

Invitation for Bids

**Maluhia Relighting
23M-0313**

The Hawaii Health Systems Corporation (HHSC) Oahu Region is requesting bids from qualified companies for the replacement of light fixtures at Maluhia located at 1027 Hala Dr., Honolulu, HI 96817.

The IFB may be obtained electronically from the following website:

<http://maluhia.hhsc.org/procurement/notices/>

A site visit is scheduled for March 27, 2024 at 10:00 a.m. All interested companies shall meet in the Maluhia sub-basement entrance area, adjacent to the main parking lot. The deadline for submission of written/mailed questions pertaining to the IFB is April 3, 2024.

All bids must be received by HHSC by April 18, 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.

Maluhia
1027 Hala Drive
Honolulu, HI 96817

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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	March 19, 2024
2.	Pre-Bid Orientation Maluhia sub-basement entrance 10:00 a.m.	March 27, 2024
3.	Closing Date for Receipt of Questions	April 3, 2024
4.	Closing Date for Receipt of Bids 2:00 p.m.	April 18, 2024
5.	Contractor Selection/Award Notification (on/about)	April 19, 2024
6.	Contract Start Date (on/about)	May 8, 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

MALUHIA RELIGHTING

Work for this project shall include, but is not limited to removal and replacement of light fixture lamps with new LED lamps, and miscellaneous work as indicated on the drawings.

2.1 CONTRACT PERIOD

The work shall be completed within 100 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 May 8, 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.gov/campaign.

(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)

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 Maluhia Relighting IFB No. 23M-0313, 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)

**IFB No. 23M-0313
Maluhia Relighting**

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 _____
Date

Addendum No. 3 _____

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.

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

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

MALUHIA,

RELIGHTING

1027 HALA DR.
HONOLULU, OAHU, HAWAII

TMK: 01-06-09:04

FOR THE

HAWAII HEALTH SYSTEMS CORPORATION (HHSC)

STATE OF HAWAII

ELECTRICAL: RHA ENERGY PARTNERS LLC

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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 is 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. Mark Cruz
POSITION OR TITLE: Energy Engineer
TELEPHONE NUMBER: (808) 490-1959
Email: mcruz@rhaenergy.com

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

NAME: Mr. Scott Kawai
POSITION OR TITLE: Contracts Manager
TELEPHONE NUMBER: (808) 832-3001
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. 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.
- B. 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.

- C. 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 8:00 AM to 4:30 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 OWNER REP. The OWNER REP will review the questions and issue any responses via Addendum. Only information received by Addendum shall be binding.
- D. 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.
- E. 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 updated on a weekly or bi-weekly basis as directed by the OWNER REP.

- B. On a weekly or bi-weekly basis, the Contractor shall conduct a progress meeting with the Hospital and OWNER REP. 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 OWNER REP 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 OWNER REP 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 OWNER REP 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 OWNER REP 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 facilities will be fully occupied and work shall be performed in close coordination with the HHSC representative. Work shall be phased and may be limited to one Bathroom or area at a time. Work will require the relocation of clients from the work area. Time shall be allocated for the Hospital to conduct this relocation. Scheduling of the work shall be closely monitored and work performed to minimize the disruption to the remaining areas of the facility.
- 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 not be 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 SPECIAL PROVISIONS

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 OWNER REP 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 OWNER REP 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 OWNER REP determines does not accurately record the deviation may be corrected by the OWNER REP and the Contractor shall be charged for the services.
7. Submit the set of "FIELD POSTED AS-BUILT" drawings to the OWNER REP 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 OWNER REP and notify the HHSC Technical 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 OWNER REP 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 OWNER REP 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 OWNER REP 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 OWNER REP'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 OWNER REP 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 OWNER REP may reject as non-complying such material and products that do not bear identification satisfactory to the OWNER REP 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 OWNER REP, and any change shall be made in accordance with the OWNER REP'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 OWNER REP 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, interior or exterior finishes, 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 work, 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 surface 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 OWNER REP 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 OWNER REP and/or HHSC Representative.
- B. Maintain temporary construction barricade(s) throughout the duration of the Work. During the course of the project, the OWNER REP 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 PATCHING

- A. 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 OWNER REP 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 OWNER REP and/or HHSC Representative.

END OF GENERAL PROJECT REQUIREMENTS

SECTION 01100 - SUMMARY

PART 1 - GENERAL

1.01 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: The work shall generally consist of replacement of light fixture lamps with new LED lamps, and miscellaneous work as indicated on the drawings and specified herein.
 - 1. Project Location: Maluhia Hospital, 1027 Hala Dr., 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 OWNER REP.
- 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 Contracting Officer, requested by Contracting Officer, and similar phrases.
2. Indicated: The term “indicated” refers to graphic representations, notes, or schedules on drawings or to other paragraphs or schedules in specifications and similar requirements in the Contract Documents. Terms such as “shown,” “noted,” “scheduled,” and “specified” are used to help the user locate the reference.
3. Furnish: The term “furnish” means to supply and deliver to project site, ready for unloading, unpacking, assembly, 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 Contracting Officer.

C. Industry Standards

1. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
2. Publication Dates: Comply with standards in effect as of date of the Contract Documents, unless otherwise indicated.
3. Conflicting Requirements: If compliance with 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 Contracting Officer 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 OWNER REP 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 OWNER REP 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 OWNER REP and/or HHSC Representative.
- b. Permanent use of the loading area is prohibited.
- c. Subject to availability, the OWNER REP 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 OWNER REP and/or HHSC Representative.
- b. Arrange all temporary electricity and water service with the OWNER REP 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 OWNER REP and/or HHSC Representative. A minimum five (5) working days notice shall be provided. Contractor is forewarned that the OWNER REP 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 OF SUMMARY

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 OWNER REP 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 OWNER REP or HHSC Representative. Take precautions and prevent access to power equipment, tools, etc., by other than authorized construction personnel. Perform operations to ensure the safety of the occupants of the buildings at all times.
3. Perform operations to minimize inconvenience or disturbance upon the personnel and residents.
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 OWNER REP. 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 WORK RESTRICTIONS

SECTION 01300 - SUBMITTALS

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

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

1.02 PROCEDURES

- A. Unless otherwise specified, deliver submittals to the OWNER REP 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 OWNER REP or his Consultant's review stamp.
- C. Upon completion of review by the OWNER REP, the OWNER REP 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 01140.

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 OWNER REP will retain three (3) copies and return the balance to the Contractor.
5. The OWNER REP 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 OWNER REP'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 OWNER REP 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 OWNER REP on previous submissions.
7. The OWNER REP'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 OWNER REP'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 OWNER REP. All such portions of the work shall be in accordance with reviewed shop drawings and samples.

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 OWNER REP 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 OWNER REP, 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 SUBMITTALS

SECTION 01577 - POLLUTION CONTROL

PART 1 - GENERAL

1.01 SUMMARY

- A. Includes site and environmental control requirements.

1.02 TRASH, REFUSE DISPOSAL

- A. Assume all ballast or lamps from removed light fixtures contain mercury and are pcb contaminated. Dispose fixtures properly in accordance with federal, state, and local requirements
- B. Burning of debris and/or waste materials on the project site is prohibited.
- C. Do not bury debris and/or waste material on the project site, unless specifically allowed elsewhere in these specifications as backfill material.
- D. 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.
- E. 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.
- F. Use enclosed chutes and/or containers to conveying debris from above the ground floor level.
- G. 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.
 - a
- 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 devices 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 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 OWNER REP 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 POLLUTION CONTROL

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

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 light fixtures including conduit and wires not to remain in service as indicated on the drawings and/or specified herein.
 - B. All dismantled materials having no salvage value as determined by the OWNER REP 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 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 OWNER REP.
- 3.04 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 OWNER REP 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 OWNER REP and/or HHSC Representative for their removal.

3.05 CLEAN-UP

- A. From time to time, as directed by the OWNER REP 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 OWNER REP 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 SELECTIVE DEMOLITION AND REMOVAL

DIVISION 16 - ELECTRICAL

SECTION 16000 - GENERAL ELECTRICAL REQUIREMENTS

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes specifications for interior and exterior electrical work.

1.02 INTENT OF SPECIFICATIONS AND DRAWINGS

- A. 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" and "the" are intentional. Omitted words and phrases shall be provided by inference to form complete sentences.
- B. Specifications and Drawings complement each other and what is specified, scheduled or mentioned on one shall be binding as if called for by both.
- C. Discrepancies and Interpretations:
 - 1. Should the Contractor find any discrepancies in or omissions from any of the documents or be in doubt as to their meaning, he shall advise OWNER REP who will issue any necessary clarification within a time period which does not disrupt the progress of the work.
 - 2. All interpretation and supplemental instructions will be in the form of a written addenda to the Contract Documents.
 - 3. Should any discrepancy arise from the failure of the Contractor to notify OWNER REP, the higher quality or larger quantity of item shall prevail. OWNER REP shall make the final interpretation and judgement.
 - 4. In the event of a discrepancy between small scale drawings and large-scale details, or between Drawings and Specification, on which is in violation of any regulations, ordinances, laws or codes, the discrepancy, if known by the Contractor, shall be immediately brought to the attention of OWNER REP for a decision before proceeding with the particular work involved. Work carried out disregarding these instructions will be subject to removal and replacement at the Contractor's expense.

1.03 DEFINITIONS

- A. Provide: "Furnish and install, test and deliver to the Owner in operating and ready to use condition."
- B. Wiring: "Provide all raceways, junction boxes, conductors, devices, protection equipment, etc., including testing for a complete, operative and ready to use electrical system."
- C. Equal: "Material, equipment or system, including all necessary labor, modifications and accessories satisfying the requirements of the contract documents to provide features or have operating characteristics equal or better than that specified."
- D. Complete: "Furnish installation that is operative, tested, and ready to use and which satisfies the intent of the contract documents, including all necessary accessories and

modifications.”

- E. Contractor: “The contractor responsible for all work or work it shall assign to any of its lower tiered Subcontractors. Except where noted, work of this section shall be assigned to the Contractor’s qualified and licensed electrical Subcontractor.”

F. HECO: Hawaiian Electric Company

G. HTCO: Hawaiian Telcom

1.04 GENERAL REQUIREMENTS

- A. Electrical Work: Provide all articles, materials, equipment operators, systems and services specified herein and, on the Drawings, and as normally required by accepted industry standard practices, including all labor taxes, fees, insurance, warranties and incidentals required to complete all electrical work.
- B. In general, the following work is included:
 - 1. Provide, complete and in place, lighting systems for the renovation of existing buildings throughout the hospital.
 - 2. Patch, and repair all existing floors, walls, and ceilings affected by new installations and/or relamping to match existing surroundings.
- C. Furnish required submittals and samples. Conform to the requirements of SECTION 01300 - SUBMITTALS.
- D. Furnish “As-built” Drawings. Conform to the requirements of SECTION 01300 - SUBMITTALS.
- E. Coordinate work with other trades to avoid omissions and overlapping of responsibilities.
- F. Before bidding, visit project site, carefully review each section of the Specification and all Drawings of this Contract. Verify details, report any error, conflicts or omissions to OWNER REP at least 10 calendar days before submission of bids for interpretation or clarification. If errors or omissions are not reported, Contractor shall provide necessary work at no additional cost to OWNER REP or the Owner to properly complete intent of Specification and Drawings. By submitting a proposal of the work included in this contract, the Contractor shall be deemed to have made such examination and to be familiar with and accept all conditions of the job site.

1.05 QUALITY ASSURANCE

- A. Government and Utility Requirements: Comply with all requirements of the State of Hawaii, City and County of Honolulu, and respective utility company rules and regulations.
- B. Specifications are accompanied by diagrammatical electrical plans showing locations of luminaires, standards, outlets, feeder runs, devices and other electrical equipment. Locations are approximate and before installation, Contractor shall study adjacent construction details and make installation in the most logical manner. Prior to installation and at the direction of OWNER REP, relocate any device within 10 feet – 0 inches of the location presently shown without added cost to OWNER REP or the Owner.

