STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
HONOLULU, HAWAII

SPECIAL PROVISIONS PROPOSAL, CONTRACT, BOND AND PLANS

FOR

KAILUA ROAD

TRAFFIC INTERSECTION IMPROVEMENTS ON KAILUA ROAD, VICINITY OF ULUOA STREET AND ULUMANU DRIVE

PROJECT NO. 61D-01-23

DISTRICT OF KOOLAUPOKO

ISLAND OF OAHU

FY 2024

NOTICE TO BIDDERS
Hawaii Revised Statutes (HRS),
Chapter 103D

SEALED BIDS for KAILUA ROAD INTERSECTION IMPROVEMENTS VICINITY OF ULUOA STREET AND ULUMANU DRIVE, DISTRICT OF KOOLAUPOKO, ISLAND OF OAHU, PROJECT NO. 61D-01-23, will begin as advertised in HIePRO. Bidders shall register and submit complete bids through HIePRO only. Refer to the following HIePRO link for important information on registering: https://hiepro.ehawaii.gov/welcome.html.

Plans, specifications, proposal, and other documents designated or incorporated by reference shall be available in HIePRO.

DEADLINE TO SUBMIT BIDS is January 18, 2024, at 2:00 p.m., Hawaii Standard Time (HST). **Bidders shall submit and upload the complete proposal to HIePRO prior to the bid opening date and time. Proposals received after said due date and time shall not be considered. Any additional support documents explicitly designated as confidential and/or proprietary shall be uploaded as a separate file to HIePRO. Do not include confidential and/or proprietary documents with the proposal. The record of each bidder and respective bid shall be open to public inspection. FAILURE TO UPLOAD THE PROPOSAL TO HIePRO SHALL BE GROUNDS FOR REJECTION OF THE BID.**

The scope of work consists of signalizing the intersections of Kailua Road and Uluoa Street, and Kailua Road and Ulumanu Drive, including but not limited to the installation of Type II traffic signal poles, Type I traffic signal poles, interconnect ducts, pedestrian push button assemblies, traffic signal boxes, and traffic loops along Kailua Road from Waimanalo Junction to Ulumanu Drive; construction of sidewalk curb extensions or bulb-outs,

sidewalk curb ramps, sidewalk and pavement reconstruction; striping and signage; and work zone traffic control. The estimated cost of construction is between $5,000,000 and $5,500,000.

To be eligible for award, bidders shall possess a valid State of Hawaii General Engineering "A" license at the time of bidding. Bidder's attention is also directed to Section 627.01 of the Special Provisions regarding additional bidder's qualification.

A pre-bid conference is scheduled for Pre-bid meeting December 28, 2023, at 2:00 p.m., HST, on Microsoft Teams. Due to the impacts of COVID-19, the pre-bid meeting will be conducted virtually. Contract Mr. Reid Tokuhara, Project Manager, at (808) 692-7691, or by email at reid.tokuhara@hawaii.gov, at minimum of 48-hours prior to the scheduled pre-bid meeting to obtain the link for the pre-bid meeting. All prospective bidders and/or their respective representatives are encouraged to attend, however, attendance is not mandatory. All information presented at the pre-bid conference is provided for clarification and information only. Any amendments to the bid documents shall be made by formal addendum and posted in HIePRO.

All Request for Information (RFI) questions and substitution requests shall be submitted via HIePRO **no later than January 2, 2024, at 2:00 p.m., HST.** RFI questions received after the stated deadline will not be addressed. Verbal RFI questions will not receive a response. All responses to RFI questions shall be issued by formal addendum and posted in HIePRO.

Apprenticeship Preference. A 5% bid adjustment for bidders that are party to apprenticeship agreements pursuant to HRS §103-55.6 is applicable to this project.

Employment of State Residents on Construction Procurement Contracts. Compliance with HRS §103B-3 is a requirement for this project whereby a minimum of 80% of the bidder's work force on this project shall consist of Hawaii residents.

Campaign contributions by State and County Contractors. Contractors are hereby notified of the applicability of HRS §11-355 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, contact the Campaign Spending Commission at (808) 586-0285.

Protests. Any protest of this solicitation shall be submitted in writing to the Director of Transportation, in accordance with HRS §103D-701 and Hawaii Administrative Rules §3-126.

The Equal Employment Opportunity Regulations of the Secretary of Labor implementing Executive Order 11246, as amended, shall be complied with on this project.

The U.S. Department of Transportation Regulation entitled "Nondiscrimination in Federally-Assisted Programs of the U.S. Department of Transportation," Title 49, Code of Federal Regulations (CFR), Part 21 is applicable to this project. Bidders are hereby notified that the Department of Transportation will affirmatively ensure that the contract entered into pursuant to this advertisement will be awarded to the lowest responsible bidder without discrimination on the grounds of race, color, national origin or sex (as directed by 23 CFR Part 200).

Driving While Impaired (DWI) Education. HDOT encourages all organizations contracted with the HDOT to have an employee education program preventing DWI. DWI is defined as operating a motor vehicle while impaired by alcohol or other legal or illegal substances. HDOT promotes this type of program to accomplish our mission to provide a safe environment for motorists, bicyclists, and pedestrians utilizing our State highways, and expects its contractors to do so as well.

For additional information, contact Reid Tokuhara, Project Manager, by phone at (808) 692-7691, by fax at (808) 692-7690, or by email at reid.tokuhara@hawaii.gov.

The State reserves the right to reject any or all proposals and to waive any defects in said proposals in the best interest of the public.

ROBIN K. SHISHIDO
Deputy Director of Transportation for Highways

Posted on HIePRO: December 19, 2023

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INSTRUCTIONS FOR CONTRACTOR'S LICENSING

"A" general engineering contractors and "B" general building contractors are reminded that due to the Hawaii Supreme Court's January 28, 2002 decision in Okada Trucking Co., Ltd. v. Board of Water Supply, et al., 97 Haw. 450 (2002), they are prohibited from undertaking any work, solely or as part of a larger project, which would require the general contractor to act as a specialty contractor in any area where the general contractor has no 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 *(An "A" or "B" contractor obtains "C" specialty contractor's licenses either on its own, or automatically under HAR § 16-77-32.)*. The remaining work must be performed by appropriately licensed entities. It is the sole responsibility of the contractor to review the requirements of this project and determine the appropriate licenses that are required to complete the project.

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

HONOLULU, HAWAII

SPECIAL PROVISIONS

These Special Provisions shall supplement and/or amend the applicable provisions of the Hawaii Standard Specifications for Road and Bridge Construction, 2005, hereinafter referred to as the "Standard Specifications".

Amend **Section 101 - TERMS, ABBREVIATIONS, AND DEFINITIONS** to read as follows:

"DIVISION 100 - GENERAL PROVISIONS

SECTION 101 - TERMS, ABBREVIATIONS, AND DEFINITIONS

101.01 Meaning of Terms. The specifications are generally written in the imperative mood. In sentences using the imperative mood, the subject, "the Contractor shall", is implied. In the material specifications, the subject may also be the supplier, fabricator, or manufacturer supplying material, products, or equipment for use on the project. The word "will" generally pertains to decisions or actions of the State.

When a publication is specified, it refers to the most recent date of issue, including interim publications, before the bid opening date for the project, unless a specific date or year of issue is provided.

101.02 Abbreviations. Meanings of abbreviations used in the specifications, on the plans, or in other contract documents are as follows:

AAN	American Association of Nurserymen
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ADA	Americans with Disabilities Act
ADAAG	Americans with Disabilities Act Accessibility Guidelines
AGC	Associated General Contractors of America
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
ANSI	American National Standards Institute
APA	American Plywood Association

ARA	American Railway Association
AREA	American Railway Engineering Association
ASA	American Standards Association
ASCE	American Society of Civil Engineers
ASLA	American Society of Landscape Architects
ASTM	American Society for Testing and Materials
AWG	American Wire Gauge
AWPA	American Wood Preserver's Association
AWS	American Welding Society
AWWA	American Water Works Association
BMP	Best Management Practice
CCO	Contract Change Order
CFR	Code of Federal Regulations
CRSI	Concrete Reinforcing Steel Institute
DCAB	Disability and Communication Access Board, Department of Health, State of Hawaii
DOTAX	Department of Taxation, State of Hawaii
EPA	U.S. Environmental Protection Agency
FHWA	Federal Highway Administration, U.S. Department of Transportation
FSS	Federal Specifications and Standards, General Services Administration, U.S. Department of Defense
HAR	Hawaii Administrative Rules
HDOT	Department of Transportation, State of Hawaii

