Invitation for Bids

Leahi Hospital - Replace First Floor Windows in Young Building
23L-0433

The Hawaii Health Systems Corporation (HHSC) Oahu Region is requesting bids from qualified companies for the replacement of the first floor windows in the Young Building at Leahi Hospital located at 3675 Kilauea Ave., Honolulu, HI 96816.

The IFB may be obtained electronically from the following website:
http://leahi.hhsc.org/procurement/notices/

A site visit is scheduled for May 2, 2024 at 11:30 a.m. All interested companies shall meet in the Leahi Hospital Parking Lot entrance area. The deadline for submission of written/emailed questions pertaining to the IFB is May 9, 2024.

All bids must be received by HHSC by May 23, 2024, 2:00 p.m. Hawaii Standard Time. All bids shall be sent digitally to skawai@hhsc.org. E-mail bids not received by deadline will be disqualified for consideration. No exceptions will be made even if network provider or software (e.g. MS Outlook) delays delivery. Please note that large files (>10MB) may experience network delivery issues.

Addenda to the IFB will be posted on the website listed above.

For any inquiries, please contact Scott Kawai, Oahu Region Contracts Department, at (808) 832-3025 or by email at skawai@hhsc.org.

Leahi Hospital
3675 Kilauea Ave.
Honolulu, HI 96816

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SECTION 1
ADMINISTRATION

1.0 INTRODUCTION

This Invitation for Bid (hereinafter "IFB") is issued by the Hawaii Health Systems Corporation (hereinafter "HHSC"), a public body corporate and politic and an instrumentality and agency of the State of Hawaii. All procedures and processes will be in accordance with HHSC Oahu Region policy and procedures.

In order for HHSC to accept Bidder's response in a timely manner, please thoroughly read this IFB and follow instructions as presented.

1.1 IFB TIMETABLE AS FOLLOWS

The timetable as presented represents HHSC's best estimated schedule. If an activity of the timetable, such as "Closing Date for Receipt of Bids" is delayed, the rest of the timetable dates may be modified. BIDDER will be advised, by addendum to the IFB, of any such modifications to the timetable. Contract start date will be subject to the issuance of a Notice to Proceed.

	ACTIVITY	**SCHEDULED DATES**
1.	IFB Public Announcement	April 26, 2024
2.	Pre-Bid Orientation Leahi Hospital parking lot entrance 11:30 p.m.	May 2, 2024
3.	Closing Date for Receipt of Questions	May 9, 2024
4.	**Closing Date for Receipt of Bids 2:00 p.m.**	**May 23, 2024**
5.	Contractor Selection/Award Notification (on/about)	May 24, 2024
6.	Contract Start Date (on/about)	June 14, 2024

1.2 AUTHORITY

This IFB is issued following the provisions of Chapter 323F, Hawaii Revised Statutes (HRS), and its administrative rules. All BIDDERS are charged with presumptive knowledge of all requirements of the cited authorities. Submission of a valid executed bid by any BIDDER shall constitute admission of such knowledge on the part of such BIDDER.

1.2.1 IFB ORGANIZATION

This IFB is organized into four sections:

SECTION 1: ADMINISTRATIVE
Provides information regarding administrative requirements.

SECTION 2: SCOPE OF SERVICES
Provides a detailed description of goods and/or services to be provided and delineates HHSC and CONTRACTOR responsibilities.

SECTION 3: BID FORMS AND GENERAL CONDITIONS
Describes the required format and content for submission of the bid.

SECTION 4: BID EVALUATION AND AWARD
Describes how bids will be evaluation and procedures for selection and award of contract.

1.3 HEAD OF PURCHASING AGENCY (HOPA)

The HOPA for HHSC, or designee, is authorized to execute any and all Agreements (Contracts), resulting from this IFB.

The HOPA for this IFB is:

Derek Akiyoshi
Regional Chief Executive Officer
Hawaii Health Systems Corporation

1.4 DESIGNATED OFFICIALS

The officials identified in the following paragraphs have been designated by the HOPA as HHSC's procurement officials responsible for execution of this IFB, award of Agreement and coordination of CONTRACTOR's satisfactory completion of contract requirements.

1.4.1 ISSUING OFFICER

The Issuing Officer is responsible for administrating/facilitating all requirements of the IFB solicitation process and is the **sole point of contact** for BIDDER from date of public announcement of the IFB until the selection of the successful BIDDER. The Issuing Officer will also be responsible for contractual actions throughout the term of the contract. For purposes of this IFB, the designated Issuing Officer is:

Scott Kawai
Director of Contracts and Project Management
e-mail: skawai@hhsc.org
phone: (808) 832-3025

1.5.1 CHARTER

HHSC is a public body corporate and politic and an instrumentality and agency of the State of Hawaii. HHSC is administratively attached to the Department of Health, State of Hawaii and was created by the legislature with passage of Act 262, Session Laws of the State of Hawaii 1996. Act 262 affirms the State's commitment to provide quality health care for the people in the State of Hawaii, including those served by small rural facilities.

1.5.2 STRUCTURE AND SERVICES

HHSC is organized into four operational regions and provides a broad range of healthcare services including acute, long term, rural and ambulatory health care services. As the fourth largest public health system in the country, HHSC is the largest provider of healthcare in the Islands, other than on Oahu. This solicitation is for the Oahu Region.

1.5.3 MISSION

The mission of HHSC is to provide and enhance accessible, comprehensive health care services that are quality-driven, customer-focused and cost-effective.

1.6 FACILITY INFORMATION

Detailed information pertaining to HHSC facilities is located at http://www.hhsc.org.

1.7 SUBMISSION OF QUESTIONS

Questions must be submitted in writing via electronic mail, facsimile or post mail to the Issuing Officer no later than the "Closing Date for Receipt of Questions", identified in paragraph 1.1 in order to generate an official answer. All written questions will receive an official written response from HHSC and become addenda to the IFB.

IMPORTANT

BIDDER may request changes and/or propose alternate language to the attached HHSC General and Special Terms and Conditions during this phase only. All requests will be presented to the HHSC Legal Department for review. No requests to change the HHSC General or Special Terms and Conditions will be entertained after the bids have been submitted or during the contracting process. All written questions and/or approved changes will receive an official written response from HHSC and shall be recorded as addenda to the IFB.

HHSC reserves the right to reject or deny any request(s) made by BIDDER.

Responses by HHSC shall be due to the BIDDER prior to notice of award.

Impromptu, un-written questions are permitted and verbal answers will be provided during pre-bid conferences and other occasions, but are only intended as general direction and will not represent the official HHSC position. The only official position of HHSC is that which is stated in writing and issued in the IFB as addenda thereto.

No other means of communication, whether oral or written, shall be construed as a formal or official response/statement and may not be relied upon.

SEND QUESTIONS TO:

Scott Kawai, Issuing Officer
e-mail: skawai@hhsc.org

1.8 SOLICITATION REVIEW

BIDDER should carefully review this solicitation for defects and questionable or objectionable matter. Comments concerning defects and questionable or objectionable matter, **excluding requests to revise the General or Special Conditions**, must be made in writing and should be received by the Issuing Officer, no later than the "Closing Date for Receipt of Bids" as identified in Section 1.1. This will allow issuance of any necessary amendments to the IFB. It will also assist in preventing the opening of bids upon which award may not be made due to a defective solicitation package.

1.9 IFB AMENDMENTS

HHSC reserves the right to amend the IFB any time prior to the deadline date of the IFB. IFB Amendments will be in the form of addenda.

1.10 CANCELLATION OF IFB

The IFB may be canceled when it is determined to be in the best interests of HHSC.

1.11 PROTESTS

Any protest shall be submitted in writing to the HOPA as noted below.

A protest based upon the content of the solicitation shall be submitted in writing within five (5) working days **after** the aggrieved individual/business knows or should have known of the facts giving rise thereto; provided further that the protest shall not be considered unless it is submitted in writing prior to and not later than the "Closing Date for Receipt of Bid" identified in section 1.1.

A protest of an award or proposed award shall be submitted within five (5) working days after the posting of award of the contract. The notice of award, if any, resulting from this solicitation shall be posted at the following website: http://leahi.hhsc.org/procurement/notices/

Any and all protests shall be submitted in writing to the HOPA, as follows:

Derek Akiyoshi
Hawaii Health Systems Corporation
Oahu Region
3675 Kilauea Avenue
Honolulu, Hawaii 96816

1.12 PERFORMANCE AND PAYMENT BOND

Performance and payment bonds shall be required for contracts $25,000 and higher. At the time of the execution of the contract, the successful Bidder shall file good and sufficient performance and payment bonds, each in an amount equal to one hundred percent (100%) of the amount of the contract price unless otherwise stated in the solicitation of bids.

1.13 SPECIALTY CONTRACTOR'S LICENSE

A. Contractor shall be solely responsible to ensure that all specialty licenses required to perform the Work are covered by the Contractor and/or its subcontractor(s).

1.14 WORKING HOURS

A. Regular working hours for this project shall take place between the hours of 8:00 AM to 4:30 PM Monday through Friday, excluding State Holidays, unless otherwise noted or restricted.

B. The Contractor may be given approval to work beyond the regular hours including Saturdays, Sundays, State Holidays, night work, or after hours under the provisions of the GENERAL CONDITIONS.

1.15 SPECIAL PROCEDURES DURING BIDDING

A. All bids shall be submitted to the Issuing Officer.

B. All questions regarding the IFB shall be submitted, in writing, to the Issuing Officer, who shall review the questions and issue any responses via Addendum. Only information received by Addendum shall be binding.

C. Any visitation to the site to examine the scope of work shall be requested through the HHSC Representative. Disruption of facility operations shall not be permitted.

SECTION 2
SCOPE OF SERVICES

2.0 INTRODUCTION

LEAHI HOSPITAL REPLACE FIRST FLOOR WINDOWS IN YOUNG BUILDING

Work for this project shall include, but is not limited to the demolition and replacement of existing windows, and miscellaneous work as indicated on the drawings.

2.1 CONTRACT PERIOD

The work shall be completed within 250 consecutive calendar days.

2.2 SCOPE OF SERVICES

A. The CONTRACTOR shall complete the work specified in the specifications and drawings in APPENDIX C.

B. Qualifications. The CONTRACTOR shall have:

1. A current and valid license to perform the scope of work.
2. Have been in business for the past three (3) consecutive years.
3. A permanent, on-island office location in conducting business which is accessible to telephone calls. An answering service is not acceptable.

C. HOSPITAL shall provide:

Technical Representatives who shall have the authority to oversee the successful completion of contract requirements, including monitoring, coordinating and assessing CONTRACTOR performance; placing requests for services; and, approving completed work/services with verification of same for CONTRACTOR's invoices. Technical Representatives will also serve as points of contact for "technical" matters throughout the term of the contract.

SECTION 3
Bid Forms and General Conditions

General Instructions for Completing Forms

- *Bids shall be submitted in the prescribed format outlined in this IFB*
- *No supplemental literature, brochures or other unsolicited information should be included in the bid packet.*
- *A written response is required for each item unless indicated otherwise.*

3.0 Bid Form

The bid form must be completed and submitted to HHSC by the required due date and time, and in the form prescribed by the HHSC. Facsimile transmissions shall not be accepted.

Interested bidders shall submit their bid under the interested bidder's exact legal name that is registered with the Department of Commerce and Consumer Affairs and shall indicate this exact legal name in the appropriate space on page 1 of the bid form. Failure to do so may delay proper execution of the Contract.

Interested bidders shall certify its ability to provide services on June 14, 2024 or upon execution of the Contract agreement by both parties. The Hospital reserves the right to apply liquidated damages for the delay in Contract execution on the part of the Contractor.

The interested bidder's authorized signature shall certify bid documents. If the Bid Form on Appendix A is unsigned the bid shall be automatically rejected.

The option to extend the Contract shall be at the sole discretion of the Hospital and determined to be in the best interests of the State.

3.1 Bid Security

All lump sum bids of $25,000 and higher, or lump sum base bids including alternates of $25,000 and higher, that are not accompanied by bid security are non –responsive.

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

3.2 General Conditions

The State of Hawaii INTERIM GENERAL CONDITIONS, dated August 1999, and AMENDMENTS shall be read by the Contractor as they form a part of the Agreement to be entered into between the Contractor and HHSC. The Interim General Conditions are not physically included in these specifications, but are included by reference. Copies of the INTERIM GENERAL CONDITIONS may be obtained from the Division of Public works, Department of Accounting and General Services, State of Hawaii at the following website: http://hawaii.gov/pwd/construction_bids/Members/qc/gen_cond_constr

The General Conditions are hereby amended as follows:

a. The following terms specified in Section 1 are hereby defined:

i) Bidder shall have the same definition as Contractor.

ii) Comptroller shall be the Chief Financial Officer at HHSC or his authorized representative.

iii) Department shall be HHSC or its designee.

iv) Engineer shall be the person so designated by HHSC.

v) State shall be HHSC or its designee.

b. Section 1.20 and 1.25 replace "State of Hawaii" with "State".

c. The last two sentences of the third paragraph of Section 2.1.1.2, in the Interim General Conditions is deleted and is replaced with the following:

" If the notice is faxed, the time of receipt by the CEO's fax machine shall be official. The submittal of intention to bid via fax is acceptable only to this office."

d. Section 2.1.2.1: second sentence is hereby deleted in its entirety.

e. Last sentence of paragraph 2.1.2.3 of the Interim General Conditions is amended to read as follows:

"Failure to submit either the required tax clearance certificate or Bid Form will be sufficient grounds for HHSC to refuse to receive or consider the prospective bidder's proposal."

f. The addresses specified in Section 2.6.1 of the Interim General Conditions shall be changed to Leahi Hospital 3675 Kilauea Avenue Honolulu Hawaii 96816.

g. Sections 2.10 through 2.11 are hereby deleted in their entirety.

h. Paragraph 3.8.1 of the Interim General Conditions is amended to read as follows:

“The contract shall be signed and forwarded to HHSC (Contracts Office), by the successful bidder all within three (3) days of receipt of the contract. The performance and payment bonds shall be received by HHSC (Contracts Office) within ten (10) calendar days after the bidders is awarded the contract. No proposal or contract shall be considered binding until the contract has been fully and properly executed by all parties thereto.”

i. In paragraph 3.9.2 of the Interim General Conditions, “ten (10) calendar days after such award or within such further time as the Comptroller may allow” shall be replaced with, “the time allowed in the previous section.”

j. Section 4.1: the words “accepted bid” is deleted from the first sentence.

k. Section 4.9.3: the words “submission of bids” is replaced with the words “execution of this contract”.

l. Section 5.5: the last sentence is hereby deleted in its entirety and replaced with the following:

"In the event of conflict among the Contract Documents, the order of precedence is listed in paragraph 5 of this contract and is further detailed in the following subparagraphs:"

m. Sections 5.5.1 and 5.5.2 are hereby deleted in their entirety.

n. Section 5.8.1: "twenty-four (24)" is hereby changed to "three (3)".

o. Section 5.11 is hereby deleted in its entirety.

p. Section 5.12.4 is hereby deleted in its entirety.

q. Section 7.3.7.4, subparagraphs a and b: Replace "If the project falls within the State University System, The University of Hawaii" with "HHSC."

r. Section 7.4.1 is hereby deleted in its entirety and replaced with the following:

"The Contractor shall prepare, process, obtain, and pay for all permits necessary for the proper execution of the work."

s. Section 7.7.2 is amended to read as follows: "The wage rate schedule is attached to this contract."

t. Sections 7.14.2, 7.19.2, and 7.19.4: delete "Departments and Agencies and their" and insert "directors" between "officers" and "representatives".

u. Section 7.14.4 is hereby added and reads as follows:

"Contractor warrants that it and none of its employees, agents or subcontractors performing services or providing goods pursuant to this Agreement are excluded from participation in federal health care programs, as defined in the Social Security Act (section 1128 and 1128A), and other federal laws and regulations relating to health care. HHSC reserves the right to verify that the above warranty is true and to immediately cancel this Agreement in the event it is violated."

v. Section 7.15 delete "and its Departments and Agencies".

w. Section 7.21.8.6 — Delete the word "bad" before the words "weather day conditions."

x. Section 7.35.1: the last word "earlier" is changed to "later".

3. CORPORATE COMPLIANCE PROGRAM. A description of the Corporate Compliance Program of HHSC is posted on the HHSC Internet (www.hhsc.org). The CONTRACTOR, by signing this contract, acknowledges that it has read said description, and that the CONTRACTOR knows of the fact and substance of the Corporate Compliance Program, which governs operations at all facilities of the HHSC. The CONTRACTOR understands and agrees that employees, agents, and contractors performing any services at any of the HHSC facilities shall be fully subject to such Corporate Compliance Program, as may be amended from time to time, as well as all federal program requirements and applicable policies and procedures of HHSC and its facilities. The Corporate Compliance Program requires periodic training, including an orientation program, of all people who provide financial, business office, personnel, coding, medical records information systems and clinical services in the facility. The CONTRACTOR agrees to cause its employees, agents, and contractors who provide any services at any financial, business office, personnel, coding, medical records information systems and clinical services at any of the HHSC facilities to participate in the orientation and training programs.

4. CONFIDENTIAL INFORMATION. It is acknowledged and agreed that all of the trade secrets, business plans, marketing plans, know how, data, contracts, documents, scientific and medical concepts, billing records, personnel records, medical records of any kind, and referral resources for existing or future services, products, operations, management, business, pricing, financial status, valuations, business plans, goals, strategies, objectives and agreements of HHSC and any of its facilities, affiliates or subsidiaries, and all patient information, in any form, whether written, verbal, or electronic, are confidential ("Confidential Information"); provided, however, that Confidential Information, with the exception of patient information, shall not include information that is in the public domain.

5. CONTRACTOR EXCLUSION FROM FEDERAL PROGRAMS. CONTRACTOR warrants that it and none of its employees, agents or subcontractors performing services or providing goods pursuant to this Agreement are excluded from participation in federal health care programs, as defined in the Social Security Act (section 1128 and 1128A), and other federal laws and regulations relating to health care. HHSC reserves the right to verify that the above warranty is true and to immediately cancel this Agreement in the event it is violated.

6. CAMPAIGN CONTRIBUTIONS BY STATE AND COUNTY CONTRACTORS.
CONTRACTORs are hereby notified of the applicability of Section 11-205.5, HRS, which states that campaign contributions are prohibited from specified State or county government contractors during the term of the contract if the contractors are paid with funds appropriated by a legislative body. For more information, please consult with the Campaign Spending Commission, or visit its website, www.hawaii.govicampaign.

(END OF SECTION)

SECTION 4
BID EVALUATION AND AWARD

4.0 Bid Evaluation

Each bid offer will be reviewed for exact conformity of the requirements in the IFB, known as a responsible bid. Information provided in/with the bid offer will be used to determine whether the interested bidder has the technical and financial capacity to deliver the goods or services, known as a responsive bid.

4.1 Method of Award

A. The contract will be awarded to the lowest responsive and responsible Bidder whose bid (including any alternates which may be selected) meets the requirements and criteria set forth in the solicitation documents.

B. In the event the total lump sum bid of all bidders exceeds the project control budget, HHSC reserves the right to make an award to the apparent Low Bidder if additional funds are available or by reducing the scope of work through negotiation.

4.2 Contract Execution

Upon receipt of the Contract document, the CONTRACTOR shall have ten (10) business days to execute and return the Contract to the Issuing Officer. Explicit execution instructions will accompany the Contract. A copy of the fully executed Contract will be provided the CONTRACTOR within seven (7) business days of Contract execution.

Award of Contract may be withdrawn if the CONTRACTOR is unable to meet Contract execution requirements.

(END OF SECTION)

APPENDIX A

SAMPLE
BID TRANSMITTAL COVER LETTER

Dear Mr. Kawai,

(Name of Business) proposes to provide any and all goods and services as set forth in the "Invitation for Bid" for Leahi Hospital Replace First Floor Windows in Young Building IFB No. 23L-0433, for which fees/costs have been set. The fees/costs offered herein shall apply from XXX, 2024 to XXX, 2025.

It is understood and agreed that (Name of Business) have read HHSC's Scope of Services described in the IFB and that this bid is made in accordance with the provisions of such Scope of Services. By signing this bid, (Name of Business) guarantee and certify that all items included in this bid meet or exceed any and all such Scope of Services. (Name of Business) agree, if awarded the contract, to provide the goods and services set forth in the IFB; and comply with all terms and conditions indicated in the IFB; and at the fees/costs set forth in this bid. The following individual(s) may be contacted regarding this bid:_____

_____

Other information:

Address:		Federal Tax ID #:	
Phone No.:		Hawaii GET ID #:	
E-mail address:			

(Name of Business) is a: ☐ Sole Proprietor ☐ Partnership ☐ Corporation ☐ Joint Venture Other (Specify)_____

State of Incorporation is: (Specify)_____

Year of Business started: _____

The exact legal name of the business under which the contract, if awarded, shall be executed is:_____

_____

(Authorized Bidder's Signature, Printed Name/Title; Corporate Seal or Notarized)

APPENDIX B

IFB No. 23L-0433
Leahi Hospital Replace First Floor Windows in Young Building

BID FORM

After carefully examining the bid documents, drawings and specifications identified above, the Bidder proposes to furnish at its own expense all necessary labor, materials, tools and equipment to complete the work according to the true intent and meaning of the drawings and specifications, all for the Lump Sum Base Bid of:

_____DOLLARS ($_____)

(Schedule of Values must be submitted with the Bid).

Respectfully Submitted:

_____ _____
Signature / Printed Name Date

_____
Title

OTHER CONDITIONS

1. Bidder agrees to liquidated damages as specified.

2. By submitting this proposal, the Bidder is declaring that its firm has not been assisted or represented on this matter by an individual who has, in a County capacity, been involved in the subject matter of this contract in the past two years;

3. Anti-collusion certification. In accordance with HAR 3-122-192, by submitting this proposal, the Bidder is declaring that the price submitted is independently arrived at without collusion.

4. Certification for Safety and Health Program for bids in excess of $100,000. In accordance with HRS 396-18, the Bidder certifies that its organization will have a written safety and health plan for this project that will be available and implemented by the Notice to Proceed date of this project. Details of the requirements of this plan may be obtained from the Department of Labor and Industrial Relations, Occupational Safety and Health Division (HIOSH); and

5. Upon the acceptance of the proposal by the HHSC, the Bidder must enter into and execute a contract for the same and furnish a Performance and Payment bond, as required by law.

RECEIPT OF ADDENDA
Receipt of the following addenda issued by HHSC is acknowledged by the date (s) of receipt indicated below:

Addendum No. 1 _____ Addendum No. 3 _____
Date
Addendum No. 2 _____ Addendum No. 4_____

It is understood that failure to receive any such addendum shall not relieve the Bidder from any obligation under this Proposal as submitted.

ALL JOINT CONTRACTORS OR SUBCONTRACTORS TO BE ENGAGED ON THIS PROJECT

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

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

The Bidder must be sure that it has and that the subcontractor(s) listed in the proposal have all the necessary specialty licenses needed to perform the work for this project. The Bidder shall be solely responsible for assuring that all the specialty licenses required to perform the work are covered in its bid.

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

Complete Firm Name Joint Contractor or Subcontractor for Lump Sum Base Bid	License Number	Nature and Scope of Work to be Performed

Enclosed herewith:

1. Surety Bond (*1))
2. Legal Tender (*2))
3. Cashier's Check (*3))
4. Certified Check (*3))

(Cross Out Those Not Applicable)

in the amount of:

_____ DOLLARS ($_____).

as required by law.

Respectfully submitted,

_____
Name of Company, Joint Venture or Partnership

_____
License

By _____
Signature (*4)

Title _____

Date: _____

(CORPORATE SEAL)
(*5)

NOTES:

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

2. Legal tender; or

3. A cashier's or a certified check accepted by, and payable on demand to the HHSC by a bank, a savings institution, or credit union insured by the Federal Deposit Insurance Corporation.

   a. These instruments may be utilized only to a maximum of $100,000.

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

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

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

END OF BID FORM

APPENDIX C

S P E C I F I C A T I O N S

FOR

FURNISHING LABOR AND MATERIALS

REQUIRED FOR

LEAHI HOSPITAL,

REPLACE FIRST FLOOR WINDOWS IN

YOUNG BUILDING

3675 KILAUEA AVE.
HONOLULU, OAHU, HAWAII

TMK: 3-2-031: 001

FOR THE

HAWAII HEALTH SYSTEMS CORPORATION (HHSC)

STATE OF HAWAII

ARCHITECT: PACIFIC ARCHITECTS, INC.
ENVIRONMENTAL: ENVIROQUEST, INC.

MARCH 2024

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SECTION 00210 - INSTRUCTIONS TO BIDDERS

Part 1 - GENERAL

1.01 GENERAL

A. Only Bidders with the required contractor's license(s) are eligible to submit a Bid.

B. Bidders (Contractors) shall be incorporated or organized under the laws of the State or be registered to do business in the State as a separate branch or division that is capable of fully performing under the contract. The following definitions are used in the solicitation documents.

1. Hawaii Business §3-1222-112 HAR: A bidder who is registered and incorporated or organized under the laws of the State is a "Hawaii Business" and eligible for an award.

2. Compliant non-Hawaii Business §3-122-112 HAR: A bidder not incorporated or organized under the laws of the State, but is registered to do business in the State and complies with or is exempt from the requirements of §3-122-112 HAR, is a "Compliant Non-Hawaii Business" and eligible for an award.

3. Non-compliant Bidder: If a bidder is a non-Hawaii business and is not registered with the DCCA Business Registration Division (BREG) or cannot comply with §3-122-112 HAR, then the bidder in non-compliant and is ineligible for an award.

C. Prospective Bidders shall submit their "Intention to Bid".

D. Bidders shall submit the "Sealed Bid Form", bid bond (if required), tax clearances, Hawaii business certificates, and any other documents required by the bidding documents.

E. The GENERAL CONDITIONS set forth additional terms and conditions for the bid and award process. The GENERAL CONDITIONS will be part of the contract documents by which HHSC and the bidder (prospective contractor) will be bound. Bidders are directed to the GENERAL CONDITIONS for contract and statutory requirements and for Bidding and Execution of the Contract Requirements. Bidders are also directed to "Section 00700 – General Conditions" and "Section 00800 – Special Conditions" of these specifications for definitions and modifications to the GENERAL CONDITIONS.

1.02 OFFEROR(S) or BIDDER(S)

A. The terms "Offeror" and "Bidder" are synonymous when used in this Section 00210 and other solicitation documents.

1.03 ADDENDA, CLARIFICATIONS

A. Addenda: The HHSC may periodically issue an addendum that may increase or decrease the scope of work or contract time, provisions or conditions. The HHSC will make the addenda available to the bidders at the Contracts Manager's office. Bidders are responsible for the information contained in the addenda or bid clarification whether or not the Bidder receives the addenda or clarification.

B. Bidders discovering an ambiguity, inconsistency or error when examining the bidding documents or the site and local conditions or bidders with questions or clarification requests shall send their written requests (email or fax notification are acceptable) to the Project Architect. Bidders shall comply with the following procedures:

1. Identify each request with the Project Name.

2. Indicate the appropriate section number, paragraph, drawing and detail number, schedule or other identifier.

3. The request should be brief, concise, but complete enough to properly evaluate and determine the merits or non-merits of the question or request.

C. Bidders shall make any requests for clarifications no later than fourteen (14) calendar days prior to the submission date for sealed bids. Refer to the "Notice to Bidders" for submission date.

D. HHSC will respond to important requests or clarifications by way of addenda. HHSC may not address or respond to all bidders inquiries, if the HHSC determines the request is unimportant or not required to disseminate to all Bidders.

1.04 SEALED BID FORM (BID FORM)

A. Bidder shall fill out the "Sealed Bid Form" completely. Write in ink or type. Besides the following paragraphs with instructions, there are supplemental Bidder's Instructions within the text of the "Sealed Bid Form" and bidders shall comply with the instructions. Do not alter the "Sealed Bid Form", and maintain the form intact.

B. HAWAII PRODUCT PREFERENCE: If applicable to this project, bidders proposing to use Hawaii products shall complete the "Hawaii Product Schedule" by entering the product total cost (not unit price) and identifying the respective class. Bidders may provide a cost for any one or as many products listed in the schedule. Any product that is left without a respective cost and class designation cannot be used in the preference evaluation.

1. If there are several classes offered for a product, the bidder shall choose and circle the appropriate class, otherwise, preference will be given based on the class with the lower percentage.

2. If the Hawaii product preference is used to determine the contract award, the bidder must use the designated Hawaii products in the work, otherwise the bidder (contractor) may be in default of the contract.

C. RECYCLED PRODUCT PREFERENCE is not applicable to this project.

D. OTHER CONDITIONS: Bidder acknowledges and agrees to the provisions and certifications stated in this article.

E. RECEIPT OF ADDENDA: Bidder shall fill in the appropriate dates any addenda were received.

G. LISTING JOINT CONTRACTORS OR SUBCONTRACTORS:

1. Bidder shall complete the "Joint Contractors or Subcontractors List." It is the sole responsibility of the bidder to review the requirements of this project and determine the appropriate specialty contractor's licenses that are required to complete the project. Failure of the bidder to provide the correct names, license numbers, specialty class number, classification description and to indicate that the specialty contractor is required for this project, may cause the bid to be rejected.

2. Bidder agrees the completed listing of joint contractors or subcontractors is required for the project and that the bidder, together with the listed joint contractors and subcontractors, have all the specialty contractor's licenses to complete the work.

3. Based on the Hawaii Supreme Court's January 28, 2002 decision in Okada Trucking Co., Ltd. v. Board of Water Supply, et al., 97 Hawaii 450 (2002), the bidder as a general contractor ('A' or 'B' license) is prohibited from undertaking any work solely or as part of a larger project, which would require the bidder ('A' or 'B' general contractor) to act as a specialty ('C' license) contractor in any area in which the bidder ('A' or 'B' general contractor) has no specialty contractor's license. Although the 'A' and 'B' contractor may still bid on and act as the "Prime Contractor" on an 'A' or 'B' project (*See, HRS §444-7 for the definitions of an "A" and "B" project*), respectively, the 'A' and 'B' contractor may only perform work in the areas in which they have the appropriate contractor's license. The bidder ('A' or 'B' general contractor) must have the appropriate 'C' specialty contractor's licenses either obtained on its own, or obtained automatically under HAR §16-77-32.

4. General Engineering 'A' Contractors automatically have these 'C' specialty contractor's licenses: C-3, C-9, C-10, C-17, C-24, C-31a, C-32, C-35, C-37a, C-37b, C-38, C-43, C-56, C-57a, C-57b, and C-61.

5. General Building 'B' Contractors automatically have these 'C' specialty contractor's licenses: C-5, C-6, C-10, C-12, C-24, C-25, C-31a, C-42a, and C-42b.

6. The table that lists the specialty contractor' classifications in the bid form is from the Department of Commerce and Consumer Affairs' (DCCA) website www.state.hi.us/dcca/har/index.html. Bidders shall provide the appropriate classifications numbers and descriptions for any specialty contractors that are not included in the bid form and bidders are directed to the DCCA web site for the latest updated list.

7. Instructions to complete the Joint Contractors or Subcontractors List:

   a. Determine the specialty contractor classification(s) required for this project and provide the complete firm name and license number of the joint contractor or subcontractor in the respective columns. If the bidder is a general contractor and providing the work of the required specialty contractor classification, fill in the bidder's (general contractor's) license number and name.

   b. List only one joint contractor or subcontractor per required specialty contractor's classification.

   c. For projects with alternate(s), fill out the respective "Joint Contractors or Subcontractors List for the Alternate(s)." Bidder shall determine the specialty contractor's classification and description required for the respective alternate. Bidders shall fill in the complete class number, class description, firm name and license number of the respective joint contractor or subcontractor. The bidder shall not include any joint contractor or subcontractor previously listed for the base bid.

G. COST AND TIME: Bidder shall completely fill out the article and enter the cost for the Project Bid Price, and Alternates when provided. Bidder shall tabulate the Project Bid Price, and Alternates when provided, and the Bidders shall then enter the Total Lump Sum Bid Price. **BE SURE TO ENTER THE TOTAL LUMP SUM BID PRICE IN WORDS AND NUMERALS**. Refer to Bidder's Instructions located within the article.

   1. If provided, bidder shall fill in total costs for each alternate.

2. The bidder is directed to the construction time information paragraph “B” for the list of contract times and dates which may include: contract duration, project start date, jobsite start date, jobsite completion, contract completion date and construction time for alternates. Bidder shall refer to “Section 01100” of these specifications for additional construction time information, as applicable.

H. SIGNATORY PAGE: Bidder shall completely fill out article (page). Bidder shall indicate if it is a “Hawaii Business” or a “Compliant Non-Hawaii Business.” Also, bidder shall refer to Bidder’s Instructions located within the article.

1.05 EVALUATION CRITERIA

A. EVALUTATING BIDS: The lowest responsive, responsible bid is determined by the following procedures:

1. Chapter 103D, HRS, which provides for the preferences, shall apply.

2. The total lump sum bid price is adjusted to reflect the applicable preferences.

a. For projects with alternates, the total lump sum base bid price and alternates will be adjusted to reflect the applicable preferences.

3. Project control budget is established prior to the submission of bids.

1.06 METHOD OF AWARD

A. The contract will be awarded to the lowest responsive and responsible Bidder whose bid (including any alternates which may be selected) meets the requirements and criteria set forth in the solicitation documents.

B. In the event the total lump sum bid of all bidders exceeds the project control budget, HHSC reserves the right to make an award to the apparent Low Bidder if additional funds are available or by reducing the scope of work through negotiation.

1.07 OTHER CONDITIONS FOR AWARD

A. The Chief Procurement Officer may reject any or all bids and waive any defects if the Chief Procurement Officer believes the rejection or waiver is in the best interest of HHSC.

B. The Chief Procurement Officer may hold all bids up to 60 calendar days from the date bids were opened. Unless otherwise required by law, bids

may not be withdrawn without penalty.

C. The award of the contract is conditioned upon funds made available for the project (or projects if applicable).

1.08 COMPLIANCE WITH §3-122-112 HAR:

A. As a condition for award of the contract and as proof of compliance with the requirements of 103D-310(c) HRS, the bidder shall meet the "Hawaii Business" or "Compliant non-Hawaii Business" requirements and shall provide the following documents:

1. Department of Taxation (DOTAX) and the IRS tax clearance certificates.

2. Department of Labor (DLIR) certificate of compliance.

3. Department of Commerce and Consumer Affairs (DCCA), Business Registration Division (BREG) certificate of good standing.

a. A Hawaii business that is a sole proprietorship is not required to register with the BREG and therefore not required to submit the DCCA, BREG "Certificate of Good Standing."

B. The apparent three low bidders shall furnish the required documents to HHSC within seven calendar days from the bid opening date. If a valid certificate is not submitted on a timely basis for award of a contract, a bidder otherwise responsive and responsible may not receive the award. Bidder is responsible to apply for and submit the documents by the required deadlines.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.01 REQUIRED DOCUMENTATION FOR HAWAII BUSINESS OR COMPLIANT NON-HAWAII BUSINESS (§3-122-112 HAR)

A. TAX CLEARANCE REQUIREMENTS (HRS Chapter 237): Bidder shall obtain a tax clearance certificate from the Hawaii State Department of Taxation (DOTAX) and the Internal Revenue Service (IRS). The certificate is ~~are~~ valid for six months from the most recently approved stamp date on the certificate; the certificate must be valid on the date received by HHSC.

1. DOTAX *TAX CLEARANCE APPLICATION* Form A-6 (Rev 2003) is available at DOTAX and IRS (State of Hawaii) offices or DOTAX website, and by mail or fax.

a. DOTAX website: http://www.state.hi.us/tax/alphalist.html#a

b. DOTAX forms by fax/mail: (808) 587-7572 or 1-800-222-7572

2. Mail, fax or submit in person completed tax clearance application forms to the Department of Taxation, Taxpayer Services Branch or to the address listed on the application. Facsimile numbers are:

a. DOTAX: (808) 587-1488

b. IRS: (808) 539-1573

3. DOTAX will return the form to the bidder. The bidder is reminded that it is responsible to submit the applications for the tax clearance directly to DOTAX or IRS and not to HHSC.