- C. Prior to start of the rough-in work, verify all dimensions and sizes of equipment at the job site. Circuits and raceway routes are diagrammatic and may be altered in any logical manner. However, all changes from the contract documents shall be subject to review and acceptance of OWNER REP and indicated on the "As-built" Drawings.
- D. Materials and Equipment:
1. Materials and equipment shall conform to requirements of applicable technical specification sections, publications specified therein and shall be as shown on the drawings. Materials and equipment shall be new and shall be the product of manufacturers regularly engaged in the manufacture of such products.
 2. All items shall essentially duplicate materials and equipment which have been in satisfactory use at least 2 years prior to bid opening and shall be supported by a service organization that is located within 50 miles of the site of installation.
- E. List of Materials and Equipment: Submit in accordance with SECTION 01300 - SUBMITTALS. These lists shall include manufacturer's names and material or equipment identification such as styles, types, or catalog numbers to permit ready and complete identification. Catalog cuts or brochures shall be included for luminaires and lamps.
1. Where items are specified by manufacturer's name or catalog number, substitutions require written permission by OWNER REP prior to bidding. Brand names, manufacturer's names and catalog numbers indicate the standard of design and quality required. List of substitute materials together with qualifying data shall be submitted for review at least 10 working days before bid due date. Failure to submit for review substitute materials prior to bidding shall mean that materials, as specified, will be provided. Substitute materials submitted and rejected shall not be resubmitted in any modified form.
 2. Samples of proposed substitute items may be required and shall be submitted by the Contractor at their expense as soon as practicable after they are requested.
 3. Items requiring shop drawings shall be included in the list of materials and equipment, identified by the manufacturer's name and type, and accompanied by complete descriptive data, electrical and physical characteristics of the equipment and manufacturer's bulletins.
 4. Burden of proof of equality of proposed substitutions will be the responsibility of the Contractor. Submittals shall be sufficiently detailed to permit evaluation of the proposed items. Inadequacy of submittals shall be sufficient cause to reject a proposed substitution.
 5. All prospective bidders must submit descriptive information on proposed material for pre-bidding acceptance where an item is detailed but no manufacturer is named.
- F. Prevention of Corrosion: All metallic materials shall be protected against corrosion. Exposed metallic parts of outdoor apparatus shall be constructed from 316 or 316L stainless steel. All such parts as boxes, bodies, fittings, guards and miscellaneous parts shall be constructed of 316 or 316L stainless steel. The Contractor shall not join dissimilar metals that will result in deterioration due to galvanic corrosion.

1.06 DEPARTURES

- A. Departures resulting from the substitution of materials or systems shall be accompanied by appropriate changes in all affected work of every trade. Such changes shall be done at no increase to the contract amount and shall be the responsibility of the Contractor, Sub-Contractor or supplier responsible for the departures. Changes proposed by the Contractor shall be based on a system approach and shall be allowed if implemented without decrease in quality, performance and operations, increase in utility costs or adverse effect on the available physical space to install the equipment. Such departures shall be submitted and noted in shop drawings for review and acceptance by OWNER REP. Departure initiated by other trades, requiring changes in the electrical system as well as other systems, shall be accompanied by appropriate changes to all affected work of every trade, at no increase in contract amount. Submission for departure shall be as follows:

EXAMPLE:

<u>Item</u>	<u>Manufacturer and Catalog Number Specified</u>	<u>Substitute Manufacturer and Catalog Number</u>
Cable	John Doe - No. 3200	King - No. 2200

- B. It shall be understood that after the award of contract, all departures having electrical impact, unless otherwise noted, shall be submitted by the Contractor to OWNER REP for have been review and approval by OWNER REP.

1.07 SUBMITTALS

- A. Submit in accordance with SECTION 01300 - SUBMITTALS. Partial submittals will not be acceptable. Submit for approval 3 complete sets of submittals as described below. Annotate descriptive data to show the specific model, type, and size of each item the Contractor proposes to furnish. Do not commence work until the design of the system and the various components have been approved. OWNER REP will review and approve all submittals. Before work is commenced the shop drawings must be approved.
- B. Product Data: Shall be sufficiently comprehensive and detailed to permit evaluations, otherwise the item may be rejected, and shall include, as applicable, the following:
1. Identification of each equipment and component.
 2. Dimension outlines of all enclosures.
 3. Dimension drawings of components such as switchboard and panelboards.
 4. Layouts and general arrangement of equipment.
 5. Operating and electrical characteristics including interrupting ratings and impedances.
- C. Certificate of Compliance: Where required by the section specifying the equipment, the Contractor shall submit 3 copies of certificates of compliance in accordance with the requirements of SECTION 01300 - SUBMITTALS. The certificates shall include but not be limited to factory test reports.
- D. Installation, Operation and Maintenance Data: 3 copies of installation, operation and maintenance data shall be submitted for equipment specified to require such data. The

data shall be in the form of manuals and shall indicate instructions for operating, maintaining, repairing, recommended inspection points and periods for inspection in a practical, complete and comprehensive manner. The information shall be arranged in a logical, orderly sequence, including a general description of the equipment and significant technical characteristics.

- E. Test, adjustment and calibration information shall be furnished and identified to specific equipment. The installation, operation and maintenance data shall be submitted in accordance with SECTION 01300 - SUBMITTALS.
- F. Acceptance Requirements: Acceptance for material and equipment will be based on manufacturer's published data. Where materials or equipment are specified to be constructed and tested, or both, in accordance with the standards of the National Electrical Manufacturers Association (NEMA) or the American National Standards Institute (ANSI), the Contractor shall submit proof that the items furnished under this section of the specifications conform to such requirements. A certification or published catalog specification data statement to the effect that the item is in accordance with the referenced NEMA standard by a company listed as a member company of NEMA for the section whose standards cover the item under construction, will be acceptable as sufficient evidence that the item conforms to the requirements of the National Electrical Manufacturers Association. A manufacturer's statement indicating complete compliance of each item with the applicable NEMA, ANSI or other commercial standard specified shall be submitted and will be acceptable proof of compliance. Conformance with the agency requirements does not relieve the item from complying with any other requirements of the specifications.
- G. Nameplates:
 - 1. General: In addition to standard manufacturer's nameplate, corrosion resistant nameplates shall be provided for each enclosed circuit breaker, safety switch, panelboard, lighting contactor, junction boxes, and other major pieces of equipment. Nameplates shall designate the function of the equipment for which they are used. The designation shall be submitted for review and acceptance with the shop drawings.
 - 2. Material and Lettering: 1/16 inch thick, laminated plastic, black-white-black. Nameplate lettering shall be 1/4 inch high upper-case.
 - 3. Fastening: Nameplates shall be fastened by means of non-ferrous metal screws.
 - 4. Hand lettering or stick-on embossed marking tape is not acceptable.
- H. Factory Tests and Inspection:
 - 1. The equipment furnished shall be inspected mechanically and electrically, and all manufacturers' routine factory tests shall be performed to verify conformance with the specified requirements. The test equipment and test methods shall conform to the requirements of standards specified. The contract price shall include cost of performing all tests, and no additional compensation will be allowed thereafter.
 - 2. The Contractor shall furnish, at time of equipment delivery, 3 certified copies of all test results and one electronic copy.
- I. Equipment Guarantees: Installation shall be complete in every detail and ready for use.

Any item supplied by the Contractor developing defects within one year after final acceptance by OWNER REP shall be replaced by materials, apparatus and parts including installation labor costs to make such defective portion of the completed system conform to the true intent and meaning of the drawings and specifications, without additional cost to OWNER REP or the Owner. The Contractor shall guarantee all equipment specified from the date such equipment is accepted by the Owner, against defects in materials, design, performance and workmanship. Guarantees shall be supported by manufacturer's written warranties and shall be signed by an official of the manufacturer's organization. Replacement parts shall be delivered and repairs shall be made promptly upon receipt of notice of failure under normal and proper use and maintenance. All costs of replacement and repair shall be borne by the Contractor provided that a report substantiating such defect or failure to conform to specifications is promptly given to the Contractor.

J. Warranty: Submit warranty in accordance with SECTION 01300 – SUBMITTALS.

1.08 CODES, REGULATIONS AND STANDARD SPECIFICATIONS

- A. Work shall conform to the Hawaii Revised Statutes, Ordinances of the City and County of Honolulu; International Building Code (IBC); and the latest adopted edition of National Electrical Code (NEC).
- B. Applicable rules, standards and specifications of following associations shall apply to materials and workmanship:
 - 1. American National Standards Institute (ANSI)
 - 2. Illumination Engineer Society (IES)
 - 3. National Electrical Manufacturer's Association (NEMA)
 - 4. National Fire Protection Association (NFPA)
 - 5. Underwriters' Laboratories, Inc. (UL)

1.09 WARRANTY

- A. Defective materials and workmanship shall be removed and replaced at no cost to OWNER REP or the Owner. For period of one year after acceptance of work by Owner, materials and workmanship developing defects and malfunctions shall be repaired and/or replaced, to conform with intent of the specification and drawings, at no additional cost to Owner.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. All materials shall be new, except as specifically noted, and shall bear the label of Underwriter's Laboratories, Inc., wherever standards have been established and label service is normally and regularly furnished by the agency. See the respective technical sections for the electrical material specifications.

PART 3 - EXECUTION

3.01 MATERIALS AND EQUIPMENT PROVIDED BY THE CONTRACTOR

- A. The electrical installation shall be complete and operable and shall conform to the requirements of the contract drawings. The Contractor shall provide all electrical equipment and materials, wiring, supports and such additional parts as are necessary to make the installation complete. All Contractor furnished materials and equipment are subject to review and acceptance by OWNER REP.

3.02 PROTECTION DURING STORAGE

- A. Store all materials and equipment in a safe manner; weather and fire protection shall be maintained and all materials shall be stored above the ground floor level to avoid damage by moisture.

3.03 PROTECTION OF WORK IN PROGRESS

- A. All electrical materials and equipment shall be completely protected during installation. Equipment shall be securely protected against physical or chemical damage. In areas exposed to weather, materials unused at the end of each day's work shall be stored in weather-protected locations. Damage to materials and equipment due to Contractor's neglect shall be repaired or replaced by and at the expense of the Contractor.

3.04 PROGRESS OF WORK AND COORDINATION

- A. The Subcontractor shall prepare a schedule giving the sequence of electrical work. The electrical work shall be coordinated with the work of other contractors and other trades. The schedule shall be submitted prior to beginning installation and shall be subject to review and acceptance by OWNER REP.

3.05 RULES

- A. The entire electrical installation shall conform to the applicable rules and regulations of the State Fire Code, Model Energy Code and other City and County of Honolulu standards and publications specified in the technical sections.

3.06 COORDINATION

- A. The contract drawings indicate the extent and general location and arrangement of equipment, conduit and wiring. Lighting fixtures, outlets and electrical equipment shall be located so as to avoid interference with architectural, mechanical and structural features. Any device or equipment may be relocated within 10 feet - 0 inches of the location shown on the plans before installation is initiated and without increase in contract amount.

3.07 WORKMANSHIP

- A. All materials and equipment shall be installed in accordance with printed recommendations of the manufacturer and shall conform to the requirements of the contract drawings. The installation shall be accomplished by workers skilled in this type of work. For actual fabrication, installation and testing of the Electrical Work, use only thoroughly trained and experienced workmen completely familiar with items required and with manufacturers' recommended methods of installation. In acceptance or rejection of installed work no allowance will be made for lack of skill on part of workmen.
- B. Inspection: Skill and competency of workmanship shall be subject to the approval of OWNER REP, the State and City and County of Honolulu. Notification for inspection shall be given the respective companies or agencies 3 working days in advance of work.

3.08 FIELD TESTS

- A. After the installation is completed, and at such time OWNER REP may direct, the Contractor shall conduct field tests for acceptance by OWNER REP. When the tests are specified to be performed under the supervision of the equipment manufacturer, the Contractor shall cooperate with OWNER REP during tests and shall place at the manufacturer's disposal, all assistance, materials and services required to perform such tests. The tests shall be performed in the presence of OWNER REP. The Contractor shall furnish all necessary electric power instruments and personnel required for the tests.
- B. Insulation Tests: All conductors shall receive insulation resistance test with a megger insulation tester. Submit results of tests to OWNER REP.
- C. Operating Tests: The equipment and systems shall be demonstrated to operate in accordance with the requirements of the technical sections in which the equipment or systems are specified.
- D. Ground Resistance Test: Test ground resistance by 3-point method. Results of test shall be submitted to OWNER REP. Ground Resistance: Ground resistance measurements of each ground rod shall be taken and certified by the Contractor. Upon completion of the project, the Contractor shall submit in writing to OWNER REP, the measured ground resistance of each ground rod and grounding system, as well as the resistance and soil conditions at the time the measurements were made. Ground resistance measurements shall be made in normally dry weather, not less than 48 hours after rainfall, and with the ground under test isolated from other grounds.
- E. Wherever test or inspection reveals faulty materials or installation, Contractor shall take corrective action, at his own expense, repairing or replacing materials or installation as directed. The materials or installation shall then be retested.