HIOSH	Occupational Safety and Health, Department of Labor and Industrial Relations, State of Hawaii
HMA	Hot Mix Asphalt
HRS	Hawaii Revised Statutes
ICEA	Insulated Cable Engineers Association (formerly IPCEA)
IMSA	International Municipal Signal Association
IRS	Internal Revenue Service
ITE	Institute of Transportation Engineers
MUTCD	Manual on Uniform Traffic Control Devices for Streets and Highways, FHWA, U.S. Department of Transportation
NCHRP	National Cooperative Highway Research Program
NEC	National Electric Code
NEMA	National Electrical Manufacturers Association
NFPA	National Forest Products Association
NPDES	National Pollutant Discharge Elimination System
OSHA	Occupational Safety and Health Administration/Act, U.S. Department of Labor
SAE	Society of Automotive Engineers
SI	International Systems of Units
UFAS	Uniform Federal Accessibility Standards
UL	Underwriter's Laboratory
USGS	U.S. Geological Survey
VECP	Value Engineering Cost Proposal

101.03 Definitions. Whenever the following words, terms, or pronouns are used in the contract documents, unless otherwise prescribed therein and without regards to the use or omission of uppercase letters, the intent and meaning shall be interpreted as follows:

Addendum (plural - Addenda) - A written or graphic document, including drawings and specifications, issued by the Director during the bidding period. This document modifies or interprets the bidding documents by additions, deletions, clarifications or corrections.

Addition (to the contract sum) **-** Amount added to the contract sum by change order.

Advertisement - A public announcement inviting bids for work to be performed or materials to be furnished.

Amendment - A written document issued to amend the existing contract between the State and Contractor and properly executed by the Contractor and Director.

Award - Written notification to the bidder that the bidder has been awarded a contract.

Bad Weather Day (or Unworkable Day) - A day when weather or other conditions prevent a minimum of four hours of work with the Contractor's normal work force on critical path activities at the site.

Bag - 94 pounds of cement.

Barrel - 376 pounds of cement.

Base Course - The layer or layers of specified material or selected material of a designed thickness placed on a subbase or subgrade to support a surface course.

Basement Material - The material in excavation or embankments underlying the lowest layer of subbase, base, pavement, surfacing or other specified layer.

Bid - See Proposal.

Bidder - An individual, partnership, corporation, joint venture or other legal entity submitting, directly or through a duly authorized representative or agent, a proposal for the work or construction contemplated.

Bidding Documents (or Solicitation Documents) - The published solicitation notice, bid requirements, bid forms and the proposed contract documents including all addenda and clarifications issued prior to receipt of the bid.

Bid Security - The security furnished by the bidder from which the State may recover its damages in the event the bidder breaches its promise to enter into a contract with the State, or fails to execute the required bonds covering the work contemplated, if its proposal is accepted.

Blue Book - EquipmentWatch Cost Recovery (formerly known as EquipmentWatch Rental Rate Blue Book), available from EquipmentWatch, a division of Penton, Inc.

Calendar Day - See Day.

Change Order (or Contract Change Order) - A written order signed by the Engineer issued with or without the consent of the Contractor directing changes in the work, contract time or contract price. The purposes of a change order include, but are not limited to (1) establishing a price or time adjustment for changes in the work; (2) establishing full payment for direct, indirect, and consequential costs, including costs of delay; (3) establishing price adjustment or time adjustment for work covered and affected by one or more field orders; or (4) settling Contractor's claims for direct, indirect, and consequential costs, or for additional contract time, in whole or in part.

Completion - See Substantial Completion and Final Completion.

Completion Date - The date specified by the contract for the completion of all work on the project or of a designated portion of the project.

Comptroller - the Comptroller of the State of Hawaii, Department of Accounting and General Services.

Contract - The written agreement between the Contractor and the State, by which the Contractor shall provide all labor, equipment, and materials and perform the specified work within the contract time stipulated, and by which the State of Hawaii is obligated to compensate the Contractor at the prices set forth in the contract documents.

Contract Certification Date - The Date on which the Deputy Comptroller for the State of Hawaii (or authorized representative) signs the Contract Certification.

Contract Completion Date - The calendar day on which all work on the project, required by the contract, must be completed. See CONTRACT TIME.

Contract Documents - The contract, solicitation, addenda, notice to bidders, Contractor's bid proposal (including wage schedule, list of subcontractors and other documentations accompanying the bid), notice to proceed, bonds, general provisions, special provisions, specifications, drawings, all modifications, all written amendments, change orders, field orders, orders for minor changes in the work, the Engineer's written interpretations and clarifications issued on or after the effective date of the contract.

Contract Item (Pay Item) - A specific unit of work for which there is a price in the contract.

Contract Modification (Modification) - A change order that is mutually agreed to and signed by the parties to the contract.

Contract Price - The amount designated on the face of the contract for the performance of work.

Contract Time (or Contract Duration) - The number of calendar or working days provided for completion of the contract, inclusive of authorized time extensions. Contract time shall commence on the Start Work Date and end on the Substantial Completion Date. If in lieu of providing a number of calendar or working days, the contract requires completion by a certain date, the work shall be completed by that date.

Contracting Officer - See Engineer.

Contractor - Any individual, partnership, firm, corporation, joint venture, or other legal entity undertaking the execution of the work under the terms of the contract with the State.

Critical Path - Longest logical sequence of activities that must be completed on schedule for the entire project to be completed on schedule.

Day - Any day shown on the calendar, beginning at midnight and proceeding up to, but not including, midnight the following day. If no designation of calendar or working day is made, "day" shall mean calendar day.

Department - The Department of Transportation of the State of Hawaii (abbreviated HDOT).

Director - The Director of the HDOT acting directly or through duly authorized representatives.

Plans (or Drawings) - The contract drawings in graphic or pictorial form including the notes, tables and other notations thereon indicating the design, location, character, dimensions, and details of the work.

Engineer - The Highway Administrator, Highways Division, HDOT, or the authorized person delegated to act on the Administrator's behalf.

Equipment - All machinery, tools, and apparatus needed to complete the contract.

Field Order - A written order issued by the Engineer or the Engineer's authorized representative to the Contractor requiring a change or changes to the contract work. A field order may (1) establish a price adjustment or time adjustment; or (2) may declare that no adjustment will be made to contract price or contract time; or (3) may request the Contractor to submit a proposal for an adjustment to the contract price or contract time.

Final Acceptance - The Status of the project when the Engineer finds that the Contractor has satisfactorily completed all contract work in compliance with the contract including all plant establishment requirements, and all the materials have been accepted by the State.

Final Completion - The date set by the Director that all work required by the contract has been completed in full compliance with the contract documents.

Final Inspection - Inspection where all contract items (with the exception of Planting Period and Plant Establishment Period) are accepted by the Engineer. Substantial Completion will be issued by the Engineer based on the satisfactory results of the Final Inspection.

Float - The amount of time between when an activity can start and when an activity must start, i.e., the time available to complete non-critical activities required for the performance of the work without affecting the critical path.

Guarantee - Legally enforceable assurance of the duration of satisfactory performance of quality of a product or work.

Hawaii Administrative Rules - Rules adopted by the State in accordance with Chapter 91 of the Hawaii Revised Statutes, as amended.

Hawaii eProcurement System (HIePRO) – The State of Hawaii eProcurement System for issuing solicitations, receiving proposals, and responses, and issuing notices of award.

Highway (Street, Road, or Roadway) - A public way within a right-of-way designed, intended, and set aside for use by vehicles, bicyclists, or pedestrians.

Highways Division - The Highways Division of the Hawaii Department of Transportation constituted under the laws of Hawaii for the administration of highway work.

Holidays - The days of each year which are set apart and established as State holidays pursuant to Chapter 8 of the Hawaii Revised Statutes, as amended.

Inspector - The Engineer's authorized representative assigned to make detailed inspections of contract performance, prescribed work, and materials supplied.

Laboratory - The testing laboratory of the Highways Division or other testing laboratories that may be designated by the Engineer.

Laws - All Federal, State, and local laws, executive orders and regulations having the force of law.

Leveling Course - An aggregate mixture course of variable thickness used to restore horizontal and vertical uniformity to existing pavements or shoulders.

Liquidated Damages - The amount prescribed in Subsection 108.08 - Liquidated Damages for Failure to Complete the Work or Portions of the Work on Time, to be paid to the State or to be deducted from any payments payable to or, which may become payable to the Contractor.

Lump Sum (LS) - When used as a payment method means complete payment for the item of work described in the contract documents.

Material - Any natural or manmade substance or item specified in the contract to be incorporated in the work.

Notice to Bidders - The advertisement for proposals for all work or materials on which bids are required. Such advertisement will indicate the location of the work to be done or the character of the material to be furnished and the time and place for the opening of proposals.