B. DLIR CERTIFICATE of COMPLIANCE (HRS Chapter 383 - Unemployment Insurance, Chapter 386 - Workers' Compensation, Chapter 392 - Temporary Disability Insurance, and 393 – Prepaid Health Care): Bidder shall obtain a certificate of compliance from the Hawaii State Department of Labor and Industrial Relations (DLIR). The certificate is valid for six months from the date of issue; certificates must be valid on the date received by HHSC.

1. DLIR *APPLICATION FOR CERTIFICATE OF COMPLIANCE WITH SECTION 3-122-112 HAR*, Form LIR#27 is available at DLIR website or at the neighbor island DLIR District Office.

a. DLIR website: http://www.dlir.state.hi.us/LIR#27

2. Mail, fax or submit in person completed application form to the Department of Labor and Industrial Relations, Administrative Services Office at the address listed on the application.

3. DLIR will return the form to the bidder. The bidder is reminded that it is responsible to submit the application for the certificate directly to DLIR and not to HHSC.

C. DCCA CERTIFICATE OF GOOD STANDING: Bidder shall obtain a certificate of good standing issued by the Department of Commerce and Consumer Affairs (DCCA), Business Registration Division (BREG). The certificate of good standing is valid for six months from the date of issue; certificates must be valid on the date received by HHSC.

1. DCCA *CERTIFICATE OF GOOD STANDING* is available from the business registrations website or by telephone. Bidders are advised there are costs associated with registering and obtaining

the certificate.

a. DCCA form website: http//www.BusinessRegistrations.com

b. DCCA telephone: (808) 586-2727, M - F 7:45 to 4:30 HST

2. Submit the application per DCCA's requirements.

3. DCCA will return the form to the bidder. The bidder is reminded that it is responsible to submit the application for the certificate directly to DCCA and not to HHSC.

END INSTRUCTION TO BIDDERS

SECTION 00800 - SPECIAL PROVISIONS

PART 1 - GENERAL

1.01 SUBSTITUTION REQUESTS

A. Written substitution requests must be submitted with your Invitation for Bid (IFB) in accordance with IFG Section 3. All substitutions will be reviewed and approved in accordance with Section 6.3 Substitution of Materials and Equipment.

B. Substitution requests by FAX are not acceptable.

1.02 PROJECT CONTACT PERSON

A. HHSC Representative – For access to the site.

NAME:	Mr. Ron Kurasaki
POSITION OR TITLE:	Project Manager
TELEPHONE NUMBER:	(808) 497-9350

B. Project Coordinator - For questions and clarifications during bidding and Requests for Substitutions.

NAME:	Mr. Maurice Tanaka
POSITION OR TITLE:	Project Coordinator
TELEPHONE NUMBER:	(808) 949-1601
Email:	mtanakai@pacarchitects.com

C. Procurement Agency – For questions regarding proposal and contract requirements.

NAME:	Mr. Scott Kawai
POSITION OR TITLE:	Contracts Manager
TELEPHONE NUMBER:	(808) 832-3025
Email:	skawai@hhsc.org

1.03 OFFEROR'S RESPONSIBILITY FOR EXAMINING PLANS, SPECIFICATIONS AND SITE OF WORK

A. Offerors herewith refers to sub-contractors, suppliers, manufacturer's representatives as well as contractors.

1.04 LIQUIDATED DAMAGES

A. The time of completion of the Work shall be 250 consecutive calendar days from the official commencement date of the Notice to Proceed (NTP).

B. In accordance with the General Conditions, upon failure to complete Work or any portion of the Work within the time or times fixed in the contract or extension thereof, the Contractor shall pay liquidated damages to the Department in the amount of $500.00 per calendar day of delay.

C. In accordance with the General Conditions, PROJECT ACCEPTANCE DATE, for failure to correct punch list deficiencies, within the time or times fixed in the contract or extension thereof, the Contractor shall pay liquidated damages to the HHSC, in the amount equal to ten percent (10%) of the liquidated damages per calendar day of delay.

D. In accordance with the General Conditions FINAL SETTLEMENT OF THE CONTRACT, for failure to submit closing documents within the time or times fixed in the contract or extension thereof, it is agreed that the Bidder shall pay liquidated damages to HHSC in the amount equal to five percent (5%) of the liquidated damages per calendar day of delay.

1.05 SPECIALTY CONTRACTOR'S LICENSE

A. Contractor shall be solely responsible to assure that all the specialty licenses required to perform the Work are covered by the Contractor or its subcontractor(s).

1.06 WORKING HOURS

A. The regular working hours for this project is from 7:30 AM to 3:30 PM Monday through Friday, excluding State Holidays, unless otherwise noted or restricted under "Section 01100". The Working Hours provisions of specification "Section 01100" shall govern over this article 1.06.

B. The Contractor may be given approval to work beyond the regular hours including Saturdays, Sundays, State Holidays, night work, or after hours under the provisions of the GENERAL CONDITIONS, "Overtime And Night Work Section" and under specification "Section 01100".

1.06 SPECIAL PROCEDURES DURING BIDDING

A. Bid documents will be available from the Contracts Manager's office, at Maluhia, 1027 Hala Drive, Honolulu, HI, 96817.

B. All bids shall be submitted to the Contracts Manager.

C. All questions regarding the plans and specifications shall be submitted, in writing, to the Architect. The Architect will review the questions and issue any responses via Addendum. Only information received by Addendum shall be binding.

E. All questions regarding the proposal or contractual requirements shall be submitted, in writing to the Contracts Manager. The Contracts Manager will review the questions and issue any responses via Addendum. Only information received by Addendum shall be binding.

F. All requests for substitution of materials shall be submitted in writing to the Architect. Substitutions shall be of products and materials of equal or better quality and performance of the specified products. The Architect will review the substitution and if acceptable, will issue acceptance by

Addendum. Only products pre-approved and accepted by Addendum shall be considered for use on this project.

F. Any visitation to the site to examine the scope of work shall be requested through the HHSC Representative. Disruption of facility operations shall not be permitted.

1.07 PROCEDURES DURING CONSTRUCTION

A. Upon issuance of the Notice to Proceed, the Contractor shall submit a work schedule for review and discussion. The work schedule shall be up-dated on a weekly or bi-weekly basis as directed by the Architect.

B. On a weekly or bi-weekly basis, the Contractor shall conduct a progress meeting with the Hospital and Architect. The meeting will discuss the progress of the construction, discussion of problems, and review of outstanding issues. The Contractor shall conduct the meeting and prepare the meeting notes and minutes and distribute to all parties.

C. During the construction, submittals and RFIs shall be submitted to the Architect for review and action. To expedite the review, the Contractor may make submittals via email.

D. Periodic requests for payment shall be submitted to the Architect for review and confirmation. Approved requests for payment will be forwarded to the Contracts Officer for processing of payment.

E. Upon substantial completion of the project, the Contractor shall submit in writing to the Architect a request for a pre-final inspection. The Contractor shall have completed their own inspection and completed all noted discrepancies. Include with the request for the pre-final inspection a list of all outstanding work not completed or corrected.

F. Upon conducting a pre-final inspection, the Architect shall prepare a punchlist of noted discrepancies for the Contractor's remedial action. A final inspection will be performed upon completion of all punchlist items.

1.08 PROJECT RESTRICTIONS

A. The Contractor is informed that the facility and surrounding facilities will be fully occupied and operational. All work shall be coordinated with the HHSC representative.

B. Staging and storage of materials on-site is limited and shall be coordinated with the HHSC representative. Contractor may be required to store materials off-site at his own expense.

C. Parking on-site is limited and may be restricted to only active delivery of materials and equipment. Coordinate with the HHSC representative. If on-site parking is not available, the Contractor shall park off-site.

D. The above restrictions shall be considered in the work of this project and shall be included in the Contractor's cost. No additional compensation shall be made for not considering these restrictions.

PART 2 - MATERIALS (Not Used)

PART 3 - EXECUTION

3.01 FINAL PAYMENT REQUIREMENTS

A. In addition to the requirements in the GENERAL CONDITIONS "Final Payment" section, the contractor shall submit"

1. Tax clearance certificate from DOTAX and IRS, current within two months of the issuance date; and

2. An originally signed Certificate of Compliance for Final Payment (SPO Form - 22, modified), affirming that the contractor remained in compliance with all laws as required by (§3-122-112 HAR). A contractor making a false affirmation shall be suspended and may be debarred pursuant to section 103D-702 HRS.

END OF SECTION

SECTION 01019 - GENERAL PROJECT REQUIREMENTS

PART 1 - GENERAL

1.01 SUMMARY OF WORK

A. Perform operations and furnish equipment, tools, materials, related items and labor necessary to execute, complete and deliver the Work as required by the Contract Documents.

1.02 DIVISION OF WORK

A. The Division and Sections into which these specifications are divided shall not be considered an accurate or complete segregation of work by trades. This also applies to work specified within each section

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

C. Specifications and Drawings are prepared in abbreviated form and include incomplete sentences. Omission of words or phrases such as “the Contractor shall”, “as shown on the drawings”, “a”, “an”, and “the” are intentional. Omitted words and phrases shall be provided by inference to form complete sentences

D. Specifying of interface and coordination in the various Specification Sections is provided for information and convenience only. Such requirements in the various Sections shall complement the requirements of this Section.

1.03 NOTIFICATION

A. Contact the Architect and HHSC Representative at least five (5) working days prior to starting any onsite work.

1.04 SAFETY REQUIREMENTS

A. The Hawaii Occupational Safety and Health Law, Chapter 396, Hawaii Revised Statutes, effective May 16, 1972, as amended, is applicable and made a part of the Contract. Carefully read and strictly comply with its requirements.

B. Protect the facility personnel, students, and the public whenever power driven equipment is used. Ensure adequate safety precautions are used when operating any power driven equipment.

1.05 PERFORMANCE AND COORDINATION

A. Contractor shall be in charge of the Work and the Project Contract Limits, as well as the directing and scheduling of all work. Contractor shall include general supervision, management and control of the Work of this project, and in addition to other areas more specifically noted throughout the Specifications. Final responsibility for performance, interface, and completion of the Work and the Project shall be the Contractor's.

B. Jobsite Administration shall be the responsibility of the Contractor. Provide a competent superintendent on the job and provide an adequate staff to execute the Work. In addition, all workers shall dress neatly and conduct themselves properly at all times. Loud abusive behavior, sexual harassment and misconduct will not be tolerated. Workers found in violation of the above shall be removed from the job site as directed by the HHSC Technical Representative.

C. The HHSC and/or Hospital will hold the Contractor liable for all the acts of Subcontractors and shall deal only with the Prime Contractor in matters pertaining to other trades employed on the job.

D. Coordination: Provide project interface and coordination to properly and accurately bring together the several parts, components, systems, and assemblies as required to complete the Work.

1. Provide interface and coordination of all trades, crafts and subcontracts. Ensure and make correct and accurate connections of abutting, adjoining, overlapping, and related work. Provide anchors, fasteners, accessories, appurtenances, and incidental items needed to complete the Work, fully, and correctly in accordance with the Contract Documents.

2. Provide additional structural components, bracing, blocking, miscellaneous metal, backing, anchors, fasteners, and installation accessories required to properly anchor, fasten, or attach material, equipment, hardware, systems and assemblies to the structure.

3. Provide caulking, sealing, and flashing as required to waterproof the building complete and as required to insulate the building thermally and acoustically. Include sealing, flashing, and related work as required to prevent moisture intrusion, air infiltration, and light leakage.

4. Materials, equipment, component parts, accessories, incidental items, connections, and services required to complete the Work which is not provided by subcontractors shall be provided by the Contractor.

1.06 COOPERATION WITH OTHER CONTRACTORS

A. The Hospital reserves the right at any time to contract for or otherwise perform other or additional work within the Project Contract Limits. The

Contractor of this project shall to the extent ordered by the HHSC Representative, conduct its work so as not to interfere with or hinder the progress or completion of the work performed by the Hospital or other contractors.

1.07 SUBMITTALS

A. Furnish required submittals specified in this Section and in the Technical Sections. Submittals include one or more of the following: shop drawings, color samples, material samples, technical data, material safety data information, schedules of materials, schedules of operations, guarantees, certifications, operating and maintenance manuals, and field posted as-built drawings.

B. Record Drawings: Field Posted As-Built Drawings, the intent of which is to record the actual in-place construction so that any future renovations or tie-ins can be anticipated accurately, shall be prepared and submitted by the Contractor. To accomplish this, the following procedure shall be followed by the Contractor:

1. A full-size set of field posted as-built drawings shall be maintained at the job site. All deviations from alignments, elevations and dimensions which are stipulated on the drawings and authorizations given by the HHSC Technical Representative to deviate from the drawings shall be clearly and accurately recorded by the Contractor on this set of record drawings.

2. Changes shall be recorded immediately after they are constructed in place to assure they are not forgotten. Record the changes in red pencil and where applicable, refer to the authorizing document or Change Order. The field posted as-built drawings shall be made available to the Architect and HHSC Technical Representative at any time so that its clarity and accuracy can be monitored.

3. The words “FIELD POSTED AS-BUILT” shall be labeled on the title sheet and certified by the Contractor as to accuracy and completeness as shown below:

FIELD POSTED AS-BUILT

Certified By: _____Date:_____
Contractor (Include name and company)

4. The words “FIELD POSTED AS-BUILT” shall be labeled on all sheets in the margin space to the right of the sheet number written from the bottom upward.

5. The Index to Drawings shall be revised with the label “FIELD POSTED AS-BUILT” for each sheet. The index shall conclude

with the following note: “A COMPLETE SET CONTAINS ____ SHEETS” with the total number of sheets comprising the set to be placed in the blank.

6. Any “FIELD POSTED AS-BUILT” drawing which the Architect determines does not accurately record the deviation may be corrected by the Architect and the Contractor shall be charged for the services.

7. Submit the set of “FIELD POSTED AS-BUILT” drawings to the Architect and notify the HHSC Technical Representative no later than five (5) calendar days prior to the date of final inspection.

8. “AS-BUILT” drawings will be prepared by the design consultant using the “FIELD POSTED AS-BUILT”. Both sets of drawings will be sent to the Contractor for review and approval. The Contractor shall retain the “FIELD POSTED AS-BUILT” drawings for records, sign the “AS-BUILT” set of drawings, indicating approval, and return the drawings in a timely manner to the Architect and notify the HHSC Representative.

1.08 CONSTRUCTION SCHEDULE:

A. The Construction Schedule completion date will be approved prior to award. The daily activities of the Construction Schedule will be reviewed within fifteen (15) calendar days after the Notice to Proceed or upon earlier written instruction by HHSC.

B. The schedule shall be related to the entire project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the work. If requested by the Architect or HHSC Representative, the Contractor shall participate in a preliminary meeting to discuss the proposed schedule and requirements prior to submission of the schedule.

C. Contractor shall prosecute the work according to the Schedule. The Architect and HHSC Representative shall rely on the reviewed Contractor’s Schedule and regular updates for planning and coordination. The HHSC Representative’s review of the Contractor’s Construction Schedule does not relieve the Contractor of its obligation to complete the work within the allotted contract time. Nor does the review grant, reject or in any other way act on the Contractor’s request for adjustment(s)to complete remaining contract work, or for claims of additional compensation. Such requests shall be processed in accordance with other relevant provisions of the contract.

D. If the Architect issues a Field Order or Change Order or requires Force Account Work that affects the sequence or duration of work activities noted on the construction progress schedule, the Contractor shall promptly update the schedule. This shall be accomplished by adding,

deleting or revising the work activities noted, or changing the logic in the schedule to show the Contractor's plan for incorporating the change into the flow of work. All Change Orders and Time Extension requests that affect the construction schedule shall be evaluated based on their impact on the approved Construction Schedule.

1.09 MEETINGS

A. Contractor shall meet with the hospital's representative, weekly or other interval as determined, to discuss the progress of the Work.

B. For each meeting, Contractor shall take meeting minutes and provide a list stating all items, work or material, which may cause a delay or have an impact on the project's contractual dates. The list shall be inclusive of items requiring action from all responsible parties such as outstanding submittal status, request for information (clarification), force account work, change order, and change proposals. The format of this list shall be at the Contractor's discretion, subject to the Architect's approval. Submit the list to all parties for discussions as a meeting agenda. Contractor shall provide a plan of corrective action for any item, which is delayed or expected to be delayed, where that item impacts the contractual dates.

1.10 PROJECT AND SITE CONDITIONS

A. Project Contract Limits (Contract Zone Limits) shown on the drawings indicate only in general the limits of the work involved. Perform necessary and incidental work, which may fall outside of these demarcation lines. Confine construction activities within the Project Contract Limits and do not spread equipment and materials indiscriminately about the area.

1.11 SANITARY FACILITIES

A. The Contractor shall be allowed to utilize on-site restrooms as directed by the Architect and/or HHSC Representative. The Contractor shall maintain the facility in clean and sanitary condition at all time. Failure to do so, may require the Contractor to provide portable temporary toilet facilities for the contractor's use.

1.12 CONSTRUCTION AIDS

A. Provide construction aids and equipment required by construction personnel and to facilitate execution of the Work including: scaffolds, ladders, ramps, platforms, railings, and other such facilities and equipment.

PART 2 - MATERIALS

2.01 QUALITY

A. Materials, items, equipment and fixtures specified in the various Divisions and Sections shall be new unless otherwise specified.

2.02 STORAGE AND HANDLING

A. Contractor shall supervise jobsite delivery and handling, and assign storage space for materials, items, equipment and fixtures of all trades. Contractor and installer are responsible for delivery, unloading, unpacking, handling, storage, distribution, installation and protection of its materials at the jobsite.

B. Except as otherwise required by these specifications or by the Hospital, determine and comply with manufacturer(s) recommendation(s) on product handling, storage and protection.

C. Deliver products to the jobsite in manufacturer's original containers, with labels intact and legible. Maintain packaged material with seals unbroken and labels intact until time of use. Promptly remove damaged materials and unusable items from the jobsite, and promptly replace with material meeting the specified requirements, at no additional cost to the Hospital.

D. The Architect may reject as non-complying such material and products that do not bear identification satisfactory to the Architect as to manufacturer, grade, quality, and other pertinent information.

PART 3 - EXECUTION

3.01 EXAMINING THE SITE

A. Contractor and Subcontractors are expected to visit the site and make due allowances for difficulties and contingencies to be encountered. Compare contract documents with work in place. Become familiar, with existing conditions, the conditions to be encountered in performing the Work, and the requirements of the drawings and specifications.

B. Verify construction dimensions and elevations indicated on the drawings before any construction begins. Any discrepancy shall be immediately brought to the attention of the Architect, and any change shall be made in accordance with the Architect's instruction. Contractor shall not be entitled to extra payment if it fails to report the discrepancies before proceeding with any work whether within the area affected or not.

E. Obtain all field measurements required for the accurate fabrication and installation of the Work included in this Contract. Exact measurements are the Contractor's responsibility.

F. Furnish or obtain templates, patterns, and setting instructions as required for the installation of all Work. All dimensions shall be verified in the field.

G. The Contractor shall accept the site in the condition which exists at the time access is granted to begin the Work.

1. Verify existing conditions and dimensions shown and other dimensions not indicated but necessary to accomplish the Work.

2. Locate general reference points and take action to prevent their destruction. Lay out work and be responsible for lines, elevations and measurements and the work executed. Exercise precautions to verify figures and conditions shown on drawings before layout of work.

3. Before starting the Work, the Contractor and each Subcontractor, shall verify governing dimensions and shall examine adjoining work on which the Contractor's work is in any way dependent. No additional compensation will be allowed on account of differences between actual measurements and dimensions shown. Submit differences discovered during the verification work to the Architect for interpretations before proceeding with the associated work.

3.03 UTILITY SERVICE

A. Electricity - Make arrangements with the facilities for temporary use of electricity for construction use.

B. Telephone - Make arrangements with the utility companies for temporary telephone service for construction use or utilize cellular phone service.

C. Water - Make arrangements for temporary water use with the facilities.

3.04 ENVIRONMENTAL

A. General Contractor shall oversee that proper environmental conditions are met regarding temperature, humidity, lighting and ventilation.

3.05 PREPARATION AND PROTECTION

A. Protection of Property: Continually maintain adequate protection of the Work from damage and protect all property, including but not limited to buildings, equipment, furniture, grounds, vegetation, material, utility systems located at and adjoining the job site. Repair, replace or pay the expense to repair damages resulting from Contractor's fault or negligence.

B. Before starting work to be applied to previously erected constructions, make a thorough and complete investigation of such recipient surfaces and determine their suitability to receive required additional construction and finishes. Contractor, at its expense, shall make whatever repairs and conditioning required to properly prepare such surfaces. Contractor shall

coordinate the work to provide a suitable surfaces to receive following work.

C. Commencement of work by any trade will be construed as acceptance of existing conditions and surfaces as being satisfactory for application of subsequent work, and full responsibility for finished results and assumption of warranty obligations under the Contract.

D. Protect existing work in a manner to prevent damage including interior work from damage by vandals or the elements. Provide temporary protection. Use curtains, barricades, or other appropriate methods. Take positive measures to prevent breakage of glass and damage to plastic, aluminum and other finishes.

E. Repairs and Replacements: In event of damage, promptly make replacements and repairs to the approval of the Architect and/or HHSC Representative and at no additional cost to the Hospital. Additional time required to secure replacements and to make repairs will not be considered to justify an extension in the Contract Time or completion.

3.06 BARRICADE

A. Erect temporary construction barricade(s) to prevent unauthorized persons from entering the project area and to the extent required by the Architect and/or HHSC Representative.

B. Maintain temporary construction barricade(s) throughout the duration of the Work. During the course of the project, the Architect and/or HHSC Representative may require additional barricades be provided for the safety of the public. Contractor shall erect the additional barricade(s) at its own expense.

3.07 INSTALLATION

A. Materials, items, fixtures required by the various Divisions and Sections of the Specifications shall be installed in accordance with Contract Documents, by workers specially trained and skilled in performance of the particular type of work, to meet guarantee and regulatory agency requirements. Should the drawings or specifications be void of installation requirements, install the materials, items, fixtures in accordance with the manufacturer's current specifications, recommendations, instructions and directions, and/or best construction industry standards.

3.08 CUTTING AND PATCHING

A. General Contractor shall oversee cutting and patching of concrete, masonry, structural members and other materials where indicated on drawings and as job conditions require. Unless noted elsewhere in the Drawings and Specifications, no cutting or patching of existing or new

structural members will be permitted without previously notifying the HHSC Technical Representative.

B. Patching materials and workmanship shall be of equal quality to that indicated on the drawings, specified for new work, and/or to match the construction of item to be patched.

3.09 CLEAN-UP

A. Rubbish and debris resulting from work of the various Divisions and Sections of the specifications shall be collected and disposed of by the Contractor at legal disposal areas away from the project site. Clean up and remove from premises all debris accumulated from operations from time to time and as directed by the Architect and/or HHSC Representative. Permission to provide on-site trash containers shall be granted by the Hospital and shall be placed where directed by the Architect and/or HHSC Representative.

END OF SECTION

SECTION 01100 - SUMMARY

PART 1 - GENERAL

1.01 WORK COVERED BY CONTRACT DOCUMENTS

A. Project Identification: The work shall generally consist of demolition and removal work, reroofing, and miscellaneous repairs as indicated on the drawings and specified herein.

1. Project Location: Leahi Hospital, 3675 Kilauea Ave., Honolulu, Hawaii.

B. Perform operations and furnish equipment, tools, materials, related items and labor necessary to execute, complete and deliver the Work as required by the Contract Documents.

C. The Division and Sections into which these specifications are divided shall not be considered an accurate or complete segregation of work by trades. This also applies to work specified within each section

D. Contractor shall not alter the Drawings and Specification. If an error or discrepancy is found, notify the Architect.

E. Specifying of interface and coordination in the various specification sections is provided for information and convenience only. These requirements in the various sections shall complement the requirements of this Section.

1.02 SPECIFICATION FORMATS AND CONVENTIONS

A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

1. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated and include incomplete sentences. Omission of words or phrases such as “the Contractor shall”, “as shown on the drawings”, “a”, “an”, and “the” are intentional. Omitted words and phrases shall be provided by inference to form complete sentences. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred, as the sense requires. Singular words shall be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates. Where devices, or items, or parts thereof are referred to in the singular, it is intended that such reference shall apply to as many such devices, items or parts as are required to properly complete the Work.

2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.

    a. The words “shall,” “shall be,” or “shall comply with,” depending on the context, are implied where a colon (:) is used within a sentence or phrase.

3. Abbreviations and Acronyms for Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities indicated in Gale Research’s “Encyclopedia of Associations” or in Columbia Books’ “National Trade & Professional Associations of the U.S.”

B. Definitions

1. Directed: Terms such as “directed,” “requested,” “authorized,” “selected,” “approved,” “required,” and “permitted” mean directed by HHSC Representative, requested by HHSC Representative, and similar phrases.

2. Indicated: The term “indicated” refers to graphic representations, notes, or schedules on drawings or to other paragraphs or schedules in specifications and similar requirements in the Contract Documents. Terms such as “shown,” “noted,” “scheduled,” and “specified” are used to help the user locate the reference.

3. Furnish: The term “furnish” means to supply and deliver to project site, ready for unloading, unpacking, assembly, installation, and similar operations.

4. Install: The term “install” describes operations at project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.

5. Provide: The terms “provide” or “provides” means to furnish and install, complete and ready for the intended use.

6. Installer: An installer is the contractor or another entity engaged by contractor as an employee, subcontractor, or sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.

7. Submit: Terms such as “submit,” “furnish,” “provide,” and “prepare” and similar phrases in the context of a submittal, means to submit to the HHSC Representative.

C. Industry Standards

1. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.

2. Publication Dates: Comply with standards in effect as of date of the Contract Documents, unless otherwise indicated.

3. Conflicting Requirements: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to HHSC Representative for a decision before proceeding.

1.04 WORK SEQUENCE

A. The Work will be conducted in a single construction phase.

1.05 USE OF PREMISES AND WORK RESTRICTIONS

A. General: Contractor shall have full use of construction zone for construction operations, including restricted use of project site, during construction period. Contractor’s use of premises is limited only by State’s right to perform work or to retain other contractors on portions of the project site.

B. Contractor’s use of premises is restricted as follows:

1. Construction Times and Schedule:

a. The Contractor shall coordinate the work schedule with the Architect and/or HHSC Representative. An advanced notice of 15 calendar days shall be provided prior to the start of work. Work can be scheduled for weekdays (8:00 AM to 4:30 PM) with advanced notice by the Contractor.

b. The normal operational hours are 8:00 AM to 4:30 PM, Monday through Friday.

c. Unless restricted elsewhere in these specifications, the Contractor may not perform work outside of normal daily

operation hours. Weekend or holiday work may be permitted with the approval of the Architect and/or HHSC Representative. Any weekend or holiday work shall require a 15 calendar day advanced notice.

d. Work performed during normal operating hours shall not impede public traffic or office personnel. An alternate route around the work areas may be required.

2. Site Access and Parking:

a. Arrange all on-site parking and access with the Architect and/or HHSC Representative.

b. Permanent use of the loading area is prohibited.

c. Subject to availability, the Architect and/or HHSC Representative will designate other on-site areas that may be used by the Contractor other than assigned stalls. Restore any property damaged by construction activities at the completion of the project.

3. Sanitation and Utilities:

a. Contractor may use designated restrooms, however, shall maintain the facilities in clean condition at all times. Coordinate with the Architect and/or HHSC Representative.

b. Arrange all temporary electricity and water service with the Architect and/or HHSC Representative. There will be no charges for reasonable electricity and water service.

c. Should interruption of any utility services be required, outages shall be coordinated with the Architect and/or HHSC Representative. A minimum five (5) working days notice shall be provided. Contractor is forewarned that the Architect and/or HHSC Representative may require outages to be done at specific times to minimize disruptions to the facility operations.

4. Other Conditions:

a. Noise and other disrupting activities normally resulting from construction operations are detrimental to the conduct of normal activities in adjacent locations surrounding the project area. Accordingly, exercise every precaution to keep noise levels to a minimum. Internal combustion engines and compressors shall be equipped with mufflers to reduce noise to a minimum.

b. Use or application of materials with offensive odors should be avoided and may be restricted from use on this project.

1.06 WORK UNDER OTHER CONTRACTS

A. Separate Contract: The HHSC may execute a separate contract for certain construction at the facility that was not known at the time Offers were submitted.

B. Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END SECTION

SECTION 01140 – WORK RESTRICTIONS

PART 1 – GENERAL

1.01 SUMMARY

A. This section includes work restrictions on the Contractor's operations, and construction as required to maintain the facility's operation during the construction period.

B. CONSTRUCTION PROVISIONS

1. Rules and Regulations: Consult with the Architect and HHSC Representative at the pre-construction conference and become familiar with the rules and regulations of the facility.

2. Contractor's Operations: Confine all construction operations to the immediate vicinity of the construction activity. Store building materials, equipment, tools and incidentals in an enclosed area as directed by the Architect or HHSC Representative. Take precautions and prevent access to power equipment, tools, etc., by other than authorized construction personnel. Perform operations to insure the safety of the occupants of the buildings at all times.

3. Perform operations to minimize inconvenience or disturbance upon the personnel and occupants.

4. Protection of occupants: Special consideration must be made by the Contractor at all times to safely protect the occupants and facility personnel from any and all injuries that may be caused as a result of the work performed under this contract.

5. Caution: The Contractor shall caution his personnel on the job that any association with the occupants be avoided as much as possible, that when spoken to by occupants, normal courtesy shall be maintained at all times.

7. None of the foregoing regulations shall be construed as a restriction on the legal prosecution of the work.

1.02 SEQUENCING OF WORK

A. The Contractor shall schedule his work in general consideration for the on-going operation of the hospital. All work shall be coordinated with the HHSC Representative and/or Architect. Contractor shall consider in his proposal interruptions or delays to his schedule of work due to special requirements of the hospital or HHSC Representative.

END OF SECTION

SECTION 01300 - SUBMITTALS

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

Where indicated in these specifications, provide submittals to the Architect for review.

1.02 PROCEDURES

A. Unless otherwise specified, deliver submittals to the Architect with copy of transmittal to the Contracts Manager.

B. Transmit all items using form which identifies Project, Contractor, Subcontractor, and major supplier. Identify pertinent drawing sheet, detail number, and specification section number, as appropriate. Identify deviations from Contract Documents. Provide space for the Architect or his Consultant's review stamp.

C. Upon completion of review by the Architect, the Architect will return submittals to the Contractor with copy to the Contracts Manager and HHSC Representative.

1.03 SCHEDULE OF WORK

A. Coordinate Schedule with Work Sequence specified in Section 00800.

1.04 SHOP DRAWINGS AND SAMPLE SUBMITTALS

A. All submittals shall be made in accordance with the following unless otherwise specified. Minimum sheet size is 8-1/2" x 11". Maximum sheet size is same size as the Contract Drawings. Drawings shall be presented in a clear and thorough manner. Details shall be identified by reference to sheet, schedule, and detail shown on Contract Drawings.

B. Mark each copy to identify applicable products, and other data. Supplement manufacturer's standard data to provide information unique to the work. Include manufacturer's installation instructions when required by the specification.

1. The Contractor shall review, stamp with his approval and submit with reasonable promptness and in orderly sequence so as to cause no delay in work of any other Subcontractor, all shop drawings, and product data required by these specifications.

2. Properly identify shop drawings and samples as specified. At the time of submission, the Contractor shall inform the HHSC Technical Representative in writing of any deviation in the shop

drawings or submittals from requirements of the Contract Documents.

3. By approving and submitting the shop drawings and submittals the Contractor thereby represents that he has determined and verified all field measurements, field criteria, materials, catalog numbers and similar data, or will do so, and that he has checked and coordinated each shop drawing and sample with the requirements of these specifications.

4. Six (6) copies of the Shop Drawings and submittals shall be submitted for review. Upon review, the Architect will retain three (3) copies and return the balance to the Contractor.

5. The Architect will review the shop drawings and submittals with reasonable promptness so as to cause no delay but only for conformance with the design concept of the Project and with the information given in the Contract Documents. The Architect's review of a separate item shall not indicate approval of an assembly in which the item functions.

6. The Contractor shall make any corrections required by the Architect and shall resubmit the required number of corrected copies of shop drawings or submittals for review. The Contractor shall direct specific attention in writing or on resubmitted shop drawings to revisions other than the corrections requested by the Architect on previous submissions.

7. The Architect's review of shop drawings or submittals shall not relieve the Contractor of responsibilities for any deviation from the requirements of the Contract Documents unless the Contractor has informed the Hospital in writing of such deviation, at time of submission, and the HHSC Representative has given written approval to the specific deviation; nor shall the Architect's review relieve the Contractor from responsibility for errors or omissions in the shop drawings or samples.

8. No portion of the work requiring a shop drawing or sample submission shall be commenced until the submission has been reviewed by the Architect. All such portions of the work shall be in accordance with reviewed shop drawings and samples.

C. Samples: Submit full range of manufacturer's standard textures, colors, and patterns for the Hospital's selection. Submit samples as specified in the respective Specification sections and as noted above. Samples shall illustrate functional characteristics of the Product, with integral parts and attachment devices. Coordinate submittal of different categories for interfacing work. Include identification on each sample, giving full information.

1.05 BIDDER'S SPECIAL RESPONSIBILITY FOR COORDINATING CONTRACTURAL WORK AND SUBMITTALS:

A. The General Contractor shall be responsible for the coordination of all contractual work and submittals.

B. The General Contractor shall have a rubber stamp made up in the following format:

Contractor's Name

PROJECT: _____

_____

PROJECT NO.: _____

THIS SUBMITTAL HAS BEEN CHECKED BY THIS GENERAL CONTRACTOR. IT IS CERTIFIED CORRECT, COMPLETE, AND IN COMPLIANCE WITH CONTRACT DRAWINGS AND SPECIFICATIONS. ALL AFFECTED CONTRACTORS AND SUPPLIERS ARE AWARE OF, AND WILL INTEGRATE THIS SUBMITTAL INTO THEIR OWN WORK.

DATE RECEIVED _____
SPECIFICATION SECTION # _____
SPECIFICATION PARAGRAPH # _____
DRAWING _____
SUBCONTRACTOR _____
SUPPLIER _____
MANUFACTURER _____

CERTIFIED BY: _____

C. This stamp, "filled-in", should appear on the title sheet of each shop drawing, on a cover sheet of submittals in an 8-1/2" x 11" format, or on one face of a cardstock tag (min. 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 tag will be used by the Architect for his receipt, review, and log stamp and for any comments that relate to the sample.

D. All submittals for material and shop drawings listed in the contract documents, shall be required and shall be first reviewed and certified by the General Contractor, then reviewed and approved by the Architect, prior to any ordering of materials and equipment. Submittals that have not been reviewed by the General Contractor shall be returned for review.

1.06 MANUFACTURER'S CERTIFICATES

Submit certificates, warranties, operating and maintenance instructions in accordance with requirements of each specification section. Submit in triplicate.

1.07 MSDS

MSDS shall be submitted prior to the pre-construction meeting. The Contractor shall submit MSDS log and reference each MSDS to its specification Section number and product system.

PART 2 – PRODUCTS

(Not used.)

PART 3 – EXECUTION

(Not used.)

END OF SECTION

SECTION 01577 - POLLUTION CONTROL

PART 1 - GENERAL

1.01 SUMMARY

A. Includes site and environmental control requirements.

1.02 TRASH, REFUSE DISPOSAL

A. Burning of debris and/or waste materials on the project site is prohibited.

B. Do not bury debris and/or waste material on the project site, unless specifically allowed elsewhere in these specifications as backfill material.

C. Haul unusable debris and waste material to an appropriate off-site dump area. During loading operations, water down or provide other measures to prevent dust or other airborne contaminants.

D. Vacuum, wet mop, or damp sweep when cleaning rubbish and fines which can become airborne from floors or other paved areas. Do not dry sweep.