END OF GENERAL ELECTRICAL REQUIREMENTS

SECTION 16050 - BASIC ELECTRICAL MATERIALS AND METHODS

PART 1 - GENERAL

1.01 SUMMARY

- A. This section provides the specifications for general electrical work. See other specification sections for more detailed specifications related to specific electrical systems.

1.02 RELATED WORK DESCRIBED ELSEWHERE

- A. SECTION 16000 – GENERAL ELECTRICAL REQUIREMENTS

1.03 SUBMITTALS

- A. Submit in accordance with SECTION 01300 – SUBMITTALS.
- B. Shop Drawings and Manufacturer's Literature:
 - 1. Submit complete shop drawings and manufacturer's literature for the Owner's review before any work is ordered or fabricated. Partial or incomplete submittals will be returned without review. Submit manufacturer's literature for the following:
 - a. Raceways
 - b. Conductors
 - c. Cabinets/Enclosures
 - d. Circuit Breakers
 - e. Junction Boxes
 - f. Lamps
 - 2. Shop drawings and catalogue cuts for substitute materials shall clearly specify compliance with and/or deviation from specified material. Certification shall not contain statements to imply that the item does not meet requirements specified, such as "as good as"; and "achieve the same end use and results as materials formulated in accordance with the referenced publications". Certifications shall simply state that the item conforms to the requirements specified. Certificates shall be printed on the manufacturer's letterhead and shall be signed by the manufacturer's official authorized to sign certificates of compliance. Review of shop drawings and catalogue cuts shall not release Contractor from complying with intent of specification and drawings. Partial or incomplete submittals will be returned without review.
- C. As-Built Drawings: Submit as-built drawings as specified under SECTION 01300 – SUBMITTALS.
- D. Guarantee and Certificate: Submit guarantee and certificate as noted under item entitled "GUARANTEE AND CERTIFICATE" hereinbelow.

1.04 GUARANTEE AND CERTIFICATE

- A. Any item of material, apparatus, equipment furnished and installed, or construction by the Contractor showing defects in design, construction, quality or workmanship within one year from the date of final acceptance by the Owner shall be replaced by such new material, apparatus or parts as may be found necessary to make such defective portion of the complete system conform to the true intent and meaning of the specification and/or the drawings. Exceptions shall be fluorescent and incandescent lamps which shall be guaranteed for one half the manufacturer's listed life time. Such repairs or replacement shall be made by the Contractor or his surety, free of all expense to the Owner.

1.05 COORDINATION WITH UTILITY COMPANIES AND OTHER TRADES

- A. During bidding and construction, Contractor shall coordinate his work with utilities, and other trades to avoid omissions and overlapping of responsibilities.

1.06 GENERAL REQUIREMENTS

- A. The Contractor shall furnish all labor, materials (except as hereinafter noted), tools, equipment and appliances required to provide and install all Electrical Work, complete, as indicated on the drawings and/or as herein specified. The drawings note various sizes of equipment as determined for basis of design; the electrical work, however, shall be installed to comply with the equipment furnished by the successful supplier. The work shall include but not necessarily be limited to, the following:
 - 1. Provide electrical connections (circuit breakers, conduits, conductors, terminations, etc.) to equipment furnished by others. Re-size electrical connections as required to suite equipment being furnished at no additional cost to the Owner.
 - 2. Prime and paint all installations, and areas exposed by demolition work, to match surrounding surfaces.
 - 3. Unless otherwise specified, the Contractor is responsible for moving about all furniture and equipment to provide himself with sufficient working space. The Contractor shall protect these items and make good any damage to them at no cost to the Owner. After the electrical work in each room is completed, the Contractor shall replace all furniture and equipment to their original locations and clean room to condition when work started.
 - 4. Before bidding on this work, carefully examine each of the drawings and the site. By submitting a proposal of the work included in this contract, the Contractor shall be deemed to have made such examination and to be familiar with and accept all conditions of the job site.

1.07 CODES, REGULATIONS AND STANDARD SPECIFICATIONS

- A. Work shall conform to latest adopted edition of National Electrical Code.
- B. Applicable rules, standards and specifications of following associations shall apply to materials and workmanship:
 - 1. American National Standards Institute (ANSI)
 - 2. National Board of Fire Underwriters (NBFU)

3. National Electrical Manufacturer's Association (NEMA)
4. National Fire Protection Association (NFPA)
5. Underwriters' Laboratories, Inc. (UL)

PART 2 - PRODUCTS

2.01 MATERIALS

- A. General: All materials shall be new, except as specifically noted, and shall bear the label of Underwriters' Laboratories whenever standards have been established and label service is normally and regularly furnished by the agency.
- B. Raceways:
 1. Conduits: EMT and galvanized rigid steel, 3/4 inch minimum diameter with compression or threaded fittings, respectively. Aluminum conduits shall not be used.
 2. Non-Metallic Conduit: PVC Schedule 40 and sunlight-resistant epoxy resin coated fiberglass, wall thickness as indicated (ISO 9001: 2008 certified), 3/4 inch minimum diameter.
 3. Flexible Conduit: 3/4 inch minimum, zinc-coated inside and outside; for damp, wet, moist, or corrosive areas -- liquid-tight with factory fittings and UV stabilized PVC jacket.
- C. Conductors: Conductors shall be copper, No. 12 AWG minimum; No. 10 AWG and smaller, solid and round; No. 8 AWG and larger, 7 or 19 strands concentric. All conductors No. 6 and smaller shall be types THW and RHW. All conductors No. 4 AWG and larger shall be type THWN-2 with neoprene jacket. Conductors used for fire alarm, sound system, and control wiring may be sized according to the system manufacturer based on their load and voltage drop calculations and code requirements. Conductors used to serve critical operations power systems (power systems for facilities or parts of facilities that require continuous operations for reasons of public safety, emergency management, national security, or business continuity) including but not limited to emergency power, HVAC, fire alarm, security, telecommunications, and signaling shall be a listed 2-hour electrical circuit protective system. Conductors installed on roof tops and exposed to sunlight shall be derated per NEC Table 310.15(B)(2)(b) or shall be type XHHW-2. Conduit sizes shall be increased as necessary to accommodate derated and type XHHW-2 conductors. Reduce conductor sizes at equipment terminations as required to accommodate maximum allowable conductor size accepted at equipment terminals per manufacturer's recommendations. Provide UL listed in-line reducer splice kit or UL listed cable reducing adapter plugs as required to reduce conductor sizes.
- D. Circuit Breakers: Circuit breakers shall be of the molded case type with toggle operated mechanism and thermal-magnetic overload trips, with voltage, phase, and AIC ratings matching the panelboard that the circuit breaker is being installed in. Adjustable trips shall be provided for elevator equipment, mechanical equipment, and when normally available. Circuit breakers for use in existing switchboards or panelboards shall be suitable for such use. Provisions to lock breaker in the open position shall be an integrated means that remains in place with or without the lock installed. Provide shunt

trip when indicated on drawings. Coordinate signal output voltages of elevator circuit breakers with Fire Protection contractor. Square D, GE, Eaton Cutler-Hammer or accepted equivalent.

- E. Small Junction Boxes: Pressed, zinc-coated steel, minimum nominal size 4 inch square, minimum depth 2-1/8 inches, with squared corners and edges. Boxes indicated as weatherproof, for installation in damp or wet locations, or locations exposed to weather shall be weatherproof cast metal type "FS" boxes with threaded hubs with gasketed covers or NEMA 4X stainless steel (316) with stainless steel (316) fasteners and hardware, pad lockable.
- F. Large Junction Boxes: For dry interior locations, the box shall be fabricated from NEC gauge galvanized steel with matching screw-on type cover, field punched knockouts, factory primed and painted. Boxes indicated as weatherproof, for installation in damp or wet locations, or locations exposed to weather shall be NEMA 4X stainless steel (316) with stainless steel (316) fasteners and hardware, pad lockable. All screws and hardware shall be stainless steel (316).
 - 1. Ceiling Fan Rated Junction Boxes: Used for ceiling fan installations. Round or octagonal galvanized steel box, U.L. listed for ceiling fan mount use. Able to support up to 75 pounds. Provide mounting brackets as required.
- G. Device and Cover Plates:
 - 1. Plates for interior flush construction shall be smooth reinforced plastic, with suitable hole, and color to match device.
 - 2. Plates for exposed, damp, or wet installations shall be weatherproof with lockable U.V. stabilized covers. Covers shall permit plugs to be connected without compromising the integrity of the protective nature of the cover.
 - 3. Plates for exposed, damp, or wet installations shall be neoprene gasketed cast aluminum, gray powder coat finish, with spring loaded neoprene gasketed flip-open lid(s).
- H. Hardware, Supports, Backing, Etc.: All hardware, supports, backing and other accessories necessary to install electrical equipment shall be provided. For interior installations, iron or steel materials shall be galvanized for corrosion protection, and non-ferrous materials shall be brass or bronze. For installations in damp, wet, or exposed locations, all materials (c-channels, straps, anchors, bolts, hardware, etc.) shall be stainless steel (type 316 or 316L). All exposed edges of hardware and supports shall be smooth.
- I. Warning Labels: Pre-manufactured, adhesive backed, red background with white lettering reading "DANGER", white background with black lettering reading "AREA IN FRONT OF THIS ELECTRICAL PANEL MUST BE KEPT CLEAR FOR 36 INCHES, OSHA AND NEC REGULATIONS".

PART 3 - EXECUTION

3.01 GENERAL

- A. Rules: The entire installation shall be made in strict accordance with the latest rules and regulations of the National Board of Fire Underwriters, the currently adopted edition of the National Electrical Code and the local Electrical and Fire Bureaus.
- B. Construction Methods: Construction shall conform to construction practices as recommended by the latest edition of the Edison Electric Institute, National Electrical Code, National Electrical Safety Code and applicable instructions of manufacturers of equipment and material supplied for this project.
- C. Materials and Workmanship: All labor and materials of every kind shall be subject to the approval of the Owner, who shall be afforded every facility for ascertaining the competence of such labor and examining such materials as he may deem necessary. Concealed work shall be reopened at random as directed during formal inspections by the Owner or Electrical Inspector. Materials shall be new and shall bear the inspection label of the Underwriters' Laboratories, Inc. Brand names and catalog numbers used in this specification indicate the standards of design and quality required.
- D. Record Drawings: The Contractor shall maintain a current and adequate record of each change as it occurs, regardless of how ordered.
- E. Plans and Specification: This specification is intended to cover all labor, materials and standards of workmanship to be employed in the work indicated on the plans and called for in the specification or reasonably implied therein. The plans and specification supplement one another. Any part of the work mentioned in one and not represented in the other, shall be done the same as if it has been mentioned in both. The Contractor shall not make alterations in the drawings and specification.
- F. Discrepancies and Interpretations:
 - 1. Should the Contractor find any discrepancies in or omissions from any of the documents or be in doubt as to their meaning, he shall advise the Owner who will issue any necessary clarification within a time period which does not disrupt the progress of the work.
 - 2. All interpretations and supplemental instructions will be in the form of written changes to the Contract Documents.
 - 3. Should any discrepancy arise from the failure of the Contractor to notify the Owner, the higher quality or larger quantity of item shall prevail. The Owner shall make the final interpretation and judgment.
 - 4. In the event of a discrepancy between small scale drawings and large scale details, or between drawings and specification, on which is in violation of any regulations, ordinances, laws or codes, the discrepancy, if known by the Contractor, shall be immediately brought to the attention of the Owner for a decision before proceeding

with the particular work involved. Work carried out disregarding these instructions will be subject to removal and replacement at the Contractor's expense.