Notice to Proceed - Written notice from the Engineer to the Contractor identifying the date on which the Contractor is to begin procuring materials and required permits and adjusting work forces, equipment, schedules, etc. prior to beginning physical work.

Pavement - The uppermost layer of material placed on the traveled way or shoulders or both. Pavement and surfacing may be interchangeable.

Pavement Structure - The combination of subbase, base, pavement, surfacing or other specified layer of a roadway constructed on a subgrade to support the traffic load.

Payment Bond - The security executed by the Contractor and surety or sureties furnished to the Department to guarantee payment by the Contractor to laborers, material suppliers and subcontractors in accordance with the terms of the contract.

Physical Work - Physical construction activities on the project site or at appurtenant facilities including staging areas. It includes; (i) building or installing any structures or facilities including, but not limited to sign erection; BMP installation; field office site grading and building; (ii) removal, adjustment, or demolition of physical obstructions on site; (iii) any ground breaking activities; and (iv) any utility work. It does not include pre-construction environmental testing (such as water quality baseline measurements) that may be required as part of contract.

Pre-Final Inspection - Inspection scheduled when Contractor notifies Engineer that all physical work on the project, with the exception of planting period and plant establishment period, has been completed. Notice from Contractor of substantial completion will suspend contract time until Contractor receives punchlist from Engineer.

Profile Grade - The elevation or gradient of a vertical plane intersecting the top surface of the proposed pavement.

Project Acceptance Date - The calendar day on which the Engineer accepts the project as completed. See Final Completion.

Proposal (Bid) - The offer of a Bidder, on the prescribed HDOT form, to perform the work and furnish the labor and materials at the prices quoted.

Public Traffic - Vehicular or pedestrian movement on a public way.

Punchlist - A list compiled by the Engineer specifying work yet to be completed or corrected by the Contractor in order to substantially complete the contract.

Questionnaire - The specified forms on which the bidder shall furnish required information as to its ability to perform and finance the work.

Request for Change Proposal - A written notice from the Engineer to the Contractor requesting that the Contractor provide a price and/or time proposal for contemplated changes preparatory to the issuance of a field order or change order.

Right-of-Way - Land, property, or property interests acquired by a government agency for, or devoted to transportation purposes.

Roadbed - The graded portion of a highway within top and side slopes, prepared as a foundation for the pavement structure and shoulders.

Roadside - The area between the outside edges of the shoulders and the right-of-way boundaries. Unpaved median areas between inside shoulders of divided highways and infield areas of interchanges are included.

Section and Subsection - Section or subsection shall be understood to refer to these specifications unless otherwise specified.

Shop Drawings - All drawings, diagrams**,** illustrations, schedules and other data or information which are specifically prepared or assembled by or for the Contractor and submitted by the Contractor to illustrate some portion of the work.

Shoulder - The portion of the roadway next to the traveled way for: accommodation of stopped vehicles, placement of underground facilities, emergency use, and lateral support of base and surface courses.

Sidewalk - That portion of the roadway primarily constructed for use by pedestrians.

Solicitation - An invitation to bid or request for proposals or any other document issued by the Department to solicit bids or offers to perform a contract. The solicitation may indicate the time and place to receive the bids or offers and the location, nature and character of the work, construction or materials to be provided.

Specifications - Compilation of provisions and requirements to perform prescribed work.

(A) Standard Specifications. Specifications by the State intended for general application and repetitive use.

(B) Special Provisions. Revisions and additions to the standard specifications applicable to an individual project.

Standard Plans - Drawings provided by the State for specific items of work approved for repetitive use.

State - The State of Hawaii, its Departments and agencies, acting through its authorized representative(s).

State Waters – All waters, fresh, brackish, or salt, around and within the State, including, but not limited to, coastal waters, streams, rivers, drainage ditches, ponds, reservoirs, canals, ground waters, and lakes; provided that drainage ditches, ponds, and reservoirs required as a part of a water pollution control system are excluded.

Start Work Date - Date on which Contractor begins physical work on the contract. This date shall also be the beginning of Contract Time.

Structures - Bridges, culverts, catch basins, drop inlets, retaining walls, cribbing, manholes, endwalls, buildings, sewers, service pipes, underdrains, foundation drains, and other such features that may be encountered in the work.

Subbase - A layer of specified material of specified thickness between the subgrade and a base.

Subcontract - Any written agreement between the Contractor and its subcontractors which contains the conditions under which the subcontractor is to perform a portion of the work for the Contractor.

Subcontractor - An individual, partnership, firm, corporation, joint venture or other legal entity, as licensed or required to be licensed under Chapter 444, Hawaii Revised Statutes, as amended, which enters into an agreement with the Contractor to perform a portion of the work**.**

Subgrade - The top surface of completed earthwork on which subbase, base, surfacing, pavement, or a course of other material is to be placed.

Substantial Completion - The Status of the project when the Contractor has completed the work, except for the planting period and plant establishment period, and each of the following requirements are met:

(1) All traffic lanes (including shoulders, ramps, sidewalks and bike paths) are in their final configuration as designed and the final wearing surface has been installed;

(2) All operational and safety devices have been installed in accordance with the contract documents including guardrails, end treatments, traffic barriers, required signs and pavement markings, drainage, parapet, and bridge and pavement structures;

(3) All required illumination and lighting for normal and safe use and operation is installed and functional in accordance with the contract documents;

(4) All utilities and services are connected and working;

(5) The need for temporary traffic controls or lane closures at any time has ceased, except for lane closures required for routine maintenance;

(6) The building, structure, improvement or facility can be used for its intended purpose.

Substantial Completion Date - The date the Substantial Completion is granted by the Engineer in Writing and Contract Time stops.

Superintendent - The employee of the Contractor who is responsible for all the work and is a Contractor’s agent for communications to and from the State.

Surety - The qualified individual, firm or corporation other than the Contractor, which executes a bond with and for the Contractor to insure its acceptable performance of the contract.

Surfacing - The uppermost layer of material placed on the traveled way or shoulders. This term is used interchangeably with pavement.

Traveled Way - The portion of the roadway for the movement of vehicles, exclusive of shoulders.

Unsuitable Material - Materials that contain organic matter, muck, humus, peat, sticks, debris, chemicals, toxic matter, or other deleterious materials not suitable for use in earthwork.

Utility - A line, facility, or system for producing, transmitting, or distributing communications, power, electricity, heat, gas, oil, water, steam, waste, or storm water.

Utility Owner - The entity, whether private or owned by a State, Federal, or County governmental body, that has the power and responsibility to grant approval for, or undertake construction work involving a particular utility.

Water Pollutant - Dredged spoil, solid refuse, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical waste, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, soil, sediment, cellar dirt and industrial, municipal, and agricultural waste.

Water Pollution - (1) Such contamination or other alteration of the physical, chemical, or biological properties of any state waters, including change in temperature, taste, color, turbidity, or odor of the waters, or **(2)** Such discharge of any liquid, gaseous, solid, radioactive, or other substances into any state waters, as will or is likely to create a nuisance or render such waters unreasonably harmful, detrimental, or injurious to public health, safety, or welfare, including harm, detriment, or injury to public water supplies, fish and aquatic life and wildlife, recreational purposes and agricultural and industrial research and scientific uses of such waters or as will or is likely to violate any water quality standards, effluent standards, treatment and pretreatment standards, or standards of performance for new sources adopted by the Department of Health.

Work - The furnishing of all labor, material, equipment, and other incidentals necessary or convenient for the successful execution of all the duties and obligations imposed by the contract.

Working Day - A calendar day in which a Contractor is capable of working four or more hours with its normal work force, exclusive of:

(1) Saturdays, Sundays, and recognized legal State holidays and such other days specified by the contract documents as non-working days,

(2) Day in which the Engineer suspends work for four or more hours through no fault of the Contractor."

END OF SECTION 101

Make this section a part of the Standard Specifications:

"**SECTION 102 - BIDDING REQUIREMENTS AND CONDITIONS**

102.01 Prequalification of Bidders. Prospective bidders shall be capable of performing the work for which they are bidding.

In accordance with HRS Chapter 103D-310, the Department may require any prospective bidder to submit answers to questions contained in the 'Standard Qualification Questionnaire For Prospective Bidders On Public Works Contracts' furnished by the Department, properly executed and notarized, setting forth a complete statement of the experience of such prospective bidder and its organization in performing similar work and a statement of the equipment proposed to be used, together with adequate proof of the availability of such equipment. Whenever it appears to the Department, from answers to the questionnaire or otherwise, that the prospective bidder is not fully qualified and able to perform the intended work, the Department will, after affording the prospective bidder an opportunity to be heard and if still of the opinion that the bidder is not fully qualified to perform the work, refuse to receive or consider any bid offered by the prospective bidder. All information contained in the answers to the questionnaire shall be kept confidential. Questionnaire so submitted shall be returned to the bidders after serving their purpose.