E. Use enclosed chutes and/or containers to conveying debris from above the ground floor level.

F. Clean-up shall include the collection of all waste paper and wrapping materials, cans, bottles, construction waste materials and other objectionable materials, and removal as required. Frequency of clean-up shall coincide with rubbish producing events. The Contractor shall be responsible for all clean-up cost.

1.03 DUST

A. Prevent dust from becoming airborne at all times including non-working hours, weekends and holidays in conformance with the State Department of Health, Administrative Rules, Title 11, Chapter 60 - Air Pollution Control.

B. Contractor is responsible for and shall determine the method of dust control. Subject to the Contractor’s choice, the use of water or “environmentally friendly chemicals” may be used over surfaces which create airborne dust.

C. Construct or erect dust control barriers as required to retain dust within the project site area.

D. Contractor is responsible for all damage claims resulting from failure to control airborne dust during all times that the site is under the Contractor's control.

1.04 NOISE

A. Keep noise within acceptable levels at all times in conformance with the State Department of Health, Administrative Rules, Title 11, Chapter 46 - Community Noise Control. Contractor shall obtain and pay for the Community Noise Permit from the State Department of Health when the construction equipment or other devices emit noise at levels exceeding the allowable limits.

B. To reduce loud disruptive noise levels, ensure mufflers and other devises are provided on equipment, internal combustion engines and compressors. Maintain equipment to reduce noise to acceptable levels.

C. Starting-up of construction equipment meeting allowable noise limits shall not be done prior to 8:00 a.m. without prior approval of the HHSC Representative. Equipment exceeding allowable noise levels shall not be started-up prior to 8:00 a.m.

1.05 OTHERS

A. Wherever trucks and/or vehicles leave the site and enter surrounding paved streets, Contractor shall prevent any material from being carried onto the pavement. Waste water shall not be discharged into existing streams, waterways, or drainage systems such as gutters and catch basins unless treated to comply with the State Department of Health water pollution regulations. The Contractor shall construct a vehicle wash-down area, within the project site, to remove all mud, gravel, etc., before leaving the site.

B. Trucks hauling debris shall be covered as required by PUC Regulation. Trucks hauling fine materials shall be covered.

C. No dumping of waste concrete will be permitted at the job-site.

D. Except for rinsing of the hopper and delivery chute, and for wheel washing where required, concrete trucks shall not be cleaned on the job-site.

E. Except in an emergency, such as a mechanical breakdown, all vehicle fueling and maintenance shall be done in a designated area. A temporary berm shall be constructed around the area when runoff can cause a problem.

F. If allowed in this Contract, spray painting shall be done by the “airless spray” process only. All other types of spray painting shall not be permitted.

1.07 SUSPENSION OF WORK

A. Violations of any of the above requirements or any other pollution control requirements which may be specified in the Specifications shall be cause for suspension of the work creating such violation.

B. Reference the General Conditions Construction, dated 3/17/06 for the suspension procedures.

C. The Architect and/or HHSC Representative may also suspend any operations which creates a pollution problems even if the problem does not violate the provisions of this Section. In this instance, the work is considered a Change and subject to the provisions of the contract.

PART 2 - PRODUCTS (Not used)

PART 3 - EXECUTION (Not used)

END OF SECTION

SECTION 01715 - EXISTING CONDITIONS - ASBESTOS / LEAD / HAZARDOUS MATERIAL SURVEY

PART 1 - GENERAL

1.01 SUMMARY

A. This section includes the results of the State's survey for Asbestos, Lead and / or other hazardous materials and is provided for the Contractor's information.

1.02 ASBESTOS

A. The structure or structures to be renovated or modified under this contract were surveyed for the presence of asbestos containing materials (ACM). Asbestos-containing material was identified on the drywall system.
   1. The report is included, even when no ACM was found, for the Contractor's information. Review the attached report for the basis on which the negative ACM finding was made. Contractor may perform further surveys at its own expense, if ACM not shown in the report is suspected in the areas of the building in which work will be performed. If ACM is found, notify the HSSC Representative immediately. The Hospital will reimburse the Contractor for the testing cost if ACM is found.

   2. If there is ACM outside of the areas in which work will be performed, this ACM 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 HSSC Representative. Based on the information contained in the additional survey(s), notify affected personnel per paragraph 1.02 B.

D. Removal, disposal and handling of work involving the asbestos shall be performed as noted in the Specification Section 13281 Asbestos Abatement.

1.03 LEAD PAINT

A. Tests for lead paints were performed for this project. The report found paints with various levels of lead. Removal, disposal and handling of work involving the lead paint shall be performed as noted in the Specification Section 13282 Lead Paint Control Measures.

PART 3 - EXECUTION

3.01 SURVEY

A. Limited Inspection Report for Asbestos and Lead, dated March 2016, prepared by EnivroQuest, Inc., 45 pages.

END OF SECTION

EnviroQuest

LIMITED INSPECTION REPORT FOR ASBESTOS AND LEAD

Leahi Hospital – Window Replacement Project
Administration, Atherton, Trotter & Young Buildings
3675 Kilauea Avenue
Honolulu, Oahu, Hawaii

Prepared for:

Pacific Architects, Inc.
2020 South King Street
Honolulu, Hawaii 96826

Prepared by:

EnviroQuest, Inc.
98-029 Hekaha Street, Suite 21
Aiea, Hawaii 96701
808.486.5881
eqi@enviroquestinc.com

March 2016

ENVIROQUEST Project 8703

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EXECUTIVE SUMMARY

ENVIROQUEST, INC. (EQI) was retained by Pacific Architects, Inc. to conduct a limited hazardous material inspection of the Leahi Hospital, 3675 Kilauea Avenue, Honolulu, Hawaii. The inspection was conducted on March 9, 2016.

The objective of the inspection was to determine the location of asbestos-containing materials (ACMs) and lead-based paints (LBPs) which may be disturbed by the window replacement work.

The listed areas were included in our inspection:

- Young building, basement, 1st, 2nd, 3rd, 4th and 5th floor windows
- Administration building, basement, 1st and 2nd floor windows
- Atherton building, basement, 1st, 2nd and 3rd floor windows
- Trotter building, basement and 1st floor windows

Asbestos Containing Material

Based on the laboratory analytical results from this inspection, the listed material was identified as asbestos-containing material.

Material	Location	Condition
Caulking	Young building, all metal and wood window system scheduled for replacement (frame/wall seams)	Good
Caulking	Young building, all glass door system scheduled for replacement (frame/wall seams)	Good
Caulking	Administration building, all metal and wood window systems scheduled for replacement (frame/wall seams)	Good
Glazing	Administration building, all wood window systems, scheduled for replacement (frame/glass seams)	Damaged
Caulking	Atherton building, all metal and wood window systems scheduled for replacement (frame/wall seams)	Good
Glazing	Atherton building, all wood window systems, scheduled for replacement (frame/glass seams)	Damaged

The National Emission Standard for Hazardous Air Pollutants (NESHAP), 40 CFR 61 Part M, defines asbestos containing materials as those which contain greater than 1% asbestos. The identified ACM must be removed prior to the renovation activity. All removal must be completed by a certified asbestos abatement contractor under controlled conditions in accordance with United States Environmental Protection Agency (EPA) and Hawaii Department of Health (HDOH) regulations. Work should also be monitored by an independent industrial hygiene professional.

Lead-Based Paint

Based on the laboratory analytical results from this inspection, the listed building components were painted or coated with LBP or lead coatings.

Color	Location	Condition
Tan and brown	Young building, wood window screens	Poor to Fair
Beige, light brown and brown	Young building, wood windows	Poor to Fair
Brown	Administration building, wood windows	Poor to Fair
White	Administration building, concrete walls and window sills	Poor to Fair
Off-white (light blue)	Atherton building, concrete walls and window sills	Poor to Fair
White and brown	Atherton building, wood windows	Poor to Fair
Brown	Trotter building, wood windows	Poor to Fair

United States Environmental Protection Agency (EPA) defines lead-based paint as paint or other coatings containing lead equal to, or in excess of, 0.5% by weight. Also note that lead at concentrations below the EPA guideline was detected various other paint/coating (see Table 2). The contractor's employees removing or disturbing the painted material also must be informed that it contains lead and must have received training under Occupational Safety and Health Administration (OSHA) 29 CFR 1926.62 *Lead*. If any other untested paints are disturbed, they should be assumed to contain lead.

If the painted components containing the lead are scheduled for demolition, composite samples of the expected building waste generated should be collected for *Toxicity Characteristic Leaching Procedure* (TCLP) analysis to determine the waste disposal characterization. *Hawaii Administrative Rules, Title 11, Department of Health, Chapter 261, Hazardous Waste Management* allows a maximum concentration of lead contaminant by TCLP at 5.0 mg/L. TCLP results exceeding the 5.0 mg/L threshold requires the material to be disposed of as hazardous waste. Results below this threshold allow for the materials to be disposed of as construction debris. Note that painted metal components are exempt from TCLP testing and hazardous waste disposal if recycled.

1.0 INTRODUCTION

This report presents the results of the limited hazardous material inspection of the Leahi Hospital, 3675 Kilauea Avenue, Honolulu, Hawaii. The inspection was conducted on March 9, 2016.

The objective of the inspection was to determine the location of asbestos-containing materials (ACMs) and lead-based paints (LBPs) which may be disturbed by the window replacement work.

The listed areas were included in our inspection:

- Young building, basement, 1st, 2nd, 3rd, 4th and 5th floor windows
- Administration building, basement, 1st and 2nd floor windows
- Atherton building, basement, 1st, 2nd and 3rd floor windows
- Trotter building, basement and 1st floor windows

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2.0 ASBESTOS

Eighty-four samples were collected from suspect asbestos-containing materials. The samples were collected by HDOH accredited Asbestos Building Inspector, Mr. Daniel Lewis (HIASB-0724).

2.1 Methodology

Prior to sampling, EQI visually surveyed the project areas for suspect asbestos-containing materials and homogeneous areas (areas that have uniform color, texture, and appearance). Suspect materials were divided into friable and non-friable materials and placed in one of the following EPA categories:

- Surfacing Materials (sprayed or troweled-on materials)
- Thermal Systems Insulations (materials generally applied to various mechanical systems)
- Miscellaneous Materials (any materials which do not fit in the above categories)

Sampling methodology followed the general guidelines for bulk asbestos sampling as presented in Section 40, Part 763 (AHERA), of the Code of Federal Regulations (CFR), and Hawaii Administrative Rules (HAR) 11-501 and 11-502.

2.2 Results

Samples were submitted to Forensic Analytical in Rancho Dominguez, California. The samples were analyzed by polarized-light microscopy (PLM), using EPA Method 600/R-93-116, Visual Area Estimation.

Forensic Analytical is accredited for bulk asbestos analysis through successful participation in the US Department of Commerce, National Institute of Standards and Technologies (NIST), and National Voluntary Laboratory Accreditation Program (NVLAP). The laboratory is currently registered to provide asbestos laboratory services in the State of Hawaii under Title 11 of the HAR, Chapter 504.

Based on the laboratory analytical report, the caulking and the glazing materials were identified as ACM. The NESHAP, 40 CFR 61 Part M, defines asbestos containing materials as those which contain greater than 1% asbestos. In accordance with NESHAP requirements, samples consisting of distinct layers of materials were analyzed and reported separately by the laboratory.

A summary of the homogeneous materials is presented in Table 1. The laboratory analytical report and chain of custody forms are included in Appendix 1.

TABLE 1
Asbestos Homogeneous Material Summary

Homogeneous Material	ACM[1] (Y/N)	Location	Sample ID	Friable (Y/N)	Est Qty (ACM) (ft^2)	Condition[2]
Black caulking	**Y**	**Young building, 5th floor, metal window/wall seams**	**8703-01A 8703-02A 8703-03A**	**N**	**Not Quantified**	**G**
Black caulking	**Y**	**Young building, 5th floor, metal window/wall seams**	**8703-04A 8703-05A 8703-06A**	**N**	**Not Quantified**	**G**
Brown caulking	**Y**	**Young building, 5th floor, metal door/wall seam**	**8703-07A 8703-08A 8703-09A**	**N**	**Not Quantified**	**G**
Brown caulking	**Y**	**Young building, 5th floor, wood window/wall seams**	**8703-10A 8703-11A 8703-12A**	**N**	**Not Quantified**	**G**
Tan glazing	N	Young building, 5th floor, window, glass glazing	8703-13A 8703-14A 8703-15A	Y	--	D
Brown caulking	**Y**	**Young building, 4th floor, wood window/wall seams**	**8703-16A 8703-17A 8703-18A**	**N**	**Not Quantified**	**G**
Tan glazing	N	Young building, 4th floor, wood window, glass glazing	8703-19A 8703-20A 8703-21A	Y	--	D
White caulking	Y	Young building, 3rd floor, window/wall seams	8703-22A 8703-23A 8703-24A	N	--	G
Tan glazing	N	Young building, 3rd floor, wood window, glass glazing	8703-25A 8703-26A 8703-27A	Y	--	D
Plaster wall	N	Young building, 3rd floor, perimeter window walls	8703-28A 8703-29A 8703-30A	N	--	D
Brown caulking	**Y**	**Young building, 2nd floor, wood window/wall seams**	**8703-31A 8703-32A 8703-33A**	**N**	**Not Quantified**	**G**

1. ACM= <1% asbestos content
2. Good (G); Damaged (D) <10% distributed or 25% localized; Significant Damage (SD), >10% distributed or 25% localized

TABLE 1
Asbestos Homogeneous Material Summary

Homogeneous Material	ACM[1] (Y/N)	Location	Sample ID	Friable (Y/N)	Est Qty (ACM) (ft^2)	Condition[2]
Tan glazing	N	Young building, 2nd floor, wood window, glass glazing	8703-34A 8703-35A 8703-36A	Y	--	D
Black caulking	**Y**	**Young building, 1st floor, metal window/wall seams**	**8703-37A 8703-38A 8703-39A**	**N**	**Not Quantified**	**G**
Brown caulking	**Y**	**Young building, 1st floor, wood window/wall seams**	**8703-40A 8703-41A 8703-42A**	**N**	**Not Quantified**	**G**
Tan glazing	N	Young building, 1st floor, wood window, glass glazing	8703-43A 8703-44A 8703-45A	Y	--	D
Brown caulking	**Y**	**Young building, basement, wood window/wall seams**	**8703-46A 8703-47A 8703-48A**	**N**	**Not Quantified**	**D**
Tan glazing	N	Young building, basement, wood window, glass glazing	8703-49A 8703-50A 8703-51A	Y	--	G
Brown caulking	**Y**	**Administration building, 1st floor, wood window/wall seams**	**8703-52A 8703-53A 8703-54A**	**N**	**Not Quantified**	**G**
Gray glazing	**Y**	**Administration building, 1st floor, wood window, glass glazing**	**8703-55A 8703-56A 8703-57A**	**Y**	**Not Quantified**	**D**
Brown caulking	N	Administration building, 2nd floor, wood window/wall seams	8703-58A 8703-59A 8703-60A	N	--	G
Gray glazing	**Y**	**Administration building, 2nd floor, wood window, glass glazing**	**8703-61A 8703-62A 8703-63A**	**Y**	**Not Quantified**	**D**
Gray/brown caulking	**Y**	**Atherton building, 3rd floor, metal window/wall seams**	**8703-64A 8703-65A 8703-66A**	**N**	**Not Quantified**	**G**

1. ACM= <1% asbestos content
2. Good (G); Damaged (D) <10% distributed or 25% localized; Significant Damage (SD), >10% distributed or 25% localized

TABLE 1
Asbestos Homogeneous Material Summary

Homogeneous Material	ACM[1] (Y/N)	Location	Sample ID	Friable (Y/N)	Est Qty (ACM) (ft^2)	Condition[2]
Off-white glazing	N	Atherton building, 2nd floor, wood window, glass glazing	8703-67A 8703-68A 8703-69A	Y	--	D
Brown caulking	**Y**	**Atherton building, 2nd floor, wood window/wall seams**	**8703-70A 8703-71A 8703-72A**	**N**	**Not Quantified**	**G**
White caulking	N	Atherton building, basement, window/wall seams	8703-73A 8703-74A 8703-75A	N	--	G
Gray glazing	**Y**	**Atherton building, basement , wood window, glass glazing**	8703-76A 8703-77A 8703-78A	**Y**	**Not Quantified**	D
Plaster/coating	N	Trotter building, 1st floor, wood window/wall seams	8703-79A 8703-80A 8703-81A	N	--	G
Tan glazing	N	Trotter building, basement, wood window, glass glazing	8703-82A 8703-83A 8703-84A	N	--	D

1. ACM= <1% asbestos content
2. Good (G); Damaged (D) <10% distributed or 25% localized; Significant Damage (SD), >10% distributed or 25% localized

3.0 LEAD

Twenty four paint chip samples were collected from painted or coated materials. The samples were collected by HDOH accredited Lead Inspector, Mr. David Leigh (PB-0294).

3.1 Methodology

Prior to sampling, EQI visually surveyed the project areas for painted building components. Our sampling methodology generally followed the "Guidelines for the Evaluation and Control of Lead-Based Paint Hazard in Housing" published by the Department of Housing and Urban Development (HUD) in 1995.

The paint chip samples were collected using a hand chisel and then placed into a single plastic bag which was sealed and labeled. The samples were then placed into another sealed bag for storage. Sampling equipment was cleaned between each sampling to avoid cross-contamination between samples.

Samples were submitted to Forensic Analytical in Rancho Dominguez, California. The samples were analyzed in accordance with EPA Method 3050B/7420 Lead, Atomic Absorption, Direct Aspiration. Forensic Analytical is accredited for lead analysis through successful participation in the American Industrial Hygiene Association's (AIHA) Environmental Lead Laboratory Accreditation Program (ELLAP).

3.2 Results

Based on the laboratory analytical report, 12 out of twenty four samples exceeded the EPA threshold of 0.5% lead by weight. The EPA defines lead-based paint as paint or other coatings containing lead equal to, or in excess of, 0.5 percent lead by weight.

A summary of lead paint is presented in Table 2. The laboratory analytical report and chain of custody forms are included in Appendix 2.

TABLE 2
Lead Paint Summary

Paint Color	Int/Ext	LBP_1 (Y/N)	LCP_2 (Y/N)	Paint Location	Sample ID	$Condition_{3,4}$
Beige	Int	N	N	Young building, concrete walls/window sills	8703-01L	Fair
Beige	Ext	N	Y	Young building, concrete wall at the windows	8703-02L	Fair
Tan/brown	**Ext**	**Y**	**N**	**Young building, wood window screen**	**8703-03L**	**Fair**
White/green	Int	N	Y	Young building, wood window	8703-04L	Fair
Beige/brown	**Int/Ext**	**Y**	**N**	**Young building, wood windows**	**8703-05L**	**Fair**
Brown	**Ext**	**Y**	**N**	**Young building, wood window screen**	8703-06L	**Fair**
Beige/brown	Int/Ext	N	N	Young building, wood windows	8703-07L	Fair
Light brown	**Int/Ext**	**Y**	**N**	**Young building, wood windows**	**8703-08L**	**Fair**
Beige	Ext	N	N	Young building, concrete wall at the windows	8703-09L	Fair
Brown	**Int/Ext**	**Y**	**N**	**Administration building, wood windows**	**8703-10L**	**Fair**
Light brown	Ext	N	Y	Administration building, concrete window sills	8703-11L	Fair
White	Int	N	N	Administration building, wood windows	8703-12L	Fair
White	**Ext**	**Y**	**N**	**Administration building, concrete wall/window sill**	**8703-13L**	**Fair**
Light blue	**Ext**	**Y**	**N**	**Atherton building, concrete wall and window sills**	**8703-14L**	**Fair**
Beige	Ext	N	Y	Atherton building, concrete window sills	8703-15L, 20L	Fair
Off-white	Ext	N	N	Atherton building, concrete window sills	8703-16L	Fair
White	**Int**	**Y**	**N**	**Atherton building, wood windows**	**8703-17L**	**Fair**
Brown	**Ext**	**Y**	**N**	**Atherton building, wood windows**	**8703-18L, 19L**	**Poor**
Brown	**Ext**	**Y**	**N**	**Trotter building, wood windows**	**8703-21L, 23L**	**Fair**
Beige	Ext	N	Y	Trotter building, concrete wall and window sills	8703-22L, 24L	Fair

1. LBP = >0.5% lead by weight
2. LCP = >0% but <0.5% lead by weight
3. Exterior: Intact – Entire surface is intact; Fair - $\leq$ 10ft^2; Poor - >10 ft^2
4. Interior: Intact – Entire surface is intact; Fair - $\leq$ 2ft^2 or $\leq$ 10%; Poor - >2 ft^2 or >10

4.0 CONCLUSION

4.1 Asbestos

Based on the laboratory analytical results from this inspection, the listed material was identified as asbestos-containing material.

Material	Location	Condition
Caulking	Young building, all metal and wood window system scheduled for replacement (frame/wall seams)	Good
Caulking	Young building, all glass door system scheduled for replacement (frame/wall seams)	Good
Caulking	Administration building, all metal and wood window systems scheduled for replacement (frame/wall seams)	Good
Glazing	Administration building, all wood window systems, scheduled for replacement (frame/glass seams)	Damaged
Caulking	Atherton building, all metal and wood window systems scheduled for replacement (frame/wall seams)	Good
Glazing	Atherton building, all wood window systems, scheduled for replacement (frame/glass seams)	Damaged

The NESHAP, 40 CFR 61 Part M, defines asbestos containing materials as those which contain greater than 1% asbestos. The identified ACM must be removed prior to the renovation activity. All removal must be completed by a certified asbestos abatement contractor under controlled conditions in accordance with EPA and HDOH regulations. Work should also be monitored by an independent industrial hygiene professional.

4.2 Lead-Based Paint

Based on the laboratory analytical results from this inspection, the listed building components were painted or coated with LBP or lead coatings.

Color	Location	Condition
Tan and brown	Young building, wood window screens	Poor to Fair
Beige, light brown and brown	Young building, wood windows	Poor to Fair
Brown	Administration building, wood windows	Poor to Fair
White	Administration building, concrete walls and window sills	Poor to Fair
Off-white (light blue)	Atherton building, concrete walls and window sills	Poor to Fair
White and brown	Atherton building, wood windows	Poor to Fair
Brown	Trotter building, wood windows	Poor to Fair

EPA defines lead-based paint as paint or other coatings containing lead equal to, or in excess of, 0.5% by weight. Also note that lead at concentrations below the EPA guideline was detected various other paint/coating (see Table 2). The contractor's employees removing or disturbing the painted material also must be informed that it contains lead and must have received training under OSHA 29 CFR 1926.62 *Lead*. If any other untested paints are disturbed, they should be assumed to contain lead.

If the painted components containing the lead are scheduled for demolition, composite samples of the expected building waste generated should be collected for TCLP analysis to determine the waste disposal characterization. *Hawaii Administrative Rules, Title 11, Department of Health, Chapter 261, Hazardous Waste Management* allows a maximum concentration of lead contaminant by TCLP at 5.0 mg/L. TCLP results exceeding the 5.0 mg/L threshold requires the material to be disposed of as hazardous waste. Results below this threshold allow for the materials to be disposed of as construction debris. Note that painted metal components are exempt from TCLP testing and hazardous waste disposal if recycled.

5.0 LIMITATIONS

The information set forth is based solely on the agreed upon scope of services, on personal observation, laboratory data, and information provided by Pacific Architects, Inc.

Although this inspection provides information on the relative presence or absence of asbestos-containing material and lead-based paint, it should not be construed as a final statement that all hazardous materials have been identified.

Given the often obscure and elusive nature of hazardous materials, it is never possible to absolutely dismiss the possibility of additional hazardous materials. EnviroQuest, Inc. expressly disclaims any and all liability, representations, expressed or implied, contained in, or for omission from this report, or any other written or oral communication which might be interpreted as establishing the total extent of all liability present at the subject property.

Our services have been performed with usual thoroughness and competence of the consulting profession, in accordance with the standard of professional services at this time. No other warranty or representation, either expressed or implied is included or intended.

Any question regarding our work and this report, the presentation of the information, and the interpretation of the data are welcome and should be referred to the undersigned. EQI greatly appreciates this opportunity to assist you with your industrial hygiene needs. We look forward to working with you again in the future.

David Leigh

David Leigh
Certified Industrial Hygienist

Asbestos
Laboratory Analytical Report

Appendix 1

Forensic Analytical LABORATORIES

Final Report

Bulk Asbestos Analysis

(EPA Method 600/R-93-116, Visual Area Estimation)

EnviroQuest, Inc.
Steve Tanaka
98-029 Hekaha Street
Suite 21
Aiea, HI 96701

Client ID: 7104
Report Number: B217994
Date Received: 03/11/16
Date Analyzed: 03/16/16
Date Printed: 03/16/16
First Reported: 03/16/16

Job ID/Site: 8703; Leahi Hospital window replacement

Date(s) Collected: 03/09/2016

FALI Job ID: 7104
Total Samples Submitted: 84
Total Samples Analyzed: 61

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
8703-01A	50978725						
Layer: Black Putty		Chrysotile	**3 %**				
Total Composite Values of Fibrous Components:		**Asbestos (3%)**					
Cellulose (Trace) Synthetic (3 %)							
8703-02A	50978726						
Comment: Sample not analyzed due to prior positive result in series.							
8703-03A	50978727						
Comment: Sample not analyzed due to prior positive result in series.							
8703-04A	50978728						
Layer: Black Putty		Chrysotile	**3 %**				
Total Composite Values of Fibrous Components:		**Asbestos (3%)**					
Cellulose (Trace) Synthetic (3 %)							
8703-05A	50978729						
Comment: Sample not analyzed due to prior positive result in series.							
8703-06A	50978730						
Comment: Sample not analyzed due to prior positive result in series.							
8703-07A	50978731						
Layer: Brown Putty		Chrysotile	**3 %**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (3%)**					
Cellulose (Trace) Talc (7 %)							
8703-08A	50978732						
Comment: Sample not analyzed due to prior positive result in series.							
8703-09A	50978733						
Comment: Sample not analyzed due to prior positive result in series.							
8703-10A	50978734						
Layer: Brown Putty		Chrysotile	**3 %**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (3%)**					
Cellulose (Trace) Talc (7 %)							
8703-11A	50978735						
Comment: Sample not analyzed due to prior positive result in series.							

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Report Number: B217994
Client Name: EnviroQuest, Inc. **Date Printed:** 03/16/16

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
8703-12A	50978736						
Comment: Sample not analyzed due to prior positive result in series.							
8703-13A	50978737						
Layer: Tan Putty			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
8703-14A	50978738						
Layer: Tan Putty			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
8703-15A	50978739						
Layer: Tan Putty			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
8703-16A	50978740						
Layer: Brown Putty		Chrysotile	**3 %**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace) Talc (7 %)		**Asbestos (2%)**					
8703-17A	50978741						
Comment: Sample not analyzed due to prior positive result in series.							
8703-18A	50978742						
Comment: Sample not analyzed due to prior positive result in series.							
8703-19A	50978743						
Layer: Tan Putty			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
8703-20A	50978744						
Layer: Tan Putty			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
8703-21A	50978745						
Layer: Tan Putty			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					

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Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
8703-22A	50978746						
Layer: White/Clear Puttys			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
8703-23A	50978747						
Layer: White/Clear Puttys			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
8703-24A	50978748						
Layer: White/Clear Puttys			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
8703-25A	50978749						
Layer: Tan Putty			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
8703-26A	50978750						
Layer: Tan Putty			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
8703-27A	50978751						
Layer: Tan Putty			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
8703-28A	50978752						
Layer: Beige Plaster			**ND**				
Layer: White Plaster			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
8703-29A	50978753						
Layer: Beige Plaster			**ND**				
Layer: White Plaster			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					

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Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
8703-30A	50978754						
Layer: Beige Plaster			**ND**				
Layer: White Plaster			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
8703-31A	50978755						
Layer: Brown Putty		Chrysotile	**3 %**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace) Talc (3 %)		**Asbestos (2%)**					
8703-32A	50978756						
Comment: Sample not analyzed due to prior positive result in series.							
8703-33A	50978757						
Comment: Sample not analyzed due to prior positive result in series.							
8703-34A	50978758						
Layer: Tan Putty			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
8703-35A	50978759						
Layer: Tan Putty			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
8703-36A	50978760						
Layer: Tan Putty			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
8703-37A	50978761						
Layer: Black Putty		Chrysotile	**3 %**				
Total Composite Values of Fibrous Components: Cellulose (Trace) Synthetic (3 %)		**Asbestos (3%)**					
8703-38A	50978762						
Comment: Sample not analyzed due to prior positive result in series.							
8703-39A	50978763						
Comment: Sample not analyzed due to prior positive result in series.							
8703-40A	50978764						
Layer: Brown Putty		Chrysotile	**3 %**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace) Talc (3 %)		**Asbestos (2%)**					

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Report Number: B217994
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Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
8703-41A	50978765						
Comment: Sample not analyzed due to prior positive result in series.							
8703-42A	50978766						
Comment: Sample not analyzed due to prior positive result in series.							
8703-43A	50978767						
Layer: Tan Putty			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
8703-44A	50978768						
Layer: Tan Putty			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
8703-45A	50978769						
Layer: Tan Putty			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
8703-46A	50978770						
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
8703-47A	50978771						
Layer: Brown Putty		Chrysotile	**3 %**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace) Talc (3 %)		**Asbestos (Trace)**					
Comment: This comment applies to the Brown Putty only: Due to small sample size, this result may not be repeatable.							
8703-48A	50978772						
Comment: Sample not analyzed due to prior positive result in series.							
8703-49A	50978773						
Layer: Tan Putty			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
8703-50A	50978774						
Layer: Tan Putty			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					

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Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
8703-51A	50978775						
Layer: Tan Putty			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
Cellulose (Trace)							
8703-52A	50978776						
Layer: Brown Putty		Chrysotile	**3 %**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (2%)**					
Cellulose (Trace) Talc (7 %)							
8703-53A	50978777						
Comment: Sample not analyzed due to prior positive result in series.							
8703-54A	50978778						
Comment: Sample not analyzed due to prior positive result in series.							
8703-55A	50978779						
Layer: Grey Putty		Chrysotile	**Trace**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (Trace)**					
Cellulose (Trace) Talc (Trace)							
8703-56A	50978780						
Layer: Grey Putty		Chrysotile	**Trace**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (Trace)**					
Cellulose (Trace) Talc (Trace)							
8703-57A	50978781						
Layer: Grey Putty		Chrysotile	**Trace**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (Trace)**					
Cellulose (Trace) Talc (Trace)							
8703-58A	50978782						
Layer: Dark Brown Putty			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
Cellulose (Trace)							
8703-59A	50978783						
Layer: Dark Brown Putty			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
Cellulose (Trace)							
8703-60A	50978784						
Layer: Dark Brown Putty			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
Cellulose (Trace)							

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Report Number: B217994
Client Name: EnviroQuest, Inc. **Date Printed:** 03/16/16

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
8703-61A	50978785						
Layer: Grey Putty		Chrysotile	**Trace**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace) Talc (Trace)		**Asbestos (Trace)**					
8703-62A	50978786						
Layer: Grey Putty		Chrysotile	**Trace**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace) Talc (Trace)		**Asbestos (Trace)**					
8703-63A	50978787						
Layer: Grey Putty		Chrysotile	**Trace**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace) Talc (Trace)		**Asbestos (Trace)**					
8703-64A	50978788						
Layer: Grey Semi-Fibrous Material		Chrysotile	**7 %**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (7%)**					
8703-65A	50978789						
Comment: Sample not analyzed due to prior positive result in series.							
8703-66A	50978790						
Comment: Sample not analyzed due to prior positive result in series.							
8703-67A	50978791						
Layer: Off-White Putty			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
8703-68A	50978792						
Layer: Off-White Putty			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
8703-69A	50978793						
Layer: Off-White Putty			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
8703-70A	50978794						
Layer: Brown Putty		Chrysotile	**3 %**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace) Talc (7 %)		**Asbestos (3%)**					

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Report Number: B217994
Client Name: EnviroQuest, Inc. **Date Printed:** 03/16/16

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
8703-71A	50978795						
Comment: Sample not analyzed due to prior positive result in series.							
8703-72A	50978796						
Comment: Sample not analyzed due to prior positive result in series.							
8703-73A	50978797						
Layer: White Putty			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
8703-74A	50978798						
Layer: White Putty			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
8703-75A	50978799						
Layer: White Putty			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
8703-76A	50978800						
Layer: Grey Putty		Chrysotile	**Trace**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (Trace)**					
8703-77A	50978801						
Layer: Grey Putty		Chrysotile	**Trace**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (Trace)**					
8703-78A	50978802						
Layer: Grey Putty		Chrysotile	**Trace**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (Trace)**					
8703-79A	50978803						
Layer: Grey Plaster			**ND**				
Layer: Paint/Coating			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
8703-80A	50978804						
Layer: Grey Plaster			**ND**				
Layer: Paint/Coating			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					

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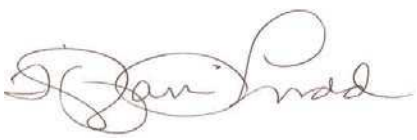
Report Number: B217994

Client Name: EnviroQuest, Inc. **Date Printed:** 03/16/16

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
8703-81A	50978805						
Layer: Grey Plaster			**ND**				
Layer: Paint/Coating			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
8703-82A	50978806						
Layer: Tan Putty			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
8703-83A	50978807						
Layer: Tan Putty			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
8703-84A	50978808						
Layer: Tan Putty			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					



Tiffani Ludd, Laboratory Supervisor, Rancho Dominguez Laboratory

Note: Limit of Quantification ('LOQ') = 1%. 'Trace' denotes the presence of asbestos below the LOQ. 'ND' = 'None Detected'.