- G. Symbols: The standard electrical symbols together with the special symbols, notes and instructions shown on the drawings indicate the work and outlets required and are all to be included as a part of this specification.
- H. Coordination: This specification is accompanied by floor plans of the buildings indicating locations of all outlets, circuit runs, and other electrical apparatus. These locations are approximate and, before installing, the Contractor shall study the adjacent architectural details and actually make the installation in the most logical manner. Any outlet may be relocated within 10 feet before installation at the direction of the Owner. The circuit routing is typical only and may be varied in any logical manner.

3.02 INSTALLATION

A. Grounding:

1. All services, metallic enclosures, raceways, and electrical equipment shall be grounded according to requirements of NEC Article 250. At building, 5/8 inch x 8 feet copper ground rods, Copperweld Steel Company, shall be driven with top 12 feet below finished grade and shall be connected together with bare copper wire buried 12 inches below finished grade to obtain a ground of 25 ohms or less as measured by three point pot method with an electric ground megger. Connect ground to nearest cold water pipe and to building entrance equipment with bare copper. Final connection to equipment, raceways, grounding type receptacles and other metallic parts directly exposed to ungrounded electric conductors shall be No. 8 AWG minimum, copper, NEC type TW, green insulation. Use approved bonding terminal at panels.
2. All grounding wire runs within building shall be routed together with circuit conductors.
3. Bond and ground all feeder conduits to panelboard enclosures.
4. Provide isolated ground wire from each isolated ground bus, in each panelboard, to the secondary neutral ground of each dry-type transformer serving the panelboards.

B. Wiring System:

1. Below grade use Schedule 40 PVC. Provide separate ground wire and rise out of ground with rigid steel conduit.
2. Above finished ground floor where exposed to damage, exposed below 7 feet - 0 inches above finished floor (any floor except catwalk), and where exposed on the exterior of the building, use rigid steel conduit.
3. Above finished ground floor where concealed in walls or ceilings, and not exposed to damage, use EMT with UL approved grounding connectors.
4. All wiring shall be installed in conduits except as noted.
5. Conduit system shall be continuous from outlet to outlet or fitting to fitting so that electrical continuity is obtained between all conduits of the system.

6. Conduits cut square and inner edges reamed. Butt together evenly in couplings.
7. Make bends and offsets with hickey or conduit-bending machine. Do not use vise or pipe tee. Flattened or crushed conduit not acceptable.
8. Use of running threads not permitted. Where conduits cannot be joined by standard threaded couplings, approved water-tight conduit unions shall be used.
9. Cap conduits during construction with plastic or metal-capped bushings to prevent entrance of dirt or moisture. Swab all conduits and dry before installing wires. Provide seals on all conduits entering the building, or pad mounted equipment, where the conduit is connected to manholes, handholes, light poles, or other pad mounted equipment.
10. Pullstrings shall be placed in all empty conduits 10 feet in length or longer.
11. Install insulating bushings and two locknuts on each end of every conduit run at enclosures and boxes. Provide grounding bushings as required.
12. Conduits shall not be installed in slabs. Route circuits feeding floor boxes, on second floor, in first floor ceiling spaces.
13. Conduits passing through floor slabs and fire rated walls shall be fire proofed.
14. Flexible conduits shall be liquid-tight. Flexible conduits located in food preparation areas shall be liquid-tight PVC coated.

C. Conductors:

1. Mechanical means for pulling shall be torque-limiting type and not used for #2 AWG and smaller wires.
2. Pulling tension shall not exceed wire manufacturer's recommendations.
3. Where necessary, powdered soapstone may be used as a lubricant for drawing wires through conduit. No other means of lubricating will be allowed.
4. Form neatly in enclosures for minimum of crossovers. Tag all feeders.
5. Color code feeder, branch circuit, and grounding conductors. Color for grounding conductors shall be green. Color for neutral conductors shall be white except for where neutrals of more than system are installed in the same raceway or enclosure, the other neutral shall be white with a colored stripe (other than green). The color coding for 3-phase and single-phase circuits shall be as follows:
 - a. 208Y/120V, 3-phase, 4-wire:
 - 1) Black (Phase-A)
 - 2) Red (Phase-B)
 - 3) Blue (Phase-C)

D. Splicing of Wire and Cable:

1. Wires shall be formed neatly in enclosures and boxes.
2. Splices made according to NEC Article 110.
3. Splices shall be reinsulated. Remove all sharp points that can pierce tape. Use Minnesota Mining and Manufacturing Co. "Scotch" #33 tape, or accepted equivalent. Splices in pull boxes shall be water-tight.

E. Boxes and Enclosures:

1. Boxes on exterior walls or outside of buildings shall be weatherproofed, zinc-coated cast iron with threaded hubs and mounting ears.
2. Provide outlet boxes in hollow tiles or concealed in other spaces with extensions or raised rings of such depth that metal will be flush with surrounding surfaces or openings.
3. Offset boxes, on opposite side of walls, by 6 inches to minimize noise transmission thru walls.
4. Boxes installed in 2 and 3 hour fire rated walls shall be fire proofed to maintain the integrity of the fire rated walls.
5. Boxes to be plumb and exactly flush.

F. Light Switches: Light switches shall be installed 46 inches to center above the finished floor and four inches from door casings (6 inches from uncased openings) to the center of switch for single gang switches and the same distance to center of switch nearest casing or opening in cases of multi-gang switches unless otherwise indicated. Where more than one switch occurs at one location, they shall be ganged under one plate. Other switches shall be located as shown.

G. Convenience Outlets: Shall be installed horizontally, 18 inches above the finish floor unless otherwise indicated.

H. Finishing:

1. All cutting that may be required for complete installation of the electrical work shall be carefully performed, and all patching shall be finished in first-class condition by the Contractor.
2. Close unused knockouts in boxes or enclosures with metal cap.
3. Wipe clean all exposed raceways and enclosures with rag and solvent. Unfinished raceways and enclosures shall be prime- painted and finished to blend into background. (Do not cover nameplates.) Factory finished enclosures shall not be painted.

I. Miscellaneous Details:

1. Cut, drill and patch as required to install electrical system. Repair any surface damaged or marred by notching, drilling or any other process necessary for installation of electrical work. Cutting, repairs and refinishing subject to the approval

- of the Owner. Need for remedial work determined by Owner as attributable to poor coordination and workmanship shall be cause for reconstruction to the satisfaction of the Owner.
2. Attachment of electrical equipment to wood by non-ferrous wood screws. Attachment to concrete by expansion anchors. Powder-charge-driven studs and anchors permitted only with prior approval.
 3. Complete all panel circuit directories, using typewriter. Verify "room" and "use" designations before typing.
 4. All grounding wire within building run in rigid steel conduit, and where practicable, routed together with circuit conductors.
 5. Furnish necessary test equipment and make all tests necessary to check for unspecified grounding, shorts and wrong connections. Correct faulty conditions, if any.
 6. Label all panels and service equipment. Identification labeling shall be by competent craftsmen. Letters to be 1-1/2 inches high minimum, black paint. Dynamo labels are not acceptable. Panel label designation: "PANEL (Name) 208/120 V, 3-phase, 4WSN". Tag all empty conduits in terminal cabinets and boxes giving destination. Use fiber disc tags in bushing.
 7. Provide warning labels on all electrical panelboards, disconnect switches, time switches, and motor starters.

3.03 TESTING AND INSPECTION

- A. If the Hospital (or its representative) discovers any errors, the Contractor, at his own expense, shall go over all similar portions of the entire job, taking the necessary or directed remedial action.
- B. Interior installations, 600 volts or less shall be tested for insulation resistance after all wiring is completed and ready for connection to fixtures and equipment. Using a 500 volt megger, measure and record the insulation resistance from phase to phase and phase to neutral. The records shall be turned over to the Owner for proper disposition.
- C. The Contractor shall re-tape splices which have been bared for inspection. The Contractor shall test all portions of the electrical system furnished by him for proper operation and freedom from accidental grounds. All tests shall be subject to the approval of the Owner.
- D. Wherever test or inspection reveals faulty equipment or installation, the Contractor shall take corrective action, at his own expense, repairing or replacing equipment or installation as directed.
- E. The Contractor shall open, remove, and replace switchboard and panelboard covers for pre-final and final inspections by the Owner.

END OF BASIC ELECTRICAL MATERIALS AND METHODS

SECTION 16500 - LIGHTING

PART 1 - GENERAL

1.01 SUMMARY

- A. This specification section provides the requirements for all interior and building mounted light fixtures and lamps.

1.02 RELATED WORK DESCRIBED ELSEWHERE

- A. SECTION 16000 - GENERAL ELECTRICAL REQUIREMENTS
- B. SECTION 16050 - BASIC ELECTRICAL MATERIALS AND METHODS

1.03 SUBMITTALS

- A. Submit in accordance with SECTION 01300 – SUBMITTALS.
- B. Shop Drawings and Manufacturer's Literature: Submit complete shop drawings and manufacturer's literature for Light Fixtures for the Owner's review before any work is fabricated. Partial or incomplete submittals will be returned without review. Submit manufacturer's literature for the following:

- 1. Light Fixtures
- 2. Drivers
- 3. Emergency Battery Packs
- 4. Light Switches

Shop drawings and catalogue cuts for substitute materials shall clearly specify compliance with and/or deviation from specified material. Certification shall not contain statements to imply that the item does not meet requirements specified, such as "as good as"; and "achieve the same end use and results as materials formulated in accordance with the referenced publications". Certifications shall simply state that the item conforms to the requirements specified. Certificates shall be printed on the manufacturer's letterhead and shall be signed by the manufacturer's official authorized to sign certificates of compliance. Review of shop drawings and catalogue cuts shall not release Contractor from complying with intent of specification and drawings.

- C. Warranty: Submit warranty as noted under item entitled "WARRANTY" hereinbelow.
- D. Guarantee and Certificate: Submit guarantee and certificate as noted under item entitled "GUARANTEE AND CERTIFICATE" hereinbelow.

1.04 QUALITY CONTROL

- A. LED Luminaire - IES LM-79 Test Report: Submit test report on manufacturer's standard production model luminaire. Include all applicable and required data as outlined under "14.0 Test Report" in IES LM-79.

- B. LED Light Source - IES LM-80 Test Report: Submit report on manufacturer's standard production LED light source (package, array, or module). Include all applicable and required data as outlined under "8.0 Test Report" in IES LM-80.
- C. LED Light Source - IES TM-21 Test Report: Submit test report on manufacturer's standard production LED light source (package, array or module). Include all applicable and required data, as well as required interpolation information as outlined under "7.0 Report" in IES TM-21.
- D. Test Laboratories: Test laboratories for the IES LM-79 and IES LM-80 test reports must be one of the following:
 - 1. National Voluntary Laboratory Accreditation Program (NVLAP) accredited for solid-state lighting testing as part of the Energy-Efficient Lighting Products laboratory accreditation program for both LM-79 and LM-80 testing.
 - 2. One of the qualified labs listed on the Department of Energy - LED Lighting Facts Approved Testing Laboratories List for LM-79 testing.
 - 3. One of the EPA-Recognized Laboratories listed for LM-80 testing.

1.05 WARRANTY

- A. Support all equipment items by service organizations which are reasonably convenient to the equipment installation in order to render satisfactory service to the equipment on a regular and emergency basis during the warranty period of the contract.
 - 1. Provide a written 5 year on-site replacement manufacturer's warranty for material, fixture finish, and workmanship. On-site replacement includes transportation, removal, and installation of new products.
 - a. Include finish warranty to include failure and substantial deterioration such as blistering, cracking, peeling, chalking, or fading.
 - b. Material warranty must include:
 - 1) All drivers.
 - 2) Replacement when more than 5 percent of LED sources in any lightbar or subassembly(s) are defective or non-starting.
 - c. Warranty period must begin on date of Substantial Completion. Provide the Owner with signed warranty certificates during project closeout.
 - d. Luminaire Useful Life Certificate: Submit certification from the manufacturer indicating the expected useful life of the luminaires provided. The useful life must be directly correlated from the IES LM-80 test data using procedures outlined in IES TM-21. Thermal properties of the specific luminaire and local ambient operating temperature and conditions must be taken into consideration.

1.06 GUARANTEE AND CERTIFICATE

- A. Any item of material, apparatus, equipment furnished and installed, or construction by the Contractor showing defects in design, construction, quality or workmanship within one year from the date of final acceptance by the Owner shall be replaced by such new material, apparatus or parts as may be found necessary to make such defective portion of the complete system conform to the true intent and meaning of the specification

and/or the drawings. Such repairs or replacement shall be made by the Contractor or his surety, free of all expense to the Owner.