No person, firm or corporation may bid where (1) the person, firm, or corporation, or (2) a corporation owned substantially by the person, firm, or corporation, or (3) a substantial stockholder or an officer of the corporation, or (4) a partner or substantial investor in the firm is in arrears in payments owed to the State or its political subdivisions or is in default as a surety or failure to do faithfully and diligently previous contracts with the State.

102.02 Contents of Proposal Forms. The Department will furnish prospective bidders with proposal forms posted in HIePRO stating:

(1) The location,

(2) Description of the proposed work,

(3) The approximate quantities,

(4) Items of work to be done or materials to be furnished,

(5) A schedule of items, and

(6) The time in which the work shall be completed.

Papers bound with or attached to the proposal form are part of the proposal. The bidder shall not detach or alter the papers bound with or attached to the proposal when the bidder submits its proposal through HIePRO.

Also, the bidder shall consider other documents including the plans and specifications a part of the proposal form whether attached or not.

102.03 (Unassigned)

102.04 Estimated Quantities. The quantities shown in the contract are approximate and are for the comparison of bids only. The actual quantity of work may not correspond with the quantities shown in the contract. The Department will make payment to the Contractor for unit price items in accordance with the contract for only the following:

(1) Actual quantities of work done and accepted, not the estimated quantities; or

(2) Actual quantities of materials furnished, not the estimated quantities.

The Department may increase, decrease, or omit each scheduled quantities of work to be done and materials to be furnished. When the Department increases or decreases the estimated quantity of a contract item by more than 15% the Department will make payment for such items in accordance with Subsection 104.06 - Methods of Price Adjustment.

102.05 Examination of Contract and Site of Work. The bidder shall examine carefully the site of the proposed work and contract before submitting a proposal.

By the act of submitting a bid for the proposed contract, the bidder warrants that:

(1) The bidder and its Subcontractors have reviewed the contract documents and found them free from ambiguities and sufficient for the purpose intended;

(2) The bidder and its workers, employees and subcontractors have the skills and experience in the type of work required by the contract documents bid upon;

(3) Neither the bidder nor its employees, agents, suppliers or subcontractors have relied upon verbal representations from the Department, its employees or agents, including architects, engineers or consultants, in assembling the bid figure; and

(4) The basis for the bid figure is solely on the construction contract documents.

Also, the bidder warrants that the bidder has examined the site of the work. From its investigations, the bidder acknowledges satisfaction on:

(1) The nature and location of the work;

(2) The character, quality, and quantity of materials;

(3) The difficulties to be encountered; and

(4) The kind and amount of equipment and other facilities needed.

Subsurface information or hydrographic survey data furnished are for the bidders' convenience only. The data and information furnished are the product of the Department's interpretation gathered in investigations made at the specific locations. These conditions may not be typical of conditions at other locations within the project area or that such conditions remain unchanged. Also, conditions found at the time of the subsurface explorations may not be the same conditions when work starts. The bidder shall be solely responsible for assumptions, deductions, or conclusions the bidder may derive from the subsurface information or data furnished.

If the Engineer determines that the natural conditions differ from that originally anticipated or contemplated by the Contractor in the items of excavation, the State may treat the difference in natural conditions, as falling within the meaning of Subsection 104.02 – Changes.

102.06 Preparation of Proposal. The submittal of its proposal shall be on forms furnished by the Department. The bidder shall specify in words or figures:

(1) A unit price for each pay item with a quantity given;

(2) The products of the respective unit prices and quantities;

(3) The lump sum amount; and

(4) The total amount of the proposal obtained by adding the amounts of the several items.

The words and figures shall be in ink or typed. If a discrepancy occurs between the prices written in words and those written in figures, the prices written in words shall govern.

When an item in the proposal contains an option to be made, the bidder shall choose in accordance with the contract for that particular item. Determination of an option will not permit the Contractor to choose again.

The bidder shall sign the proposal properly in ink. A duly authorized representatives of the bidder or by an agent of the bidder legally qualified and acceptable to the Department shall sign, including one or more partners of the bidder and one or more representatives of each entity comprising a joint venture.

When an agent, other than the officer(s) of a corporation authorized to sign contracts for the corporation or a partner of a partnership, signs the proposals, a 'Power of Attorney' shall be on file with the Department or submitted with the proposal. Otherwise, the Department will reject the proposal as irregular and unauthorized.

The bidder shall submit acceptable evidence of the authority of the partner, member(s) or officer(s) to sign for the partnership, joint venture, or corporation respectively with the proposal. Otherwise, the Department will reject the proposal as irregular and unauthorized.

102.07 Irregular Proposals. The Department may consider proposals irregular and may reject the proposals for the following reasons:

(1) The proposal is a form not furnished by the Department, altered, or detached;

(2) The proposal contains unauthorized additions, conditions, or alternates. Also, the proposal contains irregularities that may tend to make the proposal incomplete, indefinite, or ambiguous to its meaning;

(3) The bidder adds provisions reserving the right to accept or reject an award. Also, the bidder adds provisions into a contract before an award;

(4) The proposal does not contain a unit price for each pay item listed except authorized optional pay items; and

(5) Prices for some items are out of proportion to the prices for other items.

(6) If in the opinion of the Director, the bidder and its listed subcontractors do not have the Contactor's licenses or combination of Contractor's licenses necessary to complete the work.

Where the prospective bidder is bidding on multiple projects simultaneously and the proposal limits the maximum gross amount of awards that the bidder can accept at one bid letting, the proposal is not irregular if the limit on the gross amount of awards is clear, and the Department selects the awards that can be given.

102.08 Proposal Guaranty. The Department will not consider a proposal of $25,000 or more unless accompanied by:

(1) A deposit of legal tender; or

(2) A valid surety bid bond, underwritten by a company licensed to issue bonds in the State of Hawaii, in the form and composed, substantially, with the same language as provided herewith and signed by both parties; or

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

(a) The bidder may use these instruments 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 acceptable.

(c) The instrument shall be made payable at sight to the Department.

If bidder elects options (1) or (3) above for its bid security, said bid security shall be in its <u>original form</u> and shall be <u>submitted before the bid deadline</u> to the Contract Office, Department of Transportation, Aliiaimoku Hale, 869 Punchbowl Street, Room 105, Honolulu, Hawaii 96813. Original surety bid bonds do <u>not</u> need to be submitted to the Contracts Office. Bidders are reminded that a copy of its surety bid bond shall be <u>included with its bid</u> submitted and uploaded to HIePRO.

In accordance with HRS Chapter 103D-323, the above shall be in a sum not less than 5% of the amount bid.

102.09 Delivery of Proposal. Bidders shall <u>upload the complete proposal to HIePRO</u> prior to the bid opening date and time. Proposals received after said due date and time shall not be considered. Original (wet ink, hard copy) proposal documents are not required to be submitted. **Contract**

award shall be based on evaluation of proposals submitted and uploaded to HIePRO. Any additional support documents explicitly designated as confidential and/or proprietary shall be uploaded as a "separate file" to HIePRO. Do not include confidential and/or proprietary documents with the proposal. The record of each bidder and respective bid shall be open to public inspection.

FAILURE TO UPLOAD THE COMPLETE PROPOSAL TO HIePRO SHALL BE GROUNDS FOR REJECTION OF THE BID.

If there is a conflict between the specification document and the HIePRO solicitation, the specifications shall govern and control, unless otherwise specified.

102.10 Withdrawal or Revision of Proposals. A bidder may withdraw or revise a proposal after the bidder submits the proposal in HIePRO. Withdrawal or revision of proposal must be completed before the time set for the receiving of bids.

102.11 Public Opening of Proposals. Not applicable.

102.12 Disqualification of Bidders. The Department may disqualify a bidder and reject its proposal for the following reasons:

(1) Submittal of more than one proposal whether under the same or different name.

(2) Evidence of collusion among bidders. The Department will not recognize participants in collusion as bidders for any future work of the Department until such participants are reinstated as qualified bidders.

(3) Lack of proposal guaranty.

(4) Submittal of an unsigned or improperly signed proposal.

(5) Submittal of a proposal without a listing of subcontractors or containing only a partial or incomplete listing of subcontractors.

(6) Submittal of an irregular proposal in accordance with Subsection 102.07 - Irregular Proposals.

