product.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Sherwin-Williams.

B. Benjamin Moore.

C. PPG.

D. or Approved Substitute.

2.02 PAINT PRODUCTS, GENERAL

A. Material Compatibility:

1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer based on testing and field experience.
2. For each coat in a paint system, provide products recommended in writing by topcoat manufacturer for use in paint system and on substrate indicated.

B. Colors: As indicated on the drawings.

2.03 PRIMERS

A. Exterior, Latex Block Filler: Water-based, pigmented, high-solids, emulsion coating formulated to bridge and fill porous surfaces of exterior concrete masonry units in preparation for specified subsequent coatings.

1. PPG
2. Benjamin Moore
3. Sherwin-Williams
4. or Approved Substitute.
5. Minimum Solids Content: Manufacturer's standard percentage solids by volume.

B. Surface-Tolerant Metal Primer: Corrosion-resistant, solvent-based metal primer formulated for use on structural steel and metal fabrications that have been minimally prepared.

1. PPG
2. Benjamin Moore
3. Sherwin-Williams
4. or Approved Substitute.

C. Quick-Drying, Alkyd Metal Primer: Corrosion-resistant, solvent-based, modified-alkyd primer; lead and chromate free; formulated for quick-drying capabilities and for use on cleaned, exterior steel surfaces.

1. PPG
2. Benjamin Moore
3. Sherwin-Williams
4. or Approved Substitute.

D. Alkyd Metal Primer: Corrosion-resistant, solvent-based, alkyd primer formulated for use on prepared ferrous metals subject to industrial and light marine environments.

1. PPG
2. Benjamin Moore
3. Sherwin-Williams
4. or Approved Substitute.

E. Water-Based, Galvanized-Metal Primer: Corrosion-resistant, pigmented, acrylic primer; formulated for use on cleaned/etched, exterior, galvanized metal to prepare it for subsequent water-based coatings.

1. PPG
2. Benjamin Moore

3. Sherwin-Williams
4. or Approved Substitute.

2.04 FINISH COATINGS

A. Exterior Latex Paint, Semigloss: Water-based, pigmented emulsion coating formulated for alkali, mold, microbial, and water resistance and for use on exterior surfaces, such as masonry, portland cement plaster, and primed wood and metal.

1. PPG
2. Benjamin Moore
3. Sherwin-Williams
4. or Approved Substitute.

B. Exterior, High-Build Latex Paint: Water-based, high-build, pigmented, emulsion coating; high-solids content improves filling, uniformity, and film build on concrete masonry surfaces. Formulated for abrasion, mold, microbial, and wind-driven rain resistance and for use on exterior masonry, concrete masonry unit, and concrete surfaces.

1. PPG
2. Benjamin Moore
3. Sherwin-Williams
4. Or Approved Substitute
5. Minimum Solids Content: Manufacturer's standard percentage solids by volume.

C. Exterior Alkyd Enamel, Flat: Solvent-based, pigmented, alkyd enamel formulated for mold, microbial, and water resistance and for use on exterior, primed, wood and metal surfaces.

1. PPG
2. Benjamin Moore
3. Sherwin-Williams
4. or Approved Substitute

D. Exterior Alkyd Enamel, Semigloss: Solvent-based, pigmented, alkyd enamel formulated for mold, microbial, and water resistance and for use on exterior, primed, wood and metal surfaces.

1. PPG
2. Benjamin Moore
3. Sherwin-Williams
4. or Approved Substitute

E. Exterior Alkyd Enamel, Gloss: Solvent-based, pigmented, alkyd enamel formulated for mold, microbial, and water resistance and for use on exterior, primed, wood and metal surfaces.

1. PPG

2. Benjamin Moore
3. Sherwin-Williams
4. or Approved Substitute

F. Quick-Drying Alkyd Enamel, Semigloss: Solvent-based, alkyd or modified-alkyd enamel formulated for quick-drying capabilities and for use on exterior, primed, metal and dimensionally stable wood surfaces.

1. PPG
2. Benjamin Moore
3. Sherwin-Williams
4. or Approved Substitute

G. Quick-Drying Alkyd Enamel, Gloss: Solvent-based, alkyd or modified-alkyd enamel formulated for quick-drying capabilities and for use on exterior, primed, metal and dimensionally stable wood surfaces.

1. PPG
2. Benjamin Moore
3. Sherwin-Williams
4. or Approved Substitute

PART 3 - EXECUTION

3.01 EXAMINATION

A. Verify suitability of substrates, including surface conditions and compatibility, with finishes and primers.

B. Proceed with coating application only after unsatisfactory conditions have been corrected.

1. Application of coating indicates acceptance of surfaces and conditions.

3.02 PREPARATION

A. Comply with manufacturer's written instructions applicable to substrates and paint systems indicated.

B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.

1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection.

C. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.

1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce paint systems specified in this Section.

3.03 INSTALLATION

A. Apply paints in accordance with manufacturer's written instructions.

B. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

3.04 CLEANING AND PROTECTION

A. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.

B. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Office-in-Charge, and leave in an undamaged condition.

C. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.05 EXTERIOR PAINTING SCHEDULE

A. Concrete Masonry Unit Substrates:

1. Latex System:

a. Prime Coat: Exterior, latex block filler.
b. Intermediate Coat: Matching topcoat.
c. Topcoat: Exterior latex paint, semigloss.

2. Latex over Alkali-Resistant Primer System

a. Prime Coat: Exterior, alkali-resistant, water-based primer.
b. Intermediate Coat: Matching topcoat.
c. Topcoat: Exterior latex paint, semigloss.

B. Steel and Iron Substrates:

1. Alkyd System:

a. Prime Coat:
b. Intermediate Coat: Matching topcoat.
c. Topcoat: Exterior alkyd enamel, semigloss.

2. Quick-Drying Enamel System:

a. Prime Coat: Quick-drying, alkyd metal primer.

b. Intermediate Coat: Matching topcoat.
c. Topcoat: Quick-drying alkyd enamel, semigloss.

C. Galvanized-Metal Substrates:

1. Latex System:

a. Prime Coat: Water-based, galvanized-metal primer.
b. Intermediate Coat: Matching topcoat.
c. Topcoat: Exterior latex paint, semigloss.

D. Aluminum Substrates:

1. Latex System:
a. Prime Coat: Quick-drying aluminum primer.
b. Intermediate Coat: Matching topcoat.
c. Topcoat: Exterior latex paint, semigloss.

2. Alkyd System:

a. Pretreatment Coat: Vinyl wash primer.
b. Prime Coat: Quick-drying aluminum primer.
c. Intermediate Coat: Matching topcoat.
d. Topcoat: Exterior alkyd enamel, semigloss.

E. Exposed Wood-Framing Substrates:

1. Latex over Latex Primer System:

a. Prime Coat: Exterior, latex wood primer.
b. Intermediate Coat: Matching topcoat.
c. Topcoat: Exterior latex paint, semigloss.

2. Latex over Alkyd Primer System:

a. Prime Coat: Exterior, alkyd/oil wood primer.
b. Intermediate Coat: Matching topcoat.
c. Topcoat: Exterior latex paint, semigloss.

3. Alkyd System:

a. Prime Coat: Exterior, alkyd/oil wood primer.
b. Intermediate Coat: Matching topcoat.
c. Topcoat: Exterior alkyd enamel, semigloss.
d. Topcoat: Alkyd floor enamel, gloss.

END OF SECTION

DIVISION 13 - SPECIAL CONSTRUCTION

SECTION 13280 - REMOVAL AND DISPOSAL OF ASBESTOS-CONTAINING MATERIAL

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS: The General Terms and Conditions, City and County of Honolulu (not specifically attached), the Special Provisions, and all other applicable documents preceding these specifications shall govern all work specified in all DIVISIONS AND SECTIONS.

1.02 SUMMARY: Removal and disposal of asbestos-containing material prior to planned renovation activities.

1.03 PRELIMINARY: In performing this asbestos abatement project, all possible safeguards, precautions, and protective measures should be utilized to prevent exposure of any individual to asbestos fibers.

1.04 WORK SPECIFIED IN THIS SECTION:

A. Contractor is responsible for coordinating all work within this Section with contract drawings, contract specifications, and contract documents.

B. All asbestos-containing material (ACM) as identified in SECTION 01715 - EXISTING CONDITIONS - ASBESTOS/ LEAD / HAZARDOUS MATERIAL SURVEY, and/or in any asbestos survey report included as part of the contract documents, and which will be impacted/disturbed by planned renovation activity described in the Contract Documents are included as part of the asbestos related work under this Section even if not identified in this Section.

C. Furnish all labor, materials, and equipment necessary to carry out the safe removal of ACM in compliance with all applicable laws and regulations, from all surfaces/areas as specified, including all incidental and pertinent operations to safely complete this project.

D. Contractor shall treat all asbestos-containing homogeneous area(s) within the project limits as ACM and is included as work under this Section as required to safely complete this project.

E. Homogeneous areas that are known to be ACM, shall be treated as ACM throughout the project limits and are included as work under this Section as required to safely complete this project.

F. Suspect ACM not previously tested or identified shall be treated as ACM unless proven otherwise. The contractor shall be responsible for all cost associated with additional asbestos testing. Contractor shall not test any suspect ACM previously tested.

G. The asbestos work shall generally include the removal and disposal, as asbestos-containing material all materials containing, the following materials that are anticipated to be disturbed as part of this project:

1. All black caulking at window/window frames throughout building and as required to safely complete this project.

2. All suspect materials at roof not confirmed to be non-ACM, unless proven otherwise, as required to safely complete this project.

H. Post-removal encapsulation work shall include the coating of all surfaces in the asbestos regulated area as well as on other surfaces designated on the plans and specifications.