1.07 GENERAL REQUIREMENTS

- A. The Contractor shall furnish all labor, materials (except as hereinafter noted), tools, equipment and appliances required to provide and install all Electrical Work, complete, as indicated on the drawings and/or as herein specified. The drawings note various sizes of equipment as determined for basis of design; the electrical work, however, shall be installed to comply with the equipment furnished by the successful supplier. The work shall include but not necessarily be limited to, the following:
1. Demolish existing light fixtures and or lamps and provide new LED light fixtures in the same location.
 2. Replace interior and exterior light fixtures on a one-for-one basis with new LED light fixtures in the same location.
 3. Connection and testing of equipment furnished by others requiring electrical connections.
 4. Before bidding on this work, carefully examine each of the drawings and the site. By submitting a proposal of the work included in this contract, the Contractor shall be deemed to have made such examination and to be familiar with and accept all conditions of the job site.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. General: All materials shall be new, except as specifically noted, and shall bear the label of Underwriters' Laboratories whenever Standards have been established and label service is normally and regularly furnished by the agency.
- B. Light Fixtures: Provide light fixtures complete with necessary LEDs, drivers, starters, and accessories, according to the "Light Fixture Schedule". All light fixtures shall be supplied complete.
- C. LED Luminaires: Provide luminaires complete with power supplies (drivers) and light sources. Provide design information including lumen output and design life in luminaire schedule on project plans for LED luminaires. LED Luminaires must also meet the following minimum requirements:
1. Luminaires must have a minimum 5 year manufacturer's warranty.
 2. Luminaires must have a minimum L70 lumen maintenance value of 50,000 hours as calculated by IES TM-21, with data obtained per IES LM-80 requirements.

3. Luminaire drive current value must be identical to that provided by test data for luminaire in question.
 4. Luminaires must be tested to IES LM-79 and IES LM-80 standards, with the results provided as required in the Submittals paragraph of this specification.
 5. Luminaires must be listed with the Design Lights Consortium 'Qualified Products List' when falling into category of "General Application" luminaires, i.e. Interior Directional, Display Case, Troffer, Linear Ambient, or Low/High Bay. Requirements are shown in the Design Lights Consortium "Technical Requirements Table" at <https://data.energystar.gov/dataset/EPA-Recognized-Laboratories-For-Lighting-Products/jgwf-7qrr>.
 6. Provide Department of Energy 'Lighting Facts' label for each luminaire.
- D. LED Drivers: NEMA SSL 1, UL 8750. LED drivers must be electronic, UL Class 1, constant-current type and comply with the following requirements:
1. Output power (watts) and luminous flux (lumens) as shown in luminaire schedule for each luminaire type to meet minimum luminaire efficacy (LE) value provided.
 2. Power Factor (PF) greater than or equal to 0.9 over the full dimming range when provided.
 3. Current draw Total Harmonic Distortion (THD) of less than 20 percent. d. Class A sound rating.
 4. Operable at input voltage of 120-277 volts at 60 hertz.
 5. Minimum 5 year manufacturer's warranty.
 6. RoHS compliant.
 7. Integral thermal protection that reduces or eliminates the output power if case temperature exceeds a value detrimental to the driver.
 8. UL listed for dry or damp locations typical of interior installations.
- E. Emergency Battery Packs: Maintenance free, high temperature, nickel-cadmium battery, automatic charger with transfer circuit, shall have a minimum output rating of at least 80 percent of the normal lamp output for a minimum of 90 minutes, be compatible with light fixture; self-testing/self-diagnostic, shall be sized for mounting inside light fixture, voltage shall match light fixture branch circuit; and shall include push-to-test switch and LED charging indicator light. Provide remote push-to-test switch and LED charging indicator light for existing light fixtures when switch and indicator light cannot be mounted on to light fixture.
- F. Tumbler Switches: Single or double pole, 3 or 4 way, as required, non-mercury, quiet, 20 amperes, 120-277 volt, UL labeled AC type, silvered contacts, ivory, tumbler switch with endurance of 10,000 make-breaks, enclose in outlet box and device plate, compatible with automated lighting system.

- G. Dimmer Switches: Single, 3 or 4 way, as required, electronic dimming type, compatible with light fixtures being dimmed, "on/off" switch with dimming capability, specification grade, battery-powered, operates for at least 5 years on a single lithium battery, UL labeled AC type. Enclose in outlet box and device plate, compatible with automated lighting system.
- H. Combination Occupancy Sensor / Light Switch: Single pole, 3 or 4 way, as required, ultrasonic from 25 kHz to 40 kHz, LED positive detection indicator, adjustable delayed off-time range between 30 seconds and 15 minutes, minimum and sensitivity adjustment, 15 amps, 120 volts AC, 60 Hz. Sensors shall have manual override switch and three modes of functioning: OFF, ON and AUTOMATIC. Cover plate shall be white. Locate sensors as indicated and in accordance with the manufacturer's recommendations to maximize energy savings. Sensors shall be U.L. listed and compatible with automated lighting system. Preset time delay for 10 minutes.
- I. Wiring: As specified in SECTION 16050 - BASIC ELECTRICAL MATERIALS AND METHODS.

PART 3 - EXECUTION

3.01 GENERAL

- A. As specified on SECTION 16050 - BASIC ELECTRICAL MATERIALS AND METHODS.

3.02 INSTALLATION

- A. Fixture Supports:
 - 1. Every outlet box or other support for light fixtures shall be of sufficient strength to support at least 4 times the weight of the fixture.
 - 2. Support all fixtures weighing more than 50 lbs. independently of the outlet box.
 - 3. Fixtures shall be securely and safely supported by means of fixture studs in the outlet boxes or other approved means. Ceiling fixtures shall be arranged to hang vertically unless otherwise directed by the Owner. Provide accessories such as straps, mounting plates, nipples, or brackets for proper installation. Provide additional suspension wires and channels for mounting on suspended ceilings as recommended by fixture manufacturer. Fixtures shall not be hung from outlet box "ears".
 - 4. Where ceiling construction is such that mounting channels, strongbacks, braces, etc., are required to properly support fixtures, provide these supports at no additional cost to the Owner. Refer to architectural drawings for type of ceiling construction.
 - 5. Provide a red colored warning tag with black or white lettering at each light fixture being controlled by the low voltage lighting system. The warning tag shall read "WARNING: LIGHT FIXTURE IS CONTROLLED BY LOW VOLTAGE SYSTEM. LIGHT SWITCH DOES NOT DE-ENERGIZE POWER TO LIGHT FIXTURE. TURN OFF CIRCUIT BREAKER SERVING LIGHT PRIOR TO WORKING ON LIGHT."
- B. Wiring: As specified in SECTION 16050 - BASIC ELECTRICAL MATERIALS AND METHODS.

3.03 TESTING AND INSPECTION

- A. As specified in SECTION 16050 - BASIC ELECTRICAL MATERIALS AND METHODS.

END OF LIGHTING

CORRIDOR LIGHTING RETROFIT

MALUHIA HOSPITAL

1027 HALA DR, HONOLULU, HI 96817

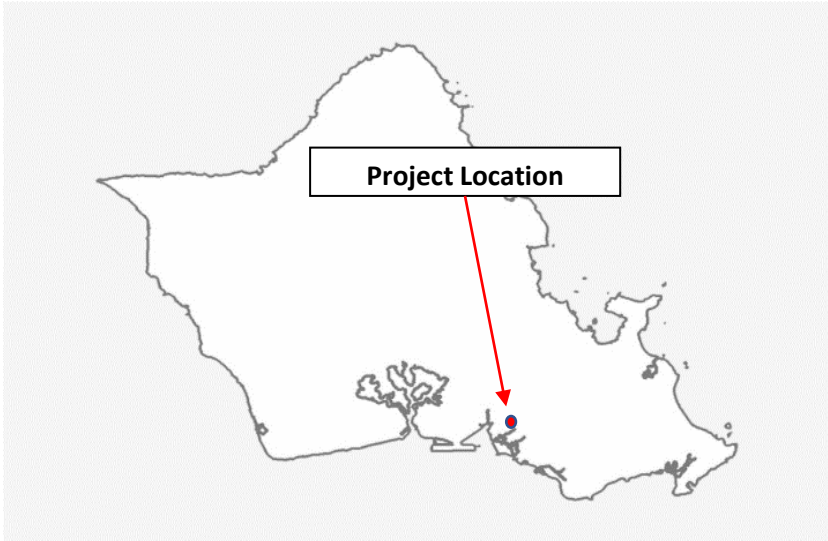


RHA Energy Partners LLC
2153 North King Street,
Suite 201
Honolulu, Hawaii 96819

LOCATION MAP



ISLAND MAP



INDEX OF DRAWINGS

DRAWING NO.	SHEET DISCRIPTION
001	TITLE SHEET, ISLAND MAP, LOCATION MAP, INDEX OF DRAWINGS
002	GENERAL NOTES AND GENERAL ELECTRICAL NOTES
003	SYMBOLS AND LIGHT FIXTURE SCHEDULE
004	SUB-BASEMENT FLOOR LIGHTING PLAN
005	BASEMENT FLOOR LIGHTING PLAN
006	FIRST FLOOR LIGHTING PLAN
007	SECOND FLOOR LIGHTING PLAN (ADDITIVE OPTIONS)
008	THIRD FLOOR LIGHTING PLAN (ADDITIVE OPTIONS)
009	REFERENCE PHOTOS OF EXISTING FIXTURES



THIS WORK WAS PREPARED BY ME OR UNDER MY
SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL
BE UNDER MY OBSERVATION.
Melvin Oyadomari
LICENSE EXPIRATION DATE: 4/30/2024

CORRIDOR LIGHTING RETROFIT
MALUHIA HOSPITAL
1027 HALA DR, HONOLULU, HI, 96816

REVISION MARK · DATE · DESCRIPTION

SHEET TITLE:
TITLE SHEET, ISLAND MAP,
LOCATION MAP, INDEX OF
DRAWINGS

DRAWING NO:
001

GENERAL NOTES

1.

PERFORM ALL WORK IN ACCORDANCE WITH THE "MANUAL OF ACCIDENT PREVENTION IN CONSTRUCTION" PUBLISHED BY THE ASSOCIATED GENERAL CONTRACTORS OF AMERICA.
2.

VERIFY ALL DIMENSIONS AND SITE CONDITIONS PRIOR TO BID SUBMITTAL AND CONSTRUCTION. ANY DISCREPANCIES ON SITE CONDITIONS VS DETAILS OR LAYOUT ARE TO BE CORRECTED AND INCLUDED IN INITIAL BID SUBMITTAL. NO ADDITIONAL COST WILL BE INCURRED IF SITE CONDITIONS WERE NOT OBSERVED AND NOTED.
3.

WRITTEN DIMENSIONS PREVAIL, DO NOT SCALE DRAWINGS. DIMENSIONS ARE TO FACE TO FINISH, UNLESS OTHERWISE NOTED. SHOULD DIMENSIONAL DISCREPANCIES BE FOUND, CONTACT THE ENGINEER FOR CLARIFICATION PRIOR TO PROCEEDING WITH THE WORK.
4.