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EnviroQuest

PLM DATA SHEET

Project No.: 8N03 Project Name: Leahy hospital window replacement Date: 3/9/16

Page: 1 of 10

Material Description: black rubbery window caulking — Friable / Non-friable

Sample No.	Location	% Asb.	Asb. Type
8N03-01A	5th floor, perimeter window, A Young build		
02A	" , int window		
03A	" " perimeter window		
	Int Side		

CONDITION: % Damaged: % Localized: % Distributed: Total Material Quantity:

Surfacing Material		TSI		Misc.	
☐ Sig. Damage	% Crumbling -	☐ Sig. Damage	% Gouge/Punct -	☐ Sig. Damage	% Crumbling -
☐ Damaged	% Delaminating -	☐ Damaged	% Crushed -	☐ Damaged	% Delaminating -
☐ Good Cond.	% H_2O/Gouges -	☐ Good Cond.	% H_2O Stains -	☑ Good Cond.	% H_2O/Gouges-

Contact Potential	☐ High	☐ Moderate	☐ Low
Vibration Potential	☐ High	☐ Moderate	☐ Low
Air Erosion	☐ High	☐ Moderate	☐ Low
OVERALL POTENTIAL RATING	☐ Significant Damage	☐ Damage	☐ Minimal Damage

Material Description: black caulking — Friable / Non-friable

Sample No.	Location	% Asb.	Asb. Type
8N03-04A	Young build, perimeter window, ext side, 5th flr		
05A	" " " " " "		
06A	" " " " " "		

CONDITION: % Damaged: % Localized: % Distributed: Total Material Quantity:

Surfacing Material		TSI		Misc.	
☐ Sig. Damage	% Crumbling -	☐ Sig. Damage	% Gouge/Punct -	☐ Sig. Damage	% Crumbling -
☐ Damaged	% Delaminating -	☐ Damaged	% Crushed -	☐ Damaged	% Delaminating -
☐ Good Cond.	% H_2O/Gouges -	☐ Good Cond.	% H_2O Stains -	☑ Good Cond.	% H_2O/Gouges-

Contact Potential	☐ High	☐ Moderate	☑ Low
Vibration Potential	☐ High	☐ Moderate	☑ Low
Air Erosion	☐ High	☐ Moderate	☑ Low
OVERALL POTENTIAL RATING	☐ Significant Damage	☐ Damage	☐ Minimal Damage

Sampled By: D Lewis *DOH Cert No:* Delivered to Lab By:	Relinquished By/Date/Time: 3/10/16 Received By/Date/Time: FE 11:05A 3/11/16	Relinquished By/Date/Time: Received By/Date/Time:

TURNAROUND TIME: ☐ < 12 Hours ☐ 24 Hours ☑ 3 Days ☐ 5 Days ☐ _____

Surfacing	<1,000 ft² = 3 Samples	1,000 – 5,000 ft² = 5 Samples	>5,000 ft² = 7 Samples
TSI	Minimum of 3 Samples (Run) UNLESS	<6 In. or ft² = 1 Sample	Minimum of 3 Samples (Elbow & 'T')
Misc.	Minimum of 3 Samples (*Hawaii*)		

Surfacing	Sig. Damage = *> 10% Dist. or 25% Local*	Damaged = *< 10% Dist. or 25% Local*	*Good = Very Limited Damage*
TSI	Sig. Damage = *10% Missing Jacket OR > 10% Dist. or 25% Local*	Damaged = *< 10% Missing Jacket OR < 10% Dist. or 25% Local*	Good = *Very Limited Damage*
Misc	Sig. Damage = *> 10% Dist. or 25% Local*	Damaged = *< 10% Dist. or 25% Local*	*Good = Very Limited Damage*

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PLM DATA SHEET

Project No.: 3N03 Project Name: Leahi hospital window replacement Date: 3/9/16

Material Description: tan/brown caulking — Friable / Non-friable

Sample No.	Location	% Asb.	Asb. Type
3N03-09A	Young, 5th, door caulking, galv door		
09B	" " " "		
09C	" " " "		

CONDITION: % Damaged: % Localized: % Distributed: Total Material Quantity:

Surfacing Material		TSI		Misc.	
☐ Sig. Damage	% Crumbling -	☐ Sig. Damage	% Gouge/Punct -	☐ Sig. Damage	% Crumbling -
☐ Damaged	% Delaminating -	☐ Damaged	% Crushed -	☐ Damaged	% Delaminating -
☐ Good Cond.	% H_2O/Gouges -	☐ Good Cond.	% H_2O Stains -	☐ Good Cond.	% H_2O/Gouges-

Contact Potential	☐ High	☐ Moderate	☐ Low
Vibration Potential	☐ High	☐ Moderate	☐ Low
Air Erosion	☐ High	☐ Moderate	☐ Low
OVERALL POTENTIAL RATING	☐ Significant Damage	☐ Damage	☐ Minimal Damage

Material Description: tan brown caulking — Friable / Non-friable

Sample No.	Location	% Asb.	Asb. Type
3N03-10A	Young building, 5th fl, wood WF		
11A	" " " "		
12A	" " " "		

CONDITION: % Damaged: % Localized: % Distributed: Total Material Quantity:

Surfacing Material		TSI		Misc.	
☐ Sig. Damage	% Crumbling -	☐ Sig. Damage	% Gouge/Punct -	☐ Sig. Damage	% Crumbling -
☐ Damaged	% Delaminating -	☐ Damaged	% Crushed -	☐ Damaged	% Delaminating -
☐ Good Cond.	% H_2O/Gouges -	☐ Good Cond.	% H_2O Stains -	☐ Good Cond.	% H_2O/Gouges-

Contact Potential	☐ High	☐ Moderate	☐ Low
Vibration Potential	☐ High	☐ Moderate	☐ Low
Air Erosion	☐ High	☐ Moderate	☐ Low
OVERALL POTENTIAL RATING	☐ Significant Damage	☐ Damage	☐ Minimal Damage

Material Description: brown caulking — Friable / Non-friable

Sample No.	Location	% Asb.	Asb. Type
3N03 13A	Young build, 5th fl, wood WF/ glass glazing		
14A	" " " "		
15A	" " " "		

CONDITION: % Damaged: % Localized: % Distributed: Total Material Quantity:

Surfacing Material		TSI		Misc.	
☐ Sig. Damage	% Crumbling -	☐ Sig. Damage	% Gouge/Punct -	☐ Sig. Damage	% Crumbling -
☐ Damaged	% Delaminating -	☐ Damaged	% Crushed -	☐ Damaged	% Delaminating -
☐ Good Cond.	% H_2O/Gouges -	☐ Good Cond.	% H_2O Stains -	☑ Good Cond.	% H_2O/Gouges-

Contact Potential	☐ High	☐ Moderate	☐ Low
Vibration Potential	☐ High	☐ Moderate	☐ Low
Air Erosion	☐ High	☐ Moderate	☐ Low
OVERALL POTENTIAL RATING	☐ Significant Damage	☐ Damage	☐ Minimal Damage

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PLM DATA SHEET

Project No.: 3N03 Project Name: Leahi hospital window replacemt Date: 3/9/16

Page: 3 of 10

Material Description: tan/brown caulk — Friable / Non-friable

Sample No.	Location	% Asb.	Asb. Type
3N03-16A	Young, 4th floor, wood window F/ wall caulk		
17A	" " " "		
18A	" " " "		
	perimeter original wood walls		

CONDITION: % Damaged: % Localized: % Distributed: Total Material Quantity:

Surfacing Material		TSI		Misc.	
☐ Sig. Damage	% Crumbling -	☐ Sig. Damage	% Gouge/Punct -	☐ Sig. Damage	% Crumbling -
☐ Damaged	% Delaminating -	☐ Damaged	% Crushed -	☐ Damaged	% Delaminating -
☐ Good Cond.	% H_2O/Gouges -	☐ Good Cond.	% H_2O Stains -	☐ Good Cond.	% H_2O/Gouges-

Contact Potential	☐ High	☐ Moderate	☐ Low
Vibration Potential	☐ High	☐ Moderate	☐ Low
Air Erosion	☐ High	☐ Moderate	☐ Low
OVERALL POTENTIAL RATING	☐ Significant Damage	☐ Damage	☐ Minimal Damage

Material Description: tan/brown caulk — Friable / Non-friable

Sample No.	Location	% Asb.	Asb. Type
3N03-19A	Young, 4th, wood window F/ glass seams		
20A	" " " "		
21A	" " " "		

CONDITION: % Damaged: % Localized: % Distributed: Total Material Quantity:

Surfacing Material		TSI		Misc.	
☐ Sig. Damage	% Crumbling -	☐ Sig. Damage	% Gouge/Punct -	☑ Sig. Damage	% Crumbling -
☐ Damaged	% Delaminating -	☐ Damaged	% Crushed -	☐ Damaged	% Delaminating -
☐ Good Cond.	% H_2O/Gouges -	☐ Good Cond.	% H_2O Stains -	☐ Good Cond.	% H_2O/Gouges-

Contact Potential	☐ High	☐ Moderate	☑ Low
Vibration Potential	☐ High	☐ Moderate	☑ Low
Air Erosion	☐ High	☐ Moderate	☑ Low
OVERALL POTENTIAL RATING	☐ Significant Damage	☐ Damage	☐ Minimal Damage

Material Description: tan caulking — Friable / Non-friable

Sample No.	Location	% Asb.	Asb. Type
3N03-22A	Young, 3rd, perimeter window F/ wall seam		
23A	" " " "		
24A	" " " "		

CONDITION: % Damaged: % Localized: % Distributed: Total Material Quantity:

Surfacing Material		TSI		Misc.	
☐ Sig. Damage	% Crumbling -	☐ Sig. Damage	% Gouge/Punct -	☐ Sig. Damage	% Crumbling -
☐ Damaged	% Delaminating -	☐ Damaged	% Crushed -	☑ Damaged	% Delaminating -
☐ Good Cond.	% H_2O/Gouges -	☐ Good Cond.	% H_2O Stains -	☑ Good Cond.	% H_2O/Gouges-

Contact Potential	☐ High	☐ Moderate	☑ Low
Vibration Potential	☐ High	☐ Moderate	☑ Low
Air Erosion	☐ High	☐ Moderate	☑ Low
OVERALL POTENTIAL RATING	☐ Significant Damage	☐ Damage	☑ Minimal Damage

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PLM DATA SHEET

Project No.: 3N03 Project Name: Leahi hospital window replacement Date: 3/a/16

Page: 4 of 10

Material Description: Caulking — Friable / Non-friable

Sample No.	Location	% Asb.	Asb. Type
3N03-25A	Young, 3rd fl, perimeter wood window (glass glazing)		
26A	" " " " "		
27A	" " " " "		

CONDITION: % Damaged: % Localized: % Distributed: Total Material Quantity:

Surfacing Material		TSI		Misc.	
☐ Sig. Damage	% Crumbling -	☐ Sig. Damage	% Gouge/Punct -	☐ Sig. Damage	% Crumbling -
☐ Damaged	% Delaminating -	☐ Damaged	% Crushed -	☐ Damaged	% Delaminating -
☐ Good Cond.	% H_2O/Gouges -	☐ Good Cond.	% H_2O Stains -	☐ Good Cond.	% H_2O/Gouges-

Contact Potential	☐ High	☐ Moderate	☐ Low
Vibration Potential	☐ High	☐ Moderate	☐ Low
Air Erosion	☐ High	☐ Moderate	☐ Low
OVERALL POTENTIAL RATING	☐ Significant Damage	☐ Damage	☐ Minimal Damage

Material Description: plaster — Friable / Non-friable

Sample No.	Location	% Asb.	Asb. Type
3N03-28A	~~Too~~ Young, 3rd perimeter wall under window		
29A	" " " " "		
30A	" " " " "		

CONDITION: % Damaged: % Localized: % Distributed: Total Material Quantity:

Surfacing Material		TSI		Misc.	
☐ Sig. Damage	% Crumbling -	☐ Sig. Damage	% Gouge/Punct -	☑ Sig. Damage	% Crumbling -
☐ Damaged	% Delaminating -	☐ Damaged	% Crushed -	☐ Damaged	% Delaminating -
☐ Good Cond.	% H_2O/Gouges -	☐ Good Cond.	% H_2O Stains -	☐ Good Cond.	% H_2O/Gouges-

Contact Potential	☑ High	☐ Moderate	☐ Low
Vibration Potential	☐ High	☐ Moderate	☐ Low
Air Erosion	☐ High	☐ Moderate	☐ Low
OVERALL POTENTIAL RATING	☐ Significant Damage	☐ Damage	☐ Minimal Damage

Material Description: Caulking — Friable / ~~Non-friable~~

Sample No.	Location	% Asb.	Asb. Type
3N03-31A	Young, 2nd, perimeter wood w/ wall		
32A	" " " " "		
33A	" " " " "		

CONDITION: % Damaged: % Localized: % Distributed: Total Material Quantity:

Surfacing Material		TSI		Misc.	
☐ Sig. Damage	% Crumbling -	☐ Sig. Damage	% Gouge/Punct -	☐ Sig. Damage	% Crumbling -
☐ Damaged	% Delaminating -	☐ Damaged	% Crushed -	☑ Damaged	% Delaminating -
☐ Good Cond.	% H_2O/Gouges -	☐ Good Cond.	% H_2O Stains -	☑ Good Cond.	% H_2O/Gouges-

Contact Potential	☐ High	☐ Moderate	☐ Low
Vibration Potential	☐ High	☐ Moderate	☑ Low
Air Erosion	☐ High	☐ Moderate	☐ Low
OVERALL POTENTIAL RATING	☐ Significant Damage	☐ Damage	☐ Minimal Damage

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PLM DATA SHEET

Project No.: 8N03 Project Name: Leahi hospital window replacement Date: 3/9/18

Material Description: Caulking — Friable / Non-friable

Sample No.	Location	% Asb.	Asb. Type
8N03-34A	Young, 2nd, perimeter wood WF/ glass seam		
35A	" " " "		
36A	" " " "		

CONDITION: % Damaged: % Localized: % Distributed: Total Material Quantity:

Surfacing Material		TSI		Misc.	
☐ Sig. Damage	% Crumbling -	☐ Sig. Damage	% Gouge/Punct -	☐ Sig. Damage	% Crumbling -
☐ Damaged	% Delaminating -	☐ Damaged	% Crushed -	☐ Damaged	% Delaminating -
☐ Good Cond.	% H_2O/Gouges -	☐ Good Cond.	% H_2O Stains -	☑ Good Cond.	% H_2O/Gouges-

Contact Potential	☐ High	☐ Moderate	☑ Low
Vibration Potential	☐ High	☐ Moderate	☑ Low
Air Erosion	☐ High	☐ Moderate	☑ Low
OVERALL POTENTIAL RATING	☐ Significant Damage	☐ Damage	☑ Minimal Damage

Material Description: black non-rubbery caulk — Friable / Non-friable

Sample No.	Location	% Asb.	Asb. Type
8N03-37A	Young, 1st perimeter galvanized WF/ wall		
38A	" " " "		
39A	" " " "		

CONDITION: % Damaged: % Localized: % Distributed: Total Material Quantity:

Surfacing Material		TSI		Misc.	
☐ Sig. Damage	% Crumbling -	☐ Sig. Damage	% Gouge/Punct -	☐ Sig. Damage	% Crumbling -
☐ Damaged	% Delaminating -	☐ Damaged	% Crushed -	☐ Damaged	% Delaminating -
☐ Good Cond.	% H_2O/Gouges -	☐ Good Cond.	% H_2O Stains -	☑ Good Cond.	% H_2O/Gouges-

Contact Potential	☐ High	☐ Moderate	☐ Low
Vibration Potential	☐ High	☐ Moderate	☐ Low
Air Erosion	☐ High	☐ Moderate	☐ Low
OVERALL POTENTIAL RATING	☐ Significant Damage	☐ Damage	☐ Minimal Damage

Material Description: Caulking — Friable / Non-friable

Sample No.	Location	% Asb.	Asb. Type
8N03-40A	Young, 1st perim WF/ wall		
41A	" " " "		
42A	" " " "		

CONDITION: % Damaged: % Localized: % Distributed: Total Material Quantity:

Surfacing Material		TSI		Misc.	
☐ Sig. Damage	% Crumbling -	☐ Sig. Damage	% Gouge/Punct -	☐ Sig. Damage	% Crumbling -
☐ Damaged	% Delaminating -	☐ Damaged	% Crushed -	☐ Damaged	% Delaminating -
☐ Good Cond.	% H_2O/Gouges -	☐ Good Cond.	% H_2O Stains -	☐ Good Cond.	% H_2O/Gouges-

Contact Potential	☐ High	☐ Moderate	☐ Low
Vibration Potential	☐ High	☐ Moderate	☐ Low
Air Erosion	☐ High	☐ Moderate	☐ Low
OVERALL POTENTIAL RATING	☐ Significant Damage	☐ Damage	☐ Minimal Damage

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PLM DATA SHEET

Project No.: 8103 Project Name: Leahi hospital window replacement Date: 3/4/11

Page: 6 of 10

Material Description: Caulking

Friable / ~~Non-friable~~

Sample No.	Location	% Asb.	Asb. Type
8103-43A	Young, LR perimeter wood w/ glass seam		
44A	" " " "		
45A	" " " "		

CONDITION: % Damaged: % Localized: % Distributed: Total Material Quantity:

Surfacing Material		TSI		Misc.	
☐ Sig. Damage	% Crumbling -	☐ Sig. Damage	% Gouge/Punct -	☐ Sig. Damage	% Crumbling -
☐ Damaged	% Delaminating -	☐ Damaged	% Crushed -	☐ Damaged	% Delaminating -
☐ Good Cond.	% H_2O/Gouges -	☐ Good Cond.	% H_2O Stains -	☐ Good Cond.	% H_2O/Gouges-

Contact Potential	☐ High	☐ Moderate	☑ Low
Vibration Potential	☐ High	☐ Moderate	☑ Low
Air Erosion	☐ High	☐ Moderate	☐ Low
OVERALL POTENTIAL RATING	☐ Significant Damage	☐ Damage	☐ Minimal Damage

Material Description: caulking

Friable / ~~Non-friable~~

Sample No.	Location	% Asb.	Asb. Type
8103 46A	Young, basement - Perimeter wood w/ wall		
47A	" " " " " "		
48A	" " " " " "		

CONDITION: % Damaged: % Localized: % Distributed: Total Material Quantity:

Surfacing Material		TSI		Misc.	
☐ Sig. Damage	% Crumbling -	☐ Sig. Damage	% Gouge/Punct -	☐ Sig. Damage	% Crumbling -
☐ Damaged	% Delaminating -	☐ Damaged	% Crushed -	☐ Damaged	% Delaminating -
☐ Good Cond.	% H_2O/Gouges -	☐ Good Cond.	% H_2O Stains -	☐ Good Cond.	% H_2O/Gouges-

Contact Potential	☐ High	☐ Moderate	☐ Low
Vibration Potential	☐ High	☐ Moderate	☐ Low
Air Erosion	☐ High	☐ Moderate	☐ Low
OVERALL POTENTIAL RATING	☐ Significant Damage	☐ Damage	☐ Minimal Damage

Material Description: Caulking

Friable / Non-friable

Sample No.	Location	% Asb.	Asb. Type
8103-49A	Young, basement - perimeter w/ WF / glass		
50A	" " " " " " "		
51A	" " " " " " "		

CONDITION: % Damaged: % Localized: % Distributed: Total Material Quantity:

Surfacing Material		TSI		Misc.	
☐ Sig. Damage	% Crumbling -	☐ Sig. Damage	% Gouge/Punct -	☐ Sig. Damage	% Crumbling -
☐ Damaged	% Delaminating -	☐ Damaged	% Crushed -	☐ Damaged	% Delaminating -
☐ Good Cond.	% H_2O/Gouges -	☐ Good Cond.	% H_2O Stains -	☐ Good Cond.	% H_2O/Gouges-

Contact Potential	☐ High	☐ Moderate	☐ Low
Vibration Potential	☐ High	☐ Moderate	☐ Low
Air Erosion	☐ High	☐ Moderate	☐ Low
OVERALL POTENTIAL RATING	☐ Significant Damage	☐ Damage	☐ Minimal Damage

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6-15-17 Kamitsuruma, Minami-ku, Sagamihara-shi, Kanagawa-ken 252-0302 Japan Phone: (042) 851-5675

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PLM DATA SHEET

Project No.: 3703 Project Name: Leahi Hospital replace windows Date: 3/9/17

Page: 7 of 10

Material Description: caulking — Friable / Non-friable

Sample No.	Location	% Asb.	Asb. Type
3703-52A	Admin, 1st, perimeter WF/wall		
53A	" " "		
54A	" " "		

CONDITION: % Damaged: % Localized: % Distributed: Total Material Quantity:

Surfacing Material		TSI		Misc.	
☐ Sig. Damage	% Crumbling -	☐ Sig. Damage	% Gouge/Punct -	☐ Sig. Damage	% Crumbling -
☐ Damaged	% Delaminating -	☐ Damaged	% Crushed -	☐ Damaged	% Delaminating -
☐ Good Cond.	% H_2O/Gouges -	☐ Good Cond.	% H_2O Stains -	☑ Good Cond.	% H_2O/Gouges-

Contact Potential	☐ High	☐ Moderate	☑ Low
Vibration Potential	☐ High	☐ Moderate	☐ Low
Air Erosion	☐ High	☐ Moderate	☐ Low
OVERALL POTENTIAL RATING	☐ Significant Damage	☐ Damage	☐ Minimal Damage

Material Description: caulking — Friable / Non-friable

Sample No.	Location	% Asb.	Asb. Type
3703-55A	Admin, 1st perimeter WF/glass		
56A	" " "		
57A	" " "		

CONDITION: % Damaged: % Localized: % Distributed: Total Material Quantity:

Surfacing Material		TSI		Misc.	
☐ Sig. Damage	% Crumbling -	☐ Sig. Damage	% Gouge/Punct -	☐ Sig. Damage	% Crumbling -
☐ Damaged	% Delaminating -	☐ Damaged	% Crushed -	☐ Damaged	% Delaminating -
☐ Good Cond.	% H_2O/Gouges -	☐ Good Cond.	% H_2O Stains -	☑ Good Cond.	% H_2O/Gouges-

Contact Potential	☐ High	☐ Moderate	☑ Low
Vibration Potential	☐ High	☐ Moderate	☑ Low
Air Erosion	☐ High	☐ Moderate	☐ Low
OVERALL POTENTIAL RATING	☐ Significant Damage	☐ Damage	☐ Minimal Damage

Material Description: caulking — Friable / Non-friable

Sample No.	Location	% Asb.	Asb. Type
3703-58A	Admin 2nd, perimeter WF/wall		
59A	" " "		
60A	" " "		

CONDITION: % Damaged: % Localized: % Distributed: Total Material Quantity:

Surfacing Material		TSI		Misc.	
☐ Sig. Damage	% Crumbling -	☐ Sig. Damage	% Gouge/Punct -	☐ Sig. Damage	% Crumbling -
☐ Damaged	% Delaminating -	☐ Damaged	% Crushed -	☐ Damaged	% Delaminating -
☐ Good Cond.	% H_2O/Gouges -	☐ Good Cond.	% H_2O Stains -	☐ Good Cond.	% H_2O/Gouges-

Contact Potential	☐ High	☐ Moderate	☐ Low
Vibration Potential	☐ High	☐ Moderate	☐ Low
Air Erosion	☐ High	☐ Moderate	☐ Low
OVERALL POTENTIAL RATING	☐ Significant Damage	☐ Damage	☐ Minimal Damage

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PLM DATA SHEET

Project No.: 3803 Project Name: Leahi hospital Date: 3/9/11

Page: 8 of 10

Material Description: Caulking — Friable / Non-friable (circle one)

Sample No.	Location	% Asb.	Asb. Type
3803-61A	Admin, 2nd, perimeter WF/glass		
62A	" " " "		
63A	" " " "		

CONDITION: % Damaged: % Localized: % Distributed: Total Material Quantity:

Surfacing Material		TSI		Misc.	
☐ Sig. Damage	% Crumbling -	☐ Sig. Damage	% Gouge/Punct -	☐ Sig. Damage	% Crumbling -
☐ Damaged	% Delaminating -	☐ Damaged	% Crushed -	☐ Damaged	% Delaminating -
☐ Good Cond.	% H_2O/Gouges -	☐ Good Cond.	% H_2O Stains -	☐ Good Cond.	% H_2O/Gouges-

Contact Potential	☐ High	☐ Moderate	☑ Low
Vibration Potential	☐ High	☐ Moderate	☑ Low
Air Erosion	☐ High	☐ Moderate	☐ Low
OVERALL POTENTIAL RATING	☐ Significant Damage	☐ Damage	☑ Minimal Damage

Material Description: Caulking — Friable / Non-friable (circle one)

Sample No.	Location	% Asb.	Asb. Type
3803-64A	~~Atherton~~ Admin, 3rd fl, unpainted mid WF/wall caulk		
65A	" " " "		
66A	" " " "		

CONDITION: % Damaged: % Localized: % Distributed: Total Material Quantity:

Surfacing Material		TSI		Misc.	
☐ Sig. Damage	% Crumbling -	☐ Sig. Damage	% Gouge/Punct -	☐ Sig. Damage	% Crumbling -
☐ Damaged	% Delaminating -	☐ Damaged	% Crushed -	☐ Damaged	% Delaminating -
☐ Good Cond.	% H_2O/Gouges -	☐ Good Cond.	% H_2O Stains -	☐ Good Cond.	% H_2O/Gouges-

Contact Potential	☐ High	☐ Moderate	☐ Low
Vibration Potential	☐ High	☐ Moderate	☐ Low
Air Erosion	☐ High	☐ Moderate	☐ Low
OVERALL POTENTIAL RATING	☐ Significant Damage	☐ Damage	☐ Minimal Damage

Material Description: Caulking — Friable / Non-friable

Sample No.	Location	% Asb.	Asb. Type
3803-67A	Atherton, 2nd floor, WWF/glass		
68A	" " " "		
69A	" " " "		

CONDITION: % Damaged: % Localized: % Distributed: Total Material Quantity:

Surfacing Material		TSI		Misc.	
☐ Sig. Damage	% Crumbling -	☐ Sig. Damage	% Gouge/Punct -	☐ Sig. Damage	% Crumbling -
☐ Damaged	% Delaminating -	☐ Damaged	% Crushed -	☐ Damaged	% Delaminating -
☐ Good Cond.	% H_2O/Gouges -	☐ Good Cond.	% H_2O Stains -	☐ Good Cond.	% H_2O/Gouges-

Contact Potential	☐ High	☐ Moderate	☐ Low
Vibration Potential	☐ High	☐ Moderate	☐ Low
Air Erosion	☐ High	☐ Moderate	☐ Low
OVERALL POTENTIAL RATING	☐ Significant Damage	☐ Damage	☐ Minimal Damage

98-029 Hekaha Street, Suite 21, Aiea, HI 96701 Phone: (808) 486-5881 Fax: (808) 486-5889 E-mail: eqi@enviroquestinc.com
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PLM DATA SHEET

Project No.: 3N03 Project Name: Leahi hospital Date: 3/6/16

Page: 9 of 10

Material Description: caulking — Friable / Non-friable

Sample No.	Location	% Asb.	Asb. Type
3N03-N0A	Atherton, 2nd floor, perimeter WF/glass wall		
N1A	" " " "		
N2A	" " " "		

CONDITION: % Damaged: % Localized: % Distributed: Total Material Quantity:

Surfacing Material		TSI		Misc.	
☐ Sig. Damage	% Crumbling -	☐ Sig. Damage	% Gouge/Punct -	☐ Sig. Damage	% Crumbling -
☐ Damaged	% Delaminating -	☐ Damaged	% Crushed -	☐ Damaged	% Delaminating -
☐ Good Cond.	% H_2O/Gouges -	☐ Good Cond.	% H_2O Stains -	☐ Good Cond.	% H_2O/Gouges-

Contact Potential	☐ High	☐ Moderate	☐ Low
Vibration Potential	☐ High	☐ Moderate	☐ Low
Air Erosion	☐ High	☐ Moderate	☐ Low
OVERALL POTENTIAL RATING	☐ Significant Damage	☐ Damage	☐ Minimal Damage

Material Description: caulking — Friable / Non-friable

Sample No.	Location	% Asb.	Asb. Type
3N03-N3A	Atherton, basement, perimeter WF/wall		
N4A	" " " "		
N5A	" " " "		

CONDITION: % Damaged: % Localized: % Distributed: Total Material Quantity:

Surfacing Material		TSI		Misc.	
☐ Sig. Damage	% Crumbling -	☐ Sig. Damage	% Gouge/Punct -	☐ Sig. Damage	% Crumbling -
☐ Damaged	% Delaminating -	☐ Damaged	% Crushed -	☐ Damaged	% Delaminating -
☐ Good Cond.	% H_2O/Gouges -	☐ Good Cond.	% H_2O Stains -	☐ Good Cond	% H_2O/Gouges-

Contact Potential	☐ High	☐ Moderate	☐ Low
Vibration Potential	☐ High	☐ Moderate	☐ Low
Air Erosion	☐ High	☐ Moderate	☐ Low
OVERALL POTENTIAL RATING	☐ Significant Damage	☐ Damage	☐ Minimal Damage

Material Description: caulking — Friable / Non-friable

Sample No.	Location	% Asb.	Asb. Type
3N03-N6A	Atherton, basement, perimeter WF/glass		
N7A	" " " "		
N8A	" " " "		

CONDITION: % Damaged: % Localized: % Distributed: Total Material Quantity:

Surfacing Material		TSI		Misc.	
☐ Sig. Damage	% Crumbling -	☐ Sig. Damage	% Gouge/Punct -	☐ Sig. Damage	% Crumbling -
☐ Damaged	% Delaminating -	☐ Damaged	% Crushed -	☐ Damaged	% Delaminating -
☐ Good Cond	% H_2O/Gouges -	☐ Good Cond.	% H_2O Stains -	☐ Good Cond.	% H_2O/Gouges-

Contact Potential	☐ High	☐ Moderate	☐ Low
Vibration Potential	☐ High	☐ Moderate	☐ Low
Air Erosion	☐ High	☐ Moderate	☐ Low
OVERALL POTENTIAL RATING	☐ Significant Damage	☐ Damage	☐ Minimal Damage

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PLM DATA SHEET

Project No.: 8903 Project Name: Leahi Hospital Date: 3/9/16

Material Description: Caulking — Friable / Non-friable

Sample No.	Location	% Asb.	Asb. Type
79A	Trotter build - perimeter WF / wall		
80A	" " " "		
81A	" " " "		
	no - glass seam glazing		

CONDITION: % Damaged: % Localized: % Distributed: Total Material Quantity:

Surfacing Material		TSI		Misc.	
☐ Sig. Damage	% Crumbling -	☐ Sig. Damage	% Gouge/Punct -	☐ Sig. Damage	% Crumbling -
☐ Damaged	% Delaminating -	☐ Damaged	% Crushed -	☐ Damaged	% Delaminating -
☐ Good Cond.	% H_2O/Gouges -	☐ Good Cond.	% H_2O Stains -	☐ Good Cond.	% H_2O/Gouges-

Contact Potential	☐ High	☐ Moderate	☐ Low
Vibration Potential	☐ High	☐ Moderate	☐ Low
Air Erosion	☐ High	☐ Moderate	☐ Low
OVERALL POTENTIAL RATING	☐ Significant Damage	☐ Damage	☐ Minimal Damage

Material Description: — Friable / Non-friable

Sample No.	Location	% Asb.	Asb. Type
82A	Trotter build, basement, perimeter WF/ glass		
83A	" " " "		
84A	" " " "		
	NO wall/WF caulk		
	a rubber -		

CONDITION: % Damaged: % Localized: % Distributed: Total Material Quantity

Surfacing Material		TSI		Misc.	
☐ Sig. Damage	% Crumbling -	☐ Sig. Damage	% Gouge/Punct -	☐ Sig. Damage	% Crumbling -
☐ Damaged	% Delaminating -	☐ Damaged	% Crushed -	☐ Damaged	% Delaminating -
☐ Good Cond.	% H_2O/Gouges -	☐ Good Cond.	% H_2O Stains -	☐ Good Cond.	% H_2O/Gouges-

Contact Potential	☐ High	☐ Moderate	☐ Low
Vibration Potential	☐ High	☐ Moderate	☐ Low
Air Erosion	☐ High	☐ Moderate	☐ Low
OVERALL POTENTIAL RATING	☐ Significant Damage	☐ Damage	☐ Minimal Damage

Material Description: — Friable / Non-friable

Sample No.	Location	% Asb.	Asb. Type

CONDITION: % Damaged: % Localized: % Distributed: Total Material Quantity:

Surfacing Material		TSI		Misc.	
☐ Sig. Damage	% Crumbling -	☐ Sig. Damage	% Gouge/Punct -	☐ Sig. Damage	% Crumbling -
☐ Damaged	% Delaminating -	☐ Damaged	% Crushed -	☐ Damaged	% Delaminating -
☐ Good Cond.	% H_2O/Gouges -	☐ Good Cond.	% H_2O Stains -	☐ Good Cond.	% H_2O/Gouges-

Contact Potential	☐ High	☐ Moderate	☐ Low
Vibration Potential	☐ High	☐ Moderate	☐ Low
Air Erosion	☐ High	☐ Moderate	☐ Low
OVERALL POTENTIAL RATING	☐ Significant Damage	☐ Damage	☐ Minimal Damage

98-029 Hekaha Street, Suite 21, Aiea, HI 96701 Phone: (808) 486-5881 Fax: (808) 486-5889 E-mail: eqi@enviroquestinc.com
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Lead
Laboratory Analytical Report

Appendix 2

Forensic Analytical LABORATORIES

Metals Analysis of Paints

EnviroQuest, Inc.
Steve Tanaka
98-029 Hekaha Street
Suite 21
Aiea, HI 96701

Client ID: 7104
Report Number: M169942
Date Received: 03/11/16
Date Analyzed: 03/16/16
Date Printed: 03/16/16
First Reported: 03/16/16

Job ID / Site: 8703; Leahi Hospital - window replacement
Date(s) Collected: 03/09/16

FALI Job ID: 7104
Total Samples Submitted: 24
Total Samples Analyzed: 24

Sample Number	Lab Number	Analyte	Result	Result Units	Reporting Limit*	Method Reference
8703-01L	LM121324	Pb	< 0.009	wt%	0.009	EPA 3050B/7420
8703-02L	LM121325	Pb	0.007	wt%	0.006	EPA 3050B/7420
8703-03L	LM121326	Pb	3.5	wt%	0.3	EPA 3050B/7420
8703-04L	LM121327	Pb	0.45	wt%	0.03	EPA 3050B/7420
8703-05L	LM121328	Pb	1.5	wt%	0.2	EPA 3050B/7420
8703-06L	LM121329	Pb	1.3	wt%	0.2	EPA 3050B/7420
8703-07L	LM121330	Pb	< 0.006	wt%	0.006	EPA 3050B/7420
8703-08L	LM121331	Pb	0.97	wt%	0.06	EPA 3050B/7420
8703-09L	LM121332	Pb	< 0.006	wt%	0.006	EPA 3050B/7420
8703-10L	LM121333	Pb	1.3	wt%	0.06	EPA 3050B/7420
8703-11L	LM121334	Pb	0.081	wt%	0.007	EPA 3050B/7420
8703-12L	LM121335	Pb	< 0.006	wt%	0.006	EPA 3050B/7420
8703-13L	LM121336	Pb	0.62	wt%	0.03	EPA 3050B/7420
8703-14L	LM121337	Pb	0.94	wt%	0.06	EPA 3050B/7420
8703-15L	LM121338	Pb	0.0027	wt%	0.0006	EPA 3050B/7420
8703-16L	LM121339	Pb	< 0.006	wt%	0.006	EPA 3050B/7420
8703-17L	LM121340	Pb	2.0	wt%	0.2	EPA 3050B/7420
8703-18L	LM121341	Pb	5.5	wt%	0.4	EPA 3050B/7420
8703-19L	LM121342	Pb	8.8	wt%	0.7	EPA 3050B/7420
8703-20L	LM121343	Pb	0.12	wt%	0.006	EPA 3050B/7420
8703-21L	LM121344	Pb	14	wt%	0.6	EPA 3050B/7420
8703-22L	LM121345	Pb	0.36	wt%	0.03	EPA 3050B/7420
8703-23L	LM121346	Pb	11	wt%	0.6	EPA 3050B/7420
8703-24L	LM121347	Pb	0.21	wt%	0.02	EPA 3050B/7420

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Forensic Analytical LABORATORIES

Metals Analysis of Paints

EnviroQuest, Inc.
Steve Tanaka
98-029 Hekaha Street
Suite 21
Aiea, HI 96701

Client ID: 7104
Report Number: M169942
Date Received: 03/11/16
Date Analyzed: 03/16/16
Date Printed: 03/16/16
First Reported: 03/16/16

Job ID / Site: 8703; Leahi Hospital - window replacement
Date(s) Collected: 03/09/16

FALI Job ID: 7104
Total Samples Submitted: 24
Total Samples Analyzed: 24

Sample Number	Lab Number	Analyte	Result	Result Units	Reporting Limit*	Method Reference

* The Reporting Limit represents the lowest amount of analyte that the laboratory can confidently detect in the sample, and is not a regulatory level. The Units for the Reporting Limit are the same as the Units for the Final Results.