I. Cleaning shall include all work within the complex affected by the removal project.

J. In general, the principal items of work shall be as follows:

1. Protection of all on-site personnel and visitors.

2. Preparation of work area.

3. Removal and disposal of asbestos-containing material as specified.

4. Encapsulation of surfaces noted.

5. Cleaning.

6. Removal of temporary plastic coverings.

K. Changes to SECTION 13280 - REMOVAL AND DISPOSAL OF ASBESTOS-CONTAINING MATERIAL of the specifications are not permitted except by the Certified Asbestos Project Designer who designed the project.

L. All work specified in this Section shall be performed by individual(s) who are State of Hawaii - Department of Health certified and registered asbestos workers and/or supervisors. All training and registration must be current and each individual must possess current and valid asbestos ID at all times at the project site. Individuals without a current asbestos ID card onsite shall not be permitted to perform any work relating to this Section.

1.05 COORDINATION WITH OTHER SECTIONS: Prior to commencement of work, an annotated description of all existing damaged and missing items shall be submitted to the Officer-in-Charge. It will be the Contractor's responsibility to repair and/or replace to the Officer-in-Charge's satisfaction all items identified as damaged and/or missing that cannot be proven to have been in this condition prior to the commencement of this project.

1.06 SUBMITTALS:

A. Submit under provisions of the SUBMITTALS Section of the GENERAL REQUIREMENTS. Submittals shall be submitted in the order listed herein. Failure to do so will result in automatic rejection of submittals.

B. Furnish Contractor certification that the Contractor is experienced with the EPA and OSHA regulations related to asbestos, application, removal, disposal and treatment.

C. Detailed Asbestos Work Schedule: Actual start and completion dates for each phase of the asbestos removal work and other work specified. The schedule shall be formulated on a day/week basis and include working hours. The schedule shall be updated weekly and six (6) copies submitted to the Officer-in-Charge.

D. Notices: As early as possible prior to commencement of work and before commencement of any on-site activity, submit a written courtesy "notice/notification" of the proposed asbestos abatement work with copies to the Officer-in-Charge and to the following agency:

State Department of Health. Indoor and Radiological Health Branch. Asbestos Section, 99-945 Halawa Valley Street, Aiea, Hawaii 96701.

E. Permits: Submit six (6) copies of all permits and arrangements for transportation and disposal of asbestos-containing or contaminated materials.

F. Manufacturer's Data: Submit six (6) copies of manufacturer's specifications, installation instructions and field test procedures for each material, and all equipment related to asbestos handling and abatement, including other data as may be required to show compliance with these specifications and proposed uses. Indicate the application rate for encapsulant as specified herein. Indicate by transmittal form that a copy of each installation instruction has been distributed to the installer.

G. SDS Sheets: Liquid sanders, encapsulants and any other materials brought on-site that are considered as hazardous materials under 29 CFR 1910.1200, shall include Safety Data Sheets (SDS).

H. Samples: Submit samples of the following items for approval prior to ordering materials:

1. Asbestos Encapsulant(s): Six (6) copies of manufacturer's literature including all laboratory data, MSDS, and application instructions.

2. Plastic Sheeting: Six (6) 8-1/2- by 11-inch pieces of each thickness and type with labels indicating actual mil. thickness.

3. Surfactant: Six (6) copies of manufacturer's literature including all laboratory data, SDS, mixing and application instructions.

4. Tapes and Adhesives: Six (6) copies of manufacturer's literature including all laboratory data.

5. Warning Labels and Signs: Six (6) copies of examples of all required signage.

6 Protective Clothing: Six (6) copies of manufacturer's literature on all protective clothing and one sample of each item (which will be returned to the Contractor).

7. Respirator Equipment: Six (6) copies of manufacturer's literature on all respirator equipment and one sample of each item which will be returned to the Contractor.

I. Project Specific Descriptions and Drawings: Submit to the Officer-in-Charge six (6) copies of shop drawings with the following items as a minimum:

1. Name and resume of Contractor's onsite Competent Person responsible for compliance with all Federal, State and Local regulations and plans and specifications. No work shall be performed unless the designated Competent Person is onsite.

2. Descriptions of any equipment to be employed not discussed in this Section.

3. Project specific work procedures (detailed plan of work procedures and methods) to be employed for this project.

4. Location of regulated (control) work area boundaries.

5. Location and construction of decontamination unit adjacent to the regulated work area.

J. Documentation for Instruction: Furnish employee certification that employees have had instructions on the dangers of asbestos exposure, on respirator use, and decontamination, from an EPA approved training facility, as required by AHERA Regulation 40 CFR 763, Appendix C to Subpart E, April 30, 1987 and Asbestos Model Accreditation Plan (MAP), and Hawaii Administrative Rules, Chapter 11-501, 11-503 and 11-504.

Submit to the Officer-in-Charge documentation that each and every individual, including foremen, supervisors, other company personnel or agents, and any other individual who may be exposed to airborne asbestos fibers, who may be responsible for any aspects of abatement activities, or who is allowed or permitted to enter areas where such exposure may occur, has had instruction on the hazards and health effects of asbestos exposure. Also, submit to the Officer-in-Charge documentation that personnel stated above have had instructions on the nature of the activities and operations which create a risk of asbestos exposure and the

necessary protective steps, on use and fitting of respirators (in accordance with qualitative procedures as detailed in OSHA Appendix C), Qualitative and Quantitative Fit Testing.

Procedures, on protective dress, on use of showers, on entry and exit from the work areas under normal and emergency conditions, on all aspects of work procedures and protective measures, and on all provisions of OSHA 1926.1101, and that each and every employee understands this instruction. This documentation shall be an outlined format of the instruction and shall be signed by all employees to be engaged on this project and by all individuals before being allowed within the project site and must include an acknowledgment and an assumption of the potential risk of exposure by that individual and a release of liability of the City and County, Consultant, and Officer-in-Charge for any such exposure. The Contractor shall be responsible for keeping the documentation up to date and subsequent submittals to the Officer-in-Charge before any additional employee or individual, not currently on this list, is allowed within the project site.

K. Documentation from Physician: Submit to the Officer-in-Charge documentation from a physician that all employees or agents who may be exposed to airborne asbestos have been provided with an opportunity to be medically monitored to determine whether they are physically capable of working while wearing the respirator required without suffering adverse health effects. In addition, documentation that all individuals permitted within the project site have received medical monitoring or had such monitoring made available to them as required in OSHA 1926.1101. The Contractor must be aware of and provide information to the examining physician about unusual conditions in the work place environment (e.g. high temperatures, humidity, chemical contaminants) that may impact on the employee's ability to perform work activities. The Contractor shall keep and make available to all affected individuals a record and the results of such examinations.

L. Medical Surveillance Program: Submit to the Officer-in-Charge a copy of the Contractor's medical surveillance program prepared in accordance with all applicable laws, and all medical examination documentation for all employees to be used on this project.

M. Respiratory Protection Program: Submit to the Officer-in-Charge a copy of the Contractor's respiratory protection program prepared in accordance with all applicable laws. The Contractor shall also submit fit test data on all employees to be used on this project.

N. Hazard Communication Program: Submit to the Officer-in-Charge a copy of the Contractor's hazard communication program prepared in accordance with all applicable laws.

O. Site Emergency Action Plan: Submit to the Officer-in-Charge a copy of the Contractor's site emergency action plan prepared in accordance with all applicable laws.

P. HEPA Vacuums: Submit manufacturer's certification that vacuums conform to ANSI Z9.2-79, Fundamentals Governing the Design and Operation of Local Exhaust Systems as applicable to this project.

Q. Respirators: Submit notarized certifications respirators meet all requirements of NIOSH and EPA. Document NIOSH approval of all respiratory protective devices utilized on site. Include manufacturer's certification of HEPA filtration capabilities for all cartridges and filters.

R. Rental Equipment: When rental equipment is to be used in abatement areas or to transport asbestos-contaminated waste, a written notification concerning intended use of the rental equipment must be provided to the rental agency with a copy submitted to the Officer-in-Charge.

S. Entry Log: Maintain a log of all personnel other than the Contractor's employees and agents who enter the work area while asbestos abatement operations are in progress until after final clearance is received that the work area is asbestos free.

The log shall contain the following information as a minimum and certified copies shall be submitted to the Officer-in-Charge weekly:

1. Date of visit.

2. Visitor's name, employer, business address, and telephone number.

3. Time of entry and exit from work area.

4. Purpose of visit.

5. Type of protective clothing and respirator worn.

6. Certificate of release signed and filed with the contractor.

T. Daily Log: Maintain a daily log documenting the dates and times of, but not limited to, the following items:

1. Meetings; purpose, attendees, brief discussion.

2. Visitations; authorized and unauthorized at the job site.

3. Special or unusual events, i.e., equipment failures, accidents.

4. Air monitoring tests and test results.

5. Documentation of Contractor's completion of the following:

a. Inspection of work area preparation prior to start of removal and daily thereafter.

b. Progress of the work.

c. Contractor's inspections prior to encapsulation of the substrate from which such materials have been removed.

d. Removal of waste materials from work area.

e. Decontamination of equipment (list items).

f. Contractor's final.

6. Daily certification by the Contractor's onsite competent person that all work has been performed in accordance with all applicable laws, specifications and approved work plan.

U. Waste Disposal Manifest Forms: Submit copies of all transport manifests, trip tickets and disposal receipts for all asbestos-containing waste materials removed from the work area during the abatement process.

V. Air Monitoring Testing Laboratory: Submit name, address and telephone number of air monitoring testing laboratory selected for sample collection, analyses and reporting of airborne fiber concentrations along with evidence that the air monitoring testing laboratory is a successful participant in the Proficiency Analytical Testing (PAT) program for employee exposure for airborne fibers (OSHA monitoring).

W. General Contractor's Air Monitoring Consultant (3rd Party Industrial Hygienist) and Testing Laboratory: Submit name, address of air monitoring testing laboratory selected for daily inspection, sample collection, analyses and reporting of airborne fiber concentrations along with evidence that the air monitoring testing laboratory is a successful participant in the Proficiency Analytical Testing (PAT) program and a State of Hawaii certified Asbestos Project Monitor hired by the General Contractor.