THE BID DOCUMENTS ESTABLISH THE PROJECT SCOPE AND DESIGN INTENT. ENGINEER MAY ISSUE ADDITIONAL DRAWINGS AND DETAILS TO CLARIFY AND TO ACHIEVE DESIGN INTENT AS NEEDED. CONTRACTOR CANNOT CLAIM ANY ADDITIONAL COST BASED ON THESE CLARIFICATION DRAWINGS AND DETAILS.
5.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND TRADES TO EXAMINE ALL DRAWINGS AND SPECIFICATIONS CONTAINED WITHIN THE CONSTRUCTION DOCUMENTS WHEN PREPARING THEIR BIDS. FULL SCOPE OF WORK TO BE PERFORMED BY EACH CONTRACTOR OR TRADE MAY NOT BE COMPLETELY DOCUMENTED WITHIN THE CONFINES OF DRAWING SHEETS SPECIFICALLY PREPARED FOR ONE CONTRACTOR OR TRADE. UNDER NO CIRCUMSTANCES SHALL ADDITIONAL COMPENSATION BE DUE ANY CONTRACTOR OR TRADE FOR WORK WHICH IS SHOWN IN OTHER LOCATIONS OF THE CONSTRUCTION DOCUMENTS NOT SPECIFICALLY PREPARED FOR THE CONTRACTOR OR TRADE. THE ENGINEER SHALL BE NOTIFIED IN WRITING FOR CLARIFICATION PRIOR TO SUBMISSION OF BID. IF OWNER IS NOT NOTIFIED OF SUCH DISCREPANCIES, THE CONTRACTOR OR TRADE SHALL BID ON THE DISCREPANCY WHICH REQUIRES THE GREATER SCOPE OF WORK AND/OR GREATER COST OF MATERIALS.
6.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE TIMELY ARRIVAL OF ALL SPECIFIED FINISH MATERIALS, EQUIPMENT, LIGHT FIXTURES AND ANY OTHER SUCH MATERIAL(S) TO BE UTILIZED ON THIS PROJECT. THE CONTRACTOR SHALL NOTIFY THE OWNER IN WRITING WITHIN 10 DAYS OF DATE OF CONTRACT OF THOSE SPECIFIED ITEMS THAT MAY NOT BE READILY AVAILABLE. IF NOTIFICATION IS NOT RECEIVED BY THE OWNER, THE CONTRACTOR SHALL ACCEPT RESPONSIBILITY FOR THE PROPER ORDERING AND FOLLOW-UP OF SPECIFIED ITEMS AND WILL PURSUE WHATEVER MEANS NECESSARY AT NO ADDITIONAL COST TO THE OWNER, ENSURE AVAILABILITY OF ALL SPECIFIED ITEMS SO AS NOT TO CREATE A HARDSHIP ON THE OWNER AND NOT DELAY PROGRESS OF THE WORK. NO EXTENSION OF TIME TO THE CONTRACT WILL BE ALLOWED.
7.

WHERE IT IS NECESSARY TO CORE, DRILL OR CUT OPEN ANY EXISTING SURFACES TO INSTALL ELECTRICAL, MECHANICAL OR ANY OTHER WORK, THE OPENING AND ADJACENT SURFACES SHALL BE RESTORED TO ITS ORIGINAL CONDITION AND SHALL BE AIRTIGHT, AND/OR WEATHER TIGHT.
8.

THE JOB SITE MUST BE LEFT IN A SAFE, SECURE CONDITION AT THE END OF EACH CONSTRUCTION WORK DAY OR NIGHT. CLEAN-UP AND REMOVE FROM THE JOB SITE ALL RUBBISH AND MAINTAIN THE PREMISE IN A CLEAN ORDERLY CONDITION AT ALL TIMES. UPON COMPLETION OF CONSTRUCTION THE ENTIRE SITE SHALL BE CLEANED OF ALL RUBBISH AND DEBRIS.
9.

THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT DAMAGE TO EXISTING AND COMPLETED STRUCTURES AND SHALL BE FULLY RESPONSIBLE FOR ANY DAMAGE TO THESE STRUCTURES CAUSED BY HIS OPERATIONS.
10.

THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS OF THE SPACE PRIOR TO THE START OF WORK. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION PRIOR TO THE START OF WORK.
11.

WHERE COMPONENTS PASS THROUGH FIRE RATED WALLS, PROVIDE SEALED ASSEMBLIES CLASSIFIED BY U.L. TO PROVIDE FIRE BARRIERS EQUAL TO OR GREATER THAN THE TIME RATING OF THE CONSTRUCTION BEING PENETRATED, WITH APPROPRIATE MATERIALS AND SYSTEMS THAT COMPLY WITH APPLICABLE CODES.
12.

THIS PROJECT IS SUBJECT TO THE CONFORMANCE WITH THE DESIGN AND CONSTRUCTION REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES ADMINSTRATED BY THE DEPARTMENT OF JUSTICE OR THE FAIR HOUSING ACT ACCESSIBILITY GUIDELINES ADMINSTRATED BY THE DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT SHALL BE EQUIVALENT TO MEETING THE ACCESSIBILITY OF THIS CODE.
13.

FIRE SAFETY NOTES: STRUCTURES UNDERGOING CONSTRUCTION, ALTERATION, OR DEMOLITION OPERATIONS, INCLUDING THOSE IN UNDERGROUND LOCATIONS, SHALL COMPLY WITH NFPA 241, STANDARD FOR SAFEGUARDING CONSTRUCTION, ALTERATION, AND DEMOLITION OPERATIONS, AND THIS CHAPTER 2012 NFPA1.
14.

ABSOLUTELY NO SMOKING AND OTHER USE OF TOBACCO PRODUCTS INCLUDING E-CIGARRETES, ALCOHOLIC BEVERAGES AND OTHER ILLEGAL SUBSTANCES ALLOWED ON PROJECT SITE. CONTRACTORS FOUND SMOKING ON PROJECT SITE WILL BE IN VIOLATION OF THEIR CONTRACT, WHICH IS CAUSE FOR TERMINATION.

GENERAL ELECTRICAL NOTES

1.

PLANS DO NOT INDICATE COMPLETE EXISTING ELECTRICAL CONDITIONS. CONTRACTOR SHALL VISIT JOBSITE TO BECOME FAMILIAR WITH ALL EXISTING CONDITIONS AND EXTENT OF DEMOLITION AND NEW WORK PRIOR TO THE START OF WORK.
2.

PRIOR TO THE START OF WORK, CONTRACTOR SHALL VISIT JOBSITE AND REPORT ANY DISCREPANCIES AND/OR DIFFERENCE IN DRAWINGS, IN RESPECT TO EXISTING CONDITION, TO RHA ENERGY PARTNERS.
3.

CONTRACTOR SHALL RESOLVE ALL DISCREPANCIES AND QUESTIONS PRIOR TO THE START OF WORK. NO EXTRA PAYMENT SHALL BE ALLOWED ON ACCOUNT OF WORK MADE NECESSARY BY CONTRACTOR’S FAILURE TO VISIT THE SITE AND/OR FAILURE TO RESOLVE DISCREPANCIES AND QUESTIONS.
4.

ALL OUTAGES SHALL BE COORDINATED AND APPROVED BY THE OWNER. OUTAGES SHALL BE SCHEDULED AND LIMITED PER OWNER’S REQUIREMENTS AND MAY INLCUDE AFTER HOUR OR WEEKEND WORK SCHEDULE. ANY SUCH OUTAGE WORK SHALL NOT CONSTITUTE A CHANGE ORDER OR ADDITIONAL COST OF WORK AND SHALL BE PART OF THE WORK.
5.

VERIFY EXISTING CIRCUITS AND HOMERUN LOCATIONS PRIOR TO STARTING WORK.
6.

BEFORE ANY ELECTRICAL WIRING IS CUT, CONTRACTOR SHALL VERIFY/TRACE USAGE OF WIRING TO ENSURE THAT REQUIRED SERVICES ARE NOT DISCONTINUED.
7.

REMOVE ALL EXISTING EXPOSED CONDUIT AND WIRES NOT TO REMAIN IN SERVICE; CONCEALED RACEWAYS NO LONGER REQUIRED SHALL BE CAPPED AND ABANDONED IN PLACE WITH ALL WIRES REMOVED. REPAIR AND RESTORE AFFECTED AREAS TO MATCH EXISTING FINISH.
8.

PROVIDE METAL SEAL(S) FOR ALL ABANDONED RACEWAY OPENING(S) IN BOX(ES), CABINET(S), AND EQUIPMENT ENCLOSURE(S); SEALS SHALL RETAIN NEMA RATING OF REMAINING BOX(ES), CABINET(S), AND EQUIPMENT ENCLOSURE(S).
9.

FOR EXISTING CIRCUIT(S) WHERE SOME ELECTRICAL ITEMS ARE REMOVED, CONTRACTOR SHALL PROVIDE ALL NECESSARY RACEWAYS, WIRES, BOXES, AND ETC. PER NEC REQUIREMENTS TO ENSURE ELECTRICAL CONTINUITY AND PROPER OPERATION OF REMAINING CIRCUIT COMPONENT(S).
10.

ALL ARCHITECTURAL AND STRUCTURAL SURFACES TO REMAIN AND ARE AFFECTED BY ELECTRICAL DEMOLITION WORK SHALL PATCHED, PAINTED, FIRESTOPPED, AND RESTORED TO MATCH ADJACENT FINISH TO THE SATISFACTION OF THE OWNER..
11.

WHERE POSSIBLE, CONCEAL ALL RACEWAYS IN WALLS, ABOVE CEILING OR WITHIN WALLS. GROUT AND PATCH AND PAINT AFFECTED AREAS TO MATCH ADJACENT FINISH. WHERE RACEWAYS ARE EXPOSED, PAINT RACEWAYS AND BOXES TO MATCH ADJACENT FINISH. ALL EXTERIOR EQUIPMENT MOUNTING HARDWARE SHALL BE TYPE 316 SS.
12.

CONDUITS SHALL NOT BE ROUTED ACROSS SIGNS, PLAQUES, DOORS, WINDOW OPENINGS, ACCESS PANELS OR INTERFERE WITH THEIR OPERATION. CONDUITS SHALL NOT BE ROUTED UNDER LIGHT FIXTURES AND SHALL NOT RESTRICT ACCESS TO EXISTING JUNCTION BOXES, DEVICES, ETC. ROUTE EXPOSED CONDUIT AS HIGH AS PRACTICABLE.
13.

NOT ALL PENETRATIONS ARE INDICATED. PENETRATE WALLS, SLABS, AND CEILINGS AS NECESSARY TO COMPLETE CONDUIT INSTALLATIONS. FIRE STOP, PATCH AND PAINT PENETRATIONS TO MATCH EXISTING FIRE RATINGS AND ADJACENT FINISHES. FOR PENETRATIONS THROUGH EXTERIOR WALLS, PROVIDE CONDUITS, CONDUIT BODIES, JUNCTION BOXES, AND FIRE STOPPING IMMEDIATELY AFTER PENETRATIONS ARE MADE SO AS TO MAKE PENETRATIONS WEATHERPROOF AND FIRE STOPPED BY THE END OF THE WORK DAY.
14.

RETURN ALL SALVABLE APPARATUS, AS DETERMINED BY THE CONTRACTING OFFICER OR ITS REPRESENTATIVES, TO A SITE DESIGNATED BY THE CONTRACTING OFFICER OR ITS REPRESENTATIVES, AT NO ADDITIONAL COST TO THE OWNER. DISPOSE OF ALL UNWANTED MATERIALS.
15.

ASSUME ALL BALLAST OR LAMPS FROM REMOVED LIGHT FIXTURES CONTAIN MERCURY AND ARE PCB CONTAMINATED. DISPOSE FIXTURES PROPERLY IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REQUIREMENTS.
16.

ALL ELECTRICAL ITEMS AND WORK SHALL BE NEW UNLESS OTHERWISE INDICATED ON PLANS.
17.

VERIFY RATINGS OF ALL ELECTRICALLY OPERATED OR CONTROLLED EQUIPMENT PROVIDED BY OTHER TRADES. COORDINATE RATINGS OF OVERCURRENT PROTECTIVE DEVICES, DISCONNECT SWITCHES, CONDUIT AND WIRING TO MATCH THE ACTUAL EQUIPMENT SUPPLIED AT NO ADDITIONAL COSTS.
18.

RELOCATION, REMOVAL, OR REPLACEMENT OF EXISTING ILLUMINATED EXIT SIGNS IS NOT INCLUDED AS PART OF THIS PROJECT.
19.

PATCH AND PAINT AREAS AFFECTED BY LIGHTING REPLACEMENT OR RETROFIT WORK TO MATCH ADJACENT FINISH.
20.

REPLACE DAMAGED OR BROKEN CEILING TILES DUE TO LIGHTING REPLACEMENT OR RETROFIT WORK WITH MATCHING TILES AND PER OWNER’S APPROVAL.
21.

FOR REMOVED AND REINSTALLED ITEMS, CLEAN AND REPAIR ITEMS TO FUNCTIONAL CONDITION ADEQUATE FOR INTENDED REUSE.