(7) Evidence of assistance from a person who has been an employee of the agency within the preceding two years and who participated while in State office or employment in the matter with which the contract is directly concerned, pursuant to HRS Chapter 84-15.

(8) Suspended or debarred in accordance with HRS Chapter 104-25.

(9) Failure to complete the prequalification questionnaire, if applicable.

(10) Failure to attend the mandatory pre-bid meeting, if applicable.

102.13 Material Guaranty. The successful bidder may be required to furnish a statement of the composition, origin, manufacture of materials, and samples.

102.14 Substitution of Materials and Equipment Before Bid Opening. See Subsection 106.13 for Substitution Of Materials and Equipment After Bid Opening.

(A) General. When brand names of materials or equipment are specified in the contract documents, they are to indicate a quality, style, appearance, or performance and not to limit competition. The bidder shall base its bid on one of the specified brand names unless alternate brands are qualified as equal or better in an addendum. Qualification of such proposed alternate brands shall be submitted via email to the Contact person listed in HIePRO for the solicitation and also post a question in HIePRO under the question/answer tab referencing the email with the request. The request must be posted in HIePRO no later than 14 calendar days before the bid opening date.

An addendum will be issued to inform all prospective bidders of any accepted substitution in accordance with Subsection 102.17 – Addenda .

(B) Statement of Variances. The statement of variances must list all features of the proposed substitution that differ from the contract documents and must further certify that the substitution has no other variant features. The brochure and information submitted shall be clearly marked showing make, model, size, options, and any other features requested by the Engineer and must include sufficient evidence to evaluate each feature listed as a variance. A request will be denied if submitted without sufficient evidence. If after installing the substituted product, an unlisted variance is discovered, the Contractor shall immediately replace the product with a specified product at no increase in contract price and contract time.

(C) Substitution Denial. Any substitution request not complying with the above requirements will be denied.

102.15 Preferences.

(A) Preference for Hawaii Products. In accordance with ACT 174, SLH 2022, effective June 27, 2022, Hawaii Products Preference shall not apply to solicitations for public works construction. Therefore, the Hawaii Products Preference shall not apply to this project.

(B) Preferences for Apprenticeship Programs. In accordance with ACT 17, SLH 2009 – Apprenticeship Program, a 5% bid adjustment for bidders that are parties to apprenticeship agreements pursuant to Hawaii Revised Statutes (HRS) Section 103-55.6 may be applied to the bidder's price for evaluation purposes. These procedures apply to public works projects with estimated cost of $250,000 or more and entered into under the provisions of HRS Chapter 103.

The following provisions apply to this Apprenticeship Program.

(1) Definitions

(a) "Apprenticeable trade", HRS Section 103-55.6 (c), shall have the same meaning as 'apprenticeable occupation' pursuant to Hawaii Administrative Rules (HAR) Section 30-1-5.

(b) "Department" means the department of labor and industrial relations.

(c) "Director" means the director of labor and industrial relations.

(d) "Employ" means the employment of a person in an employer-employee relations.

(e) "Governmental body" means as defined in HRS Section 103D-104.

(f) "Party to an apprenticeship agreement" means party to a registered apprenticeship program with the department of labor and industrial relations.

(g) "Preference" means the 5% by which the qualified bidder's offer amount would be decreased for evaluation purposes.

(h) "Public work" shall be as defined in HRS Section 104-2 and HAR Section 12-22-1.

(i) "Registered apprenticeship program" means a construction trade program approved by the department pursuant to HAR Section 12-30-1 and Section 12-30-4.

(j) "Sponsor" means an operator of an apprenticeship program and in whose name the program is approved and registered with the department of labor and industrial relations

pursuant to HAR Section 12-30-1.

(k) Offeror – Entity/bidder submitting a proposal to undertake a project.

(l) Procurement Officer – Director of Transportation or his authorized representative.

(2) Qualification Procedures

(a) Any bidder seeking the preference must be a party to an apprenticeship agreement registered with the department at the time the offer is made for each apprenticeable trade the bidder will employ to construct the public works projects for which the offer is being made.

1. The apprenticeship agreement shall be registered and conform to the requirements of HRS Chapter 372.

2. Subcontractors do not have to be a party to an apprenticeship agreement for the bidder to obtain the preference.

3. The bidder is not required to have apprentices in its employ at the time of submittal of an offer to qualify for the preference.

(b) The department shall:

1. Develop and maintain a list of construction trades in registered apprenticeship programs which conform to HRS Chapter 372; and

2. Electronically post the list, including any amendments, on the department website (http://labor.hawaii.gov).

(c) Bidder is responsible to comply with all submission requirements for registration of its apprenticeship program before requesting a preference.

(d) Bidder shall provide a certification by the sponsor of the respective registered apprenticeship programs covering the relevant trade(s) for the public works project.

(e) *Certification Form 1* issued by the department shall

include:

1. Contractor information;

2. Solicitation reference;

3. Trade(s);

4. Date and name of apprenticeship program;

5. Signature of authorized training coordinator or training trust fund administrator certifying that the contractor is a participant in the program, and that the program is registered with the department;

6. Contract information for sponsor's authorized representative signing the form;

7. Number of apprentices enrolled in the program, number who successfully completed the apprenticeship program in the past 12 months, including whether the contractor is signatory to a collective bargaining agreement for that trade, or if not, provide for attachment of a copy of the agreement between the contractor and the program.

(3) Solicitation Procedures.

(a) If the NTB indicates that this project is covered by this preference, and the offer is less than $250,000 this preference will still be applicable in determining the lowest bidder.

(b) A claim for this preference must include the following:

1. Allow bidder seeking to claim the preference to state the trades the bidder will employ to perform the work;

2. For each trade to be employed to perform the work, the bidder shall submit a completed signed original *Certification Form 1* verifying participation in an apprenticeship program registered with the department;

3. The *Certification Form 1* shall be authorized by an apprenticeship sponsor of the department's list of

registered apprenticeship programs. The authorization shall be an original signature by an authorized official of the apprenticeship sponsor; and

4. The completed *Certification Form 1* for each trade must be submitted by the bidder with the offer. Previous certifications shall not apply unless allowed by the solicitation.

(c) Upon receiving *Certification Form 1*, the procurement officer will verify with the department that the apprenticeship program is on the list of apprenticeship programs registered with the department. If the programs are not confirmed by the department, the bidder will not qualify for the preference.

(4) Evaluation and Contract Award

(a) If the bidder certifies participation in an apprenticeship program for each trade which will be employed by the bidder for the project, the procurement officer shall apply the preference and decrease the bidder's total bid amount by five per cent (5%) for evaluation purposes.

(b) Should the bidder qualify for other statutory preferences (for example, Hawaii products), all applicable preferences shall be applied to the bidder's price.

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

(d) Any claims challenging a bidder's representation that the bidder is a participant in an apprenticeship program(s) as claimed, shall be submitted to the procurement officer. The procurement officer will refer the challenge to the department of labor and industrial relations who shall investigate any such claims and shall make a determination.

(5) Contract Administration

(a) For the duration of a contract awarded utilizing the apprenticeship preference, the contractor shall certify each month that work is being conducted on the project, that it continues to be a participant in the relevant apprenticeship program for each trade it employs.

(b) Monthly certification shall be made on *Monthly Certification Form 2* prepared and made available by the department, be a signed original by the respective apprenticeship program sponsors authorized official, and submitted by the contractor with its monthly payment requests.

(c) Should the contractor fail or refuse to submit its monthly certification forms, or at any time during the construction of the project, cease to be a part to a registered apprenticeship agreement for each apprenticeable trades the contractor employs, or will employ, the contractor will be subject to the following sanctions:

1. Withholding of the requested payment until the required form(s) are submitted;

2. Temporary or permanent cessation of work on the project , without recourse to breach of contract claims by the contractor; provided the agency shall be entitled to restitution for nonperformance or liquidated damages claims; or

3. Proceed to debar or suspend pursuant to HRS Section 103D-702.

(d) If events such as “acts of God,” acts of a public enemy, acts of the State or any other governmental body in its sovereign or contractual capacity, fires, floods, epidemics, freight embargoes, unusually severe weather, or strikes or other labor disputes prevent the contractor from submitting the certification forms, the contractor shall not be penalized as provided herein, provided the contractor completely and expeditiously complies with the certification process when the event is over.

This subsection shall not apply when its application will disqualify the State from receiving federal funds or aid.

(C) Preference for Recycled Products. Recycled Products shall not apply to this project.

(D) Evaluation Procedures and Contract Award. For bid evaluation, the Engineer will evaluate the bids by applying the applicable preferences selected by the bidders according to the contract. The Engineer will base the calculations for adjustments upon the original bid prices offered. If more than one preference applies, the evaluated bid price shall be the sum of the original bid price plus applicable preference adjustments.