1.07 PRODUCT HANDLING: Delivery and Storage of Materials: Deliver materials to the site in original packages, containers or bags fully identified with manufacturer's name, brand and lot number. Store materials in a dry well-ventilated space, under cover, off the ground and away from surfaces subject to dampness or condensation as approved by the Officer-in-Charge. Material that becomes contaminated with asbestos shall be disposed of in accordance with applicable regulations. Replacement materials shall be stored outside the contaminated work area until abatement is completed.

1.08 PROTECTION:

A. Site Security: The work area is to be restricted only to authorized, trained, and protected personnel. These may include the Contractor's employees, employees of Subcontractors, the Officer-in-Charge and his representatives, State and local inspectors, responding emergency personnel and any other designated individuals. A list of authorized personnel shall be established prior to job start.

1. Entry to the work area by unauthorized individuals shall not be permitted without the express approval of the Officer-in-Charge and any such entry shall be reported immediately to the Officer-in-Charge by the Contractor.

2. A Visitor's Log shall be maintained.

3. The Contractor shall have control, subject to approval of the Officer-in-Charge, of security in the work area and in proximity of Contractor's equipment and materials.

B. Site Protection and Safety: As a minimum, follow the requirements of EPA, OSHA and NIOSH. Take all necessary precaution to ensure there is no asbestos contamination to those areas not included in the work schedule.

C. Protective Covering: The Contractor shall provide and install additional protective covering to protect the project on an "as required" or "upon request" by the Officer-in-Charge basis. Protective covering shall be clean plastic sheets.

D. Safeguarding of Property: The Contractor shall take whatever steps necessary to safeguard his work and also the property of the City and County and other individuals in the vicinity of his work area during the execution of this Contract. He shall be responsible for and make good on any and all damages by his employees' negligence. Do not load structure with weight that will endanger the structure.

E. Completed Work: The Contractor shall provide all necessary protection for surfaces encapsulated under this section.

1.09 ABBREVIATIONS:

A. ANSI: American National Standards Institute, Inc.

B. CFR: Code of Federal Regulations.

C. HIOSH: Hawaii Occupational Safety and Health, Department of Labor and Industrial Relations, State of Hawaii.

D. EPA: U.S. Environmental Protection Agency.

E. NESHAPS: National Emission Standards for Hazardous Air Pollutants.

F. MAP: Asbestos Model Accreditation Plan.

G. NIOSH: National Institute for Occupational Safety and Health.

H. OSHA: Occupational Safety and Health Administration.

1.10 GENERAL REQUIREMENTS:

A. Furnish Contractor certification, within ten (10) consecutive calendar days from award, that the Contractor is experienced with the EPA and OSHA regulations related to asbestos, application, removal, disposal, and treatment.

B. Furnish employee certification, within ten (10) consecutive calendar days from award, that employees have had instructions on the dangers of asbestos exposure, on respirator use and decontamination, from an EPA approved training facility, as required by AHERA Regulation 40 CFR 763, Appendix C to Subpart E, April 30, 1987 and asbestos Model Accreditation Plan (MAP), and Hawaii Administrative Rules, Chapter 11-501 and 11-504.

C. Contractor shall examine and have at all times in his possession at his office (one copy) and in view and readily available at each jobsite (one copy) a current issue of the following publications:

1. Title 29, Code of Federal Regulations, Part 1926.1101 Construction Industry, Occupational Safety and Health Administration (OSHA), U.S. Department of Labor.

2. State of Hawaii: Occupational Safety and Health Standards, Title 12, Subtitle 8, Part 1.

3. State of Hawaii: Occupational Safety and Health Standards, Title 12, Chapter 203 - Hazard Communication.

4. Title 40, Code of Federal Regulations, Part 61, Subparts A and M, National Emission Standards for Hazardous Air Pollutants, U.S. Environmental Protection Agency (EPA).

5. Guidance for Controlling Asbestos-Containing Materials in Buildings (purple book), U.S. Environmental Protection Agency (EPA).

6. Title 34, Code of Federal Regulations, Part 231, Appendix C, Procedures for Containing and Removing Building Materials Containing Asbestos, U.S. Environmental Protection Agency (EPA).

7. ANSI Z88.2-80 Practice for Respiratory Protection.

8. EPA, Final Response to the Asbestos Hazard Emergency Response Act (AHERA), 40 CFR, Part 763, Subpart E.

9. EPA, Model Accreditation Plan, 40 CFR Part 763 Subpart E, Appendix C.

10. State of Hawaii, Asbestos Requirements, Title 11, Chapters 501 through 504.

11. Project plans and specifications and approved Work Plan.

D. The Contractor shall comply with the above requirements and any applicable State and City and County regulations. Where conflict or any inconsistency among requirements, this specification exists, and approved work plan exists the more stringent requirements shall apply. Ignorance of the above requirements and any applicable State and City and County regulations resulting in additional cost to the Contractor shall not be paid by City and County.

E. All regulations shall govern over these specifications, except that any more stringent specification (including approved work plan) or specification providing greater protection against asbestos exposure, injury, loss or liability shall control to the extent permitted by regulation. Any question regarding conflict or inconsistency between specifications and/or regulations should be directed to the Officer-in-Charge.

F. The Asbestos Contractor shall give, at a minimum, ten (10) working days notification to the General Contractor's Air Monitoring Consultant and the Officer-in-Charge's Air Monitoring Consultant prior to the start of any asbestos related work.

G. The Asbestos Contractor shall not begin with any work without the General Contractor's Air Monitoring Consultant present onsite.

H. WHENEVER APPROVAL OF THE OFFIECR-IN-CHARGE IS REQUIRED PRIOR TO PROCEEDING WITH OTHER WORK, THE FOLLOWING SHALL BE COMPLIED WITH:

1. The Contractor shall allow the Officer-in-Charge 24 hours from notification to respond to the request for inspection.

2. The Contractor shall designate one person (either a foreman or superintendent) who will be authorized to request inspections. The name of the designated person shall be submitted in writing to the Officer-in-Charge prior to commencing with the work. Requests from any other person will not be considered an official request.

3. The designated person, when requesting inspection, shall provide the following information:

a. Name of caller.

b. Building and rooms to be inspected.

c. Work phase of inspection, as specified.

1.11 DEFINITIONS:

A. Abatement: Procedure to control fiber release from asbestos containing building materials.

1. Removal: All herein specified procedures necessary to remove asbestos-containing materials from an area and disposal of the material at an approved site in an acceptable manner.

2. Post-Removal Surface Encapsulation: Procedures necessary to coat surfaces from which asbestos-containing materials have been removed and where designated on the drawings to control any residual fiber release.

B. Air Monitoring: The process of measuring the fiber content of a specific, known volume of air in a period of time.

C. Amended Water: Water to which a surfactant has been added to reduce water surface tension and thereby provide a more rapid penetration.

D. Authorized Visitor: The Officer-in-Charge, his representatives, air monitoring personnel, or a representative of any regulatory or other agency having jurisdiction over the project.

E. Holding Area: A secure area used for the storage of double bagged asbestos-containing material before removal from the project site to an approved disposal site.

F. Homogeneous Area: An area of surfacing material, thermal system insulation material, or miscellaneous material that is uniform in color and texture, and which does not extend to other floors or buildings.

G. Fixed Object: A unit of equipment or furniture in the work area which cannot be removed from the work area without dismantling.

H. Friable Asbestos: Asbestos-containing material which can be crumbled to dust, when dry, under hand pressure.

I. HEPA Filter: A High Efficiency Particulate Air filter capable of trapping and retaining 99.97 percent of monodispersed particles 0.3 micrometers or greater in diameter.

J. HEPA Vacuum Equipment: Industrial grade vacuuming equipment that utilizes a High Efficiency Particulate Air (HEPA) filter.

K. Post-Removal Encapsulation: A liquid material which can be applied to surfaces from which asbestos-containing material has been removed to control the possible release of residual fibers, either by creating a membrane over the surface (bridging encapsulant) or by penetrating into the material and binding its components (penetrating encapsulant).

L. Surfactant: A chemical-wetting agent added to water to improve penetration, thus reducing the quantity of water required for a given operation or area.

PART 2 - PRODUCTS

2.01 MATERIALS:

A. Plastic Sheeting: Minimum thickness of 6-mil polyethylene film.

B. Plastic Bags: Minimum thickness 6-mil polyethylene film labeled as specified hereinafter.

C. Tapes: Tape shall be capable of sealing joints of adjacent sheets of polyethylene and for attaching polyethylene sheets to finished or unfinished surfaces of dissimilar materials and capable of adhering under both dry and wet conditions, including the use of amended water. Silver cloth duct tape, minimum 2 inches wide, and double-faced foam tapes, shall be used on polyethylene sheeting, red or orange tape, minimum 2 inches wide for exit arrows.

D. Adhesives: Adhesives shall be capable of sealing joints of adjacent sheets of polyethylene and for attachment of polyethylene sheet to finished or unfinished surfaces of dissimilar materials and capable of adhering under both dry and wet conditions, including use of amended water.

E. Surfactant (Wetting Agent): 50 percent polyoxyethylene ester and 50 percent polyoxyethylene ether, or equivalent, and shall be mixed with water to provide a concentration of 1 ounce, or more as needed, of surfactant to 5 gallons of water. (An equivalent surfactant shall be understood to mean material with a surface tension of 29 dynes/cm as tested in its properly-mixed concentration, using ASTM Method D 1331-56 (R 1980), "Surface and Interfacial Tension of Solutions of Surface-Active Agents").

F. Asbestos Encapsulant: Encapsulant shall be non-flammable with a Class A fire classification. Encapsulant shall be odorless when dry, and compatible with materials applied by others. All references to application at strengths below full strength shall be as approved by the product manufacturer for the intended use.