RHA Energy Partners LLC
2153 North King Street,
Suite 201
Honolulu, Hawaii 96819



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

LICENSE EXPIRATION DATE: 4/30/2024

CORRIDOR LIGHTING RETROFIT
MALUHIA HOSPITAL
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








REVISION MARK · DATE · DESCRIPTION

SHEET TITLE:
GENERAL NOTES AND
GENERAL CONSTRUCTION
NOTES

DRAWING NO:

002

SYMBOLS

	2X4 RECESSED TROFFER
	2X4 RECESSED TROFFER WITH VENT
	DOMENIGHT LIGHT
	RECESSED DOWNLIGHT CAN
	4' STRIP LIGHT
	1x4 SURFACE WRAP
	FIXTURE TYPE IDENTIFIER, FIXTURE TYPE "A" INDICATED, ALL OTHERS SIMILAR
	SWITCH/ES, NUMBER OF "\$" DENOTES GANG
	NOTE INDICATOR, "SEE NOTE NO.3" INDICATED, ALL OTHERS SIMILAR

SUB-BASEMENT, BASEMENT, & 1ST FLOOR - FIXTURE SCHEDULE

FIXTURE TYPE	MOUNTING	DESCRIPTION	LIGHT ENGINE	MANUFACTURE OR APPROVED EQUAL
A	RECESS MOUNT	23.8"W X 47.8"L X 2.3"H, RECESSED MOUNT, FLAT PANEL, METAL FRAME WITH SATIN WHITE (SWL) LENS, DIRECT-LID PANEL, WHITE FINISH, L80>60,000 LUMEN MAINTENANCE, CSA CERTIFIED, DAMP LOCATION LISTED, IC RATED, IP5X RATED, DLC LISTED, MULTI-VOLTAGE DRIVER INPUT VOLTAGE RANGE OF 120V-277V,5 YEAR WARRANTY.	24W LED, 3258 LUMENS, 5000K, 80 CRI	LITHONIA CPX 2X4 MVOLT 3000LM 80CRI 5000K SWL NO DIM
C	PENDANT MOUNT	10"W X 48"L X 2-3/4"H, PENDANT MOUNT, LOW PROFILE LED WRAPAROUND, 100% ACRYLIC PRISMATIC DIFFUSER, PRE-PAINTED CODE-GAUGE STEEL METAL PARTS, WHITE FINISH, 90% LED LUMEN MAINTENANCE AT 50,0000 HOURS (L90/50,000), CSA CERTIFIED, DAMP LISTED, DLC LISTED, MULTI-VOLTAGE DRIVER INPUT VOLTAGE RANGE OF 120V-277V, 5 YEAR WARRANTY. INCLUDE ALL NECESSARY PENDANT MOUNT HARDWARE AS MAY BE REQUIRED PER MANUFACTURE OR INSTALLATION INSTRUCTIONS.	40W LED, 4874 LUMENS, 4000K, 80 CRI	LITHONIA LBL4 4800LM 80CRI 40K NO DIM MVOLT
D	SURFACE MOUNT	5.39"W X 47.01"L X 2.2"H, SURFACE MOUNT, COLOR COATED STEEL SHEET WITH POLYCARBONATE LENS, WHITE FINISH, UL LISTED, DLC LISTED, MULTI-VOLTAGE DRIVER INPUT VOLTAGE RANGE OF 120V-277V, 50,000 HOUR LIFESPAN, 5 YEAR WARRANTY.	50W LED, 5000K, 86CRI	RAB GUS17-4 5873LM 5000K NO DIM

2ND & 3RD FLOOR - FIXTURE SCHEDULE (ADDITIVE OPTION)

FIXTURE TYPE	MOUNTING	DESCRIPTION	LIGHT ENGINE	MANUFACTURE OR APPROVED EQUAL
A	RECESS MOUNT	23.8"W X 47.8"L X 2.3"H, RECESSED MOUNT, FLAT PANEL, METAL FRAME WITH SATIN WHITE (SWL) LENS, DIRECT-LID PANEL, WHITE FINISH, L80>60,000 LUMEN MAINTENANCE, CSA CERTIFIED, DAMP LOCATION LISTED, IC RATED, IP5X RATED, DLC LISTED, MULTI-VOLTAGE DRIVER INPUT VOLTAGE RANGE OF 120V-277V,5 YEAR WARRANTY.	24W LED, 3258 LUMENS, 5000K, 80 CRI	LITHONIA CPX 2X4 MVOLT 3000LM 80CRI 5000K A12
B	SURFACE MOUNT	14"W X 3 5/16" H, SURFACE MOUNT, ROUND PLASTIC FRAME WITH POLYCARBONATE LENS, WHITE FINISH, UL LISTED, CCT FIELD ADJUSTABLE, WET RATED, FCC LISTED, ENERGY STAR LISTED, MULTI-VOLTAGE DRIVER INPUT VOLTAGE RANGE OF 120V-277V, 50,000 HOUR LIFESPAN, 5 YEAR WARRANTY.	20W LED, 1500 LUMENS, 5000K, 90CRI	RAB CRVFAS-14R MVOLT 1500LM 5000K NO DIM



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Melvin S. Oyadomari
LICENSE EXPIRATION DATE: 4/30/2024

CORRIDOR LIGHTING RETROFIT
MALUHIA HOSPITAL
1027 HALA DR, HONOLULU, HI, 96816

REVISION MARK · DATE · DESCRIPTION

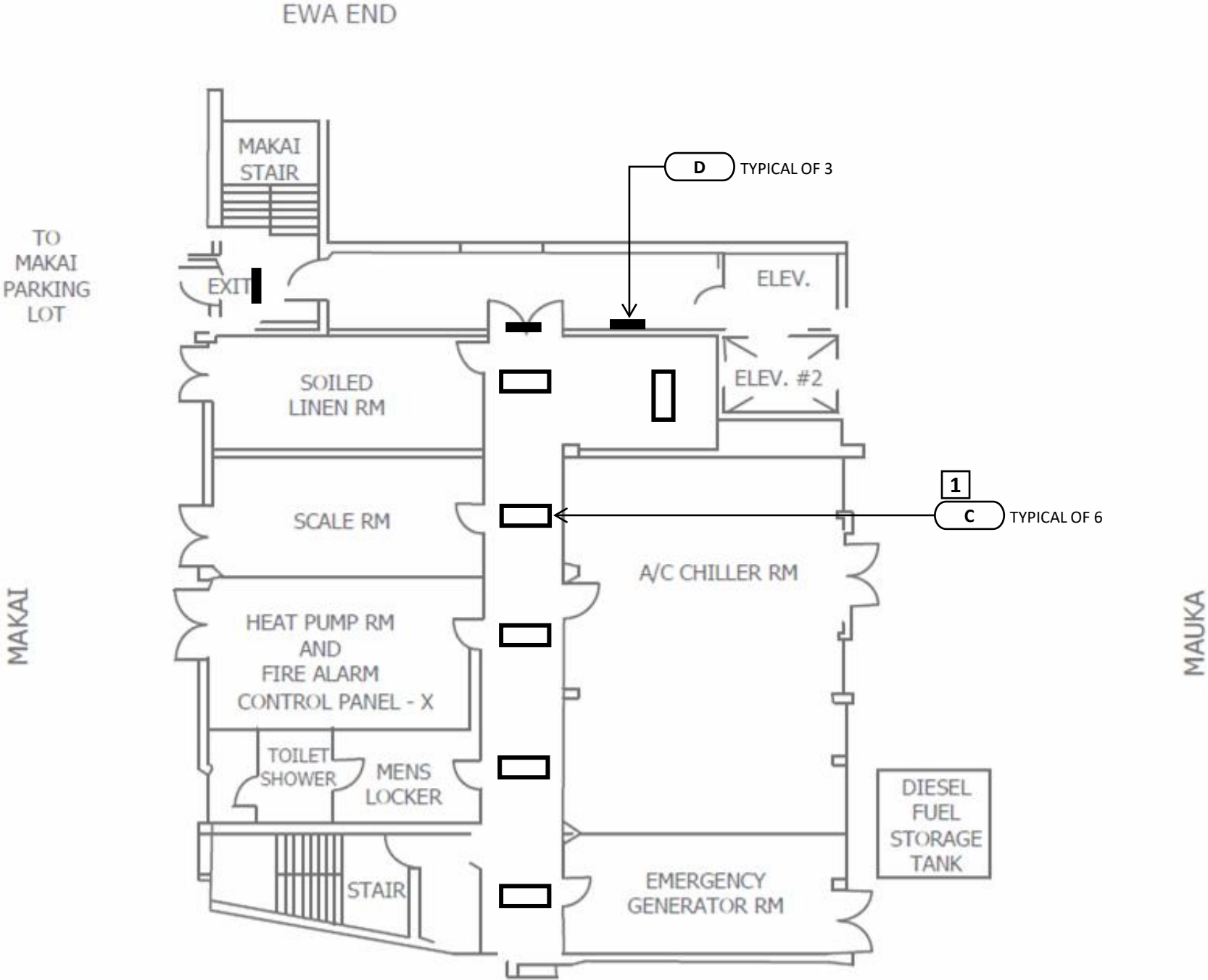
SHEET TITLE:
SYMBOLS AND LIGHT
FIXTURE SCHEDULE

DRAWING NO:

003

SUB-BASEMENT FLOOR PLAN

NOT TO SCALE



SHEET NOTES:

1. CONTRACTOR TO REMOVE EXISTING FIXTURES AND REPLACE WITH NEW FIXTURES INDICATED ON LIGHT FIXTURE SCHEDULE ON SHEET 003.
 2. NOT ALL NECESSARY MOUNTING HARDWARE AND OPTIONS ARE SPECIFIED. CONTRACTOR TO PROVIDE ALL OPTIONS, ACCESSORIES AND HARDWARE AS REQUIRED TO INSTALL EACH LIGHT FIXTURE IN THE LOCATIONS INDICATED.
 3. CONTRACTOR TO MOUNT NEW FIXTURES TO EXISTING LOCATIONS.
- 1** CONTRACTOR TO RE-USE EXISTING PENDANT MOUNTING EQUIPMENT OR VERIFY COMPATIBLE AND CODE COMPLIANT SINGLE STEM HANGERS. CONTRACTOR TO MAINTAIN EXISTING PENDANT EQUIPMENT HEIGHT.



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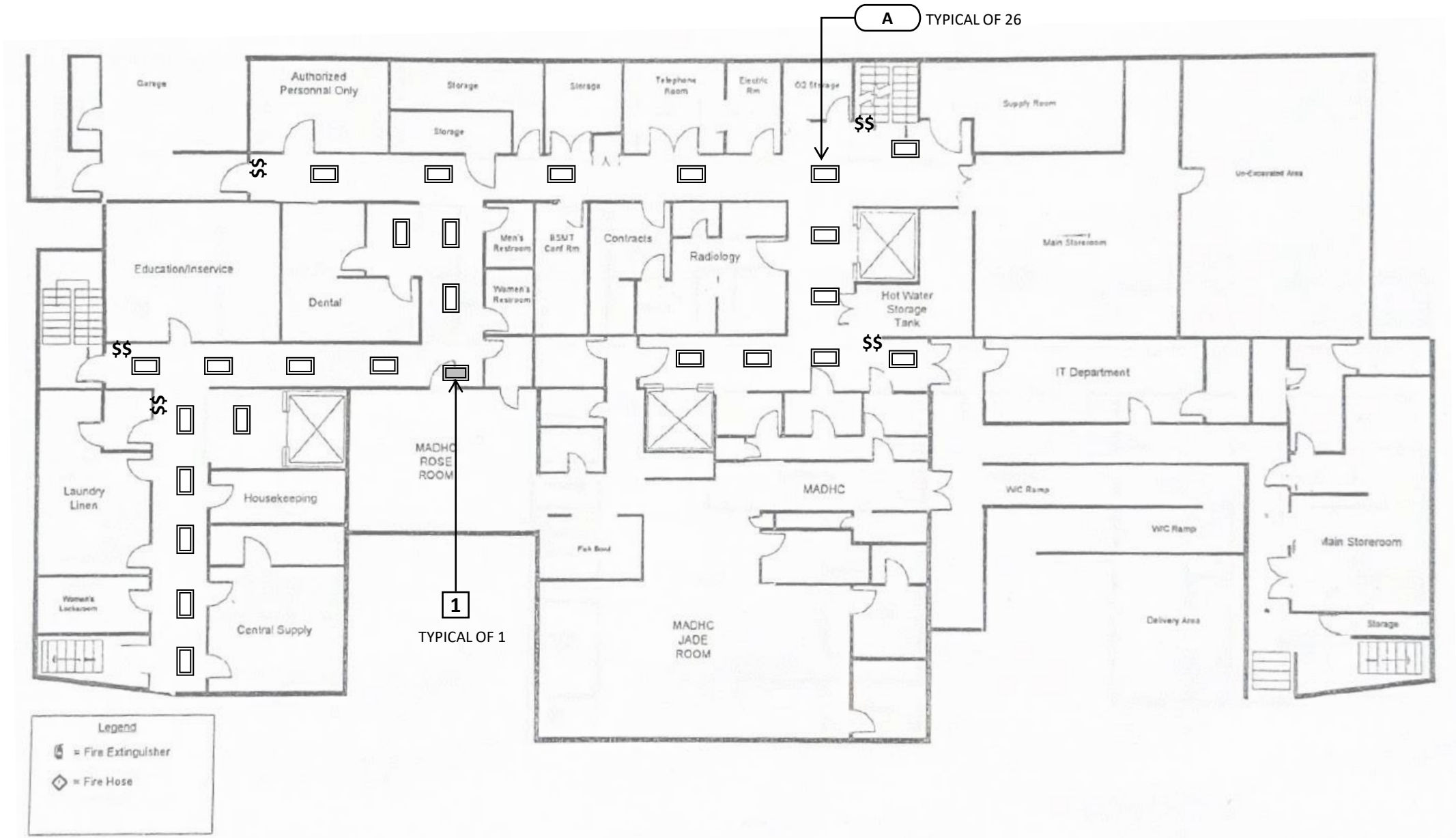
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SHEET TITLE:
SUB-BASEMENT FLOOR
LIGHTING PLAN