The Engineer will award the contract to the responsible bidder submitting the responsive bid with the lowest evaluated bid price. The contract amount of the contract awarded shall be the original bid price offered exclusive of any preference.

102.16 Certification for Safety and Health Program for Bids in excess of $100,000. In accordance with HRS Chapter 396-18, the bidder or offeror, by signing and submitting this proposal, certifies that a written safety and health plan for this project will be available and implemented by the notice to proceed date for this project. Details of the requirements of this plan may be obtained from the State Department of Labor and Industrial Relations, Occupational Safety and Health Division (HIOSH).

102.17 Addenda. Addenda issued shall become part of the contract documents. Addenda to the bid documents will be provided to all prospective bidders via HIePRO. Each addendum shall be an addition to the contract documents. The terms and requirements of the bid documents (i.e., drawings, specifications and other bid and contract documents) cannot be changed prior to the bid opening except by a duly issued addendum."

END OF SECTION 102

Make this section a part of the Standard Specifications:

"SECTION 103 - AWARD AND EXECUTION OF CONTRACT

103.01 Consideration of Proposals. The Department will compare the proposals in terms of the summation of the products of the approximate quantities and the unit bid prices after the submittal date and time established in HIePRO. If a discrepancy occurs between the unit bid price and the bid price, the unit bid price shall govern.

The Department reserves the right to reject proposals, waive technicalities or advertise for new proposals, if the rejection, waiver, or new advertisement favors the Department.

103.02 Award of Contract. The award of contract, if it be awarded, will be made within 60 calendar days after the opening of bids, to the lowest responsible and responsive bidder whose bid meets all the requirements and criteria set forth in the invitation for bids. (Through HIePRO). The successful bidder will be notified by letter mailed to the address shown in its proposal, that its proposal has been accepted, and that it has been awarded the contract.

(1) Requirement for Award. To be eligible for award, the apparent low bidder will be contacted to submit copies of the documents listed below to demonstrate compliance with HRS Section 103D-310(c). The documents shall be submitted to the Department within 14 days after bid opening unless otherwise specified in the invitation for bids or an extension is granted in writing by the Department. If a valid certificate/clearance is not submitted on a timely basis for award of a contract, a bidder otherwise responsive and responsible may not receive the award. See also Subsection 108.03 – Preconstruction Data Submittal.

The Department may request the bidders to allow the Department to consider the bids for the issuance of an award beyond the 60 calendar day period. Agreement to such an extension must be made by a bidder in writing. Only bidders who have agreed to such an extension will be eligible for the award.

(A) Tax Clearance. Pursuant to HRS Sections 103D-310(c), 103-53 and 103D-328, the successful bidder shall be required to submit a certified copy of its tax clearance issued by the Hawaii State Department of Taxation (DOTAX) and the Internal Revenue Service (IRS) to demonstrate its compliance with HRS Chapter 237. A tax clearance is valid for six (6) months from the most recent approval stamp date on the tax clearance and must be valid on the bid's first legal advertisement date or any date thereafter up to the bid opening date.

FORM A6, TAX CLEARANCE CERTIFICATE, is available at the following website:

https://tax.hawaii.gov/

To receive DOTAX Forms by fax or mail, phone (808) 587-7572 or 1-800-222-7572.

The application for the Tax Clearance Certificate is the responsibility of the bidder and must be submitted directly to the DOTAX or IRS. The approved certificate may then be submitted to the Department.

(B) DLIR Certificate of Compliance. Pursuant to HRS Section 103D-310(c), the successful bidder shall be required to submit a copy (faxed copies are acceptable) of its approved certificate of compliance issued by the Hawaii State Department of Labor and Industrial Relations (DLIR) to demonstrate its compliance with unemployment insurance (HRS Chapter 383), workers' compensation (HRS Chapter 386), temporary disability insurance (HRS Chapter 392), and prepaid health care (HRS Chapter 393). The certificate is valid for six (6) months from the most recent approval stamp date on the certificate and must be valid on the bid's first legal advertisement date or any date thereafter up to the bid opening date. For certificates which receive a "pending" approval stamp, a DLIR approval stamp is required prior to the issuance of the Notice to Proceed.

FORM LIR#27, APPLICATION FOR CERTIFICATE OF COMPLIANCE WITH SECTION 3-122-112, HAR, is available at the following website:

http://labor.hawaii.gov/

More information is available by calling the DLIR Unemployment Insurance Division at (808) 586-8926.

Inquiries regarding the status of a LIR#27 Form may be made by calling the DLIR Disability Compensation Division at (808) 586-9200.

The application for the Certificate of Compliance is the responsibility of the bidder and must be submitted directly to the DLIR. The approved certificate may then be submitted to the Department.

(C) DCCA Certificate of Good Standing. Pursuant to HRS Section 103D-310(c), the successful bidder shall be required to submit a copy (faxed copies are acceptable) of its approved Certificate of Good Standing issued by the Hawaii State Department of Commerce and Consumer Affairs (DCCA), Business Registration Division (BREG) to demonstrate that it is either:

(1) Incorporated or organized under the laws of the State; or

(2) Registered to do business in the State as a separate branch or division that is capable of fully performing under the contract.

The Certificate of Good Standing is valid for six (6) months from the approval date on the certificate and must be valid on the bid's first legal advertisement date or any date thereafter up to the bid opening date. A Hawaii business that is a sole proprietorship, however, is not required to register with the BREG, and therefore not required to submit a Certificate of Good Standing. Bidders are advised that there are costs associated with registering and obtaining a Certificate of Good Standing from the DCCA.

To purchase a CERTIFICATE OF GOOD STANDING, go to On-Line Services at the following website:

http://cca.hawaii.gov/

The application for the Certificate of Good Standing is the responsibility of the bidder and must be submitted directly to the DCCA. The approved certificate may then be submitted to the Department.

(D) Hawaii Compliance Express (HCE). In lieu of the certificates referenced above, the bidder may make available proof of compliance through the Hawaii Compliance Express or any other designated certification process. Bidders may apply and register at the "Hawaii Compliance Express" website:

https://vendors.ehawaii.gov/hce/

103.03 Cancellation of Award. The Department reserves the right to cancel the award of contracts before the execution of said contract by the parties. There will be no liability to the awardee and to other bidders.

103.04 Return of Proposal Guaranty. The Department will return the proposal guaranties, except those of the three lowest bidders, after the Department checks the proposals. The Department will return the proposal guaranties of the remaining two lowest bidders, not awarded the contract, within five working days following the execution of the contract. The Department will return the successful bidder's proposal guaranty after the successful bidder furnishes a bond and executes the contract.

103.05 Requirement of Contract Bond. At the time of execution of the contract, the successful bidder shall file a good and sufficient performance bond and a payment bond on the forms furnished by the Department conditioned for the full and faithful performance of the contract in accordance with the terms and intent thereof and for the prompt payment to all others for all labor and material furnished by them to the bidder and used in the prosecution of the work provided for in the contract. The bonds shall be of an amount equal to 100 percent of the amount of the contract price and include 5 percent of the contract amount estimated to be required for extra work. The bidder shall limit the acceptable performance and payment bonds to the following:

(a) Legal tender;

(b) Surety bond underwritten by a company licensed to issue bonds in the State of Hawaii; or

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

1. The bidder may use these instruments only to a maximum of $100,000.

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

Such bonds shall also by the terms inure to the benefit of any and all persons entitled to file claims for labor done or material furnished in the work so as to give them a right of action as contemplated by HRS Section 103D-324.

103.06 Execution of the Contract. The contract bond and HRS Chapter 104 - Compliance Certificate, similar to a copy of the same annexed hereto, shall be executed by the successful bidder and returned within ten days after the award of the contract or within such further time as the Director may allow after the bidder has received the contract for execution.

The contract shall not bind the Department unless said parties execute the contract and the Director of Finance endorses the bidder's certificate in accordance with HRS Section 103-39.

103.07 Failure to Execute Contract. Failure to execute the contract and file acceptable bonds shall be cause for the cancellation of the award in accordance with Subsection 103.06 - Execution of the Contract. Also, the Contractor forfeits the proposal guaranty which becomes the property of the Department. This is not a penalty, but liquidated damages sustained by the State. The Department may then make award to the next lowest responsible and responsive bidder or the Department may readvertise and construct the work under contract."

END OF SECTION 103

SECTION 104 – SCOPE OF WORK

Make the following amendment to said Section:

(I) Amend **Section 104.11(B) Contractor's Duty to Locate and Protect Utility** by adding the following after line 291:

"**(4)** The Contractor shall contact the Hawaii One Call Center at 811 prior to any execution in a public right of way or on private property."