G. Warning Labels and Signs: As required by OSHA regulation 29 CFR 1926.1101. Permanent signage for access panels and areas with encapsulated asbestos-containing materials shall be as specified hereinafter. Signage shall be as approved by the Officer-in-Charge.

H. Protective Clothing: As specified hereinafter. The Contractor is cautioned that during the summer and fall, there is usually a tremendous shortage of coveralls due to the consumption of these items by mainland contractors for summer abatement projects. The Contractor shall have all the required sets of coveralls required for this project on island prior to the start of work. There will be no time extension for the unavailability of coveralls or related equipment.

I. Other Materials: Provide all other materials, which may be required to properly prepare and complete this project.

2.02 TOOLS AND EQUIPMENT:

A. General: Provide and fabricate suitable tools for the asbestos abatement procedures.

B. Water Sprayer: Airless or a pressure sprayer for amended water application as applicable.

C. HEPA Vacuum: High Efficiency Particulate Air (HEPA) vacuum.

D. Air Purifying Unit: Air filtration system equipped with HEPA filter.

E. Paint/Encapsulant Sprayer: Airless type.

1. Scaffolding and Shoring: As required to accomplish the work and meet all applicable safety regulations.

2. No power driven tools/equipment (no mechanical means) shall be permitted for removal of asbestos-containing materials.

F. Other tools and equipment as necessary.

2.03 PERSONNEL PROTECTION REQUIREMENTS:

A. The Contractor acknowledges he alone is responsible for instruction and enforcement of personnel protection requirements and that these specifications provide only a minimum acceptable standard.

B. The Contractor acknowledges that all person(s) within the regulated work area shall not remove respiratory protection. Any person(s) observed removing respiratory protection within the regulated area on more than one occasion will not be permitted to continue any work on the project.

C. Provide workers with personally-issued and marked respiratory equipment approved by NIOSH and accepted by OSHA.

1. Initial cleaning and work area preparation shall be performed in half mask dual cartridge negative pressure respirators approved for asbestos by NIOSH.

2. All removal work related to the removal and bagging of all asbestos material, shall be performed in air purifying respirators equipped with cartridges approved for asbestos by NIOSH.

D. Loading and Unloading of Double-Bags or Drums at the Project Site and Landfill: Half-face dual-cartridge respirators equipped with cartridges NIOSH approved for asbestos.

E. Other: Should any condition, for any reason, be encountered where the exposure level exceeds the action levels provided by the Officer-in-Charge, the Contractor shall stop work and determine the causes of the excessive levels. Should the action level continue to be exceeded, the contractor shall stop work. Work will not be resumed until approval is received from the Officer-in-Charge.

F. Beards: Bearded persons will not be permitted in the regulated work area.

G. Provide workers with disposable protective full-body clothing consisting of material impenetrable by asbestos fibers and of the proper size for each individual to accommodate movement without tearing. Such clothing shall consist of full-body coveralls, footwear, gloves, and headgear. Provide hard hats as required by applicable safety regulations. Disposable clothing shall not be allowed to accumulate and shall be disposed of as asbestos-contaminated waste.

1. Protective clothing shall be worn by all personnel within the work area from the start of the removal through post-removal encapsulation work, until the Contractor has received acceptance of the asbestos-containing material removal and post-removal encapsulation work.

2. All persons conducting any work within the regulated work area shall remain fully suited (dressed) with protective clothing at all times. Any persons(s) observed partially suited while conducting work within the regulated area on more than one occasion will be required to be removed from performing any work on the project.

H. No visitors shall be allowed in work areas, except as authorized by the Officer-in-Charge and specified herein. Provide authorized visitors with suitable respirators with fresh cartridges. Provide authorized visitors with suitable disposable protective full-body clothing consisting of material impenetrable by asbestos fibers and of the proper size for each individual to accommodate movement without tearing. Such clothing shall consist of full-body coverall, footwear, gloves and headgear, including hard hat when required and insulated rubber boots or equal.

I. The Contractor shall include in his Bid the expense of a total of four (4) changes of clothing and respirators per day for each day of asbestos abatement work for visitor's use. The quantity shall accumulate and may be used at any time during asbestos abatement work at the discretion of the Officer-in-Charge.

J. All electrical systems used for asbestos abatement operations shall as a minimum be protected with Ground Fault Circuit Interrupters (GFCI) selected and installed in strict accordance with the manufacturer's instructions, the National Electric Code and all other pertinent codes.

K. All GFCI inside the regulated work area must be of waterproof type.

L. Additional safety equipment (e.g., hard hats meeting the requirements of ANSI Z89.1-1981, eye protection meeting the requirements of ANSI Z87.1-1979, safety shoes meeting the requirements of ANSI Z41.1-1967, disposable PVC gloves), as necessary, shall be provided to all workers and authorized visitors.

PART 3 - EXECUTION

3.01 WORK AREA PREPARATION:

A. Work by the Asbestos Abatement Contractor: Step 1

1. Posting of Caution Signs: Post caution signs in and around the work area to comply with 29 CFR 1910.1001 and all other Federal, State and local requirements. Signs shall be posted at a distance sufficiently far enough away from the work area to permit a person to read the sign and take the necessary protective measures to avoid exposure.

2. Critical Seals (barriers): Seal all windows, doors, and openings to the regulated work area with plastic sheeting. Plastic sheeting is to remain in place for the duration of the asbestos abatement or until specified by the Officer-in-Charge.

3. Inspect the Building Openings: At the beginning of each work day, the Contractor shall inspect and ensure that all doors, windows and other openings of affected building(s) and all surrounding buildings are closed or sealed.

B. Work by the Asbestos Abatement Contractor: Step 2

1. Temporary utility services are also generally specified under the General Specifications. Requirements specified herein amplify the General Specifications as they apply to the asbestos abatement operations.

2. Temporary Electricity and Lighting:

a. Existing electrical service to the building may be used for temporary electrical power during abatement and replacement work; however, the electrical power to the work areas will be shut down during abatement work.

b. The Contractor shall verify the location(s) of available electrical service outside the work areas and shall tie into the existing system at a location approved by the Officer-in-Charge.

c. Install circuit and branch wiring, with area distribution boxes located so that power is available throughout the project by use of construction-type power cords.

3. Temporary Water:

   a. Existing domestic water service to the building may be used for temporary water during construction. Location of tie-in shall be approved by the Officer-in-Charge.

   b. Install branch piping with taps as necessary throughout the construction area.

4. Temporary Sanitation Facilities:

   a. Existing toilet facilities may be used by the Contractor's personnel during asbestos abatement work. Personnel must be in a decontaminated state before using temporary toilet facility.

   b. Maintain toilet facility in a clean and sanitary condition in compliance with applicable codes and ordinances.

5. Temporary Fire Protection:

   a. Provide and maintain temporary fire protection equipment during the asbestos abatement operations.

   b. Equipment shall be of the appropriate type to fight fires associated with the existing building materials and those material used during the construction operations.

C. Work by the Asbestos Abatement Contractor: Step 3

Cover All Ceiling and Wall Penetrations: Cover all ceiling and wall vents, air-conditioning equipment, exhaust hoods, windows, louvered and screened openings, and doors with a single layer of 10-mil polyethylene sheeting or two layers of 6-mil polyethylene sheeting.

D. Work by the Asbestos Abatement Contractor: Step 4

AFTER STEP 3 IS COMPLETED, NOTIFY THE OFFICER-IN-CHARGE AND GET HIS/HER APPROVAL PRIOR TO PROCEEDING WITH REMOVAL WORK AS SPECIFIED HEREINAFTER.

E. Commencement of work shall not start until:

1. Pre-abatement submissions, notifications, and permits have been provided and are satisfactory to the Officer-in-Charge.

2. All equipment for abatement, clean-up and disposal are on hand.

3. All worker training (and certification) is completed.

4. Contractor receives written permission from the Officer-in-Charge to commence abatement.

3.02 ASBESTOS FIBER CONCENTRATIONS IN THE WORK AREA: The maximum permissible exposure to airborne concentrations of asbestos fibers within the work area shall be 0.05 f/cc. The work shall stop whenever these limits are exceeded and the Contractor shall remedy the condition prior to commencing the work. The expenses resulting from the delays shall be the Contractor's responsibility and shall not be paid by the City and County.

3.03 PRIOR TO ASBESTOS REMOVAL:

A. Install critical barriers.

B. Inspect the Building Openings: At the beginning of each work day, the Contractor shall inspect and ensure that all doors, windows and other openings of affected building(s) and adjacent buildings are closed and/or sealed prior to the start of any work.

C. Install decontamination unit/area adjacent to work area.

3.04 REMOVAL OF ASBESTOS-CONTAINING MATERIAL:

A. The Contractor shall stop all work if there is the possibility of rain or high winds for roof related work. The Contractor shall be responsible for any and all damages due to his negligence.

B. Continuously throughout the work shift and at the end of the day the Contractor perform a visual inspection and clean up any and all visible debris resulting from his work inside and outside of the building.

C. The Contractor at all times shall utilize "wet methods" when removing, bagging and disposing of asbestos materials. The asbestos material shall be sprayed with amended water containing a wetting agent (surfactant). The use of amended water must be strictly controlled so as not to over saturate the material. A fine "mist" spray of the amended water shall be applied in small sections to reduce fiber release preceding the removal of material. Saturate the material sufficiently to wet it to the substrate without causing excessive dripping or delamination of the material. Spray the asbestos material repeatedly during the removal operations to maintain a wet condition and to minimize asbestos fiber dispersion. Mechanical and “dry” means/methods of removal shall not be permitted.

D. The Contractor shall spray encapsulant on surfaces where asbestos material was removed.

E. The asbestos-containing material shall be removed in small sections. Before beginning the next section, the material shall be packed while still moist into individual sealable leak tight double plastic bags, sealed airtight, and gently lowered to the ground. “Burrito” style wrapping of debris is not permitted. No removed material, whether bagged or unbagged, shall be allowed to fall to the ground.