DRAWING NO:
004

BASEMENT FLOOR PLAN
NOT TO SCALE



SHEET NOTES:

1. CONTRACTOR TO REMOVE EXISTING FIXTURES AND REPLACE WITH NEW FIXTURES INDICATED ON LIGHT FIXTURE SCHEDULE ON SHEET 003.
2. NOT ALL NECESSARY MOUNTING HARDWARE AND OPTIONS ARE SPECIFIED. SUBCOTRACTOR TO PROVIDE ALL OPTIONS, ACCESSORIES AND HARDWARE AS REQUIRED TO INSTALL EACH LIGHT FIXTURE IN THE LOCATIONS INDICATED.
- 1** CONTRACTOR TO DISCONNECT AND REMOVE EXISTING FIXTURE INCLUDING VENTILATED PIECE, AND REPLACE WITH NEW FIXTURE TYPE A FOLLOWING THE MANUFACTURER'S INSTRUCTIONS AND ALL APPLICABLE BUILDING CODES.



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SHEET TITLE:
BASEMENT FLOOR
LIGHTING PLAN

DRAWING NO:
005

FIRST FLOOR PLAN

NOT TO SCALE



SHEET NOTES:

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2. NOT ALL NECESSARY MOUNTING HARDWARE AND OPTIONS ARE SPECIFIED. CONTRACTOR TO PROVIDE ALL OPTIONS, ACCESSORIES AND HARDWARE AS REQUIRED TO INSTALL EACH LIGHT FIXTURE IN THE LOCATIONS INDICATED.



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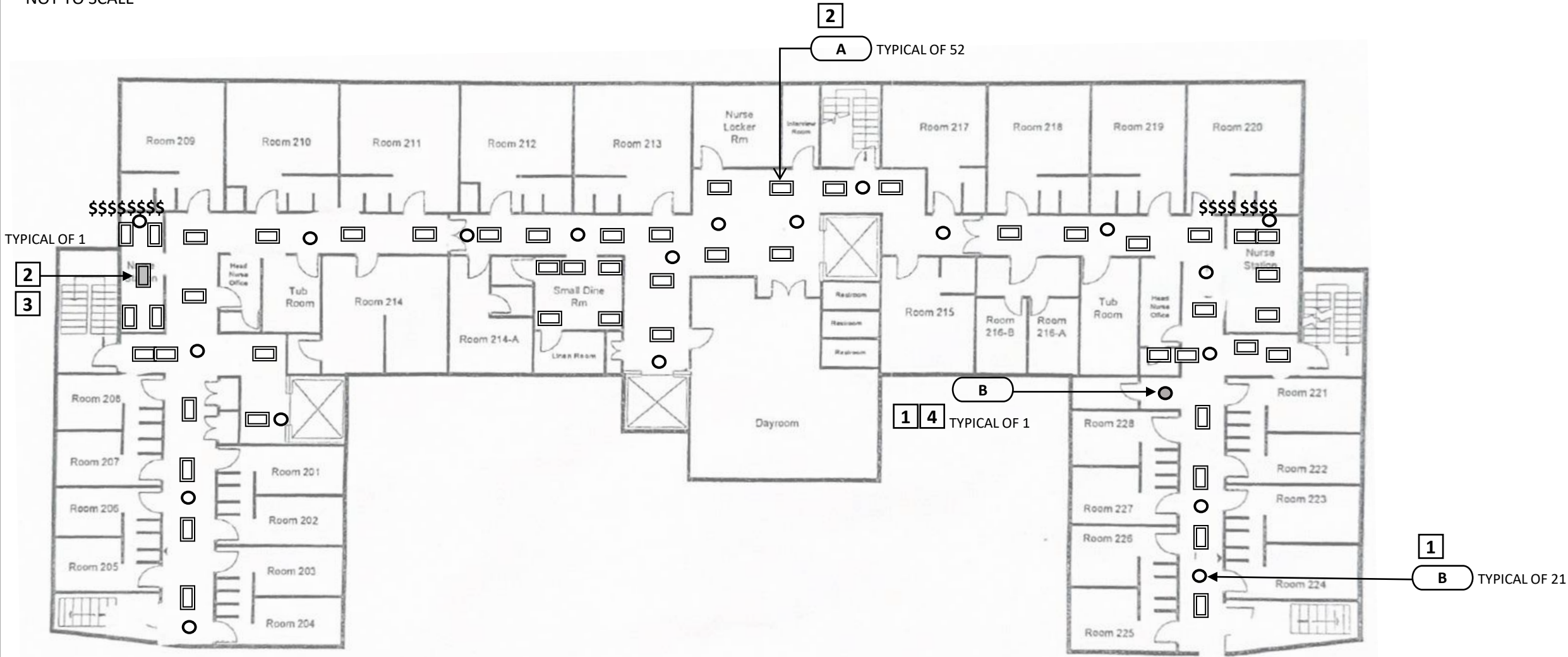
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SHEET TITLE:
FIRST FLOOR LIGHTING
PLAN

DRAWING NO:
006

SECOND FLOOR PLAN

NOT TO SCALE



SHEET NOTES:

- 1. CONTRACTOR TO REMOVE EXISTING FIXTURES AND REPLACE WITH NEW FIXTURES INDICATED ON LIGHT FIXTURE SCHEDULE ON SHEET 003.
- 2. NOT ALL NECESSARY MOUNTING HARDWARE AND OPTIONS ARE SPECIFIED. COTRACTOR TO PROVIDE ALL OPTIONS, ACCESSORIES AND HARDWARE AS REQUIRED TO INSTALL EACH LIGHT FIXTURE IN THE LOCATIONS INDICATED.
- 1 ADDITIVE OPTION 1. FIXTUEER TYPE B ON THE SECOND FLOOR IS CONSIDERED AN ADDITIVE OPTION. PRIOR TO ANY WORK RELATED TO FIXTURE TYPE B, PLEASE ENSURE THAT THE CLIENT HAS EXPRESSLY APPROVED ITS INCLUSION IN THE PROJECT.
- 2 ADDITIVE OPTION 2. FIXTUEER TYPE A ON THE SECOND FLOOR IS CONSIDERED AN ADDITIVE OPTION. PRIOR TO ANY WORK RELATED TO FIXTURE TYPE A, PLEASE ENSURE THAT THE CLIENT HAS EXPRESSLY APPROVED ITS INCLUSION IN THE PROJECT.
- 3 CONTRACTOR TO DISCONNECT AND REMOVE EXISTING FIXTURE INCLUDING VENTILATED PIECE, AND REPLACE WITH NEW FIXTURE TYPE A FOLLOWING THE MANUFACTURER’S INSTRUCTIONS AND ALL APPLICABLE BUILDING CODES.
- 4 CONTRACTOR TO REMOVE EXISTING RECESSED DOWN LIGHT CAN AND INSTALL FIXTURE B TO NEAREST JUNCTION BOX PER MANUFACTOR INSTRUCTION AND PER CODE. SEE PHOTO OF EXISTING FIXTURE ON SHEET 009.



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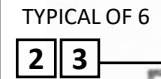
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REVISION MARK · DATE · DESCRIPTION

SHEET TITLE:
SECOND FLOOR LIGHTING
PLAN (ADDITIVE OPTIONS)

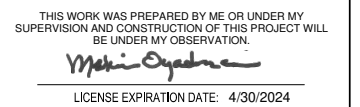
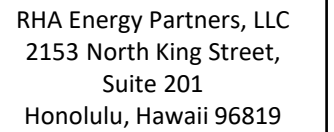
DRAWING NO:
007

NOT TO SCALE



1. CONTRACTOR TO REMOVE EXISTING FIXTURES AND REPLACE WITH NEW FIXTURES INDICATED ON LIGHT FIXTURE SCHEDULE ON SHEET 003.
2. NOT ALL NECESSARY MOUNTING HARDWARE AND OPTIONS ARE SPECIFIED. CONTRACTOR TO PROVIDE ALL OPTIONS, ACCESSORIES AND HARDWARE AS REQUIRED TO INSTALL EACH LIGHT FIXTURE IN THE LOCATIONS INDICATED.

- 1** ADDITIVE OPTION 1. FIXTURE TYPE B ON THE SECOND FLOOR IS CONSIDERED AN ADDITIVE OPTION. PRIOR TO ANY WORK RELATED TO FIXTURE TYPE B, PLEASE ENSURE THAT THE CLIENT HAS EXPRESSLY APPROVED ITS INCLUSION IN THE PROJECT.
- 2** ADDITIVE OPTION 2. FIXTURE TYPE A ON THE SECOND FLOOR IS CONSIDERED AN ADDITIVE OPTION. PRIOR TO ANY WORK RELATED TO FIXTURE TYPE A, PLEASE ENSURE THAT THE CLIENT HAS EXPRESSLY APPROVED ITS INCLUSION IN THE PROJECT.
- 3** CONTRACTOR TO DISCONNECT AND REMOVE EXISTING FIXTURE INCLUDING VENTILATED PIECE, AND REPLACE WITH NEW FIXTURE TYPE A FOLLOWING THE MANUFACTURER'S INSTRUCTIONS AND ALL APPLICABLE BUILDING CODES.
- 4** CONTRACTOR TO REMOVE EXISTING RECESSED DOWN LIGHT CAN AND INSTALL FIXTURE B TO NEAREST JUNCTION BOX PER MANUFACTURER INSTRUCTION AND PER CODE. SEE PHOTO OF EXISTING FIXTURE ON SHEET 009.



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REVISION MARK	DATE	DESCRIPTION
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SHEET TITLE:
THIRD FLOOR LIGHTING
PLAN (ADDITIVE OPTIONS)

DRAWING NO:
008

REFERENCE PHOTOS OF EXISTING FIXTURES

Existing Fixture to be replaced with **Fixture Type A**.
Additive Option 1: Fixture to be replaced with **Fixture Type A** if approved by Owner.



Additive Option 2: Fixture to be replaced with **Fixture Type B** if approved by Owner.



Existing Fixture to be replaced with **Fixture Type C**



Existing Fixtures to be replaced with **Fixture Type D**



SHEET NOTES:

- 1. REFERENCE PHOTOS ARE FOR REFERENCE OF TYPICAL EXISTING FIXTURES, HOWEVER MAY NOT BE REPRESENTATIVE OF EACH AND EVERY EXISTING FIXTURE TYPE, INSTALLATION, OR CONDITION. CONTRACTOR TO FIELD VERIFY ALL EXISINTG CONDITIONS PRIOR TO START OF WORK.



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SHEET TITLE:
REFERENCE PHOTOS OF
EXISTING FIXTURES

DRAWING NO:
009