(II) Amend **Section 104.06 Methods of Price Adjustment** as follows:

"104.06 Methods of Price Adjustment. Any adjustment in the contract price pursuant to a change or claim shall be made in one or more of the following ways:

(1) By written agreement on a fixed price adjustment before commencement of the pertinent performance.

(2) By unit prices or other price adjustments specified in the contract or subsequently agreed upon before commencement of the pertinent performance.

(3) The Engineer may base the adjustment for a lump sum item on a calculated proportionate unit price. The Engineer will calculate the proportionate unit price by dividing the original contract lump sum price by the actual or original estimated quantity established by the contract documents.

(4) In any other lawful manner as the parties may mutually agree upon before commencement of the pertinent performance.

(5) At the sole option of the Engineer, work may be paid for on a force account basis in accordance with Subsection 109.06 - Force Account Provisions and Compensation.

(6) By the cost variations attributable to the events or situations with adjustment of profit and fee, all as specified in the contract or subsequently agreed upon before commencement of the pertinent performance.

(7) In the absence of agreement by the parties:

(A) For change orders with value not exceeding $50,000 by documented actual costs of the work, allowing for overhead and profit as set forth in Section 109.05 - Allowances for Overhead and Profit. A change order shall be issued within fifteen days of

submission by the contractor of proper documentation of completed force account work, whether periodic (conforming to the applicable billing cycle) or final. The Engineer shall return any documentation that is defective, to the contractor within fifteen days after receipt, with a statement identifying the defect; or

(B) For change orders with value exceeding $50,000 by a unilateral determination by the Engineer of the costs attributable to the events or situations with adjustment of profit and fee, all as computed by the Engineer in accordance with applicable sections of HAR Chapters 3-123 and 3-126, and Section 109.05 - Allowances for Overhead and Profit. When a unilateral determination has been made, a unilateral change order shall be issued within ten days. Upon receipt of the unilateral change order, if the contractor does not agree with any of the terms or conditions, or the adjustment or nonadjustment of the contract time or contract price, the contractor shall file a notice of intent to claim within thirty days after the receipt of the written unilateral change order. Failure to file a protest within the time specified shall constitute agreement on the part of the contractor with the terms, conditions, amounts, and adjustment or nonadjustment of the contract time or the contract price set forth in the unilateral change order.

A contractor shall be required to submit cost or pricing data if any adjustment in contract price is subject to the provisions of HAR Chapter 3-122, Subchapter 15. A fully executed change order or other document permitting billing for the adjustment in price under any method listed in Subsections 104.06(1) through 104.06(7) shall be issued within ten days after agreement on the method of adjustment."

END OF SECTION 104

SECTION 105 – CONTROL OF WORK

Make the following amendments to said Section:

(I) Amend **105.01 – Authority** to read as follows:

"**105.01 Authority.**

(A) Authority of the Engineer. The Engineer is the representative of the Director and has all the authority of the Director with respect to the contract. The Engineer will make decisions on all questions that may arise regarding the contract, such as, but not limited to:

(1) Interpretation of the contract documents.

(2) Acceptability of the materials furnished and work performed.

(3) Manner of performance and rate of progress of the work.

(4) Acceptable fulfillment of the contract on the part of the Contractor.

(5) Compensation under the contract.

The Engineer's decisions on questions, claims, and disputes will be final and conclusive subject to Subsection 107.15 – Disputes and Claims.

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

(B) Authority of the Inspectors. Inspectors, as a representative of the Engineer or other agencies, will inspect the work done and materials furnished. Such inspection may extend to the preparation, fabrication or manufacture of the materials to be used. The Inspector does not have authority vested in the Engineer unless specifically delegated in writing. The Inspector may not alter or waive the provisions of the contract, issue instructions contrary to the contract, or act as agent or representative of the Contractor.

Failure of an Inspector at any time to reject non-conforming work shall not be considered a waiver of the State's right to require work in strict conformity with the contract documents as a condition of final acceptance.

(C) Authority of the Consultant and Construction Management. The State may engage consultants and construction managements to perform duties in connection with the work. Unless otherwise specified in writing to the Contractor, such retained consultants and construction managements shall have no greater authority than an Inspector."

(II) Amend **Subsection 105.02 - Submittals** by revising the first paragraph from lines 52 to 61 to read as follows:

"**105.02 Submittals.** The contract contains the description of various items that the Contractor must submit to the Engineer for review and acceptance. The Contractor shall review all submittals for correctness, conformance with the requirements of the contract documents and completeness before submitting them to the Engineer. The submittal shall indicate the contract items and specifications subsections for which the submittal is provided. The submittal shall be legible and clearly indicate what portion of the submittal is being submitted for review. The Contractor shall provide six copies of the required submissions at the earliest possible date."

(III) Amend **Subsection 105.08 (A) - Furnishing Drawings and Special Provisions** to read as follows:

"**(A) Furnishing Drawings and Special Provisions.** The State will furnish the Contractor an electronic set of the special provisions and plans." The Contractor shall have and maintain at least one set of plans and specifications on the work site, at all times.

(IV) Amend **Subsection 105.14(D) – No Designated Storage Area** from lines 421 to 432 to read as follows:

"**(D) No Designated Storage Area.** If no storage area is designated within the contract documents, materials and equipment may be stored anywhere within the State highway right-of-way, provided such storage and access to and from such site, within the sole discretion of the Engineer, does not create a public or traffic hazard or an impediment to the movement of traffic."

(V) Amend **105.16(A) – Subcontract Requirements** by adding the following paragraph after line 483:

The 'Specialty Items' of work for this project are as follows:

Section No.	Description
312	Contract Item No. 312.0100 under Section 312 – Hot Mix Glassphalt Base Course
401	Contract Item No. 401.0100 under Section 401 – Hot Mix Asphalt Pavement
606	All Contract Items under Section 606 - Guardrail
622	All Contract Items under Section 622 – Roadway and Sign Lighting System
623	All Contract Items under Section 623 - Traffic Signal System
629	All Contract Items under Section 629 - Pavement Markings
630	All Contract Items under Section 630 - Traffic Control Guide Signs
631	All Contract Items under Section 631 - Traffic Control Regulatory, Warning, and Miscellaneous Signs
632	All Contract Items under Section 632 - Markers
645	Contract Item No. 645.0100 under Section 645 – Work Zone Traffic Control”

(VI) Amend **Subsection 105.16(B) – Substituting Subcontractors** from line 487 to line 494 to read:

(B) Substituting Subcontractors. Under HRS Chapter 103D-302, the Contractor is required to list the names of persons or firms to be engaged by the Contractor as a subcontractor or joint contractor in the performance of the contract. No subcontractor may be added or deleted, unless authorized by the Engineer. Substitutions will be allowed only if the subcontractor:

END OF SECTION 105

SECTION 106 – MATERIAL RESTRICTIONS AND REQUIREMENTS

Make the following amendment to said Section:

(I) Amend **106.05(B) – Deviation** by revising the third sentence from line 106 to 108 to read as follows:

"Any deviations will be subject to Subsection 102.14 – Substitution of Materials and Equipment Before Bid Opening.

(II) Amend **106.11 Steel and Iron Construction Material** from line 238 to line 277 to read as follows

"**106.11 Steel and Iron Construction Material.** (Not Applicable)"

END OF SECTION 106

SECTION 107 - LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC

Make the following amendments to said Section:

(I) Amend **Section 107.01 Insurance Requirements** from lines to 81 to read as follows:

"(A) Obligation of Contractor. Contractor shall not commence any work until it obtains, at its own expense, all required insurance described herein. Such insurance shall be provided by an insurance company authorized by the laws of the State to issue such insurance in the State of Hawaii. Coverage by a "Non-Admitted" carrier is permissible provided the carrier has a Best's Rating of "A-VII" or better. The Contractor shall maintain and ensure all insurance policies are current for the full period of the contract until final acceptance of the work by the State.

The Certificate of Insurance shall contain: a clause that it is agreed that any insurance maintained by the State of Hawaii will apply in excess of, and not contribute with, insurance provided by this policy; and shall be accompanied by endorsement form CG2010 or equivalent naming the State as an additional insured to the policy which status shall be maintained for the full period of the contract until final acceptance of the work by State.