F. At the end of each work shift and during the work shift the Contractor shall immediately clean up any visible debris on the roof (where applicable), at ground level, inside and around the regulated work area, and inside of the building resulting from the work. All debris must be immediately cleaned up and bagged accordingly.

G. Maintain roof in watertight condition during the course of the project. Do not leave substrate exposed during non-working hours. As a result of failure to adhere to this requirement, the Contractor shall repair any damage to the satisfaction of the Officer-in-Charge, at no cost to the City and County.

H. It shall be the responsibility of the Contractor to verify the quantity and complexity of the material and satisfy himself as to the total work and/or effort to remove said material as required to safely complete this project.

I. Protect the existing building substrates and components from damage from tools and equipment used during asbestos removal and encapsulation procedures. Damage to the buildings as a result of the Contractor's negligence will require the Contractor to repair the damage at no cost to the City and County.

J. All work specified in this Section shall be performed by individuals who are State of Hawaii - Department of Health certified and registered. All training and registration must be current and each individual must possess current and valid asbestos ID at all times at the project site. Individuals without a current asbestos ID card onsite shall not be permitted to perform any work relating to this Section.

3.05 DECONTAMINATION PROCEDURES:

A. Exiting Work Area: Require all Workers to adhere to the following personal decontamination procedures whenever they leave the work area or at the end of work shift.

1. Before leaving the regulated work area, require the worker to remove the first or outer layer of disposable coveralls. Disposable coveralls are placed in a bag for disposal with other contaminated material. Respiratory protection should not be removed at this time.

2. The worker then proceeds to a designated area, and then removes the second set of disposable coveralls. Disposable coveralls are placed in a bag for disposal with other contaminated material. Only after leaving the designated area, respiratory protection may be removed.

3.06 DISPOSAL OF ASBESTOS-CONTAINING MATERIAL AND ASBESTOS-CONTAMINATED WASTE (SOLID AND/OR LIQUID):

A. As the work progresses and waste is generated, the Contractor shall transport all waste generated each day to the authorized disposal site,

unless specifically approved by the Officer-in-Charge to delay the disposal operation. Transport all waste to the pre-designated disposal site in accordance with EPA regulations.

B. The Contractor shall pay the waste disposal charge for use of the landfills. All expenses for landfills (including, but not limited to, any additional testing, special handling, labeling and coordination required by the landfills) shall be the complete responsibility of the Contractor. The Contractor shall provide the required advance notice of all deliveries to the landfill(s). Delivery time shall be as directed by the landfill operator.

C. Asbestos-containing material, asbestos contaminated material and PPE shall be double-bagged in leak tight bags with OSHA label prescribed by the OSHA 1926.1101 regulations referenced in these specifications. Label shall state:

DANGER
CONTAINS ASBESTOS FIBERS
MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS
DO NOT BREATHE DUST
AVOID CREATING DUST

D. Asbestos-containing material waste material to be transported off the facility site, shall be labeled with the name of the wastes generator and the location at which the waste was generated, as prescribed by EPA regulation 40CFR61.150 (NESHAPS). Additionally, label bags in accordance with OSHA requirement 29 CFR 1926.1101.

E. Vehicles used for transporting waste to the disposal sites shall have a completely enclosed, lockable storage compartment. Storage compartments shall be plasticized and sealed with a minimum of one layer of 6-mil polyethylene sheeting on the sides and top, and two layers of 6-mil polyethylene on the floor (bed). If allowed by OSHA, waste materials, except those with sharp edges (metal lath, screws, nails, metal suspension system, etc.), properly double-bagged or wrapped may be transported to the disposal site without being placed in drums if the transporting vehicle is prepared as specified above in addition to any more stringent requirements by OSHA 1926.1101. The compartments shall be thoroughly wet-cleaned and/or HEPA vacuumed following the disposal of each load at the disposal sites at an approved location with electrical power as required. At the conclusion of the asbestos abatement, or before transport vehicles are used for other purposes, the polyethylene sheeting shall be properly removed and disposed of as contaminated waste. After this has been accomplished, compartments shall once again be wet cleaned and HEPA vacuumed in order to eliminate all debris.

F. The Contractor shall mark vehicles used to transport asbestos-containing waste material during the loading and unloading of waste so that signs are visible, and displayed in such a manner and location that a person can easily read the legend.

The legend shall state:

DANGER
ASBESTOS DUST HAZARD
CANCER AND LUNG DISEASE HAZARD
Authorized Personnel Only

Additionally, the legend shall conform to the NESHAP requirement specified in 40 CFR Part 61.149(d)(1)(iii).

G. Workers unloading bags at the disposal sites shall be dressed in full-body protective clothing and dual-cartridge respirators.

H. Waste disposal manifest forms shall be properly completed to assure custody and disposal of all asbestos-containing material and asbestos-contaminated waste at approved disposal sites. Forms shall be kept on file as directed by the Officer-in-Charge with copies submitted to the Officer-in-Charge the next working day after each trip.

I. It is the Contractor's responsibility to assure that any Landfill used for disposal of ACM or asbestos contaminated waste is approved for that purpose.

J. Bags must be placed in the hole for burial. Dumping of bags from the containers will not be allowed. However, if a bag is torn and if acceptable by the landfill, the entire container may be buried.

K. Liquid waste shall not be disposed into the sanitary sewer system, filtered or unfiltered, without appropriate County permit(s).

L. The Contractor shall pay the waste disposal charge for use of the landfills. All expenses for landfills shall be the complete responsibility of the Contractor. The Contractor shall provide the required advance notice of all deliveries to the landfill(s). Delivery time shall be as directed by the landfill operator.

3.07 CLEANING OF THE WORK AREA:

A. Should the contractor fail to commence work to clean-up and make the work area asbestos free within one working day after the clean-up has been requested by the City and County, the Officer-in-Charge may without further notice and without termination of contract, do the clean-up and deduct the cost thereof from the contract price.

B. Surfaces to be encapsulated shall be wet-wiped and/or HEPA vacuumed just prior to the application of encapsulant.

C. Post-removal encapsulation of affected areas shall begin as specified hereinafter when approved by the Officer-in-Charge.

3.08 POST-REMOVAL ENCAPSULATION OF AFFECTED AREAS: An approved encapsulant diluted to a maximum of 1/3 strength of the manufacturer's normal application rate for the intended substrate shall be applied using airless spray equipment to all areas of the project where asbestos-containing materials have been removed.

3.09 FINAL CLEAN-UP:

A. Remove signage required by the asbestos removal and encapsulation work. Signage applicable to job site safety and the performance of the remaining portions of the work shall remain as applicable.

B. Completely remove all temporary materials. Clean and repair damage caused by temporary installations or use of temporary facilities. Restore existing facilities to their original condition as approved by the Officer-in-Charge.

END OF SECTION

SECTION 13283 - DISTURBANCE OF LEAD-CONTAINING MATERIAL

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS AND COVENANTS: The General Terms and Conditions of the City and County of Honolulu (not specifically attached), the Special Provisions, and all other applicable documents preceding these specifications shall govern all work specified hereinafter in all DIVISIONS AND SECTIONS.

1.02 DESCRIPTION OF WORK

A. All paint shall be presumed to contain lead until proven otherwise. Lead paint testing conducted did not confirm the absence of lead in the painted surfaces tested.

B. Whenever paint containing lead is being disturbed, this section shall take precedence over others.

C. The preparation and treatment of existing paint with lead material on various surfaces. Lead paint removal work shall be selective and only where existing paint is peeling, blistering, flaking, delaminating, chalky, in poor condition, not adhering to the existing substrate and/or going to be disturbed. In addition, Contractor shall coordinate work in this Section with contract drawings and documents to determine where painted surfaces, regardless of condition, are going to be disturbed and are required to be completely removed (deleading) to structural substrate to complete work required. This section is being implemented so that the planned work can be accomplished in a safe manner.

D. All preparation of paint with lead (lead-containing paint and lead-based paint) shall be identified in advance so that the preparation/treatment of surfaces will be one continuous operation.

E. Demolition of surfaces and components containing paint with lead (lead-containing paint and lead-based paint).

F. Contractor is responsible for coordinating all work within this Section with contract drawings, contract specifications, and contract documents.

1.03 WORK SPECIFIED IN THIS SECTION: Furnish all labor, materials and equipment necessary to carry out the safe preparation and treatment of paint with lead in compliance with all applicable laws and regulations from all surfaces, including all incidental and pertinent operations to safely complete this project.

Furnish all labor, materials and equipment necessary to carry out the safe demolition of surfaces and components with paint with lead in compliance with all applicable laws and regulations from all surfaces, including all incidental and pertinent operations to safely complete this project.

1.04 COORDINATION WITH OTHER SECTIONS: It will be the Contractor's responsibility to repair and/or replace, to the Officer-in-Charge's satisfaction, all items identified as damaged and/or missing in connection with this work that cannot be proven to have been in this condition prior to the commencement of this project. It is the Contractor's responsibility to bring to the attention of the Officer-in-Charge, any discrepancies in the plans and specifications prior to starting any work.

1.05 CONTRACTOR USE OF PREMISES

A. General: The Contractor shall cooperate fully with the Officer-in-Charge, during the project execution to minimize conflicts.

B. Pollution Control: The Contractor shall not contaminate the air, water, soil or other items with hazardous materials such as cleaning solutions, lead paint debris and waste, etc. The Contractor shall immediately clean the contaminated area and dispose of the waste at his own expense if determined by the Officer-in-Charge to be contaminated. The Officer-in-Charge shall have the authority to immediately stop the work and order the Contractor to clean the contaminated site.

C. Use of the Site:

1. Confine operations at the site to the areas permitted under the Contract. Portions of the site beyond areas on which work is indicated are not to be disturbed. Conform to site rules and regulations affecting the work while at the project site.

2. Do not unreasonably encumber the site with materials or equipment. Confine stock-piling of materials and location of storage to the areas authorized by the Officer-in-Charge.