Beatriz Hinojosa, Laboratory Supervisor, Rancho Dominguez Laboratory

2959 Pacific Commerce Drive, Rancho Dominguez, CA 90221 / Telephone: (310) 763-2374 (888) 813-9417 / Fax: (310) 763-8684

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MISCELLANEOUS BULK DATA SHEET

Project Name: Leahi hospital- window replacement

Location: "

Page: 1

Date: 3/9/16

Project No.: 8703

Turnaround Time: ☐<12 Hrs ☐24 Hrs ☐48 Hrs ☒3 Days ☐5 Days ☐Other:

Analysis:
- ☐TCLP Lead
- ☐TCLP RCRA 8
- ☒Total Lead
- ☐Micro ID (spore)
- ☐ _____
- ☐ _____

Sampling Media:
- ☐Bulk ☐Tape ☐Wipe
- ☐Soil ☐Vacuum ☐ _____
- ☐Swab ☐Water ☐ _____

	Sample #	Building	Int/ Ext	Flr.	Room	Component	Substrate	Color	% of Waste Stream	Area / Vol	Result
1	8703-01L	Young build, beige concrete wall/window sill, 5th floor									
2	02L	" , 5th floor, ext concrete wall at window, beige									
3	03L	" , " tan/brown window wood screen (ext)									
4	04L	" , white/green wood windn (Int)									
5	05L	Young build, beige/brown wood window system (Int and ext)									
6	06L	Young, 3rd flow ext brown wood window screen									
7	07L	" " beige and brown perimtr wood windows									

Sampled By:	Relinquished By/Date/Time: 3/10/10	Relinquished By/Date/Time	Analyzed By
Delivered to Lab By:	Received By/Date/Time: 11:05A Carrillo FE 3/11/16	Received By/Date/Time	Date Analyzed

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MISCELLANEOUS BULK DATA SHEET

Project Name: Leahi hospital - window replacement
Location: "

Page: 2
Date: 3/9/16
Project No.: 3907

Turnaround Time: ☐<12 Hrs ☐24 Hrs ☐48 Hrs ☑ 3 Days ☐5 Days ☐Other: ____

Analysis:
☐TCLP Lead
☐TCLP RCRA 8
☐Total Lead
☐Micro ID (spore)
☐ ____
☐ ____

Sampling Media:
☐Bulk ☐Tape ☐Wipe
☐Soil ☐Vacuum ☐ ____
☐Swab ☐Water ☐ ____

	Sample #	Building	Int/Ext	Flr.	Room	Component	Substrate	Color	% of Waste Stream	Area / Vol	Result
1	3903-08L	Tower Admin	, 2nd	,	lt brown	windows					
2	09L	"	"		beige concrete	wall	below window				
3	10L	Admin,	1st		brown	wood	window syst				
4	11L	"	"		lt brown	concrete	window sill				
5	12L	Admin	2nd,		white	wood window	system Int - same all floors.				
6	13L	"	3rd	,	white concrete	wall	window sill				
7	14L	Atherton	3rd floor,		lt blue	concrete w S	and wall below window				

Sampled By:	Relinquished By/Date/Time	Relinquished By/Date/Time	Analyzed By
[signature]	[signature] 3/10/16		
Delivered to Lab By:	**Received By/Date/Time**	**Received By/Date/Time**	**Date Analyzed**
	Carillo 3/11/16 11:05 Am		

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MISCELLANEOUS BULK DATA SHEET

Project Name: Leahi hospital – window replacement

Page: 3

Location:

Date: 3/9/16

Project No.: 3h07

Turnaround Time: ☐<12 Hrs ☐24 Hrs ☐48 Hrs ☑3 Days ☐5 Days ☐Other:

Analysis:
- ☐TCLP Lead
- ☐TCLP RCRA 8
- ☑Total Lead
- ☐Micro ID (spore)
- ☐ _____
- ☐ _____

Sampling Media:
- ☐Bulk ☐Tape ☐Wipe
- ☐Soil ☐Vacuum ☐ _____
- ☐Swab ☐Water ☐ _____

	Sample #	Building	Int/ Ext	Flr.	Room	Component	Substrate	Color	% of Waste Stream	Area / Vol	Result
1	3h03-15L	Atherton, 3rd	beige	corrik	WS						
2	16L	"	3rd	"	"	"	off-white				
3	17L	Atherton	2nd	Int	white	w	WF				
4	18L	"	"	ext	Brown	w	WF (por				
5	19L	Atherton,	Basemn	,	ext	brown	w WF				
6	20L ~~22L~~	"	"	"	ext	beig	Corrik WS				
7	21L	Trotter,	1st floor	–	brown	w	WF				

Sampled By:	Relinquished By/Date/Time: 3/10/16	Relinquished By/Date/Time	Analyzed By
Delivered to Lab By:	Received By/Date/Time: Camille Fite 3/10/16 11:05 AM	Received By/Date/Time	Date Analyzed

SEND ALL CORRESPONDENCE TO: _____ ☐FAX: 808.486.5889 ☐E-mail: eqi@enviroquestinc.com

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MISCELLANEOUS BULK DATA SHEET

Project Name: Leahi Hospital - window replacement

Location:

Page: 4

Date: 3/9/16

Project No.: 8703

Turnaround Time: ☐<12 Hrs ☐24 Hrs ☐48 Hrs ☐3 Days ☐5 Days ☐Other:

Analysis:
- ☐TCLP Lead
- ☐TCLP RCRA 8
- ☑Total Lead
- ☐Micro ID (spore)
- ☐
- ☐

Sampling Media:
- ☐Bulk ☐Tape ☐Wipe
- ☐Soil ☐Vacuum ☐
- ☐Swab ☐Water ☐

	Sample #	Building	Int/Ext	Flr.	Room	Component	Substrate	Color	% of Waste Stream	Area / Vol	Result
1	8703 22L	Trotter	1st,	beige concrete wall sill below window							
2	23L	"	basement,	wood below WF							
3	24L	" "		beige concrete WS/wall below window							
4											
5											
6											
7											

Sampled By: [signature]	Relinquished By/Date/Time: [signature] 3/10/16	Relinquished By/Date/Time	Analyzed By
Delivered to Lab By:	Received By/Date/Time: [signature] FE 3/11/16 11:05am	Received By/Date/Time	Date Analyzed

SEND ALL CORRESPONDENCE TO: ☐FAX: 808.486.5889 ☐E-mail: eqi@enviroquestinc.com

98-029 Hekaha Street, Suite 21, Aiea, HI 96701 Phone: (808) 486-5881 Fax: (808) 486-5889 E-mail: eqi@enviroquestinc.com

Photographs

Appendix 3

Photo #1: Young building. Metal windows with asbestos containing caulking.

Photo #2: Young building. Metal windows with asbestos containing caulking.

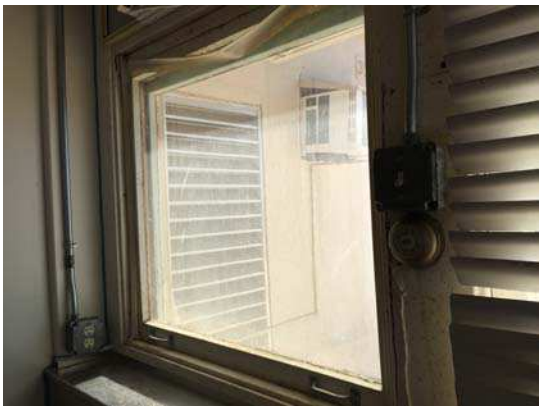


Photo #3: Young building. Wood windows with asbestos containing caulking.

Photo #4: Young building. Wood windows with non-asbestos containing glazing (interior of the frame).

Photo #5: Young building. Wood windows with asbestos containing caulking.

Photo #6: Young building. Wood windows with asbestos containing caulking.

EnviroQuest

PHOTOGRAPHIC LOG
WINDOW REPLACEMENT PROJECT
LEAHI HOSPITAL

Photo #7: Atherton building. Metal windows with asbestos containing caulking.

Photo #8: Atherton building. Wood windows with asbestos containing caulking.

Photo #9: Atherton building. Wood windows with asbestos containing caulking.

Photo #10: Atherton building. Wood windows with asbestos containing glazing (interior of the frame).

Photo #11: Administration building. Windows with asbestos containing caulking.

Photo #12: Atherton building. Wood windows with asbestos containing glazing (interior of the frame).

Photo #13: Administration building. Wood windows with asbestos containing caulking and glazing (interior of the frame).

Photo #14: Trotter building. Wood windows with non-asbestos containing caulking.

Photo #15: Trotter building. Wood windows with non-asbestos containing caulking.

Photo #16: Trotter building. Metal windows with non-asbestos containing caulking.

DIVISION 2 - SITE WORK

SECTION 02055 - SELECTIVE DEMOLITION AND REMOVAL

PART I - GENERAL

1.01 GENERAL REQUIREMENTS: Furnish all labor, materials, tools and equipment necessary to complete all removal work and surface preparation work as specified herein.

1.02 SPECIAL REQUIREMENTS:

A. The Contractor shall visit the site, examine the areas and note all existing conditions and extent of work involved for the complete removal and surface preparation work required.

B. The Contractor shall comply with pollution control regulations and safety code. See POLLUTION CONTROL Section 01577 also.

C. The project has been tested for hazardous materials including asbestos containing materials and lead-based paints. The report, Limited Inspection Report for Asbestos and Lead-Based Paint, prepared by EnviroQuest, Inc. is attached as part of these specifications. See Section 01715 – EXISTING CONDITIONS – ASBESTOS / LEAD / HAZARDOUS MATERIALS SURVEY.

PART 2 - PRODUCTS

2.01 MATERIALS:

A. Damaged surfaces or items shall be patched by the Contractor with materials which are equal or better in quality.

PART 3 - EXECUTION

3.01 GENERAL

A. All work shall be executed in an orderly and careful manner with due consideration for the remaining parts of the building.

3.02 REMOVAL WORK

A. Remove existing flooring, equipment, plumbing fixtures, furnishings, etc. , as indicated on the drawings and/or specified herein.

B. All dismantled materials having no salvage value as determined by the Architect or HHSC Representative shall become the property of the Contractor and shall be completely removed and hauled away from the premises. Contractor shall recycle all materials to be disposed off to the greatest extent possible.

3.03 SURFACE PREPARATION WORK

A. All surfaces to receive manufactured finishes shall be inspected by the manufacturer's representative as approved for installation of new materials. Should the manufacturer's representative find discrepancies in the preparation work, all such discrepancies shall be corrected at no additional cost to the project.

B. Contractor shall repair any damages occurring during the progress of the work.

3.04 PATCHWORK: All areas or surfaces damaged as a result of removal work shall be patched to match existing adjacent surfaces and/or areas to the satisfaction of the Architect.

3.05 TEMPORARY BARRICADES

A. The Contractor shall provide, erect and maintain safety barricades around the project areas during the execution of work under this contract including work done by other sections. At the discretion and approval of the Architect and/or HHSC Representative, alternative means to provide safety around the project area are acceptable.

B. Barricades shall be constructed from durable materials to provide necessary protection and security of the project area.

C. The barricades shall remain until final acceptance of the project or until the hazardous condition no longer remains and approval is given by the Architect and/or HHSC Representative for their removal.

3.06 CLEAN-UP

A. From time to time, as directed by the Architect and/or HHSC Representative, and at the completion of the removal work, remove from the site all rubbish, debris, fines, etc., accumulated from this work and leave the area neat and clean to the satisfaction of the Architect and/or HHSC Representative.

B. After the completion of the repair work and before the final acceptance of the project, the Contractor shall clean all areas of all rubbish, debris, fines, etc.

END OF SECTION

DIVISION 7 – THERMAL AND MOISTURE PROTECTION

SECTION 07900 – SEALANTS

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS: Furnish all labor, materials, tools and equipment necessary to complete all removal work and surface preparation work as specified herein.

1.02 GENERAL PROVISIONS

Except as otherwise indicated, sealants shall be provided to establish and maintain airtight, and weatherproof continuous seals on a permanent basis within recognized limitations of wear and aging for each application and type of sealant material. Provide at all joint locations where weather penetration is possible, where a weather-tight installation is required, and where indicated or required to finish the installation of two or more adjoining materials.

1.03 SUBMITTALS

A. Certificates of Compliance: Submit certificates from the manufacturers attesting that materials meet the specified requirements.

B. Manufacturers' Descriptive Data: Submit complete descriptive data for each type of material. Clearly mark data to indicate the type the Contractor intends to provide. Data shall state conformance to specified requirements. Data for sealant and calking shall include application instructions, shelf life, mixing instructions for multicomponent sealants, and recommended cleaning solvents.

C. Colors: Submit one sample of each color for each sealant and caulking type to verify that products match the adjacent finish colors. Where colors are not indicated, submit not less than 6 different samples of manufacturers' standard colors for selection.

1.04 DELIVERY AND STORAGE

Deliver materials to the job site in the manufacturers' external shipping containers, unopened, with brand names, date of manufacture, color, and material designation clearly marked thereon. Containers of elastomeric sealant shall be labeled as to type, class, grade, and use. Carefully handle and store all materials to prevent inclusion of foreign materials.

1.05 WARRANTY

The Contractor shall execute to the HHSC a 2-year written warranty after the Project Acceptance Date that the installation will be watertight and that any leaks which develop during that period which are not due to improper use or willful damage will be repaired at no cost to the HHSC. The guaranty shall provide the

following at no cost to the HHSC:

a. Repair of sealants as necessary to seal leaks which are attributable to faulty materials and/or workmanship.

b. Repair or replacement of damage to the building and/or its finishes, equipment and/or furniture when occasioned by such leaks.

PART 2 – PRODUCTS

2.01 MATERIALS

Products shall conform to the reference documents listed for each use. Color of sealant and calking shall match adjacent surface color unless specified otherwise. For ASTM C 920 sealants, use a sealant that has been tested on the type(s) of substrate to which it will be applied.

A. Interior Sealants: ASTM C 920, Type S or M, Grade NS, Class 12.5, Use NT. For use to seal general building construction joints, windows, doors, etc.

B. Exterior Sealants: For joints in vertical surfaces, provide ASTM C 290, Type S or M, Grade NS, Class 25, Use NT. For joints in horizontal surfaces, provide ASTM C 920, Type S or M, Grade P, Class 25, Use T. For use to seal general building construction joints, windows, doors, etc.

C. Floor Joint Sealant: ASTM C 920, Type S or M, Grade P, Class 25, Use T. Color of sealant shall be as selected.

D. Sanitary Sealant: ASTM C920, Type S, Grade NS, Class 25, Use NT, G and A. For use around plumbing fixtures and areas of high moisture. Single component acetoxy silicone sealant.

E. Primer for Sealants: Provide non-staining, quick-drying type and consistency recommended by the sealant manufacturer for the particular application.

F. Bond Breakers: Provide type and consistency recommended by the sealant manufacturer for the particular application.

G. Backstops: Provide glass fiber roving or neoprene, butyl, polyurethane, or polyethylene foams free from oil or other staining elements as recommended by the sealant manufacturer. Backstop material shall be compatible with the sealant. Do not use oakum and other types of absorptive materials as backstops.

H. Cleaning Solvents: Provide types recommended by the sealant manufacturer.

PART 3 – EXECUTION

3.01 SURFACE PREPARATION

Surfaces shall be clean, dry to the touch, and free from moisture, grease, oil, wax, lacquer, paint, or other foreign matter that would tend to destroy or impair adhesion. Where adequate grooves have not been provided, clean out grooves to a depth of ½ inch without damage to the adjoining work. No grinding shall be required on metal surfaces.

3.02 SEALANT PREPARATION

Do not modify the sealant by addition of liquids, solvents, or powders. Mix multicomponent elastomeric sealants in accordance with manufacturer's printed instructions.

3.03 APPLICATION

A. Elastomeric Sealant Installation Standard: Comply with the requirements of ASTM C 962 for the use of joint sealants as applicable to the materials, applications, and conditions required.

B. Backstops: Install backstops dry and free from tears or holes. Tightly pack the back or bottom of joint cavities with backstop materials to provide a joint of the depth as recommended by the sealant manufacturer.

C. Primer: Immediately prior to application of the sealant, clean out all loose particles from joints. Where recommended by sealant manufacturer, apply primer to joints in concrete masonry units, wood, and other porous surfaces in accordance with compound manufacturer's instructions. Do not apply primer to exposed finish surfaces.

D. Bond Breaker: Provide bond breakers to the back or bottom of joint cavities, as recommended by the sealant manufacturer for each type of joint and sealant used to prevent sealant from adhering to these surfaces. Carefully apply the bond breaker to avoid contamination of adjoining surfaces or breaking bond with surfaces other than those covered by the bond breaker.

E. Sealants: Provide sealant compatible with the material to which it is applied. Do not use a compound that has exceeded it shelf life or has become too jelled to be discharged in a continuous flow from the gun. Apply the compound in accordance with the manufacturer's instructions with a gun having a nozzle that fits the joint width. Force sealant into joints to fill the joints solidly without pockets. Sealants shall be uniformly smooth and free from wrinkles. Upon completion of sealant application, roughen partially filled or unfilled joints, apply sealant, and tool smooth as specified.

3.04 PROTECTION AND CLEANING

A. Protection: Protect areas adjacent to joints from compound smears. Masking tape may be used for this purpose if removed 5 to 10 minutes after the joint is filled.

B. Cleaning: Immediately scrape off fresh compound that has been smeared on masonry and rub clean with a solvent as recommended by the compound manufacturer. Upon completion of compound application, remove all remaining smears and stains resulting therefrom and leave the work in a clean and neat condition.

END OF SECTION

DIVISION 8 – DOORS AND WINDOWS

SECTION 08520 - ALUMINUM WINDOWS

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS: Furnish all labor, materials, tools and equipment necessary to complete all removal work and surface preparation work as specified herein.

1.02 QUALITY ASSURANCE

A. Qualifications of manufacturers: Use products produced by manufacturers regularly engaged in manufacture of aluminum projected windows of this type for a minimum of 5 years.

B. Qualification of workmen thoroughly trained and experienced in the necessary crafts and methods needed for proper performance of the work of this Section.

C. Performance:

1. AAMA Certified: AAMA/NWWDA, 101/I.S.2-08, "C" Commercial.

2. AAMA/WDMA 101/I.S.2/A440-08; ASTM E 283, Air .10 cfm/sf.; ASTM E 331.ASTM 547, Water 12.0 psf.

1.03 SUBMITTALS

A. Shop Drawings: Submit shop drawings for the Architect's review and do not fabricate prior to acceptance. Include calculations and certification on shop drawings stating that assemblies conform to local code requirements including wind loads and are designed to withstand all anticipated thermal expansion and contraction movements.

B. Tests: Test reports by independent testing laboratory verifying specified performance.

C. Samples: Submit samples of finishes including hardware to the Architect for acceptance.

1.04 PRODUCT HANDLING

A. Protection: Protect the materials of this section before, during and after installation. Protect the installed work and materials of all other trades.

B. Replacement: In the event of damage, immediately make all repairs and replacements necessary.

1.05 WARRANTY

A. Contractor shall warrant the installation to be installed securely per manufacturer's instructions and recommendations and shall remain weather-tight for a period of 2-years from the date of project acceptance.

B. Manufacturer's Warranty: Manufacturer agrees to repair or replace aluminum windows that fail in materials or workmanship within the specified warranty period.

1. Failures include, but are not limited to the following:

a. Failure to meet performance requirements.

b. Structural failures include excessive deflection, water leakage, condensation, and air infiltration.

c. Faulty operation of movable sash.

d. Deterioration of materials and finishes beyond normal weathering.

e. Failure of insulating glass.

2. Warranty Period:

a. Window: 10-years from date of project acceptance.

b. Glazing Units: 10-years from date of project acceptance.

c. Aluminum Finish: 10-years from date of project acceptance.

d. The surety shall not be held liable beyond 2-years from the date of project acceptance.

PART 2- PRODUCTS

2.01 MATERIALS

A. The products specified below are manufactured by EFCO to establish the minimal material, quality and performance requirements. The products of the other manufacturers are acceptable provided they meet or exceed the requirements of the specified product.

B. Fixed/Casement Windows: Projecting windows shall be Series 2700, dual glazed, combination fixed/outward projecting, w/ screens.

C. Sliding Windows: Sliding windows shall be Series 3550, dual glazed, high performance sliding windows, w/ screens.

D. Screens: Furnish windows manufacturer's standard aluminum roll-formed screen frame and glass fiber screen cloth. Frame color shall match window.

E. Finish: All windows shall be dark bronze anodized finish.

F. Glazing:

1. Glazing shall be Solarban 70XL solar control low-E tempered safety glazing, each face of dual glazing. 1/4" tempered safety Solar ban 70 on Cllr + 1/2" AS + 1/4" tempered safety Cllr.

2. Fixed spandrel transom or panels, where indicated, shall be 1" aluminum clad panels over high density tempered hardboard with Kynar finish. Color shall be selected by the Architect from manufacturer's full line of standard color selections.

PART 3 - EXECUTION

3.01 SURFACE CONDITION

A. Examine the substrate and conditions under which work of this section will be performed. Correct conditions detrimental to timely and proper completion of the work. Do not proceed until unsatisfactory conditions have been corrected.

3.02 INSTALLATION

A. Install windows as indicated on the drawings, square, plumb, and in true alignment. Surfaces shall be free from dents, buckles, dimples, or other defects.

B. Anchor frames and other items securely to continuous construction to result in a rigid installation and in accord with required safety factors. Where anchorage involves other work, provide setting drawings for proper installation.

C. Install hardware and adjust for proper operation. Seal metal to metal joints to prevent the entrance of water except at joints where frame members are designed to drain water to the exterior.

D. At juncture between frames and adjacent materials, seal entire perimeter on both sides. Use sealant and backing material as specified in Section 07900 SEALANTS.

E. Protection of Contact Surfaces: Protect dissimilar metals or with compatible materials such as concrete and other cementitious materials by painting contact surface with bituminous paint before installation or isolate with non-absorptive tape or gasket.

F. Expansion and Contraction: Install aluminum work so as to avoid objectionable distortion or overstress of parts and fastenings resulting from thermal expansion and contraction.

G. Glazing: Determine glass size and edge clearances by measuring actual openings. Set glass on glazing blocks to equally support full glass height and prevent any give or fracture.

3.03 PROTECTION

A. After erection adequately protect by masking with light motor oil, Vaseline or other accepted covering on all exposed parts of the work and finish, protecting against damage from grinding and polishing machines and/or plaster, lime, cement, acid or other harmful substances.

3.04 CLEANING

A. After completion of all other work in the vicinity of the aluminum window frames, remove all masking, oil, Vaseline and other covering used to protect the work and thoroughly clean the aluminum surfaces with soap and plain water or a petroleum product such as white gasoline, kerosene or distillant. Do not use abrasive cleaning agents.

END OF SECTION

DIVISION 9 - FINISHES

SECTION 09901 - PAINTING

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS: Furnish all labor, materials, tools and equipment necessary to complete all surface preparation and painting work as specified herein.

1.02 GENERAL PROVISIONS

A. Airless Spraying: Airless spray painting shall not be permitted on this project. All application shall be by brush or roller.

B. Application: The Contractor shall strictly conform with all Manufacturer's written instructions and recommendations for all material application.

C. Right of Rejection: The HHSC Representative shall have the right to reject all work which is not in compliance with the plans and specifications. Rejected work shall be redone at no cost to the Hospital.

D. All materials shall have low or no volatile organic compounds (VOC). The HHSC Representative reserves the right to stop all and any application work and the use of materials emitting offensive odors.

1.03 SUBMITTALS

Submit in accordance with SECTION 01300 – SUBMITTALS.

A. Schedule of Finishes

1. 4 sets of proposed painting finish schedule shall be submitted to the Engineer for approval. The schedule shall indicate the wet film thickness (mils) at which the proposed paints/coatings will be applied that are necessary to achieve the final dry film thickness indicated on the Schedule of Finishes under Section 2.02.

B. Color Samples: It is the intent for all painting required in the section to match the existing adjoining painted surfaces as close as possible in color and finish. Therefore, samples shall not be required.

D. Guaranty: 3 copies of a written guarantee shall be submitted to the HHSC Representative.

1.04 GUARANTY

A. The Contractor shall guarantee that the work performed under this section conforms to the contract requirements and is free of any defect of material or workmanship performed by the Contractor. Such guarantee

shall continue for a period of 2 years from the date of project acceptance during which period the Contractor shall remedy at his own expense any such failure to conform or any such defect.

B. The HHSC Representative shall notify the Contractor in writing within a reasonable time after discovery of any failure or defect.

C. Should the Contractor fail to remedy any failure or defect described in Paragraph A above within 10 working days after receipt of notice thereof, the HHSC Representative shall have the right to repair or otherwise remedy such failure or damage at the Contractor's expense.

1.05 SPECIAL REQUIREMENTS

A. Codes

1. The Contractor shall comply with the State OSHL (Occupational Safety and Health Law) and all pollution control regulations of the State Department of Health.

B. Protection

1. Persons

a. The Contractor shall take all necessary precautions to protect occupants, staff and public from injury.

b. The Contractor shall provide, erect and maintain safety barricades around scaffolds, hoists and wherever Contractor's operations create hazardous conditions in order to properly protect the students, faculty, staff and public.

2. Completed Work: The Contractor shall provide all necessary protection for wet paint surfaces.

3. Protective Covering: The Contractor shall provide and install protective covering over furniture, equipment, floor and other areas that are not scheduled for treatment. Protective covering shall be clean sanitary drop cloth or plastic sheets. Paint applied to surfaces not scheduled for treatment shall be completely removed and surfaces shall be returned to original condition.

4. Safeguarding of Property: The Contractor shall take whatever steps may be necessary to safeguard his work and also the property of the Maluhia Hospital 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 and for losses to work or property caused by his or his employee's negligence.

Should surface preparation work include power-washing of the existing surface, the Contractor shall take all necessary precautions to control water run-off. Failure to take this precaution shall be grounds to stop the work of the project until a satisfactory solution is provided. Costs for this action shall be borne by the Contractor.

5. Fire Safety: The Contractor shall direct his employees not to smoke in the vicinity and exercise precautions against fire at all times. Waste rags, plastic (polyester sheets), empty cans, etc. shall be removed from the site at the end of each day.

C. Storage Area for Materials: No paint material, empty cans and paint brushes and rollers may be stored in buildings, but shall be stored in separate storage facilities away from the buildings. The Contractor may furnish a job site storage facility. Such facility shall comply with requirements of the local Fire Department. The storage area shall be kept clean and facility shall be locked when not in use or when no visual supervision is possible.

D. Sequence of Operations: The sequence of operations shall divide the surfaces into work areas and present a schedule for:

1. Surface preparation and spot prime.

2. Prime coat.

3. First finish coat.

4. Second finish coat.

E. Protection, Removal, Trimming of Landscaping: The Contractor shall coordinate with the University on the location of scaffolding, platforms, etc., within the landscaping surrounding the buildings. The Contractor shall be responsible for all trimming and removal or relocation of landscaping as necessary. The Contractor shall be responsible for protection of all landscaping to remain.

1.06 AREAS TO BE PAINTED

A. Surfaces to be Painted

1. Interior:

a. All new exposed fabrications not prefinished, new mechanical piping, new electrical conduits, and touch-up of existing surfaces for the work of this project.

2. All questions regarding the extent of work shall be addressed to the HHSC Representative for clarification. The Contractor's bid shall assume, that unless noted otherwise, all questionable surfaces shall be assumed to be painted unless directed by the HHSC Representative otherwise.

B. Work Incidental to Painting

1. Other items as noted in the drawings or herein specified.

PART 2 - PRODUCTS

2.01 MATERIALS

The Contractor shall be responsible for furnishing to the University quantities of each paint material required. The paint materials will generally meet the following requirements.

A. Asbestos Prohibition: No asbestos containing materials or equipment shall be used under this section. The Contractor shall ensure that all materials and equipment incorporated in the project are asbestos-free.

B. Lead Prohibition: All paints shall be lead-free.

C. Mercury Prohibition: All paint shall be mercury- free.

D. Chromate Prohibition: All paint shall be free of zinc-chromate and/or strontium-chromate.

E. Cadmium Prohibition: All paint shall be cadmium free.

F. All materials shall be low or no VOC and shall not produce offensive odors unless otherwise specified. Should offensive odors be produced, the contractor shall immediately stop and cease to use such product until an acceptable ventilation system can be provided by the contractor to remove such offensive odors. Provide ventilation in conformance with manufacturer's recommendations. If a ventilation system is required, the cost of such measures shall be borne by the contractor.

G. Paints shall be as manufactured by Benjamin Moore, Glidden Professional, Sherwin Williams, Pittsburg Paint or pre-approved equal.

H. Thinning of paint shall be done using material recommended by the manufacturer. Mix proprietary products according to manufacturer's printed specifications. Compound thinner, mineral oil, kerosene, refined linseed oil, or gasoline shall not be used for thinning.

I. Except for metal primers all paint shall contain the maximum amount of mildewcide per gallon of paint permitted by the mildewcide manufacturer without adversely affecting the quality of the paint.

2.02 SCHEDULE OF FINISHES

A. The Schedule of Finishes is made for the convenience of the Contractor and indicates the types and quality of finishes to be applied to the surfaces.

B. Any existing painted surface not specifically noted in the finish schedule shall be finished to match adjoining work.

C. Additional paint materials not included in the Schedule of Finishes, however, required for the conditions of the site, shall be provided by the Contractor for a complete paint/repaint project.

SCHEDULE OF FINISHES

Interior System: (Products listed below are manufactured by Glidden Professional unless noted otherwise).

A. Concrete: Provide the following finish systems over interior concrete:
   1. High Performance Architectural Latex, MPI INT 3.1A-G5
      a. Primer: (MPI #149)
         1000 Glidden Professional High Hide Wall Interior Primer-Sealer
      b. Intermediate: (MPI #54).
         1407V Glidden Professional DIAMOND 350 Interior Semi-Gloss Paint
      c. Topcoat: (MPI #54).
         1407V Glidden Professional DIAMOND 350 Interior Semi-Gloss Paint

PART 3 - EXECUTION

3.01 WORKMANSHIP

A. Apply all materials in strict accordance with the manufacturer's printed instructions with paint evenly spread and well applied with no drops, runs, or sags. Do not apply paint on wet or damp surfaces nor until preceding coat of paint is thoroughly dry, and in the case of woodwork, well sanded. Particular attention shall be made to sanding between finish coats. All finishes are intended to thoroughly cover in the number of coats listed, using the quality of paint specified. If paints are thinned, apply sufficient additional coats as required to provide full and complete coverage, with no shadows, spots, streaks, voids, color bleed-through, or other defects.

B. Identification of coatings: Each coat shall be tinted a slightly different shade from the preceding coat so that it can be readily identified. Finish coat shall match approved sample for each portion of work.

C. All surfaces adjacent to areas being finished shall be protected and left clean of paints, stains, etc. Clean drop cloths shall be used until completion of job.

D. All mixing shall be done outside the building.

E. All waste materials shall not be left in or near the building but shall be stored in proper metal containers.

F. Take all necessary precautions to prevent or minimize dust from surface preparation work from becoming airborne and spreading beyond the immediate work area. If directed by Maluhia Hospital's representative, provide a dust barricade around the work area at no additional cost to Maluhia Hospital.

3.02 PREPARATION OF SURFACES

A. The painting contractor shall be wholly responsible for the finish of his work and shall not commence any part of it until surfaces are in proper condition. If painting contractor considers any surfaces unsuitable for proper finish of his work, he shall notify the General Contractor of this fact and he shall not apply any material until the unsuitable surfaces have been made satisfactory. Major defects shall be restored by the proper trades. In general, follow paint manufacturer's directions for surface preparation for the paint to be applied.

B. All surfaces:

1. All surfaces shall be free of all contaminants, including oils, greases dirt, grime, loose paint, chalk, imbedded contaminants, rust, mildew and/or any surface contaminants that will impede the proper adhesion and appearance of the finishes to be applied.

2. Remove surface "chalk" by a soap and water scrubbing. Rinse thoroughly.

3. Existing surfaces, where touch-up is required, to which new paint is to be applied shall be tightly bonded to the subsurface.

4. Remove all mildew by scrubbing with a commercial mildew wash formulated for this purpose such as Jomax or pre-approved equal. Apply per manufacturer's written instructions and adhere to all cautions. Allow 15 – 20 minutes dwell time before rinsing. If necessary, scrub surfaces to remove mildew and dirt. Work from the top to bottom. Thoroughly rinse with clean, fresh water and allow surfaces to dry thoroughly before proceeding. Repeat above process if necessary to insure removal of all milder contamination.

C. Scuff-sand glossy surfaces scheduled for painting to insure proper adhesion.

D. Unprimed galvanized metal shall be washed with a solution of chemical phosphoric metal etch and allowed to dry.

E. All metal surfaces shall be made clean and free of any defects or condition that may produce unsatisfactory finish.

3.03 PAINT APPLICATION

A. General : All materials shall be applied in accordance with the manufacturer's specifications and the finished surfaces shall be free from runs, sags, drops, ridges, waves, laps, streaks, brush marks and variations in color, texture and finish (glossy or dull). The coverage shall be complete and each coat shall be so applied as to produce a film of uniform thickness. No paint materials shall be applied until the preceding coat is thoroughly dry and approved.

B. Application: Application shall be by brush or roller only. Paint coating shall be dressed down in one direction.

C. Colors: Each coat shall be tinted a different shade from the preceding coat. Colors shall generally match the existing building colors or as selected by the HHSC Represenatative.

3.05 PROTECTION OF PROPERTY

The Contractor shall be responsible for condition of work area in his charge. He shall protect adjacent work and materials from soiling or damage as well as his own. The storage and handling of paints and thinners shall be in accordance with the safety provisions and codes covering such handling and storage.

3.06 INSPECTION

All areas shall be provided for inspection of the work by the Engineer at any time. Any work not conforming to these specifications shall be cleaned off, and repainted at the expense of the Contractor.

3.07 MISCELLANEOUS

A. Clean-up

1. During the progress of the work, all debris, empty crates, waste, drippings, etc. shall be removed by the Contractor and the grounds about the areas to be painted shall be left clean and orderly at the end of each work day.

2. Upon completion of the work, staging, scaffolding, containers and all other debris shall be removed from the site. All paint, shellac,

oil, or stains splashed or spilled upon adjacent surfaces not requiring treatment (hardware, fixture, floor, glass) shall be removed and the entire job left clean and acceptable.

END OF SECTION

DIVISION 13 - SPECIAL CONSTRUCTION

SECTION 13281 - ASBESTOS ABATEMENT

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

A. The General Instructions to Bidders, the General Conditions of Construction Contracts, and Special Provisions preceding these specifications shall govern this section of the work.

1.02 DESCRIPTION OF WORK

A. Furnish all labor, materials, equipment, and services, necessary to carry out the safe removal and disposal of asbestos-containing material in compliance with these specifications, EPA, OSHA, State of Hawaii regulations, and any other applicable Federal and State regulations. Whenever there is a conflict or overlap of the above references, the most stringent shall apply. The asbestos work at the Leahi Hospital shall generally include:

1. Young Building: Removal and disposal of caulking at all windows scheduled for replacement as identified in the Project Drawings. Asbestos containing caulking is located on all metal and wood windows. The caulking shall be completely removed from the window frames and down to the wall structural substrate.

2. Young Building: Removal and disposal of caulking at metal glass door scheduled for replacement as identified in the Project Drawings. The caulking shall be completely removed from the door frame and down to the wall structural substrate.

3. All work is to be completed when project areas are vacant

4. Contractor to coordinate all work with the Architect and/or HHSC Representative, General Contractor and the Qualified Consultant. Contractor is responsible to satisfy himself as to the total extent of all work, including to but not limited to the quantity, location, thickness, layers, accessibility, etc. of all material prior to commencement of any work.

B. In general, the principal items of the asbestos removal work shall be as follows:

1. Worker Protection

2. Decontamination Enclosure System

3. Preparation of Work Area

4. Removal of asbestos-containing materials

5. Removal of protective sheeting

6. Disposal

C. Cleaning shall include areas within and immediately around the work area affected by the abatement work and all areas contaminated by the Contractor's work.

D. The asbestos abatement work shall include removal of all asbestos-containing materials within the work area as specified herein and noted on the drawing.

E. Contractor shall comply with all regulations pertaining to asbestos removal. If there is a conflict with the specifications, the more stringent requirement shall apply.

1.03 COORDINATION WITH OTHER SECTIONS

A. Prior to commencement of work, an annotated description of all existing damaged and missing items shall be submitted to the Architect and/or HHSC Representative. It will be the Contractor's responsibility to repair and/or replace to the Architect and/or HHSC Representative'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.

1.04 SUBMITTALS PRIOR TO WORK:

A. Final payment will not be made until copies of all submittals have been furnished to and accepted by the Architect and/or HHSC Representative. Submit electronic copy of the submittal package, no later than 10 consecutive working days from award notice, which will include the items listed below.