1.06 COMMENCEMENT OF WORK

A. The Contractor shall not commence work unless the following requirements have been met. These requirements must be met each time work that calls for the disturbance paint with lead is to begin in a new work area.

B. Submittals: All pre-treatment submittals, notifications, posting and permits have been provided and are satisfactory to the Officer-in-Charge.

C. Equipment: All equipment for preparation, clean-up and disposal are on hand.

1.07 SUBMITTALS: Submit in accordance with SECTION 01300 - SUBMITTALS and the following requirements. Submittals shall be submitted in the order listed herein. Failure to do so will result in automatic rejection of submittals.

A. General: All submittals shall be made to the Officer-in-Charge no later than ten (10) consecutive calendar days from award date unless specified otherwise.

B. Detailed Paint with Lead Disturbance Schedule: The Contractor shall submit a project schedule indicating the actual start and completion dates for each phase of the work. The Contractor shall also provide detailed information concerning:

1. Name of Contractor's onsite Competent Person responsible for compliance with all Federal, State and Local regulations and plans and specifications.

2. Preparation of the work area.

3. Any personal protective equipment including respiratory protection and protective clothing acceptable by the Officer-in-Charge.

4. Employees who will participate in the project, including delineation of experience, training, and assigned responsibilities during the project.

5. Decontamination procedures for the personnel, work area and equipment.

6. Work methods and procedures to be used during the removal of loose, peeling, flaking and/or blistering paint and during demolition of surfaces and components containing lead paint including methods to suppress dust emissions during the disturbance of paint with lead.

7. Required air monitoring procedures and sampling protocols when the likelihood of airborne exposure of lead-containing dust and fumes are probable.

8. Procedures for handling and transporting waste materials.

9. Procedures for final decontamination and clean-up.

10. A sequence of work and performance schedule in coordination with other trades.

11. Emergency procedures.

C. Samples: The Contractor shall submit samples for approval prior to ordering materials.

1. Submit six (6) copies and samples for each manufacturer supplied items shall include manufacturer's name, trade name, catalog number, size, specification reference, applicable federal regulations, and all other information necessary to establish contract compliance.

2. Liquid sanders, encapsulants and any other materials brought on-site that are considered as hazardous materials under 29 CFR 1910.1200, shall include Safety Data Sheets.

D. The Officer-in-Charge with the Contractor may inspect the work area wherein all associated activities will occur and submit a statement signed by both, agreeing on building and fixture condition prior to the commencement of work.

E. Documentation for Instructions:

1. Submit to the Officer-in-Charge that the Contractor's employees, including foreman, supervisors and any other company personnel or agents who may be exposed to airborne lead dust or who may be responsible for any aspects of lead paint removal activities certificates of training, in accordance with OSHA lead in construction standard for all workers disturbing lead.

2. Submit to the Officer-in-Charge, a written respiratory protection program meeting the requirements of 29 CFR 1910.134, documentation that all employees using respirators have received the training specified in this Section and documentation of respirator fit-testing for all Contractor employees and agents who must wear negative pressure respirators.

F. Documentation from Physician: The Contractor shall submit documentation from a physician that all employees or agents who may be exposed to airborne lead dust or fumes have been medically monitored to determine whether they are physically capable of working while wearing the respirator required without suffering adverse health effects. In addition, the Contractor shall document that his personnel have received medical monitoring as required in the OSHA 1926.62 standard.

1. Before exposure to lead dust or fumes, the Contractor will provide workers with a comprehensive medical examination as required by Federal Register/Volume 55, No. 189; and 29 CFR 1926.62 or whichever is stricter for the operation being performed. This examination will not be required if adequate records show the employees have been examined as required by the aforementioned regulations within the last year.

2. The Contractor shall provide information to the examining physician about unusual conditions in the work place environment that may impact on the employee's ability to perform work activities; a copy of 29 CFR 1926.62; Federal Register/Volume 55, No. 189; a description of the affected employee's duties as they relate to the employee' s exposure; the employee's representative exposure level or anticipated exposure level; and description of any personal protective and respiratory equipment used or to be used; and information from previous medical examinations of the affected employee that is not otherwise available to the examining physician.

1.08 GENERAL REQUIREMENTS

A. The work specified herein shall include the preparation of work area, preparation and/or other special treatment procedures, demolition, and transportation and disposal procedures as required of lead-containing materials by persons trained, knowledgeable and qualified in the techniques of handling and disposing of lead-containing and lead-contaminated materials, and the subsequent cleaning of contaminated areas. This work shall be performed in compliance with all applicable federal, state and local regulations and be performed by workers who are capable of and willing to perform the work of this contract.

B. The Contractor shall submit documentation within ten (10) consecutive calendar days of award, that employees have had instructions on the dangers of lead exposure on respirator use and decontamination.

C. Applicable Standards and Guidelines: All work under this contract, and any other trade work conducted with the project, shall be performed in strict accordance with all applicable federal, state and local regulations, standards and codes governing lead paint preparation, removal, disposal, treatment, transportation and disposal of lead materials.

1. The most recent edition of any relevant regulation, standard, document code shall be in effect.

2. The Contractor shall have copies of all standards, regulations, codes and other applicable documents available at the work site in an area assigned to the Contractor throughout the execution of this project.

D. Specific Statutory and Regulatory Requirements:

1. Title 29 Code of Federal Regulations Part 1926.62, Safety and Health Standards (Lead Exposure in Construction).

2. Title 29 Code of Federal Regulations Part 1910.134, Respiratory Protection.

3. Title 40 Code of Federal Regulations Part 261, Identification and Listing of Hazardous Waste.

4. Title 40 Code of Federal Regulations Part 262, Standards Applicable to Generators of Hazardous Waste.

5. Title 40 Code of Federal Regulations Part 263, Regulations Hazardous Waste Transporters.

6. Federal Register/Vol. 54, No. 131; Tuesday, July 11, 1989. Department of Labor, Occupational Safety and Health Administration; 29 CFR Parts 1910, 1915, 1917 and 1918; Occupational Exposure to Lead; Statement of Reasons; Final Rule.

E. Alternative Procedures:

1. Requests for Alternative Procedures: Procedures described in this specification are to be used at all times. However, if specified procedures cannot be used, a request must be made in writing to the Officer-in-Charge providing details of the problem encountered and recommended alternatives.

2. Requirements for Alternative Procedures: Alternative procedures shall provide equivalent or greater protection than the procedures that they replace.

3. Approval of Alternative Procedures: Any alternative procedure must be in writing by the Officer-in-Charge before implementation.

F. The Contractor shall comply with the above requirements and any applicable State and City and County regulations. Where conflict or any inconsistency among requirements, this specification exists, and acceptable work plan exists the more stringent requirements shall apply. Ignorance of the above requirements and any applicable State and City and County regulations resulting in additional cost to the Contractor shall not be paid by the City.

G. All regulations shall govern over these specifications, except that any more stringent specification (including acceptable work plan) or specification providing greater protection against asbestos exposure, injury, loss or liability shall control to the extent permitted by regulation. Any question regarding conflict or inconsistency between specifications and/or regulations should be directed to the Officer-in-Charge.

H. The Contractor shall give, at a minimum, ten (10) working days notification to the General Contractor's Air Monitoring Consultant and the Officer's-in-Charge Monitoring Consultant prior to the start of any lead paint related work.

I. The Contractor shall not begin with any work without the General's Air Monitoring Consultant and the Officer's-in-Charge Monitoring Consultant present onsite. present onsite.

1.09 DEFINITIONS

A. Abatement: Procedure to control lead dust release from lead-containing paint.

B. Removal: All herein specified procedures necessary to remove peeling, flaking and blistering lead-containing paint in an acceptable manner.

C. Action Level (AL): Employee exposure averaged over an 8-hour period, without regard to the use of respirators, to a particular airborne concentration. OSHA requirements become effective at this level. Lead: 30 micrograms/cubic meter.

D. Air Monitoring: The process of measuring the content of a specific, known, volume of air in a stated period of time. For this project, NIOSH method 7082 or 7702 for lead monitoring.

E. Authorized Visitor: The Officer-in-Charge, their representatives, air monitoring personnel, or representative of any regulatory or other agency having jurisdiction over the project.

F. Contaminated Area: An area where unwanted toxic or harmful substances have been introduced.

G. Fixed Object: A unit of equipment or furniture in the area which cannot be removed from the work area without dismantling.

H. HEPA Filter: A High Efficiency Particulate Absolute filter capable of trapping and retaining 99.97% of particulate greater than 0.3 micron in length.

I. HEPA Vacuum Equipment: Vacuuming equipment that utilizes a High Efficiency Particulate Absolute (HEPA) filter.

J. Holding Area: A secure area used for the storage of properly contained lead-containing material before removal from the project site to an approved disposal site.

K. Lead: Metallic lead, all inorganic lead compounds, and inorganic lead soaps. Excluded are all other organic lead compounds.

L. Lead Paint: Lead-containing paint, lead-based paint and/or paint containing any amount of lead present.

M. Lead-containing Paint: Lead-containing paint, lead-based paint and/or paint containing any amount of lead.

N. Lead Control Area: An Area where lead-containing paint removal, treatment and preparation operations are performed which is isolated by physical boundaries to prevent unauthorized entry of personnel and to prevent the spread of lead dust, paint chips or debris.

O. Permissible Exposure Limit (PEL): The employer shall ensure that no employee is exposed to concentrations greater than the PEL as determined from an 8-hour time weighted average. Lead: 50 micrograms/cubic meter.

P. Personal Monitoring: Sampling of lead paint dust concentrations within the breathing zone of an employee to determine the 8-hour time weighted average. The samples shall be representative of the employee's work tasks. The breathing zone shall be considered an area within 12 inches of the nose or mouth of an employee.

Q. Plasticizing: Procedures necessary to use polyethylene sheeting, adhesives and (or) taping.

1.10 ABBREVIATIONS

A. ANSI - American National Standards Institute, Inc.

B. CFR - Code of Federal Regulations

C. EPA - U.S. Environmental Protection Agency

D. HIOSH - Department of Occupational Safety and Health, Department of Labor and Industrial Relations, State of Hawaii

E. NIOSH - National Institute for Occupational Safety and Health

F. OSHA - Occupational Safety and Health Administration

G. NESHAPS - National Emissions Standards for Hazardous Air Pollutants

H. LBP - Lead-Based Paint

PART 2 - PRODUCTS

2.01 MATERIALS

A. Plastic Sheeting: Minimum thickness is 6-mil polyethylene film.

B. Tapes: Tape shall be capable of sealing joints of adjacent sheets of polyethylene and for attaching polyethylene sheets to finished or unfinished surfaces of dissimilar materials and capable of adhering under both dry and wet conditions, including the use of amended water. Silver cloth duct tape, minimum 2 inches wide; red or NATO orange tape, minimum 2 inches wide for exit arrows; and double-faced foam tapes.

C. Adhesives: Adhesives shall be capable of sealing joints of adjacent sheets of polyethylene and for attachment of dissimilar materials and capable of adhering under both dry and wet conditions, including use of amended water.

D. Warning Labels and Signs: As required by applicable OSHA regulations and CFR. 55 No. 189.

E. Protective Clothing: The Contractor shall have all the required sets of coveralls required for this project prior to the start of work. There will be no time extension for the unavailability of coveralls or related equipment.

F. Liquid Sanders: Product shall be specifically designed for the preparation of paint where dry sanding is not allowed or not appropriate. Liquid sanders are not to be used to remove paint.

G. Other Materials: Provide all other materials which may be required to prepare properly and complete this project.

2.02 TOOLS AND EQUIPMENT

A. General: Provide and fabricate suitable tools for the lead treatment/preparation procedures.

B. Other tools and equipment as necessary to accomplish the work.

2.03 PERSONNEL PROTECTION REQUIREMENTS

A. The Contractor acknowledges that he alone is responsible for the instruction and for enforcing personnel protection requirements, and that these specifications provide only a minimum acceptable standard. If other potentially hazardous materials are used, the Contractor shall comply with all applicable regulations that exist for that particular hazardous material and to ensure worker safety and health.

B. Respiratory Protection: The Contractor shall provide all respiratory protection to workers in accordance with the submitted written respiratory protection program, which includes all items in 29CFR1910.134(b)(l-II).

C. Protective Clothing:

1. Clothing: The Contractor shall provide clothing including head, hands, foot and full body protection consisting of material impenetrable by bulk material in sufficient quantities and adequately sized for all workers and Authorized Visitors. Disposable or reusable clothing are acceptable, however, disposable clothing shall be disposed of in accordance with all federal, state and local regulations.

2. Miscellaneous safety equipment: The Contractor shall provide hard hats (meeting the requirements of ANSI Standard Z89.1-1981), protective eyewear (meeting the requirements of ANSI Standard Z87.1-1979), and disposable gloves to all workers. Safety shoes (meeting the requirements of ANSI Standard Z41.1-1987) may be required for some activities.

3. Footwear: The Contractor shall require appropriate footwear for all workers.

PART 3 EXECUTION

3.01 POTENTIAL LEAD HAZARD

A. The disturbance or dislocation of lead-containing materials may cause lead-containing dust to be released into the atmosphere, thereby creating a potential health hazard to workmen, building occupants, and neighboring residences. Apprise all workers supervisory personnel, subcontractors and consultants who will be at the job site of the seriousness of the hazard and of proper work procedures which must be followed.

B. Where in the performance of the work, workers, supervisory personnel, subcontractors or consultants may encounter, disturb, or otherwise function in the immediate vicinity of any identified lead-containing materials, take appropriate continuous measures as necessary to protect all building occupants from the potential hazard of exposure to respirable airborne lead dust and ingestible lead-containing materials. Such measures shall include at the minimum, the procedures and methods described herein, and compliance with regulations of applicable federal, state and local agencies.

3.02 LEAD-CONTAINING MATERIALS

A. Lead-based paint was detected on some of the painted surface locations tested. Lead-containing paint was detected on some of the painted surface locations tested. Lead-containing painted components may also be present at some surface locations tested, as lead concentration of painted surface locations tested were below lead paint analyzer level of detection of $0.01 mg/cm^2$.

B. This Section applies to lead painted components that will be disturbed during surface preparation and treatment, demolition, and other activities and as described herein. It does not apply to painted components that do not contain lead, nor lead paint that will not be disturbed in any manner during the work to be performed under this contract. The Officer-in-Charge shall have the authority to require special controls described under this Section of any lead painted components that are disturbed.

3.03 WORK AREA PREPARATION

A. Posting of Caution Signs: The Contractor shall post caution signs in accordance with OSHA at any location and approaches to a location where airborne concentrations of lead may exceed ambient background levels. The Contractor shall post signs at a distance sufficiently far enough away from the work area to permit an employee to read the sign and take the necessary protective measures to avoid exposure. Additional signs may need to be posted following construction of work place barriers.

B. Isolation Barriers: Isolation barriers shall be installed in accordance with the contractor's accepted work plan wherever it is necessary to protect the public, employees of the facility and non-working personnel from leaded dust. The isolation barriers shall provide sufficient protection from contaminating the exterior of the work area.

C. Inspect the Building Openings: At the beginning of each work day, the Contractor shall inspect and ensure that all doors, windows and other openings of affected building(s) and all surrounding buildings are closed or sealed.

3.04 LEAD PAINT TREATMENT/PREPARATION PROCEDURES

A. General:

1. Provide temporary utilities, security, safety, worker protection, clean-up and disposal of waste materials as described in this Section and elsewhere in these specifications.

2. Cleaning and isolating the work area: Clean the work area first using HEPA vacuum equipment and then wet cleaning methods as appropriate. Do not use methods that raise dust, such as dry sweeping or vacuuming equipment on wet surfaces.

3. Handling of lead-containing material: The Contractor shall not drop or throw to the floor, material removed from building structures or components. Material shall be removed as intact sections or components (whenever possible) and carefully lowered to the floor. For materials over 15 feet above the floor, the materials may be containerized at elevated levels, or gently lowered onto inclined chutes or scaffolding for subsequent collection and containerization.

4. Requirements for re-establishment of work area: Re-establishment of the work area shall only occur when clean-up procedures have been completed, all repairs necessitated by paint treatment activities have been performed, no visible lead paint debris is present and all work has been documented to the satisfaction of the General Contractor's Monitoring Consultant. Any variation from this shall be at the Officer-in-Charge's Monitoring Consultant discretion.

5. Ground contamination of lead paint and other paint preparatory materials shall be cleaned before leaving the premises.

B. Paint Removal: Paint removal shall only be allowed in locations where paint is peeling, blistering, cracking and/or flaking, or where otherwise noted on the drawings.

C. Paint Stripping:

1. Work included under this sub-section includes the furnishing of all labor, materials and equipment required to remove lead paint by scraping and/or brushing after the paint has been softened by the application of a chemical stripping agent.

2. Chemical removers shall contain no methylene chloride products. Chemical removers shall be compatible with, and not harmful to the substrate to which they are applied. Chemical removers used for interior surfaces shall not raise or discolor the surface being abated.

3. Chemical stripping agent neutralizers may be used on exterior surfaces only. Neutralizers shall be compatible with and not harmful to the substrate that they are applied to. Neutralizers shall be compatible with the stripping agent that has been applied to the surface substrate.

4. Chemical stripping agents and neutralizers shall be applied in accordance with the recommendations of the manufacturer. Care must be taken to adhere to all MSDS, health/safety code and other specification section requirements. Stripping agents shall not be allowed to penetrate wood or other fibrous substrates.

5. Apply paint strippers in accordance with the manufacturer's printed instructions by trowel to a minimum thickness of 1/8 inch. Cover past with fibrous rubbing gently to remove air and pierce remaining air bubbles with knife. Leave on for period of not less than 24 hours or longer according to test patch findings.

6. Neutralize area: Rinse off the residue with water into a collection-filtration system and neutralize the area in accordance with the manufacturer's recommendations.

7. Protective clothing: All workers shall be protected by rubber or polyethylene full body coverage suits, boots, gloves, face shield and protective head gear. Avoid contact with eyes and skin.

8. Ground contamination of lead paint and other paint preparatory materials shall be cleaned before leaving the premises.

D. Abrasive Removers Machine Sander:

1. Work included under this sub-section includes the furnishing of all labor, materials, and equipment required to remove lead paint by machine sanding using a high efficiency particulate air (HEPA) vacuum system, as called out in these specifications.

2. Sanders shall be of the dual action, rotary action, orbital or straight-line system type, capable of being fitted with a HEPA filter system.

3. Air compressors utilized to operate this equipment shall be designed to continuously provide 90 to 110 psi or a recommended by the manufacturer.

4. Wet sanding shall be conducted by hand or pneumatic driven sanders. Electric powered sanders shall not be used for wet sanding.

5. Dry sanding shall only be done on flat surfaces which allow the HEPA dust collection system come into tight contact with the surface being sanded. Surfaces to be sanded shall be wide enough to allow maximum efficiency of the HEPA dust collection system.

6. All lead paint shall be removed down to the bare substrate surface. In cases that some pigment may remain embedded in wood grain and similar porous substrate, care shall be taken to avoid damage to the substrate with the sanding machine. If the pigment cannot be removed without damaging the substrate, the Contractor shall notify the Officer-in-Charge for further instructions.

7. Ground contamination of lead paint and other paint preparatory materials shall be cleaned before leaving the premises.

E. Paint Preparation:

1. Work included under this Sub-Section includes the furnishing of all labor, materials and equipment required to prepare lead painted components by non-abrasive or wet abrasive techniques.