B. Notices: As early as possible but prior to commencement of work, as regulated by each agency and before commencement of any on-site project activity, send a courtesy 10-day notice in accordance with 40 CFR Part 61.145 of Subpart M, of the proposed asbestos abatement work with copies to the Architect and/or HHSC Representative and to the following agency:

State of Hawaii, Department of Health, "Notification of Demolition and Renovation" form. Send to: State of Department of Health, Indoor and Radiological Health Branch, 99-945 Halawa Valley Street, Aiea, Hawaii 96701.

C. Permits & Licenses: Copies of all permits, licenses (C-19) and arrangements for removal, transportation and disposal of asbestos-containing materials and waste water.

D. Insurance: Proof of insurance for Workman's Compensation and General Liability which covers asbestos, lead, and pollution.

E. Manufacturer's Data: Copies of manufacturer's specifications, installation instructions and field test procedures for each material and all equipment related to asbestos handling and abatement and include other data as may be required to show compliance with these specifications and proposed uses.

F. Samples: Samples of the following items for approval prior to ordering materials:

1. Surfactant: copies of manufacturer's literature including all laboratory data, mixing and application instructions.

2. Tapes and Adhesives: copies of manufacturer's literature including all laboratory data.

3. Warning Labels and Signs: copies of examples of all required signage.

4. Protective Clothing: copies of manufacturer's literature on all protective clothing and one sample of each item which will be returned to the Contractor.

5. Respirator Equipment: copies of manufacturer's literature on all respirator equipment and one sample of each item which will be returned to the Contractor.

6. Asbestos Encapsulant(s): copies of manufacturer's literature including all laboratory data, application instructions.

G. Work Plan: Submit a project Work Plan for the asbestos-containing material disturbance work written and signed by the Contractor's State of Hawaii, Department of Health certified Asbestos Project Designer. The Contractor shall also provide detailed information concerning:
   1. Preparation of the work area.
   2. Personal protective equipment including respiratory protection and protective clothing.
   3. Decontamination procedures for the personnel who may be exposed to asbestos.
   4. Handling and disposal methods and procedures to be used.
   5. Required air monitoring procedures and sampling protocols.
   6. Procedures for final cleanup.
   7. A sequence of work and performance schedule in coordination with other trades.
   8. Emergency procedures.

H. Shop Drawings: Submit shop drawings for the following items as a minimum:
   1. Descriptions of any equipment to be employed not discussed in this section.
   2. Security provisions, if any, in and around the project area.
   3. Outline of work procedures to be employed.
   4. Location of construction barriers.
   5. Location of waste dumpster.
   6. Staging of the work, the sequence.
   7. Entrances and exits to the work place.
   8. Location and construction of worker decontamination units.
   9. Water filtration system for all contaminated water. Description of water disposal and copy of water disposal permit from the City & County of Honolulu, Environmental Services, Division of Environmental Quality, *Temporary Industrial Wastewater Discharge* Permit.
   10. Proposed method of attaching plasticizing (polyethylene sheeting) shall be approved in advance to minimize damage to equipment and surfaces. Method of attachment may include any combination of duct tape or other approved waterproof tape, furring strips, spray glue, staples, nails screws or other effective procedures capable of sealing adjacent sheets of polyethylene sheeting and capable of sealing polyethylene to dissimilar finished or unfinished surfaces both under wet and dry conditions (including amended water).
   11. Proposed method of patching and repairing all damage to existing finishes from the attachment of polyethylene sheeting (as applicable).

I. Documentation for Instruction: Submit documentation that each and every individual, including foremen, supervisors, and other company personnel or agents and any other individual who may be exposed to airborne asbestos fibers, who may be responsible for any aspect of abatement activities, or who is allowed or permitted to enter areas where such exposure may occur has currently attended and passed the Abatement Worker and/or Abatement Contractor/Supervisor course whichever is relevant to that workers responsibilities as specified in 40 CFR Part 763, “Asbestos Materials in Schools”. These courses shall be EPA-approved or approved by a State Accreditation Program in the most current listing of the Federal Register. No worker shall be allowed on site if they are found to have either an expired accreditation certificate or does not comply with the requirements set forth in 40 CFR Part 763 on training. All workers shall be certified for asbestos related work in accordance with Department of Health, Chapter 11-504, Hawaii Administrative Rules, *Asbestos Abatement Certification Program*. The Contractor shall be responsible for keeping the documentation up to date and subsequent submittals to the Architect and/or HHSC Representative before any additional employee or individual, not currently on the list, is allowed within the project site.

Submit completed and signed "Employee Acknowledgment of Instruction and Release" forms. A sample "Employee Acknowledgment of Instruction and Release" form is provided at the end of this section.

J. Documentation from Physician: Submit 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, document that all individuals permitted within the project site have received medical monitoring or had such monitoring made available to them as required in OSHA 29 CFR 1926.1101. The Contractor must be aware of and provide information to the examining physician about unusual conditions in the workplace 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.

K. 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.

L. 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 Architect and/or HHSC Representative.

M. Emergency Planning Procedures: Contractor shall submit for review and acceptance by the Architect and/or HHSC Representative, an emergency plan prior to abatement initiation.
   1. Emergency procedures shall be in written form and prominently posted adjacent to the Worker Protection Notices specified hereinafter. Everyone prior to entering the work area must read and sign these procedures to acknowledge receipt of emergency exits and emergency procedures.

   2. Emergency planning shall include notification of police, fire, and emergency medical personnel of planned abatement activities work schedule, and layout of the work area, particularly barriers that may affect response capabilities.

3. Emergency planning shall include considerations of fire, explosion, toxic atmospheres, electrical hazards, slips, trips and falls, and heat related injury. Written procedures shall be developed and employee training procedures shall be provided in Contractors plan.

1.05 SUBMITTAL AFTER WORK IS COMPLETED

A. At the completion of the work, a final report shall be prepared by the Contractor for acceptance by the Architect and/or HHSC Representative. Electronic copy of the report shall be submitted and shall include the items listed below.

B. The project name, Abatement Contractor, Abatement Contractor license number, notification form to the Hawaii Department of Health and EPA, work duration, material removed, respiratory protection employed, asbestos waste manifest, total quantity of waste, employee exposure air sample results, and results of the most current PAT round results for the laboratory or laboratories conducting the employee exposure air sample analysis.

C. Certification of the Abatement Contractor's employees.

D. Visitor/Worker Entry Log: The daily log of all personnel including the Contractor's employees and agents who enter the work area while asbestos abatement operations are in progress, until final clearance is received that the work area is asbestos free. The log shall contain the listed information as a minimum.
   1. Date of visit/worker entry
   2. Visitor/Worker'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

E. A statement signed by the Asbestos Abatement Contractor that all asbestos abatement and disposal was completed in compliance with this specification, Federal and State regulations, and the approved Work Plan.

1.06 PRODUCT HANDLING

A. 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 Architect and/or HHSC Representative. 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.

1.07 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, employee's of subcontractors, the Architect and/or HHSC Representative, State and local inspectors 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 Architect and/or HHSC Representative and any such entry shall be reported immediately to the Architect and/or HHSC Representative by the Contractor.

2. A Visitor/Worker Entry Log shall be maintained.

3. The Contractor shall have control, subject to approval of the Architect and/or HHSC Representative, 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, HIOSH (State of Hawaii), 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 protective covering on an "as required" or "upon request" by the Qualified Consultant. Protective covering shall be clean plastic sheets minimum thickness of 6-mil.

D. Safeguarding of Property: The Contractor shall take whatever steps necessary to safeguard his work and also the property of the State 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.

1.08 ABBREVIATIONS

A. ANSI: American National Standards Institute, Inc.

B. CFR: Code of Federal Regulations

C. HIOSH: Division of Occupational Safety and Health, Department of Labor and Industrial Relations, State of Hawaii

D. EPA: U.S. Environmental Protection Agency

E. NESHAP: National Emission Standards for Hazardous Air pollutants

F. NIOSH: National Institute for Occupation Safety and Health

G. OSHA: Occupational Safety and Health Administration

1.09 GENERAL REQUIREMENTS

A. Contractor shall examine and have at all times in his possession at his office (one copy) and in view at each job site office (one copy) a current issue of the following publications:
   1. State of Hawaii, Department of Health, Title 11, Chapter 501-1, Asbestos Requirements

   2. State of Hawaii, Department of Health, Title 11, Chapter 501-2, Asbestos Containing Materials in Schools

   3. State of Hawaii, Department of Health, Title 11, Chapter 501-4, Asbestos Abatement Certification Program

4. Title 29, Code of Federal Regulations, Section 1910.134 - General Industry Standard for Respiratory Protection, Occupational Safety and Health Administration (OSHA), U.S. Department of Labor

5. Title 29, Code of Federal Regulations, Section 1926.1101 - Asbestos, Construction Industry, Occupational Safety and Health Administration (OSHA), U.S. Department of Labor

6. Title 29, Code of Federal Regulations, Section 1910.2 - Access to Employee Exposure and Medical Records, Occupational Safety and Health Administration (OSHA), U.S. Department of Labor

7. Title 29, Code of Federal Regulations, Section 1910.1200 - Hazard Communication, Occupational Safety and Health Administration (OSHA), U.S. Department of Labor

8. Title 40, Code of Federal Regulations, Part 61, Subparts A and M (Revised Subpart B), National Emission of Standards for Hazardous Air Pollutants, U.S. Environmental Protection Agency (EPA)

9. Guidance for Controlling Asbestos-Containing Materials in Buildings, EPA 560/5-85-024 (Purple Book), U.S. Environmental Protection Agency (EPA)

10. 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)

11. Title 29, Code of Federal Regulations, Section 1910.145 Specifications for Accident Prevention, Signs and Tags, Occupational Safety and Health Administration (OSHA), U.S. Department of Labor

12. ANSI Z88.2-80 Practice for Respiratory Protection

13. EPA, Final Response to the Asbestos Hazard Emergency Response Act (AHERA), 40 CFR, Part 763, Subpart E

B. The Contractor shall comply with the above requirements and any applicable State and City & County regulations. Where conflict or any inconsistency among requirements or with this specification exists, the more stringent requirements shall apply. Ignorance of the above requirements and any applicable State and City & County regulations resulting in additional cost to the Contractor shall be solely the Contractor's responsibility.

C. All regulations shall govern over these specifications, except that any more stringent specification 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 specification and/or regulations should be directed to the Architect and/or HHSC Representative.

D. Whenever approval of the Architect and/or HHSC Representative is required prior to proceeding with other work, the following shall be complied with:
   1. The Contractor shall allow the Architect and/or HHSC Representative 72 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 for inspections. The name of the designated person shall be submitted in writing to the Architect and/or HHSC Representative prior to

commencing with the work. Request from any other person will not be considered an official request.

1.10 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 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 stated 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 Architect and/or HHSC Representative, the Qualified Consultant, 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. Fixed Object: A unit of equipment or furniture in the work area which cannot be removed from the work area without dismantling.

G. Friable Asbestos: Asbestos containing material which can be crumbled to dust, when dry, under hand pressure.

H. HEPA Filter: A High Efficiency Particulate Absolute filter capable of trapping and retaining 99.97% of asbestos fibers greater than 0.3 micron in length.

I. HEPA Vacuum Equipment: Vacuuming equipment that utilizes a High Efficiency Particulate Absolute (HEPA) filter.

J. Surfactant: A chemical wetting agent added to water to improve penetration, thus reducing the quantity of water required for a given operation or area.

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 in to the material and binding its components (penetrating encapsulant). Selected product shall be compatible with the existing finishes including wood, metal, and plastic.

L. Qualified Consultant: Consultant hired by the HHSC who will perform air monitoring and inspection during abatement work and shall have the authority to initiate engineering controls. The Qualified Consultant will be accredited as a State of Hawaii Department of Health accredited Asbestos Project Monitor.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Plastic Sheeting: Minimum thickness is 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; red or NATO orange tape, minimum 2 inches wide for exit arrows; and double faced foam tapes, by Nashua, 3-M, Arno, or approved equal.

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 one 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. Warning Labels and Signs: As required by OSHA regulations 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 Architect and/or HHSC Representative.

G. Protective Clothing: As specified hereinafter. 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.

H. Post-Removal Encapsulation: The encapsulant shall 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 in to the material and binding its components (penetrating encapsulant) and shall be compatible with the existing finishes including wood, metal, and plastic.

I. Other Materials: Provide all other materials, such as, but not limited to lumber, plywood, nails, fasteners, metal studs, hardware, foam sealants, and caulking 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. Air Purification Equipment: High Efficiency Particulate Absolute (HEPA) filtration systems.

D. Paint/Encapsulant Sprayer: Airless type.

E. Other tools and equipment as necessary.

2.03 PERSONNEL PROTECTION REQUIREMENTS

A. The contractor acknowledges he alone is responsible for instruction and for enforcing personnel protection requirements and that these specifications provide only a minimum acceptable standard.

B. Provide workers with sufficient sets of 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. Protective clothing shall be worn by all personnel within the work area from the start of the removal and post-removal encapsulation work until the work area has received its final clearance.

C. Insulated non-skid rubber boots or an approved equal shall be required for all individuals entering the work area. Protective full body clothing without elastic at sleeves and legs shall require separate elastic or taped protection to seal the opening. Visitors shall be provided full body protective clothing.

D. No visitors shall be allowed in work areas, except as authorized by the Architect and/or HHSC Representative. Visitors must supply their own respiratory protection and show proof training in accordance with DOH 11-501-504.

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 coveralls, footwear, gloves and headgear including hard hat when required and insulated rubber boots or equal. The Contractor shall include in his Bid the expense of a total of 4 changes of clothing 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 Architect and/or HHSC Representative.

E. All electrical systems used for asbestos abatement operations shall as a minimum be protected with "Ground Fault Circuit Interrupters" selected and installed in strict accordance with the manufacturer's instructions, the National Electric Code and all other pertinent codes.

F. Additional safety equipment (e.g. hardhats meeting the requirements of ANSI Z-89.1-2009, eye protection meeting the requirements of ANSI Z87.1-2015, safety shoes meeting the requirements of ANSI Z41.1-1991, disposable PVC gloves), as necessary, shall be provided to all workers and authorized visitors.

PART 3 - EXECUTION

3.01 SEPARATION OF WORK AREAS FROM NON WORK AREAS

A. Establish asbestos control area via use of asbestos construction flagging at both interior and exterior sides of the work areas.

B. Penetrations: all openings within the work areas shall be sealed with two layers of 6-mil poly sheeting from the interior side and secured with duct tape, as applicable.

C. Inspection: The Contractor shall inspect all barriers at least twice a day (once prior to the start of each day's abatement operations and following the day's abatement operations). Document the inspections and observations in a daily project log.

3.02 DECONTAMINATION ENCLOSURE SYSTEMS

A. General: The Contractor shall construct the decontamination enclosure system or use portable units acceptable to the Qualified Consultant and as identified in the approved asbestos abatement work plan.

B. Worker Protection Notice: Post the following notice in each Clean Room and Equipment Room:
   1. Workers and authorized personnel, in order to enter the work area, shall:
      a. Remove all clothing, unless it is to remain in the Equipment room for eventual disposal.

      b. Don the appropriate respiratory protection, follow all training procedures and manufacturer's instructions. Check the equipment for proper operation before proceeding any further.

      c. Don protective clothing (full body coveralls, gloves, boots, headgear etc.) after donning respirator.

   2. All workers and authorized personnel, in order to leave the work area, shall:
      a. Remove gross (visible) contamination from themselves and their equipment. HEPA vacuum off dust in the work area.

      b. Enter the Equipment Area and, keeping your respirator in place, remove all protective clothing, including full body coveralls, gloves, boots, and headgear. Place contaminated clothing in the bag(s) provided.

      c. Proceed to the Clean Area: Get dressed and return respirator to its proper place.

      d. No smoking, eating, drinking shall be allowed inside the work area or the decontamination area.

3.03 WASTE WATER FILTERING SYSTEM

A. Prior to any waste water disposal into the sanitary sewer system, the Contractor shall be responsible for obtaining from the City and County of Honolulu, Environmental Services, Division of Environmental Quality, *Temporary Industrial Wastewater Discharge* Permit.

B. Filter: All waste water that will be discharged into the sanitary sewer system shall be treated as contaminated with asbestos and shall be filtered using two in-line filter cartridges with 2" inlets and outlets. The outlet of the first cartridge shall connect to the inlet of the second cartridge. The first cartridge shall contain six 100-micron prefilters and a second cartridge shall contain six 0.5-micron filters or equal staging according to type filtering unit.

C. One spare set of 100-micron prefilters shall be maintained at the site at all times to replace prefilters during cleaning. Maintain at least one set of 0.5-micron or equal filters at the site at all items form replacement as necessary.

3.04 COMMUNICATIONS

A. Provide a communications system suitable to monitor all activities within the work area and to readily transfer messages from one location to another.

3.05 WORK AREA PREPARATION

A. Work by the Asbestos Abatement Contractor:
   1. Step 1:
      a. Posting of Danger Signs: Post danger signs in and around the work area to comply with 29 CFR 1926.1101 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.

      b. Critical Seals (barriers): Seal all interior penetration and/or openings within the regulated work areas with plastic sheeting. Plastic sheeting is to remain in place for the duration of the asbestos abatement or until specified by the QC.

      c. Install another barrier or isolation method which prevents the migration of airborne asbestos and debris from the regulated work area.

      d. 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 and locked (as applicable).

   2. Step 2:
      a. Provide Decontamination Units where appropriate: Personnel Decontamination Unit(s) specified hereinafter shall be required.

   3. Step 3:
      a. Plasticizing: Objects which may be contaminated during abatement or difficult to clean shall be taped and sealed in a minimum of 6-mil polyethylene plastic sheeting. A minimum of 2 layers of 6-mil polyethylene plastic sheeting shall be used for preparation of critical barriers and containments.

      b. When sealing (plasticizing), plastic sheet shall be protected against damages by sharp edges, projections, etc. Provide 2" squares of duct tape at all sharp projections prior to applying plastic sheet to prevent puncture and tearing.

      c. NOTE: Combining lower mil thickness sheets to total the minimum mil thickness is not acceptable.

      d. Install a poly sheeting splashguard covering all walls within the work area, extending from the top of cove base to be removed to four feet for the floor tile/adhesive and cove base/adhesive removal.

      e. Marking Exits: Maintain and mark both normal and emergency exits from the work areas to include large tape or spray painted orange arrows in the direction of egress and at curtained doorways which side of plastic sheeting to access first. One arrow marking shall be visible from every work location. Establish a color or designation system to distinguish normal exiting to the personnel decontamination unit and emergency exiting when life safety conditions prevail.

   4. Step 5: After the sealing and temporary facility work is completed, notify the Qualified Consultant and get his approval prior to proceeding with abatement.

3.06 CAULKING AND GLAZING

A. Thoroughly wet the caulking and glazing materials with amended water before starting the removal.

B. Spray the asbestos-containing material repeatedly during the removal operations to maintain a wet condition and to minimize asbestos fiber dispersion. The Qualified Consultant shall have the authority to stop all work due to improper removal techniques.

C. The asbestos-containing material shall be removed in small sections. Before beginning the next section, the material shall be packed while still moist into sealable 6-mil double polyethylene bags and sealed airtight. No removed material, whether bagged or unbagged, shall be allowed to dry, fall to the ground, be crumbled into small pieces, pulverized, or made friable.

D. Prevent contamination spreading to the surrounding public area. A fine spray of the amended water shall be applied in small sections to reduce fiber release preceding the removal of the asbestos-containing material. Spray the asbestos-containing material repeatedly during the removal operations to maintain a wet condition and to minimize asbestos fiber dispersion. The Qualified Consultant shall have the authority to stop all work due to improper removal techniques.

E. It shall be the responsibility of the Contractor to verify the thickness of the material and satisfy himself as to the total work and/or effort to remove said material.

F. Contractor to coordinate all work with the Architect and/or HHSC Representative, General Contractor and Qualified Consultant

G. The Contractor is prohibited from using methods of removal that create excessive amounts of dust and debris.

H. Mechanical means of removal will not be allowed for caulking/glazing removal work.

3.07 EQUIPMENT CLEANING

A. All contaminated equipment and tools used for removal work shall be washed and cleaned in the work area prior to removing them from the work area. No washing of contaminated equipment and tools will be allowed outside the work area.

3.08 ASBESTOS-CONTAINING WASTE HANDLING:

A. Collect and bag all asbestos debris and any other contaminated debris found in the work area. Clean the visible residual by HEPA vacuuming.

B. Clean fixed object within the work area, using HEPA vacuum equipment. Fixed objects shall include, but not be limited to pipes, wiring and all other permanently fixed items. Do not use methods that raise dust, such as dry sweeping or vacuuming with equipment not equipped with HEPA filters. Do not use HEPA vacuum equipment on wet surfaces.

C. Debris shall be bagged and sealed in 6-mil plastic bags immediately after removal. All gross debris created by the removal process shall be bagged and sealed at the end of each removal day.

D. The bags containing the asbestos waste material shall be checked for evidence of waste material attached to the outside of the bags. If dirty, the bags shall be washed down in the work area. The bags are then moved to the Holding bin. Bags and containers shall be marked with OSHA label prescribed by the Hawaii OSHA regulations referenced in these specification. Label shall state, "DANGER – CONTAINS ASBESTOS FIBERS – AVOID CREATING DUST – CANCER AND LUNG DISEASE HAZARD." Additionally, label bags in accordance with OSHA 40 CFR 61.150; or EPA 40 CFR 763 if more restrictive. Labeling shall include the name of the waste generator and the site where the waste was generated.

E. Asbestos contaminated waste with sharp edges (e.g. nails, screws, metal lath, etc.) will tear the polyethylene bags and sheeting and therefore shall be placed in drums or enclosed with cardboard and double wrapped and sealed with plastic.

F. During the removal process, if plastic sheeting tears, or the duct tape loosens from the surface, the Abatement Contractor shall immediately stop work, cleanup loose asbestos–containing materials, and then reseal the surface by taping over the torn or loosened surface, before commencing again.

G. Protect the plastic sheeting against tearing caused by sharp projection, corners, edges, etc., of all equipment being used in the removal process. However, if the plastic sheeting tears, the Abatement Contractor shall follow repair procedure specified above.

H. Any housing or penetration concealing asbestos–containing materials shall be removed and protected to provide access to the materials. Replacement or reattachment of these shall be in a manner such that function and appearance is equal or exceeds the original condition.

3.09 CLEANING AND CLEARANCE 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 thereof has been requested by the Architect and/or HHSC Representative, and thereafter to expeditiously complete the said clean-up, Architect and/or HHSC Representative may without further notice and without termination of contract, have the clean-up done and deduct the cost thereof from the contract.

B. Visual Clearance of Removal Work Areas: Remove all visible accumulation of asbestos-containing materials and debris by HEPA vacuums, sponging, and wet-wiping. The work areas shall be totally visibly clean and remaining material encapsulated. The Contractor, in the presence of the Qualified Consultant, shall make a complete visual inspection of the work area to ensure dust-free conditions.

C. Once the Qualified Consultant verifies that the work areas are essentially clean of visible asbestos-containing debris, the Qualified Consultant will collect minimum of 2 post abatement PCM air clearance samples from each work area. The turnaround time of all PCM air samples will be 12 hours from the time of collection.

D. Should the Contractor fail to achieve the clearance level lower than 0.01 f/cc. Contractor will re-clean the area at no additional cost to the Architect and/or HHSC Representative and all additional fees to perform the sampling and analysis by the Qualified Consultant shall be paid for by the Contractor.

E. After achieving a clearance level lower 0.01 f/cc, the work area will be cleaned of all remaining containment enclosure sheeting. Clean and repair damage caused by temporary installations or use of temporary facilities. Restore existing facilities to their original condition or better, as approved by the Architect and/or HHSC Representative. Signage applicable to job site safety and the performance of the remaining portions of the work shall remain as applicable.

3.10 DISPOSAL OF ASBESTOS-CONTAINING MATERIAL

A. The Contractor shall test the caulking waste for the presence of polychlorinated biphenyls and if the waste is determined to contain less than 50 mg/kg, the caulking waste may be disposed of as asbestos waste. As the work progresses asbestos-containing waste is generated the Contractor shall transport all waste generated on a pre-scheduled day to the State of Hawaii, Department of Health's authorized disposal site, or as specifically

approved by the Architect and/or HHSC Representative to delay a disposal operation. Transport all waste to the predesignated disposal site in accordance with EPA regulations and specific landfill requirements.

Contaminated material shall be double–bagged in bags with OSHA label prescribed by the HIOSH regulations referenced in these specifications. Label shall state, "DANGER – CONTAINS ASBESTOS FIBERS – AVOID CREATING DUST – CANCER AND LUNG DISEASE HAZARD." Additionally, label bags in accordance with OSHA requirement 29 CFR 1926.1101 or EPA 40 CFR 61.150 if more restrictive. Labeling shall include the name of the waste generator and the site where the waste was generated.

B. Mark vehicles used to transport asbestos-containing waste material during the loading and unloading of the waste so that the signs are visible. The marking must be displayed in such a manner and location that a person can easily read the legend. Refer to 40 CFR Part 61.149 for lettering size, fonts and wording of sign requirements. For all loading and unloading activities, the sign referred to in 40 CFR Part 61.150 (b) (3) shall be displayed prominently.

C. 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). Waste materials, except those with sharp edges (metal lath, screws, nails, metal suspension system, etc.), properly double bagged 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 HIOSH. 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.

D. At the landfill, upon delivery of the waste for disposal, the Contractor shall notify the Scale Attendant and Landfill Spotter that the waste to be disposed of is asbestos material.

E. Workers unloading bags at the disposal sites shall be dressed in full body protective clothing and dual cartridge respirators.

F. 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 Architect and/or HHSC Representative with copies submitted to the Qualified Consultant the next working day after each trip.

NOTE: IT IS THE CONTRACTOR'S RESPONSIBILITY TO ASSURE THAT ANY LANDFILL USED FOR DISPOSAL OF ASBESTOS–CONTAINING OR ASBESTOS CONTAMINATED WASTE IS APPROVED FOR THAT PURPOSE.

G. 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.

H. The Contractor shall pay the waste disposal charge and any special handling charges at the landfills. All expenses for landfills shall be the complete responsibility of the Contractor. The bagged material shall be loaded in drums except as noted previously and transported to a landfill authorized by the State Department of Health to accept material containing asbestos. In the event the bag is torn, the tear shall be immediately mended with duct tape and the bag placed into another bag and sealed, and the wrapped material covered with another wrap and sealed. The Contractor shall make all prior arrangements with the landfill.

3.11 LOCK DOWN

A. Prior to removal of the plastic barriers and final visual inspection, a compatible post removal (lockdown) encapsulant shall then be spray applied to all exposed window and wall surfaces where asbestos has been removed.

VISITOR/WORKER ENTRY LOG
(Sample)

DATE

PROJECT

ALL PERSONNEL MUST SIGN-IN AND SIGN-OUT EVERY TIME THEY ENTER/EXIT THE WORK AREA. PLEASE PRINT CLEARLY. ATTACH EMPLOYEE RELEASE FORM FOR ALL VISITORS.

NAME	EMPLOYER Name, *Address, *Phone	TIME IN	TIME OUT	*PURPOSE OF VISIT	**TYPE OF PPE ISSUED

*NOT required of Contractor's employees

** Type of PPE (Personal Protective Equipment) Issued to include list of protective clothing worn and type of respirator used (Type "C", half-face dual cartridge, etc.

EMPLOYEE ACKNOWLEDGMENT OF INSTRUCTION AND RELEASE FORM
(sample)

Employee Name:

Employee Address:

Employee Telephone No.:

DOH Asbestos Certification Number:

Classification of Worker:

Have you had in the past, or present, any respiratory problems?

Yes No

Have you worked in the past with asbestos or fiberglass type materials?

Yes No

The project you will be working on involves the use of asbestos and the removal of the asbestos from the building. Asbestos is considered a health hazard.

The company is supplying all necessary safety clothing and working conditions required and necessary for your protection from asbestos hazard.

You shall be instructed a commencement of the job on the required use of safety equipment, clothing, working conditions and procedures. These must be rigidly adhered to. Smoking is not permitted in the work areas. Disregarding of safety instructions shall result in instant dismissal.

I acknowledge that safety instructions have been given to me by the company at my work commencement and I am thoroughly conversant with them and have answered the above questions truthfully.

Signed:
Employee

Date:

ASBESTOS DISPOSAL FORM
(sample)

Date: .

Owner or Operator of Landfill

Name

Address

City State Zip

Phone:

Name of Landfill

Name

Address

City State Zip

Phone:

Hauler

Approximate Volume of Asbestos Received

Type of Container Asbestos in

Asbestos Container Labeled? YES NO

I certify that the above statements are true and that the landfill has been approved for the disposal of asbestos. The delivered material will be covered within 6 inches (15 cm.) of non-asbestos material within 24 hours.

signed
Landfill Owner-Operator

END OF SECTION

SECTION 13282 - LEAD PAINT CONTROL MEASURES

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

A. The General Instructions to Bidders, the General Conditions of Construction Contracts, and Special Provisions preceding these specifications shall govern this section of the work

1.02 DESCRIPTION OF WORK

A. In performing this project, all possible safeguards, precautions and protective measures shall be utilized to prevent exposure of any individual to lead particulates.

B. Furnish all labor, materials and equipment necessary to carry out the safe removal and disposal of lead paint/coating, lead painted/coated building components (window system including windows, frames and security screen) and the surface preparation meeting the paint manufacture' recommendations to allow for the safe renovation, demoliltion work and repainting as identified in the Project Drawings.

C. All painted window system are identified as containing various levels of lead. The Contractor shall assume any untested paint to contain lead.

D. The Contractor shall inform his employees, Subcontractors and all other persons performing work in this project, that painted surfaces within the project areas of the building contain lead. The Contractor, his employees, Subcontractors, etc. shall initiate and maintain all programs necessary to execute the work in accordance with the contract documents, federal, state and local laws, codes, rules and regulations.

E. The Contractor shall be responsible for ensuring that all work generating lead paint containing debris conforms to the following applicable federal, state and local laws, codes, rules and regulations
   1. Occupational Safety and Health Administration (OSHA); Hawaii Occupational Safety and Health (HIOSH) standards and rules.

   2. Environmental Protection Agency (EPA), Toxic Substance Control Act (TSCA), 40 CFR Part 745, Lead, Requirements for Lead-Containing Paint Activities in Target Housing and Child Occupied Facilities.

   3. Environmental Protection Agency (EPA), Resource Conservation and Recovery Act (RCRA) of 1976, amended in 1980 and 1984.

F. The Contractor shall be responsible for initiating and maintaining all safety precautions and programs necessary to keep the work place safe for his employees and Subcontractors; and ready for safe use of the work area and building by the buildings occupants.

1.03 COORDINATION WITH OTHER SECTIONS

A. The Contractor shall coordinate all of his lead disturbance activities with the Architect and/or HHSC Representative, General Contractor and and the Qualified Consultant.

1.04 CONTRACTOR RESPONSIBILITIES

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. Contractor shall comply with all requirements of 29 CFR 1926.62. The Contractor shall also be responsible for complying with all applicable EPA regulations in regards to lead-containing materials.

B. Respirators: Use appropriate respirators and filters which meet all requirements of OSHA 29 CFR 1926.62.

C. Protective Clothing: Use appropriate personal protective clothing (disposable suits, eye protection, gloves, etc.) as required by OSHA 29 CFR 1926.62.

1.05 GENERAL REQUIREMENTS

A. The work specified herein shall include the handling of lead paint, components painted or coated with lead, transportation and disposal procedures as required of lead-containing materials by persons with approprite OSHA/HIOSH training. This work must 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. Applicable Standards and Guidelines: All work under this contract, and any other trade work conducted with the project, shall be done in strict accordance with all applicable federal, state and local regulations, standards and codes governing lead paint removal, transportation and disposal of lead materials.
   1. The most recent edition of any relevant regulation, standard, document or code shall be in effect.

C. Specific Statutory and Regulatory Requirements:
   1. Title 29, Code of Federal Regulations, section 1926.62, entitled "Lead Exposure in Construction; Interim Final Rule".

   2. Title 29 Code of Federal Regulations Part 1910.134, Respiratory Protection.

   3. 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.

   4. Title 40 Code of Federal Regulations Part 61, National Emissions Standards for Hazardous Air Pollutants

   5. Title 40 Code of Federal Regulations Part 745, Lead; Requirements for Lead-Based Paint Activities in Target Housing and Child Occupied Facilities; Final Rule

   6. Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing.

1.06 DEFINITIONS

A. 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 per cubic meter of air.

B. 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 7082 method for lead monitoring.

C. Authorized Visitor: The Architect and/or HHSC Representative, Qualified Consultant, their representatives, air monitoring personnel, or a representative of any regulatory or other agency having jurisdiction over the project.

D. Contaminated Area: An area where unwanted toxic or harmful substances exists.

E. HEPA Filter: A High Efficiency Particulate Absolute filter capable of trapping and retaining 99.97% of particulates greater than 0.3 micron in length.

F. Lead: Metallic lead, all inorganic lead compounds, and inorganic lead soaps. Excluded are all other organic lead compounds.

G. 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 per cubic meter.

H. Personal Monitoring: Contractor's sampling of lead in air 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.

I. Qualified Consultant: A third party independent consultant hired by the HHSC, who is educated and trained in recognizing and evaluating work place hazards and stress (in this instance, lead paint removal and related work in accordance with 40 CFR 745, 29 CFR 1926.62) and providing guidance on the methods and means of removing or correcting such hazards and stresses within the work environment.

1.07 ABBREVIATIONS

A. CFR - Code of Federal Regulations

B. HIOSH - Department of Occupational Safety and Health, Department of Labor and Industrial Relations, State of Hawaii

C. EPA - U.S. Environmental Protection Agency

D. NIOSH - National Institute for Occupational Safety and Health

E. OSHA - Occupational Safety and Health Administration

F. NESHAP - National Emissions Standards for Hazardous Air Pollutants

G. LP - Lead Paint

H. TCLP - Toxicity Characteristic Leaching Procedure

1.08 SUBMITTALS PRIOR TO WORK

A. Final payment will not be made until copies of all submittals have been furnished to and accepted by the Architect and/or HHSC Representative. Submit 6 copies of the submittal package no later than 10 work days from the notice of award unless otherwise specified in this section. The submittal package will include the items listed below.

B. Detailed Work Plan: The Contractor shall submit a project work plan for the lead paint disturbance work. The Plan shall be prepared by the State of Hawaii accredited lead supervisor. The Contractor shall also provide detailed information concerning:
   1. Preparation of the work area

2. Personal protective equipment including respiratory protection and protective clothing.

3. Employees who will participate in the project: include documentation of experience, documented proof of lead removal training based on 29 CFR 1926.62 and/or the proposed EPA Model Accreditation for Lead-based Paint Removal Work Training, in addition to any current EPA regulatory requirements, and assigned responsibilities during the project.

4. Decontamination procedures for the personnel who may be exposed to lead paint.

5. Lead paint treatment, handling and disposal methods and procedures to be used.

6. Required air monitoring procedures and sampling protocols.

7. Procedures for final cleanup.

8. A sequence of work and performance schedule in coordination with other trades.

9. Emergency procedures.

C. Shop Drawings: Submit shop drawings for the following items as a minimum:
   1. Descriptions of any equipment to be employed not discussed in this section.

   2. Security provisions, if any, in and around the project area.

   3. Outline of work procedures to be employed.

   4. Location of the waste storage area.

   5. Staging of the work, the sequence

   6. Entrances and exits to the work place

   7. Location and construction of worker decontamination units

   8. Water filtration system for all contaminated water. Description of water disposal and copy of water disposal permit from the City & County of Honolulu, Environmental Services, Division of Environmental Quality, *Temporary Industrial Wastewater Discharge* Permit.

D. Notices: The Contractor shall obtain a Generator's EPA Identification number (if necessary) for the lead-containing waste material generated from the project that is determined to be hazardous.

E. Insurance: Proof of insurance for Workman’s Compensation and General Liability which covers asbestos, lead, and pollution.

F. Manufacturer's Data: Copies of manufacturer's specifications, installation instructions and field test procedures for each material and all equipment related to lead handling and abatement and include other data as may be required to show compliance with these specifications and proposed uses.

G. Documentation for Instructions:
   1. Submit documentation satisfactory to the Architect and/or HHSC Representative that the Contractor's employees, including foremen, supervisors, and any other company personnel or agents who will be exposed to airborne lead dust or who shall be responsible for any aspects of the lead paint removal work activities, have received training in accordance with this specification, 29 CFR 1926.62 and any current EPA regulatory requirements.

   2. Submit to the Architect and/or HHSC Representative a written respiratory protection program meeting the requirements of 29 CFR 1910.134(b)(d)(e) and (f), documentation that all employees using respirators have received training, and documentation of respirator fit-testing for all Contractor employees and agents who will enter the work area wearing negative pressure respirators. The Contractor shall be solely responsible for his employee's personal protection.

H. Documentation From Physician: Before exposure to lead dust or fumes, the Contractor shall provide workers with a comprehensive medical examination as required by 29 CFR 1926.62. 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.

I. Respirators: Submit document NIOSH approvals for all respiratory protective devices used on site. Include manufacturer certification of HEPA filtration capabilities for all cartridges and filters.

J. Emergency Planning Procedures:
   1. The Contractor shall submit an emergency evacuation plan for the Architect and/or HHSC Representative's acceptance prior to the commencement of work. This plan shall include consideration of fire explosion, toxic atmospheres, electrical hazards, slips, trips and falls, confined spaces and heat related injury. In non-life threatening situations, the injured or incapacitated employee shall decontaminate following normal procedures, with assistance from co-workers if necessary, before exiting the work area to obtain proper medical treatment. In life threatening situations, worker decontamination shall take least priority after measures to stabilize the injured worker, remove the injured worker from the work area, and secure proper medical treatment.

   2. Emergency Response and Evacuation: The Contractor shall provide and document training in emergency response and evacuation procedures to all workers entering the work area.

K. Weekly Submittals During the Lead Disturbance Work: Copies of the following:
   1. Contractor's weekly job progress reports detailing lead paint disturbance, handling, transportation, and disposal activities. In the job progress reports, the Contractor shall include information on the review of progress concerning previously established milestones and schedules, major problems and action taken, injury reports, equipment breakdown, and bulk material and air sampling results.

   2. Work site entry logbooks with information on worker and visitor access.

   3. Daily logs documenting filter changes on respirators, HEPA vacuums, and other engineering controls.

4. Waste disposal manifest forms for all lead-containing waste material removed from the lead paint removal site and transported to the disposal site. The papers will include a chain-of-custody form with the names and addresses of the facility, the Contractor, the landfill operator, as well as the estimated quantity of lead-containing waste material, and the number and type of containers used. The form shall be signed and dated by the Facility Owner, the Contractor, and the landfill operator as the material changes custody. If a separate hauler is employed, their name, address, telephone number, and signature also shall appear on the form.

L. Waste Disposal and Landfill Requirements: Contractor shall separate lead paint chips and debris from non-hazardous waste materials such as used plastics, disposable tools, etc. Contractor shall clean all bulk lead-containing debris and waste from non-hazardous plastic, tools, suits, etc. prior to disposal.
1. If Toxic Characteristic Leaching Procedure (TCLP) test results of the containers of waste material are below the EPA limit the lead-containing waste materials (paint chips, contaminated materials, etc.) shall be disposed of at a landfill approved for such purposes. The Contractor shall submit to the Architect and/or HHSC Representative, documentation that the lead-containing waste material removed from the work area has been accepted by the landfill Owner.

2. If the TCLP test results are above the EPA limit or if materials are identified as hazardous waste, the lead-containing waste materials shall be disposed of at an EPA approved facility capable of accepting such hazardous waste.

3. The Contractor shall submit to the Architect and/or HHSC Representative, documentation that disposal of the lead-containing waste material at the selected landfill is approved by the State of Hawaii, or the EPA approved mainland facility for hazardous lead-containing waste material.

1.09 SUBMITTAL AFTER WORK IS COMPLETED

A. At the completion of the work, a final report shall be prepared by the Contractor for acceptance by the Architect and/or HHSC Representative. Six copies of the report shall be submitted and shall include the items listed below.

B. The project name, Abatement Contractor, Abatement Contractor license number, EPA waste generator number, work duration, material removed, respiratory protection employed, waste manifest signed by the Contractor, waste transporter, and ladnfill operator, and total quantity of waste, TCLP lead reports, employee exposure air sample results, and results of the most current PAT round results for the laboratory conducting the employee exposure air sample analysis.

C. Certification of the Abatement Contractor's employees.

D. Visitor/Worker Entry Log: The daily log of all personnel including the Contractor's employees and agents who enter the work area while lead abatement operations are in progress, until final clearance is received from the Qualified Consultant. The log shall contain the listed information as a minimum.
1. Date of visit/worker entry

2. Visitor/Worker'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

E. A statement signed by the Lead Abatement Contractor that all lead abatement and disposal was completed in compliance with this specification, Federal and State regulations, and the approved Work Plan.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Use the least toxic product suitable for the job.

2.02 TOOLS AND EQUIPMENT

A. General: Provide and fabricate suitable tools for the lead-containing paint disturbance procedures.

B. Other tools and equipment as necessary.

2.03 PERSONNEL PROTECTION REQUIREMENTS

A. The Contractor acknowledges he alone is responsible for instruction and for enforcing personnel protection requirements and that these specifications provide only a minimum acceptable standard.

B. Provide workers with sufficient sets of disposable protective full body clothing consisting of material impenetrable by lead-containing paint chips 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 lead contaminated waste. Protective clothing shall be worn by all personnel within the work area from the start of the removal to final visual clearance.

C. Insulated non-skid rubber boots shall be required for all individuals entering the work area. Protective full body clothing without elastic at sleeves and legs shall require separate elastic or taped protection to seal the opening. Visitors shall be provided full body protective clothing.

D. All electrical systems used for lead-containing paint abatement operations shall as a minimum be protected with "Ground Fault Circuit Interrupters" selected and installed in strict accordance with the manufacturer's instructions, the National Electric Code and all other pertinent codes.

E. Additional safety equipment (e.g. hardhats meeting the requirements of ANSI Z-89.1, eye protection meeting the requirements of ANSI Z87.1, safety shoes meeting the requirements of ASTM F2412 and F2413, disposable PVC gloves), as necessary, shall be provided to all workers and authorized visitors.

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 the

workers and the general public. Apprise all workers, supervisory personnel, subcontractors, consultants, authorized visitors, occupants and neighbors who will be at or near the job site of the seriousness of the hazard and of proper work and protective procedures which must be followed (such as informing affected individuals as required by 40 CFR 745, keeping windows and doors closed; and air conditioning and ventilation units shut down during removal work).

B. Where in the performance of the work, workers, supervisory personnel, subcontractors, or consultants who 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 workers and the general public from the potential hazard of exposure to respirable airborne lead dust. Such measures shall include the procedures and methods described in the regulations of applicable federal, state and local agencies.

3.02 WORK AREA PREPARATION

A. Treatment of Surfaces: During disturbance work, acceptable industry standard dust control methods shall be used to control dust (such as wetting items to be disturbed, by misting; provide dust screens; remove items in large, whole pieces; avoid crushing and pulverizing removal methods; encapsulate material prior to disturbace; use amended water; and containerize wet waste material). Prevent contamination spreading to the surrounding public and residential area.

B. Barriers: Standard barriers such as construction warning tape, fencing, etc. shall be used to prevent the general public access on to the work site. Seal any penetrations to the affected work area with 6 mil polyethylene plastic sheeting and duct tape.

C. NESHAP Compliance: Compliance with the requirements of EPA's NESHAP regulation is required for this project. Proper notification of the renovation of the building to the Department of Health shall be the Contractor's responsibility.

D. Ensure that all personnel working on site during the removal work are properly trained and protected as required by law.

3.03 CLEANUP AND TESTING

A. Post-work visual clearance will be conducted by the Qualified Consultant.

B. All non-hazardous waste shall be removed from the site by the completion of the project. The Contractor, in the presence of the Qualified Consultant, shall collect representative samples of the waste stream for TCLP lead analysis. All hazardous waste shall be removed from the site to an EPA approved disposal facility within 90 days of the removal work.

C. Clean Up and Testing: Wet clean and HEPA vacuum clean surfaces and surrounding ground within the lead control area daily. Do not allow lead painted/coated debris, paint chips, and dust to accumulate. Restrict the spread of dust and debris. Keep waste from being distributed over the general area. Do not dry sweep or use compressed air to clean the area. When the removal operation has been completed, the area will be cleaned of all visible lead paint contamination by vacuuming with a High Efficiency Particulate Absolute (HEPA) filtered vacuum cleaner followed by wet mopping where applicable. The Qualified Consultant will visually inspect the affected surfaces for residual lead paint chips and accumulated dust. The Contractor shall reclean areas showing dust or residual paint chips. If recleaning is required, the process will be repeated until the visual clearance is given by the Qualified Consultant. Do not remove

the lead control area or roped-off perimeter and warning signs prior to the receipt of the Qualified Consultant's lead clearance certification.

3.04 TRANSPORTATION AND DISPOSAL

A. Disposal of Hazardous Waste and Non-hazardous Waste: Contractor shall separate potentially non-hazardous waste material (i.e. plastic sheeting, disposable protective suits, etc.) from hazardous waste material prior to testing. All other debris, scraps, waste materials, rubbish and trash contaminated with lead paint and contaminated dust from the immediate work area and place in UN approved (49 CFR 178) and appropriately labeled containers and store on site for TCLP lead testing. The Contractor shall be responsible for collecting and paying of all TCLP testing.

1. Local waste landfill facilities do not accept any RCRA hazardous waste. All hazardous waste must be disposed of at an EPA approved mainland U.S. RCRA hazardous waste disposal facility. Hazardous waste must be disposed of within 90 days of the waste being created.

2. Non-hazardous lead waste and debris may be disposed of at the local waste landfill facility that is State approved to accept such waste.
   a. Notify Non-hazardous Waste Landfill Operator: The Contractor shall advise the Non-hazardous Waste landfill operator, at least twenty-four (24) hours prior to transportation, of the material to be delivered.

   b. Provide the Non-hazardous Waste Landfill Operator with applicable TCLP results which indicate that the waste material is non-hazardous.

B. Disposal of Non-Hazardous Painted Construction Debris (TCLP for Lead Not Exceeding EPA Limits): Remove non-hazardous lead waste including, debris, scraps, waste materials, rubbish, and trash from the site and disposed of at a landfill approved for disposal.

C. The Contractor shall submit disposal manifest and receipts showing acceptance of all waste material by the approved waste disposal site to the Qualified Consultant. The shipping papers shall include a chain-of-custody form and include names and addresses of the Facility Owner, the Contractor, and the Landfill Operator and information on the type and number of waste containers.

3.05 CLEARANCE CRITERIA

A. Should the contractor fail to commence work to clean-up and make the work area lead debris free within one working day after the clean-up thereof has been requested by the Architect and/or HHSC Representative, and thereafter to expeditiously complete the said clean-up, Architect and/or HHSC Representative may without further notice and without termination of contract, have the clean-up done and deduct the cost thereof from the contract.

B. Visual Clearance of Removal Work Areas: Remove all visible accumulation of lead-containing materials and debris by HEPA vacuums, sponging, and wet-wiping. The work areas shall be totally visibly clean of any lead debris or waste. The Contractor, in the presence of the Qualified Consultant, shall make a complete visual inspection of the work area to ensure lead debris free conditions.

C. Once the Qualified Consultant certifies that the work areas are essentially clean of lead debris the other Contractors may proceed with their work. The removal of signage required by lead disturbance work shall be allowed after all lead-containing material

designated to be removed is removed. Signage applicable to job site safety and the performance of the remaining portions of the work shall remain as applicable.

D. Completely remove all temporary barriers and materials when their use is no longer required. Clean and repair damage caused by temporary installations or use of temporary facilities. Restore existing facilities to their original condition or better, as approved by the Architect and/or HHSC Representative.

3.06 CONTRACTOR RESPONSIBILITIES

A. The Contractor shall be responsible for all TCLP lead testing and analysis.

B. The Contractor shall be responsible for his employees' personnel protection, personal air monitoring and necessary records as required by OSHA, Hawaii State Law and all other applicable laws and as required in these specifications. The Contractor shall provide all required documentation to the government. Contractor shall collect daily personal air samples on at least 25% of the personnel performing removal work with the most exposure for the duration of the project.

C. Air monitoring and testing which becomes necessary in order to follow up on work by the Abatement Contractor, rejected as not conforming to the requirements shall be the responsibility of the Abatement Contractor. The full cost of such additional monitoring shall be borne by the Abatement Contractor, and shall not be a part of the final contract payment.

3.07 MONITORING RESULTS

A. Airborne lead levels in areas adjacent to the work area or in any part of the work site impacted by the removal activities shall not exceed 30 micrograms per cubic meter of air.

B. If the above ambient concentrations and/or the PEL's are exceeded, the Contractor shall cease all work immediately in any work area causing or contributing to such a condition. The Contractor shall take remedial action (e.g. misting with more water, encapsulation, provide dust screens, etc.) to reduce concentrations to acceptable levels.

END OF SECTION

SECTION 13288 - TESTING AND AIR MONITORING

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

A. The General Instructions to Bidders, the General Conditions of Construction Contracts, and Special Provisions preceding these specifications shall govern this section of the work

1.02 DESCRIPTION OF WORK

A. In performing this project, all possible safeguards, precautions and protective measures should be utilized to prevent exposure of any individual to asbestos, lead and arsenic particulates.

B. These specifications are based upon procedures and standards derived from U.S. regulatory agencies (EPA, OSHA, NIOSH) and the Hawaii State Division of Occupational Safety and Health as well as from industry and sound industrial hygiene practice.

C. Testing, daily area air monitoring and visual inspections shall be provided by the Qualified Consultant hired by the General Contractor for the purpose of:
   1. Verifying compliance with the specifications and the applicable regulations listed in SECTION 13281 - ASBESTOS ABATEMENT; SECTION 13282 - LEAD PAINT CONTROL MEASURES;

   2. Ensuring that the Leahi Hospital's legally required documentation is collected;

   3. Providing engineering control during the project.

1.03 DEFINITIONS

A. ACM: asbestos containing materials.

B. ASCM: arsenic containing materials.

C. Building representative(s): The person or persons designated by the users of the building to act on their behalf.

D. Contractor: The construction firm engaged to remove, encapsulate and/or dispose of the hazardous materials.

E. Industrial Hygienist: A Certified Industrial Hygienist (CIH) certified by the American Board of Industrial Hygiene who shall direct all air monitoring and project supervision.

F. Lead: Metallic lead, all inorganic lead compounds, and inorganic lead soaps. Excluded are all other organic lead compounds

G. Project Designer: The person of firm who prepared the plans and specifications to remove, encapsulate and dispose of the ACM.

H. Project Manager: The HHSC employee responsible for administering the construction contract and ensuring that the work of the contractor is conducted according to the contract documents and in compliance with applicable laws, regulations, ordinance, etc.

I. Project Monitor: A member of the construction management team who enters the work area to set up the air monitoring device and then collects the various air samples to be sent to the laboratory for analysis.

J. Qualified Consultant: A consultant hired by the HHSC who will perform air monitoring and inspection during asbestos and lead work and shall have the authority to initiate engineering controls. The Qualified Consultant will be accredited as a State of Hawaii Department of Health accredited Project Monitor and Lead Supervisor.

1.04 COORDINATION WITH OTHER SECTIONS

A. Coordinate with the Architect and/or HHSC Representative, General Contractor and Qualified Consultant for the testing/air monitoring requirements included in SECTION 13281 - ASBESTOS ABATEMENT; SECTION 13282 - LEAD PAINT CONTROL MEASURES

PART 2 PRODUCTS

PART 3 - EXECUTION

3.01 CONTRACTOR'S RESPONSIBILITIES

A. The Contractor shall be responsible for his employees' personnel protection, personal air monitoring and necessary records as required by OSHA, Hawaii State Law and all other applicable laws and as required in these specifications. The Contractor shall provide a final report with all required documentation to the State.

B. The Contractor shall procure legally required reports for air monitoring as part of the contract. All air monitoring reports shall include all field data, laboratory reports, test results and other pertinent information about the daily work activities.

C. The Contractor shall be responsible for the proper required notifications to the EPA and State of Hawaii Department of Health.

3.02 TESTING AND AIR MONITORING

A. Duties of the Qualified Consultant.

1. Photographic Record of Project: Record the abatement project with representative photos. All photos shall become the property of the State and are to be accompanied by a detailed log.

2. Project Log: Maintain daily field reports detailing all key activities during abatement and make a summary of project activities to the Architect and/or HHSC Representative. Incorporate the contents of the daily field reports with other project data into a final project report.

3. Visual Inspection of all Work Areas: Perform regular inspections of all containment areas. Conduct inspections during the actual work performance of the contractor to document the work practices employed and prior to air testing in each area to verify that all materials scheduled for abatement were removed and the area was properly cleaned.

B. Air Monitoring: The Qualified Consultants on-site air monitoring specialists or industrial hygienists shall perform the following activities associated with this portion of the project:

1. On-site environmental air monitoring as required by EPA, OSHA, and the project specifications.

2. Laboratory analysis by the most current NIOSH or OSHA method.

3. Monitoring of decontamination procedures at site entry/exit.

4. Monitoring of containment maintenance by visual and instrumental inspection.

5. Interface with project inspectors, building representatives, representatives of regulatory agencies, and project designers during site visits.

6. Ensure that proper respiratory protection is utilized by all persons at the project site.

7. Relay to the Architect and/or HHSC Representative any discrepancies in contractor's action with provisions of project specifications.

8. Act quickly in case of emergencies with appropriate response.

3.03 SAMPLING DESIGN

A. The following is a typical sampling design per containment area during the actual construction. The number of samples and volume quantities may vary, depending on each project's specification.
   1. Work Area Samples: Low volume samples of 480 liters each shall be taken asbestos and lead work areas. If monitoring inside and outside the abatement work area shows airborne concentrations have reached the predetermined specified action level and/or TWA, the Qualified Consultant shall stop all work, notify the Architect and/or HHSC Representative immediately, have the Contractor correct the condition(s) causing the increase and ensure that the Contractor obtains the Architect and/or HHSC Representative's approval prior to restarting the removal work. At minimum one sample will be collected from the interior of the work area, one sample upwind of the work area and two samples downwind of the work area.

   2. Final Clearance Samples: Visual inspections will be conducted at the completion of the asbestos work. Asbestos air clearance samples shall be collected for all interior work.

3.04 LABORATORY ANALYSIS

A. The Qualified Consultant shall provide air monitoring results within the 3 days of sample collections to HHSC Representative.

3.05 DAILY TESTING RECORDS

A. At the conclusion of every day's testing, the Qualified Consultant shall have available copies of all air monitoring records of each work area for the Architect and/or HHSC Representative.

END OF SECTION

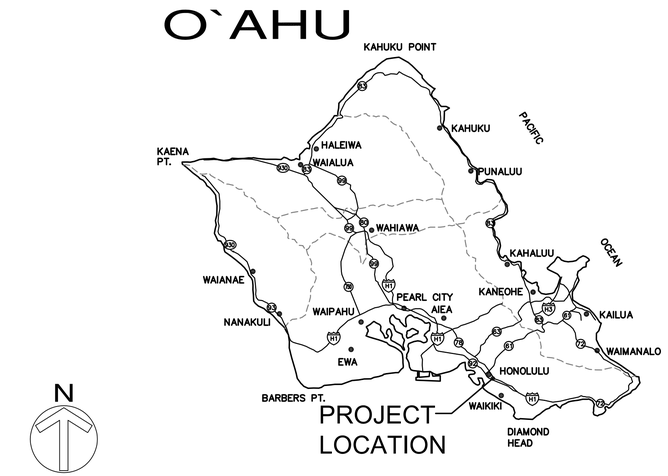
LEAHI HOSPITAL, REPLACE FIRST FLOOR WINDOWS IN YOUNG BUILDING

3675 KILAUEA AVENUE
HONOLULU, HAWAII 96816
T.M.K.: 03 - 02 - 031: 001

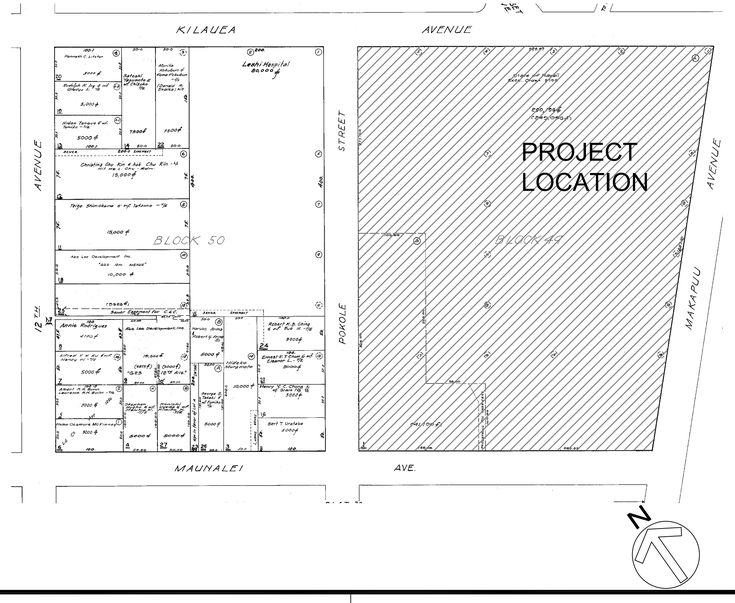
INDEX TO DRAWINGS

SHEET NO.	DESCRIPTION
T-1.0	TITLE SHEET, INDEX TO DRAWINGS, LOCATION MAP, VICINITY MAP, CONSULTANTS & NOTES
	ARCHITECTURAL
A-1.0	SITE PLAN
A-2.0	FIRST FLOOR PLAN – DEMO & NEW WORK, DEMO & NEW WORK LEGEND
A-3.0	EXTERIOR ELEVATION – DEMO WORK & DEMO WORK LEGEND
A-3.1	EXTERIOR ELEVATION – DEMO WORK & DEMO WORK LEGEND
A-4.0	EXTERIOR ELEVATION – NEW WORK & NEW WORK LEGEND
A-4.1	EXTERIOR ELEVATION – NEW WORK & NEW WORK LEGEND
A-5.0	FIRST FLOOR WINDOW SCHEDULE
A-6.0	WINDOW TYPES
A-7.0	WINDOW DETAILS

LOCATION MAP



VICINITY MAP



CONSULTANTS

ARCHITECT:
PACIFIC ARCHITECTS
2020 S. KING STREET
HONOLULU, HAWAII 96826
PHONE: (808) 949-1601
FAX: (808) 942-0054

ENVIRONMENTAL ENGINEER:
ENVIROQUEST, INC.
98-029 HEKAHA ST. SUITE 21
AIEA, HAWAII 96701
PHONE: (808) 486-5881
FAX: (808) 486-5889

NOTES

GENERAL NOTES

1. THE CONTRACTOR SHALL CAREFULLY EXAMINE THE DRAWINGS AND READ THE SPECIFICATIONS AND ALL OTHER PROPOSED CONTRACT DOCUMENTS PRIOR TO SUBMITTAL OF HIS BID PROPOSAL. THE CONTRACTOR SHALL FULLY INFORM HIMSELF OF THE SCOPE OF THIS PROJECT PRIOR TO THE SUBMISSION OF HIS BID PROPOSAL AS TO ALL CONDITIONS AND LIMITATIONS UNDER WHICH THE WORK IS TO BE PERFORMED. HE SHALL INCLUDE IN HIS PROPOSAL, A SUM TO COVER ALL COSTS OF ITEMS NECESSARY TO PERFORM THE WORK AS SET FORTH IN THE PROPOSED CONTRACT DOCUMENTS. NO ALLOWANCE SHALL BE MADE TO THE CONTRACTOR DUE TO LACK OF SUCH KNOWLEDGE.
2. IF THE CONTRACTOR IS IN DOUBT AS TO THE TRUE MEANING OF ANY PART OF THE PROPOSED CONTRACT DOCUMENTS, OR FINDS DISCREPANCIES IN OR OMISSIONS FROM ANY PART OF THE PROPOSED CONTRACT DOCUMENTS, HE MAY SUBMIT TO THE ARCHITECT A REQUEST FOR INTERPRETATION THEREOF.
3. CONTRACTOR SHALL SUBMIT HIS SUBSTITUTION REQUEST TO THE ARCHITECT PRIOR TO THE SUBMISSION OF HIS BID PROPOSAL. NO SUBSTITUTION REQUEST WILL BE ACCEPTED AFTER THE BID PROPOSAL HAS BEEN OPENED AND AWARDED.
4. ALL CONSTRUCTION SHALL CONFORM TO THE 2018 INTERNATIONAL BUILDING CODE AND THE LATEST CITY & COUNTY OF HONOLULU AMENDMENTS AND ORDINANCES.
5. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND CONDITIONS PRIOR TO FABRICATING AND/OR ORDERING MATERIALS.
6. ALL MATERIALS FOR THIS PROJECT SHALL BE NEW AND FREE FROM ANY AND ALL DEFECTS UNLESS SPECIFIED OTHERWISE.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL WORK AMONG THE VARIOUS TRADES AS NECESSARY TO AVOID CONFLICTS AND TO ENSURE THAT THE INSTALLATION OF ALL WORK IS IN COMPLIANCE WITH THE CONTRACT DOCUMENTS.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL BACKING, BLOCKING, BRACKETS, ETC. AS REQUIRED FOR THE PROPER AND SECURED INSTALLATION OF ALL MATERIALS AND PRODUCTS.
9. THE CONTRACTOR SHALL FOLLOW ALL MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION OF THEIR PRODUCTS.
10. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IMMEDIATELY UPON ENCOUNTERING OR SUSPECTING ANY ADDITIONAL HAZARDOUS MATERIALS, ETC. DURING THE COURSE OF THIS PROJECT. THE CONTRACTOR IS NOT AUTHORIZED TO HANDLE, TEST, OR REMOVE SUCH ADDITIONAL MATERIALS WITHOUT SPECIFIC AUTHORIZATION FROM THE OFFICER IN CHARGE.
11. THE CONTRACTOR WITH THE SUPERVISION OF THE ARCHITECT, SHALL INSPECT AND NOTE ALL EXISTING DAMAGES PRIOR TO THE START OF WORK. ANY NEW DAMAGES RESULTING FROM THE CONSTRUCTION SHALL BE CORRECTED AT THE CONTRACTOR'S COST.
12. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN A SAFETY BARRICADE, AS NECESSARY, OR REQUIRED BY THE OWNER AND SHALL ASSURE SAFETY FOR THE PATIENTS, STAFF AND THE PUBLIC AT ALL TIMES.
13. THE CONTRACTOR SHALL REPORT ANY UNSATISFACTORY CONDITIONS AND/OR DISCREPANCIES TO THE CONTRACTING OFFICER. FAILURE TO COMPLY WITH THIS CONDITION MAY RESULT IN PLACING ANY AND ALL RESPONSIBILITY, LIABILITY AND EXPENSE TO THE CONTRACTOR.
14. TO THE BEST OF OUR KNOWLEDGE, THIS PROJECT CONFORMS TO ADA ACCESSIBILITY GUIDELINES.
15. PENETRATIONS SHALL BE FIRE-STOPPEND AND OPENINGS SHALL BE PROTECTED THROUGH FIRE RATED WALL, FLOOR, ROOF AND CEILING ASSEMBLIES AS REQUIRED BY THE 2018 IBC CHAPTER 7.

PROJECT NOTES

1. THE INTENT OF THIS PROJECT IS TO REPLACE ALL EXISTING FIRST FLOOR WINDOWS IN THE YOUNG BUILDING WITH NEW WINDOWS.
2. THE CONTRACTOR SHALL REMOVE AND REINSTALL APPURTENANCES AS NECESSARY TO ACCOMPLISH THE PROJECT'S INTENT.
3. THE CONTRACTOR SHALL COMPLY WITH ALL HOSPITAL RULES AND REQUESTS AND SHALL INSURE MINIMAL DISRUPTION AND INCONVENIENCE TO STAFF, RESIDENCE AND VISITORS.
4. WORKING HOURS SHALL BE MONDAY TO FRIDAY, 8:00 AM TO 4:30 PM. ALL WORK SHALL BE SCHEDULED AND COORDINATED WITH THE DESIGNATED HOSPITAL REPRESENTATIVE.
5. THE HAZMAT SURVEY AS PREPARED BY ENVIROQUEST, INC. SHALL BE PART OF THESE DOCUMENTS. REFERENCE TO THE EXISTENCE OF HAZMAT SHALL BE NOTED BY THE CONTRACTOR. ALL PRECAUTIONS SHALL BE TAKEN AS NECESSARY, AND/OR AS DIRECTED.

ENVIRONMENTAL NOTE

1. ASBESTOS AND LEAD PAINT WERE INDENTIFIED WITHIN THE ROOF PROJECT AREAS AT YOUNG BUILDING OF LEAHI HOSPITAL. THE CONTRACTOR SHALL REFER TO THE HAZARDOUS MATERIAL INSPECTION REPORT THE SPECIFICATION SECTIONS 13281 AND 13282 FOR ALL ASBESTOS AND LEAD ABATEMENT WORK.

REV. NO.	DESCRIPTION	DATE

This work was prepared by me or under my supervision and construction of this project shall be under my observation.

Signature
LICENSE EXPIRES : APRIL 30, 2024

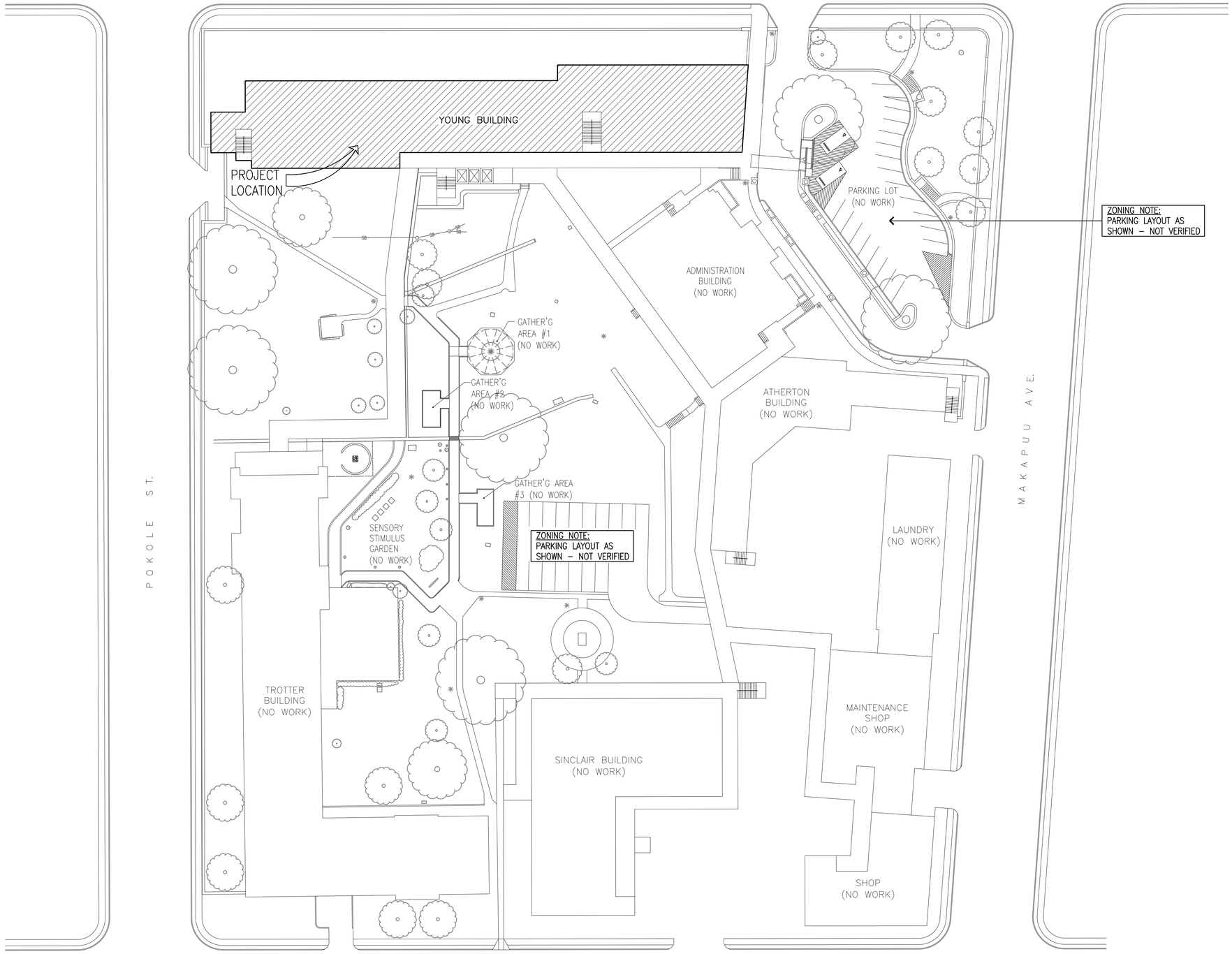
GLEN K. MURAKAMI LICENSED PROFESSIONAL ARCHITECT NO. 6065 HAWAII USA

Pacific Architects, Inc.
2020 South King Street
Honolulu, Hawaii 96826
808-949-1601
fax 808-942-0054

PROJECT TITLE: LEAHI HOSPITAL - YOUNG BUILDING - FIRST FLOOR WINDOW REPLACEMENT
3675 KILAUEA AV., HONOLULU, HAWAII 96816
T.M.K.: 3 – 2 – 031: 001

SHEET TITLE: TITLE SHEET, CONSULTANTS, LOCATION MAP, VICINITY MAP & NOTES

DATE NOVEMBER 2023
SCALE AS SHOWN
DRAWN MT | CHECK DM
SHEET
T-1.0
OF ? SHEETS



A
A–1.0
SITE PLAN
SCALE: 1/32" = 1'–0"

GRAPHIC SCALE:

0 8' 16' 32' 64' 96'

SCALE: 1/32" = 1'–0"

REV. NO.	DESCRIPTION	DATE

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PROJECT TITLE
LEAHI HOSPITAL - YOUNG BUILDING - FIRST FLOOR
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SHEET TITLE
SITE PLAN

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SCALE AS SHOWN
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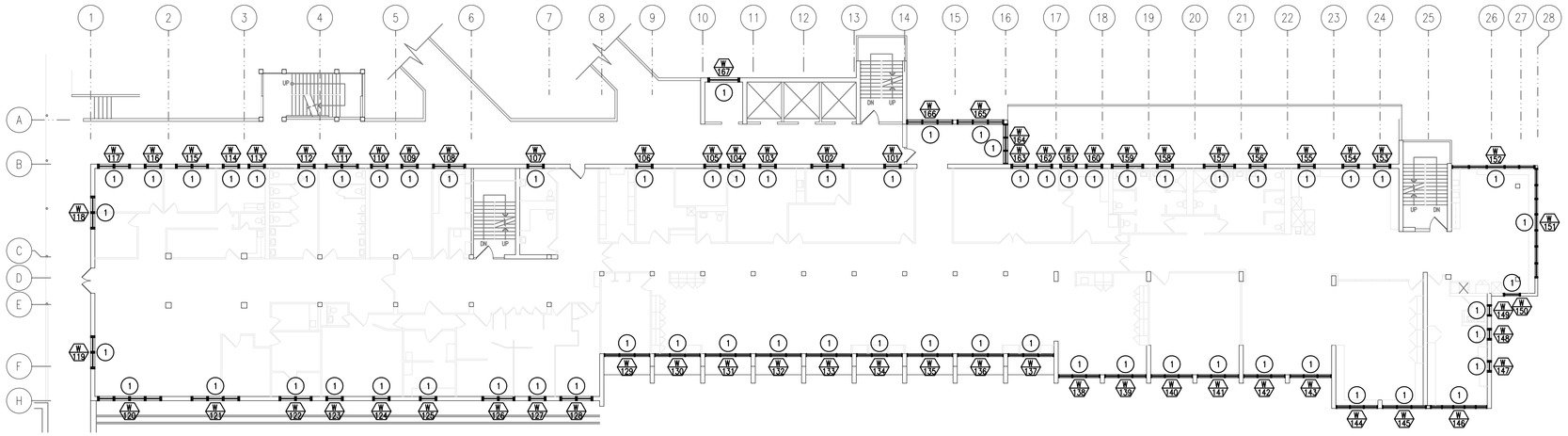
A-1.0
OF ? SHEETS



B
A-2.0

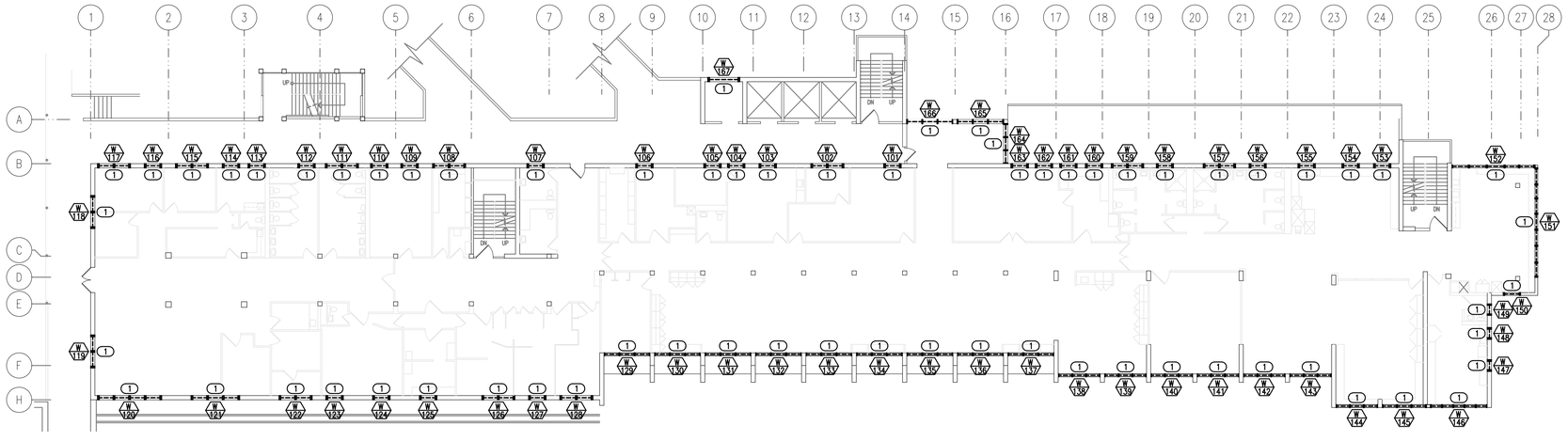
FIRST FLOOR PLAN – NEW WORK

SCALE: 1/16" = 1'-0"

NEW WORK LEGEND

1	BASE BID

NOTE:
1. SEE WINDOW SCHEDULE ON SHEET A-5.0 FOR NOMINAL WINDOW SIZES.
2. CONTRACTOR SHALL FIELD VERIFY EACH & ALL WINDOW ROUGH OPENING DIMENSIONS PRIOR TO THE ORDERING & FABRICATION OF NEW WINDOWS.