2. Application:

a. Disposable protective clothing shall be worn at all times during the work. Coveralls shall be worn with shoes and gloves.

b. Plastic drop cloths shall cover the floor and other areas not being repainted.

c. Remove from surface to be repainted all foreign matter such as tape and gum.

d. Where existing finish remains clean, tight and firm, prepare surface by using a commercial paint preparation solution (liquid sandpaper) or wet sandpaper to remove the glossy coat.

e. Completely wipe or wash all surfaces with mineral spirits, T.S.P. (tri-sodium phosphate), or other appropriate solution as required to remove any accumulated film of wax, oil, grease, smoke, dust, dirt, chalky or other foreign matter which would impair bond of, or bleed through new finish.

f. Immediately, spot prime with specified primer, areas where bare metal is exposed.

g. Dispose of waste, gloves, suits, plastic, and disposable equipment in accordance with 40 CFR 261 and specifications.

3. Ground contamination of lead paint and other paint preparatory materials shall be cleaned before leaving the premises.

3.05 LEAD PAINT - DEMOLITION PROCEDURES

A. Provide temporary utilities, security, safety, worker protection, clean-up and disposal of waste materials as described in this Section and elsewhere in these specifications.

B. Isolating the work area: The Contractor shall isolate work area, with barricades and signs to prevent un-authorized persons from entering into the work area.

The Contractor shall post signs at a distance sufficiently far enough away from the work area to permit an employee to read the sign and take the necessary protective measures to avoid exposure. Additional signs may need to be posted following construction of work place barriers.

C. The Contractor shall at all times suppress dust emissions while disturbing any material containing lead paint. No visible emission will be permitted.

D. Requirements for re-establishment of work area: Re-establishment of the work area shall only occur when clean-up procedures have been completed, all repairs necessitated by paint treatment activities have been performed, no visible lead paint debris is present, and all work has been documented to the satisfaction of the General Contractor Monitoring Consultant. Any variation from this shall be at the Officer-in-Charge's Monitoring Consultant discretion.

E. Ground contamination of lead paint and other paint preparatory materials shall be cleaned before leaving the premises.

3.06 STORAGE AND DISPOSAL REQUIREMENTS

A. Storage Requirements: The Contractor shall store Non-Hazardous and Hazardous Waste Material within the Contractor's secured storage area.

1. Bagged waste material: If bagged waste material is to be stored, the Contractor shall use dumpsters for this purpose. The dumpsters shall have doors and tops that can be closed and locked to prevent vandalism, wind dispersion of lead dust, or other disturbance of the bagged debris. The Contractor shall not store unbagged lead-containing waste, liquid waste or non-lead-containing waste in these dumpsters. The Contractor also shall ensure that the bags in the dumpsters are not damaged. The Contractor shall post warning signs on the dumpsters as specified in OSHA requirement 29 CFR 1926.62.

2. Drummed waste material: If waste material is to be stored in drums, the Contractor shall use a secured storage area for this purpose. This storage area shall have doors that can be closed and locked to prevent vandalism. The Contractor shall only store waste material contained in drums or dumpsters in the secured area. The Contractor shall ensure that the drums in this secured storage area are not damaged. The Contractor shall post warning signs outside the secured storage area as specified in the OSHA requirement 29 CFR 1926.62.

B. Waste Disposal and Landfill Requirements:

1. Representative sample(s), of paint chip debris and demolition debris, shall be submitted for hazardous/special/regulated waste determination (characterization) as required by the landfill and all applicable regulations. All testing and any other associated costs related to hazardous/special/regulated waste determination shall be paid for by the Contractor. If results are below the EPA limit(s) and characterized as a non-hazardous waste, the materials shall be disposed of at a landfill approved for such purposes. The Contractor shall submit to the Contracting Officer, documentation that the waste material removed from the work area has been accepted by the landfill owner.

2. If waste characterization or other required landfill testing result(s) of the demolition and/or paint chip debris are above EPA limits or landfill limits the materials shall be disposed of at an approved facility for receiving hazardous, regulated or special waste materials. The Contractor shall be responsible for all disposal costs including all transportation fees. The Contractor shall submit to the Contracting Officer, documentation that the waste material removed from the work area has been accepted by the hazardous materials approved landfill owner.

C. Disposal of Non-Hazardous Lead-Containing Waste:

1. Notifying landfill operator: If required by the landfill or its agents, the Contractor shall advise the landfill operator with sufficient time prior to transportation of the quantity of material to be delivered.

2. Unloading: upon reaching the landfill, the Contractor's trucks are to approach the dump location as close as possible for unloading the Lead-Containing Waste Material.

    a. The Contractor shall inspect containers as they are unloaded at the disposal site. Material in damaged containers shall be repacked in empty containers, as necessary.

    b. The Contractor shall carefully place waste containers on the ground at the disposal site, not push or throw the containers out of the trucks.

3. Clean-up procedures:

    a. If containers are broken or damaged, the Contractor shall leave the containers in the truck and clean the entire truck and its contents using HEPA vacuums and wet cleaning methods, until no visible residue is observed.

b. Following the removal of all contaminated waste, the Contractor shall decontaminate the truck cargo area using HEPA Vacuums and/or wet cleaning methods until no visible residue is observed. Polyethylene sheeting shall be removed and discarded as Lead-Contaminated Waste Material, along with contaminated cleaning materials and protective clothing, in containers at the disposal site.

3.07 TESTING/AIR MONITORING

A. Contractor Responsibilities:

1. The Contractor shall provide the personal monitoring and necessary records for all of the Contractor's employees as required by OSHA and all other applicable law.

2. Daily area air monitoring and clearance testing shall be paid by the Contractor.

3. However, any air monitoring and testing which becomes necessary in order to follow up on work by the Contractor that has been rejected as not conforming to the requirements and performed by the City and County shall be paid by the General Contractor.

B. General Contractor's Air Monitoring Consultant:

1. The General Contractor's Air Monitoring Consultant shall ensure that the applicable specifications are being followed using the methods and requirements of the applicable scope of work and to collect daily environmental samples.

2. The General Contractor's Air Monitoring Consultant shall be present onsite at all times.

END OF SECTION

SECTION 13288 - TESTING/AIR MONITORING

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS: The General Terms and Conditions, City and County of Honolulu (not specifically attached), the Special Provisions, and all other applicable documents preceding these specifications shall govern all work specified in all DIVISIONS AND SECTIONS.

1.02 SUMMARY: Inspection, testing and air monitoring shall be as follows:

A. General Contractor provided daily inspection (verification of compliance with bid documents and approved work plan), testing and air monitoring shall be supplied by the General Contractor for the purpose of:

1. Verifying compliance with the specification listed in Section 13280.

2. Verifying compliance with the specification listed in Section 13283.

3. Insuring that the City's legally required documentation is collected;

4. Providing engineering control during the project.

5. Environmental and regulatory air sampling and laboratory analyses.

6. No work shall be conducted unless the General Contractor's Air Monitoring Consultant is onsite.

7. General Contractor's Air Monitoring Consultant shall be a first-tier subcontractor.

B. Officer-in-Charge provided daily inspection (verification of compliance with bid documents and approved work plan), testing and air monitoring shall be supplied by the Contractor Officer for the purpose of:

1. Verifying compliance with the specification listed in Section 13280.

2. Verifying compliance with the specification listed in Section 13283.

3. Insuring that the City's legally required documentation is collected;

4. Providing engineering control during the project (when deemed necessary).

5. Environmental and regulatory air sampling and laboratory analyses (when deemed necessary).

6. No work shall be conducted unless the Officer-in-Charge's Air Monitoring Consultant is onsite without approval.

7. The Contractor shall give, at a minimum, ten (10) working days notification to the Officer-in-Charge's Air Monitoring Consultant prior to the start of any asbestos and lead paint related work.

1.03 COORDINATION WITH OTHER SECTIONS: The testing/air monitoring requirements included in the scope of work for any testing/air monitoring consultants or inspectors, and all applicable Federal, State, and local regulations shall be coordinated with this section.

PART 2 - PRODUCTS

Not applicable to this section.

PART 3 - EXECUTION

3.01 CONTRACTOR RESPONSIBILITIES:

A. The General Contractor's Air Monitoring Consultant will insure that the applicable specifications are being followed using the methods and requirements of the applicable scope of work.

B. The General Contractor's Air Monitoring Consultant shall have the authority to exercise engineering control during the project.

C. The Asbestos and Lead Paint Contractor shall be responsible for providing the personal monitoring and maintaining necessary records for all of the Contractor's employees as required by OSHA, Hawaii State law and all other applicable law.

D. The General Contractor shall obtain and provide all required and related reports and documentation as part of the contract.

E. Monitoring information developed by the General Contractor's Air Monitoring Consultant's activities while under the contract with the City shall be for the use of the City. The information will be available and offered to the Asbestos and Lead Paint Contractor when developed, but not thereafter, and shall not waive the Asbestos and Lead Paint Contractor's obligations stated elsewhere in this section.

F. Air monitoring and testing which becomes necessary in order to follow up on work by the General Contractor and the Asbestos and Lead Paint Contractor which is rejected as not conforming to the requirements shall be the responsibility of the City. However, the full cost of such additional monitoring and testing shall be borne by the General Contractor, and shall be deducted from the final contract payment.

3.02 OFFICER-IN-CHARGE'S AIR MONITORING CONSULTANT RESPONSIBILITIES:

A. The Officer-in-Charge's Air Monitoring Consultant will insure that the applicable specifications are being followed using the methods and requirements of the applicable scope of work.

B. The Officer-in-Charge's Air Monitoring Consultant shall have the authority to exercise engineering control during the project, if deemed necessary.

C. The Officer-in-Charge's Air Monitoring Consultant shall have the authority to stop work, if deemed necessary.

D. Air monitoring shall be performed to detect airborne fibers and airborne lead concentrations inside and outside the work area for the duration or portions of the project, if deemed necessary.

END OF SECTION