A
A-2.0

FIRST FLOOR PLAN – DEMO WORK

SCALE: 1/16" = 1'-0"

DEMO WORK LEGEND

1	REMOVE & DISPOSE EXIST'G WINDOW & FRAME – BASE BID

N

GRAPHIC SCALE:

0 4' 8' 16' 24' 48'

SCALE: 1/16" = 1'-0"

NO.	DESCRIPTION	DATE

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Signature

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Honolulu, Hawaii 96826
808-949-1601
fax 808-942-0054

PROJECT TITLE

LEAHI HOSPITAL - YOUNG BUILDING - FIRST FLOOR
WINDOW REPLACEMENT
3675 KILAUEA AV., HONOLULU, HAWAII 96816
T.M.K.: 3 – 2 – 031: 001

SHEET TITLE

FIRST FLOOR PLAN – DEMO & NEW WORK, DEMO & NEW WORK LEGEND

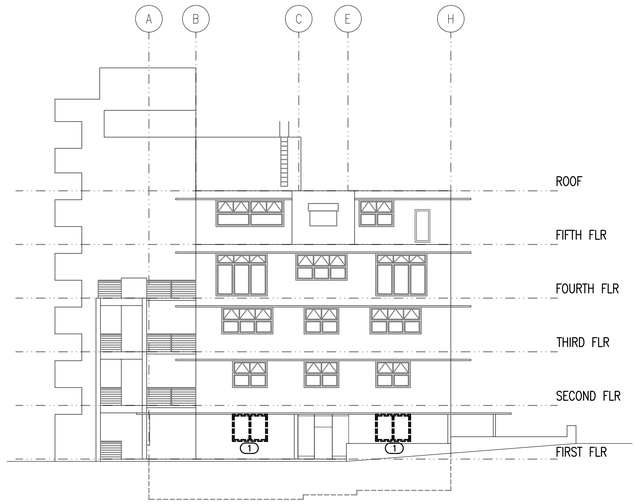
DATE NOVEMBER 2023
SCALE AS SHOWN
DRAWN MT CHECK DM
SHEET

A-2.0

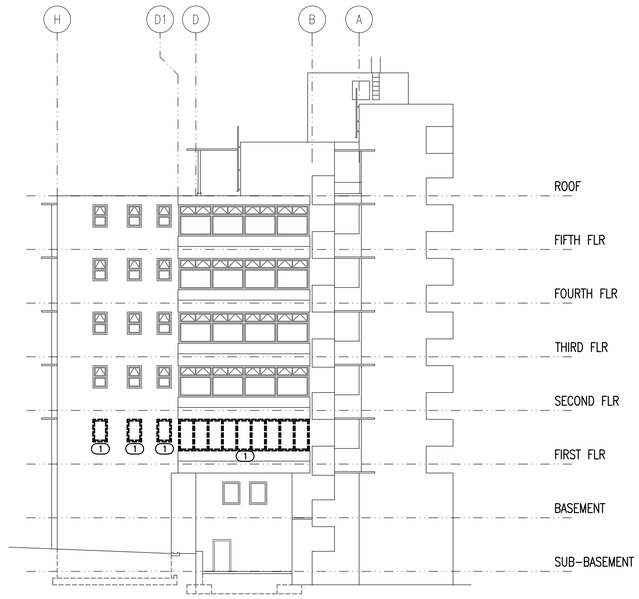
OF ? SHEETS

DEMO WORK LEGEND

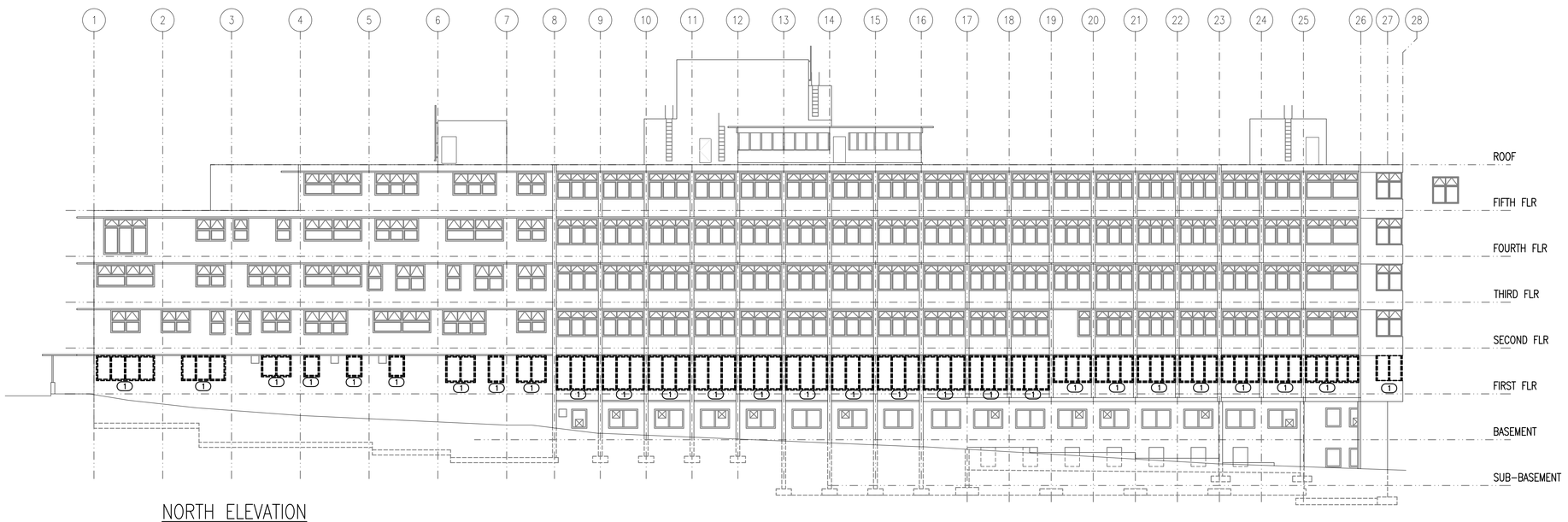
(1)	REMOVE & DISPOSE EXIST'G WINDOW & FRAME – BASE BID



EAST ELEVATION



WEST ELEVATION



NORTH ELEVATION

A
A-3.0

EXTERIOR ELEVATIONS – DEMO WORK

SCALE: 1/16" = 1'-0"

GRAPHIC SCALE:

0 4' 8' 16' 24' 48'

SCALE: 1/16" = 1'-0"

REV. NO.	DESCRIPTION	DATE

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Signature

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2020 South King Street
Honolulu, Hawaii 96826
808-949-1601
fax 808-942-0054

PROJECT TITLE

LEAHI HOSPITAL - YOUNG BUILDING - FIRST FLOOR WINDOW REPLACEMENT

3675 KILAUEA AV., HONOLULU, HAWAII 96816

T.M.K.: 3 – 2 – 031: 001

SHEET TITLE

EXTERIOR ELEVATIONS – DEMO WORK & DEMO WORK LEGEND

DATE NOVEMBER 2023

SCALE AS SHOWN

DRAWN MT CHECK DM

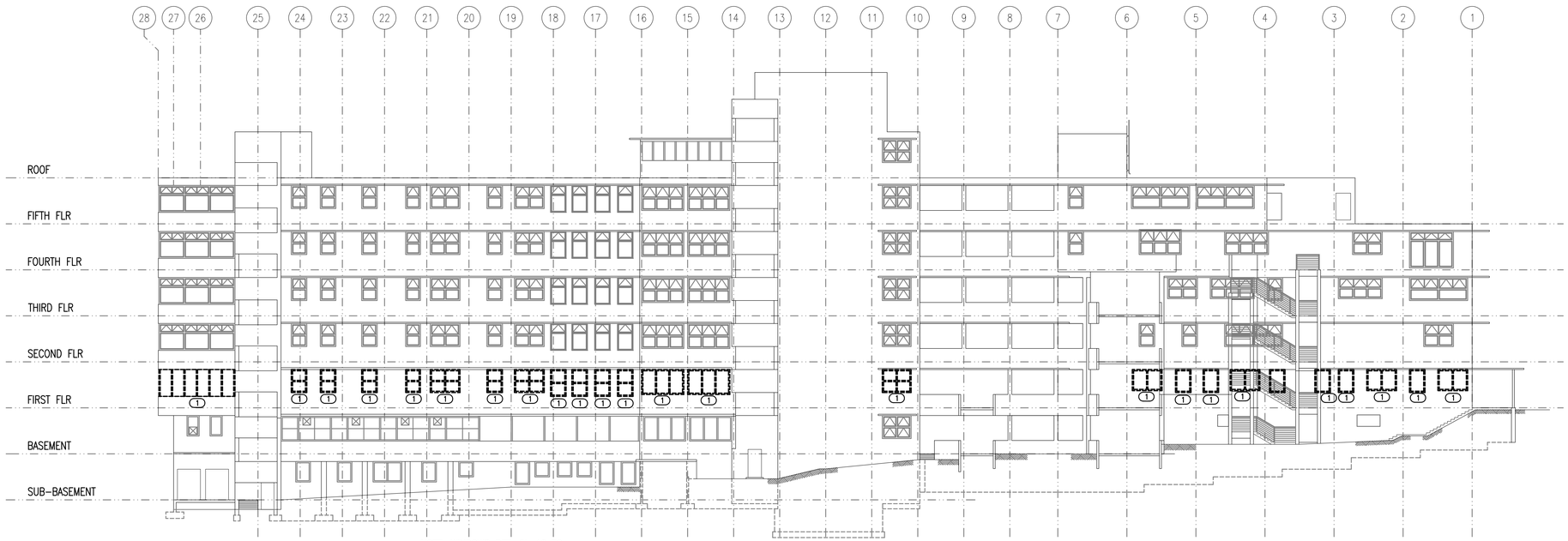
SHEET

A-3.0

OF ? SHEETS

DEMO WORK LEGEND

(1)	REMOVE & DISPOSE EXIST'G WINDOW & FRAME – BASE BID



SOUTH ELEVATION

NOTE: WINDOWS BET. GL 16 TO GL 7 NOT SHOWN. REFER TO SHT A-2.0.

A
A-3.1

EXTERIOR ELEVATION – DEMO WORK

SCALE: 1/16" = 1'-0"

N

GRAPHIC SCALE:

0 4' 8' 16' 24' 48'

SCALE: 1/16" = 1'-0"

REV. NO.	DESCRIPTION	DATE

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PROJECT TITLE

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3675 KILAUEA AV., HONOLULU, HAWAII 96816
T.M.K.: 3 – 2 – 031: 001

SHEET TITLE

EXTERIOR ELEVATION – DEMO WORK & DEMO WORK LEGEND

DATE NOVEMBER 2023

SCALE AS SHOWN

DRAWN MT CHECK DM

SHEET

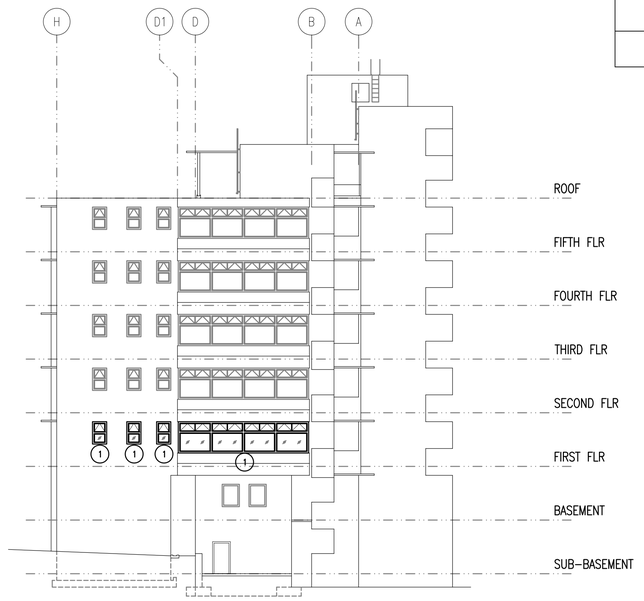
A-3.1

OF ? SHEETS

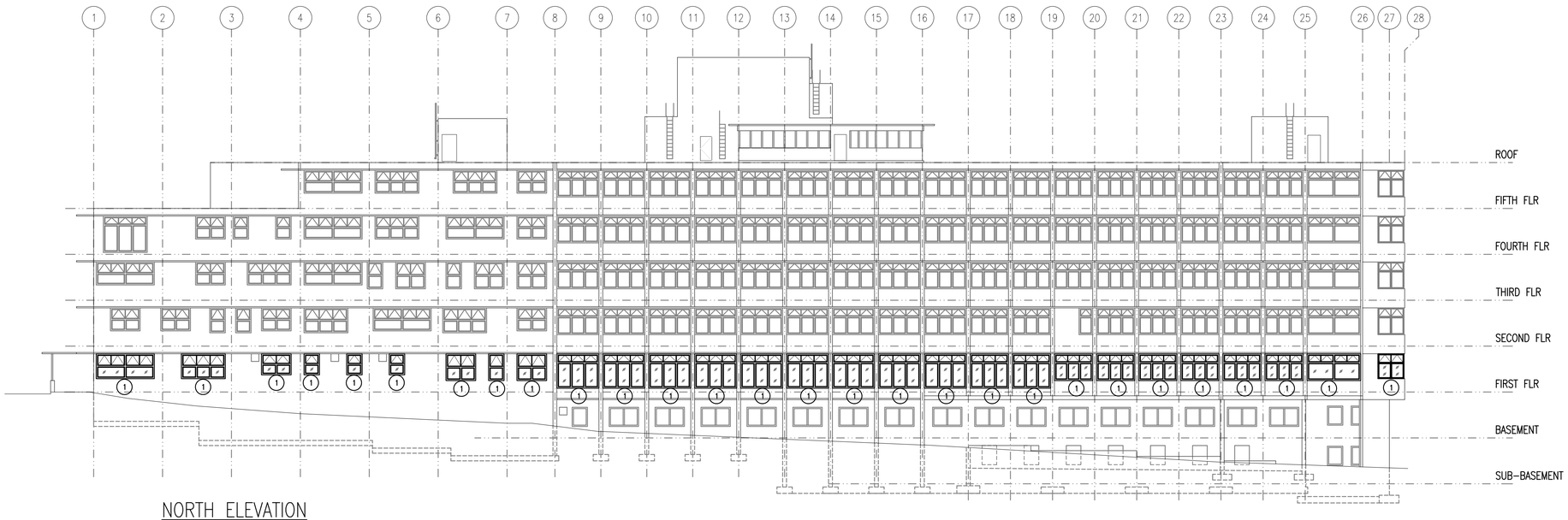
NEW WORK LEGEND

1	BASE BID

EAST ELEVATION



WEST ELEVATION



NORTH ELEVATION

A
A–4.0

EXTERIOR ELEVATIONS – NEW WORK

SCALE: 1/16" = 1'–0"

GRAPHIC SCALE:

0 4' 8' 16' 24' 48'

SCALE: 1/16" = 1'–0"

REV. NO.	DESCRIPTION	DATE

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Signature

LICENSE EXPIRES : APRIL 30, 2024

GLENN K. MURAKAMI LICENSED PROFESSIONAL ARCHITECT NO. 6065 HAWAII USA

Pacific Architects, Inc.
2020 South King Street
Honolulu, Hawaii 96826
808-949-1601
fax 808-942-0054

PROJECT TITLE

LEAHI HOSPITAL - YOUNG BUILDING - FIRST FLOOR WINDOW REPLACEMENT

3675 KILAUEA AV., HONOLULU, HAWAII 96816

T.M.K.: 3 – 2 – 031: 001

SHEET TITLE

EXTERIOR ELEVATIONS – NEW WORK & NEW WORK LEGEND

DATE NOVEMBER 2023

SCALE AS SHOWN

DRAWN MT CHECK DM

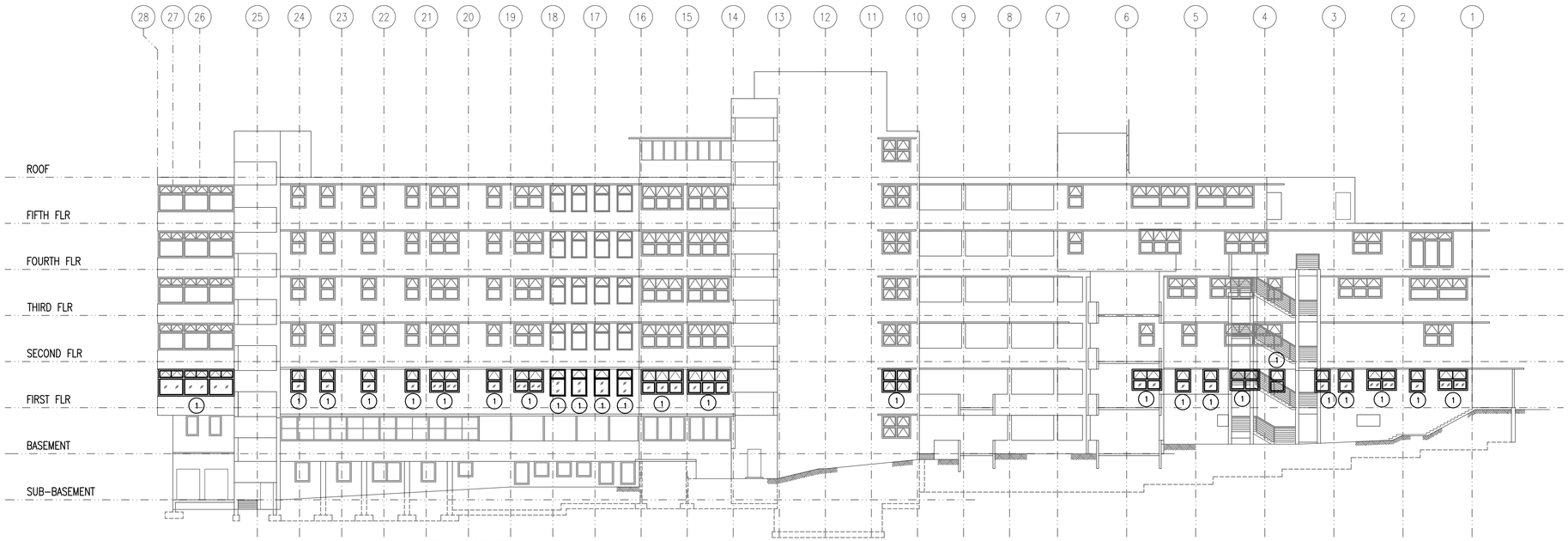
SHEET

A-4.0

OF ? SHEETS

NEW WORK LEGEND

1	BASE BID



SOUTH ELEVATION

NOTE: WINDOWS BET. GL 16 TO GL 7 NOT SHOWN. REFER TO SHT A-2.0.

A / A-4.1 EXTERIOR ELEVATION – NEW WORK

SCALE: 1/16" = 1'-0"

N

GRAPHIC SCALE:

0 4' 8' 16' 24' 48'

SCALE: 1/16" = 1'-0"

REV. NO.	DESCRIPTION	DATE

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PROJECT TITLE

LEAHI HOSPITAL - YOUNG BUILDING - FIRST FLOOR
WINDOW REPLACEMENT
3675 KILAUEA AV., HONOLULU, HAWAII 96816
T.M.K.: 3 – 2 – 031: 001

SHEET TITLE

EXTERIOR ELEVATION – NEW WORK & NEW WORK LEGEND

DATE NOVEMBER 2023

SCALE AS SHOWN

DRAWN MT CHECK DM

SHEET

A-4.1

OF ? SHEETS

YOUNG BUILDING - FIRST FLOOR WINDOW SCHEDULE

BUILDING FLOOR	WINDOW NO.	WINDOW SIZE (W x H)	TYPE	FRAME		GLAZING	DETAIL					REMARKS
				MAT'L	FINISH		HEAD	JAMB	V MULLION	H MULLION	SILL	
FIRST FLOOR	101	3'–10" x 6'–0"	B	ALUM	BRONZE ANODISE	TINTED	5	2, 6	–	8	3	
	102	7'–6" x 6'–0"	A	●	●	●	5	2, 6	4, 7	8	3	
	103	3'–10" x 6'–0"	B				5	2, 6	–	8	3	
	104	3'–10" x 6'–0"	B				5	2, 6	–	8	3	
	105	3'–10" x 6'–0"	B				5	2, 6	–	8	3	
	106	3'–2" x 6'–0"	B				5	2, 6	–	8	3	
	107	3'–10" x 6'–0"	B				5	2, 6	–	8	3	
	108	7'–6" x 7'–2"	D				5	2, 6	4, 7	8	3	
	109	3'–10" x 7'–2"	C				5	2, 6	–	8	3	
	110	3'–10" x 7'–2"	C				5	2, 6	–	8	3	
	111	7'–6" x 7'–2"	D			FROSTED	5	2, 6	4, 7	8	3	
	112	3'–10" x 6'–2"	C			FROSTED	5	2, 6	–	8	3	
	113	3'–10" x 7'–2"	C			TINTED	5	2, 6	–	8	3	
	114	3'–10" x 7'–2"	C			●	5	2, 6	–	8	3	
	115	7'–6" x 7'–2"	D				5	2, 6	4, 7	8	3	
	116	3'–10" x 7'–2"	B				5	2, 6	–	8	3	
	117	7'–6" x 7'–2"	A				5	2, 6	4, 7	8	3	
	118	7'–6" x 7'–2"	G				1	2	4, 7	4 (SIM)	3	
	119	7'–6" x 7'–2"	G				1	2	4, 7	4 (SIM)	3	
	120	14'–10" x 7'–0"	H				5	2, 6	4, 7	8	3	
	121	11'–10" x 7'–0"	F				5	2, 6	4, 7	8	3	
	122	7'–6" x 6'–0"	D				5	2, 6	7	8	3	
	123	3'–10" x 6'–0"	C				5	2, 6	–	8	3	
	124	3'–10" x 6'–0"	C				5	2, 6	–	8	3	
	125	3'–10" x 6'–0"	C				5	2, 6	–	8	3	
	126	7'–6" x 7'–0"	D				5	2, 6	7	8	3	
	127	3'–10" x 7'–0"	C				5	2, 6	–	8	3	
	128	7'–6" x 7'–0"	D				5	2, 6	4, 7	8	3	
	129	11'–0" x 6'–6"	J				5	2, 6	4, 7	8	3	
	130	11'–0" x 6'–6"	J				5	2, 6	4, 7	8	3	
	131	11'–0" x 6'–6"	J				5	2, 6	4, 7	8	3	
	132	11'–0" x 6'–6"	J				5	2, 6	4, 7	8	3	
	133	11'–0" x 6'–6"	J				5	2, 6	4, 7	8	3	
	134	11'–0" x 6'–6"	J				5	2, 6	4, 7	8	3	
	135	11'–0" x 6'–6"	J				5	2, 6	4, 7	8	3	
	136	11'–0" x 6'–6"	J				5	2, 6	4, 7	8	3	
	137	11'–0" x 6'–6"	J				5	2, 6	4, 7	8	3	
	138	10'–0" x 6'–6"	J				5	2, 6	4, 7	8	3	
	139	10'–0" x 6'–6"	J				5	2, 6	4, 7	8	3	
	140	10'–0" x 6'–6"	J				5	2, 6	4, 7	8	3	
	141	10'–0" x 6'–6"	J				5	2, 6	4, 7	8	3	
	142	10'–0" x 6'–6"	J				5	2, 6	4, 7	8	3	
	143	10'–0" x 6'–6"	J				5	2, 6	4, 7	8	3	
	144	10'–0" x 6'–6"	J				5	2, 6	4, 7	8	3	
	145	10'–0" x 6'–6"	J				5	2, 6	4, 7	8	3	
	146	14'–0" x 6'–6"	K				5	2, 6	4, 7	8	3	
	147	2'–6" x 3'–4"	C				5	2, 6	–	8	3	
	148	2'–6" x 3'–4"	C				5	2, 6	–	8	3	
	149	2'–6" x 3'–4"	C				5	2, 6	–	8	3	
	150	6'–4" x 6'–6"	A				5	2, 6	4, 7	8	3	
	151	29'–6" x 6'–6"	M				5	2, 6	4, 7	8	3	

BUILDING FLOOR	WINDOW NO.	WINDOW SIZE (W x H)	TYPE	FRAME		GLAZING	DETAIL					REMARKS
				MAT'L	FINISH		HEAD	JAMB	V MULLION	H MULLION	SILL	
FIRST FLOOR	152	19'–6" x 6'–6"	L	ALUM	BRONZE ANODISE	TINTED	5	2, 6	4, 7	8	3	
	153	4'–6" x 5'–10"	C	●	●	●	5	2, 6	–	8	3	
	154	3'–8" x 5'–10"	C				5	2, 6	–	8	3	
	155	4'–6" x 5'–10"	C				5	2, 6	–	8	3	
	156	3'–8" x 5'–10"	C				5	2, 6	–	8	3	
	157	7'–4" x 5'–10"	D				5	2, 6	7	8	3	
	158	3'–8" x 5'–10"	C				5	2, 6	–	8	3	
	159	7'–4" x 5'–10"	D				5	2, 6	7	8	3	
	160	3'–8" x 7'–0"	B				5	2, 6	–	8	3	
	161	3'–8" x 7'–0"	B				5	2, 6	–	8	3	
	162	3'–8" x 7'–0"	B				5	2, 6	–	8	3	
	163	3'–8" x 5'–10"	B				5	2, 6	–	8	3	
	164	9'–10" x 6'–0"	F				5	2, 6	4, 7	8	3	
	165	11'–0" x 6'–0"	F				5	2, 6	4, 7	8	3	
	166	11'–0" x 6'–0"	F				5	2, 6	4, 7	8	3	
	167	7'–6" x 6'–0"	E				5	6	7	9	10	

NOTES:

1. DIMENSION SHOWN IN THE WINDOW SCHEDULE ARE NOMINAL WINDOW SIZES.
2. CONTRACTOR SHALL FIELD VERIFY EACH & ALL WINDOW ROUGH OPENING DIMENSIONS PRIOR TO FABRICATION OF NEW WINDOW.
3. ALL GLASS SHALL BE ¼" LOW "E" SAFETY GLASS.

DATE

DESCRIPTION

REV. NO.

This work was prepared by me or under my supervision and construction of this project shall be under my observation.

Signature

LICENSE EXPIRES : APRIL 30, 2024

CLIFFORD K. MURAKAMI LICENSED PROFESSIONAL ARCHITECT NO. 6065 USA HAWAII

Pacific Architects, Inc.
2020 South King Street
Honolulu, Hawaii 96826
808-949-1601
fax 808-942-0054

PROJECT TITLE

LEAHI HOSPITAL - YOUNG BUILDING - FIRST FLOOR
WINDOW REPLACEMENT
3675 KILAUEA AV., HONOLULU, HAWAII 96816
T.M.K.: 3 – 2 – 031: 001

SHEET TITLE

FIRST FLOOR WINDOW SCHEDULE

DATE NOVEMBER 2023

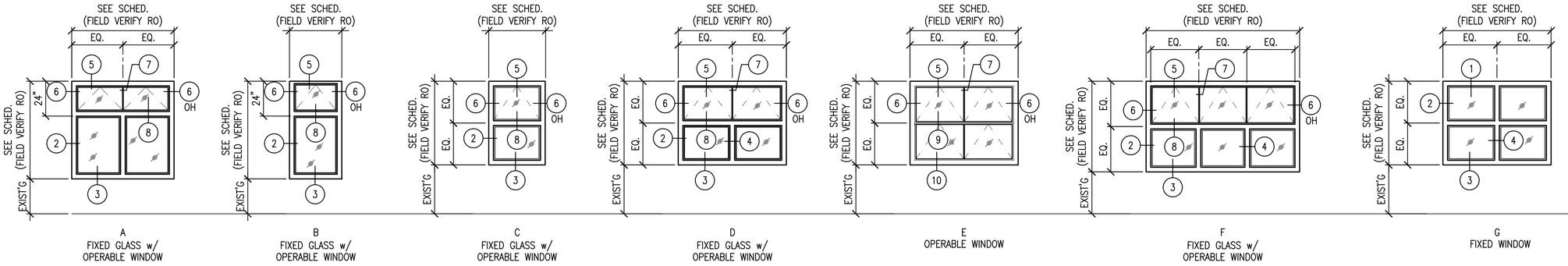
SCALE AS SHOWN

DRAWN MT CHECK DM

SHEET

A-5.0

____ OF ? SHEETS



A
FIXED GLASS w/ OPERABLE WINDOW

B
FIXED GLASS w/ OPERABLE WINDOW

C
FIXED GLASS w/ OPERABLE WINDOW

D
FIXED GLASS w/ OPERABLE WINDOW

E
OPERABLE WINDOW

F
FIXED GLASS w/ OPERABLE WINDOW

G
FIXED WINDOW

H
FIXED GLASS w/ OPERABLE WINDOW

J
FIXED GLASS w/ OPERABLE WINDOW

K
FIXED GLASS w/ OPERABLE WINDOW

L
FIXED GLASS w/ OPERABLE WINDOW

M
FIXED GLASS w/ OPERABLE WINDOW

A
A-6.0

WINDOW TYPES

SCALE: 1/4" = 1'-0"

GRAPHIC SCALE:

0 1' 2' 4' 8' 12'

SCALE: 1/4" = 1'-0"

REV. NO.	DESCRIPTION	DATE

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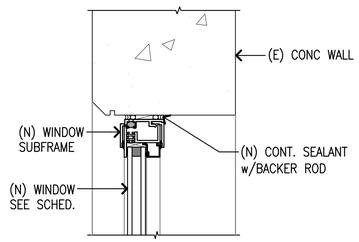
WINDOW TYPES

DATE NOVEMBER 2023
SCALE AS SHOWN
DRAWN MT CHECK DM

SHEET

A-6.0

OF ? SHEETS



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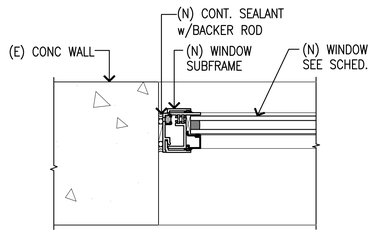

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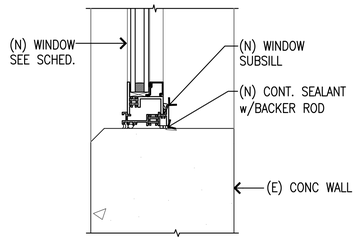

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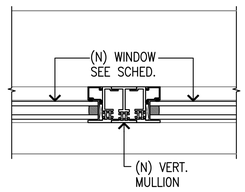

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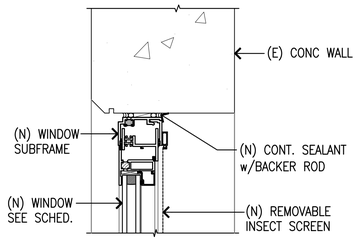

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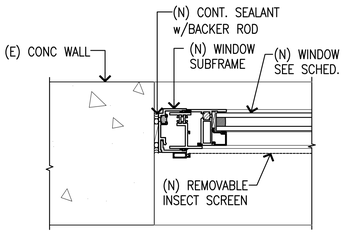

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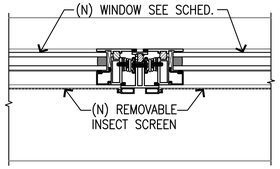

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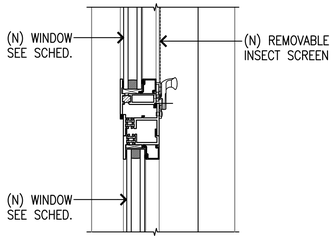

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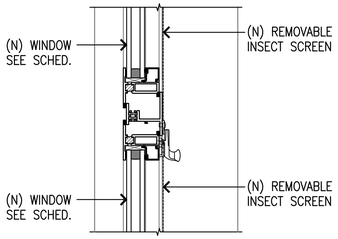

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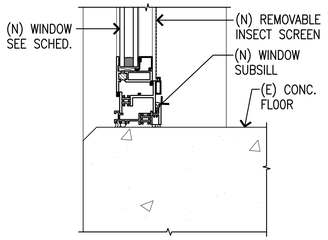

10

A
A-7.0

WINDOW DETAILS

SCALE: 3" = 1'-0"

GRAPHIC SCALE:

0 1" 2" 3" 6" 9" 1'

SCALE: 3" = 1'-0"

REV. NO.	DESCRIPTION	DATE

This work was prepared by me or under my supervision and construction of this project will be overseen by me or my supervision.

Signature

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SHEET TITLE

WINDOW DETAILS

DATE NOVEMBER 2023
SCALE AS SHOWN
DRAWN MT CHECK DM
SHEET

A - 7.0

18 OF ? SHEETS