The Contractor shall obtain all required insurance as part of the contract price. Where there is a requirement for the State of Hawaii and its officers and employees to be named as additional insureds under any Contractor's insurance policy, before the State of Hawaii issues the Notice to Proceed, the Contractor shall obtain and submit to the Engineer a Certificate of Insurance and a written policy endorsement that confirms the State of Hawaii and its officers and employees are additional insureds for the specific State project number and project title under such insurance policies. The written policy endorsement must be issued by the insurance company insuring the Contractor for the specified policy type or by an agent of such insurance company who is vested with the authority to issue a written policy endorsement. The insurer's agent shall also submit written confirmation of such authority to bind the insurer. Any delays in the issuance of the Notice to Proceed attributed to the failure to obtain the proof of the State of Hawaii and its officers and employees' additional insured status shall be charged to the Contractor.

A mere Certificate of Insurance issued by a broker who represents the Contractor (but not the Contractor's insurer), or by any other party who is not authorized to contractually name the State as an additional insured under the Contractor's insurance policy, is not sufficient to meet the Contractor's insurance obligations.

Certificates shall contain a provision that coverages being certified will not be cancelled or materially changed without giving the Engineer at least thirty (30) days prior written notice. Contractor will immediately provide written notice to the Director should any of the insurance policies evidenced on its Certificate of Insurance form be cancelled, reduced in scope or coverage, or not renewed upon expiration. Should any policy be canceled before final acceptance of the work by the State, and the Contractor fails to immediately procure replacement insurance as specified, the State, in addition to all other remedies it may have for such breach, reserves the right to procure such insurance and deduct the cost thereof from any money due or to become due to the Contractor.

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

All insurance described herein shall be primary and cover the insured for all work to be performed under the contract, all work performed incidental thereto or directly or indirectly connected therewith, including but not limited to traffic detour work, barricades, warnings, diversions, lane closures, and other work performed outside the work area and all change order work.

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

(B) Types of Insurance. Contractor shall purchase and maintain insurance described below which shall provide coverage against claims arising out of the Contractor's operations under the

contract, whether such operations be by the Contractor itself or by any subcontractor or by anyone directly or indirectly employed by any of them or by anyone for whose acts any of them may be liable.

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

(2) Auto Liability. The Contractor shall obtain Auto Liability Insurance covering all owned, non-owned and hired autos with a Combined single Limit of not less than $1,000,000 per occurrence for bodily injury and property damage with the State of Hawaii named as additional insured. Refer to SPECIAL CONDITIONS for any additional requirements.

(3) General Liability. The Contractor shall obtain General Liability insurance with a limit of not less than $2,000,000 per occurrence and in the Aggregates for each of the following:

(a) Products - Completed/Operations Aggregate,

(b) Personal & Advertising Injury, and

(c) Bodily Injury & Property Damage

The General Liability insurance shall include the State as an Additional Insured. The required limit of insurance may be provided by a single policy or with a combination of primary and excess policies. Refer to SPECIAL CONDITIONS for any additional requirements.

(4) Builders Risk For All Work. The Contractor shall take out a policy of builder's risk insurance for the full replacement value of the project work; from a company licensed or otherwise authorized to do business in the State of Hawaii; naming the State as an additional insured under each policy; and covering all work, labor, and materials furnished by such Contractor and all its subcontractors against loss by fire, windstorm, tsunamis, earthquakes, lightning, explosion, other perils covered by the standard Extended Coverage Endorsement, vandalism, and malicious mischief. Refer to SPECIAL CONDITIONS for any additional requirements."

(II) Add **Section 107.18 Citizen and Residential Labor Force** after line 745 to read as follows:

"107.18 Citizen and Residential Labor Force.

(A) Citizen Labor. No person shall be employed as a laborer or mechanic unless such person is a citizen of the United States or eligible to become one; provided that persons without such qualifications may be employed with the approval of the Governor until persons who are citizens and are competent for such services are available for hire.

(B) Residential Labor Force. In accordance with Act 192; SLH 2011, no less than eighty (80) percent of the bidder's labor force working on the contract shall be provided by Hawaii residents. This act applies to all construction procurements under HRS Chapter 103D; however this act does not apply to procurements for professional services under Section 103D-304 and small purchases under Section 103D-305. This act is also applicable to any subcontract of $50,000.00 or more in connection with this contract.

Resident means a person who is physically present in the State of Hawaii at the time the person claims to have established the person's domicile in the State of Hawaii and shows the person's intent is to make Hawaii the person's primary residence.

(C) Percentage of workforce shall be determined by dividing the labor hours (including subcontractors) provided by residents working on the project divided by the total number of hours worked by all employees of the contractor in the performance of the contract. Hours worked by employees within shortage trades as determined by the Department of Labor and Industrial Relations shall not be included in the calculation of this percentage.

(D) Certification of compliance with the forgoing provisions shall be made by the contractor in the form of a written oath submitted to the Procurement Officer on a monthly basis for the duration of the contract.

(E) Sanctions for non compliance with these provisions are as follows:

(1) With respect to the General Contractor, withholding of payment on the contract until the Contractor or its Subcontractor complies with HRS Chapter 103B as amended by Act 192, SLH 2011.

(2) Proceedings for debarment or suspension of the Contractor or Subcontractor under Hawaii Revised Statutes § 103D-702.

This Section shall not apply when its application will disqualify the State from receiving federal funds or aid."

END OF SECTION 107

Amend **Section 108** – **PROSECUTION AND PROGRESS** to read as follows:

"SECTION 108 – PROSECUTION AND PROGRESS

108.01 Notice to Proceed (NTP). A Notice To Proceed will be issued to the Contractor not more 30 calendar days after the contract certification date. The Engineer may suspend the contract before issuing the Notice To Proceed, in which case the Contractor's remedies are exclusively those set forth in Subsection 108.10 – Suspension of Work.

The Contractor shall be allowed up to 14 calendar days after the Notice to Proceed to begin physical work. The Start Work Date will be established when this period ends or on the actual day that physical work begins, whichever is first. Charging of Contract Time will begin on the Start Work Date. The Contractor shall notify the Engineer, in writing, at least five working days before beginning physical work.

In the event that the Contractor fails to start physical work within the time specified, the Engineer may terminate the contract in accordance with Subsection 108.11 – Termination of Contract for Cause.

During the period between the Notice to Proceed and the Start Work Date the Contractor should adjust work forces, equipment, schedules, and procure materials and required permits, prior to beginning physical work.

Any physical work done prior to the Start Work Date will be considered unauthorized work. If the Engineer does not direct that the unauthorized work be removed, it shall be paid for after the Start Work Date and only if it is acceptable.

In the event that the Engineer establishes, in writing, a Start Work Date that is beyond 60 calendar days from the Notice to Proceed date, the Contractor may submit a claim in accordance with, Subsection 107.15 – Disputes and Claims for increased labor and material costs which are directly attributable to the delay beyond the first 60 calendar days after the Notice to Proceed date.

The Contractor shall notify the Engineer at least 24 hours before restarting physical work after a suspension of work pursuant to Subsection 108.10 – Suspension of Work.

Once physical work has begun, the Contractor shall work expeditiously and pursue the work diligently to completion with the contract time. If a portion of the work is to be done in stages, the Contractor shall leave the area safe and usable for the user agency and the public at the end of each stage.

108.02 Prosecution of Work. Unless otherwise permitted by the Engineer, in writing, the Contractor shall not commence with physical construction unless sufficient materials and equipment are available for either continuous construction or completion of a specified portion of the work.

108.03 Preconstruction Submittals. The awardee shall submit to the Engineer for information and review the pre-construction submittals within 21 calendar days from award. Until the items listed below are received and found acceptable by the Engineer, the Contractor shall not start physical work unless otherwise authorized to do so in writing and subject to such conditions set by the Engineer. Charging of Contract Time will not be delayed, and additional contract time will not be granted due to Contractor delay in submitting acceptable preconstruction submittals. No progress payment will be made to the Contractor until the Engineer acknowledges, in writing, receipt of the following preconstruction submittals acceptable to the Engineer:

(1) List of the Superintendent and other Supervisory Personnel, and their contact information.

(2) Name of person(s) authorized to sign for the Contractor.

(3) Work Schedule including hours of operation.

(4) Initial Progress Schedule (See Subsection 108.06 – Progress Schedule).

(5) Water Pollution and Siltation Control Submittals, including Site-Specific Best Management Practice Plan.

(6) Solid Waste Disposal form.

(7) Tax Rates.

(8) Insurance Rates.

(9) Certificate of Insurance, satisfactory to the Engineer, indicating that the Contractor has in place all insurance coverage required by the contract documents.

(10) Schedule of agreed prices.

(11) List of suppliers.

(12) Traffic Control Plan, if applicable.

108.04 Character and Proficiency of Workers. The Contractor shall at all times provide adequate supervision and sufficient labor and equipment for prosecuting the work to full completion in the manner and within the time required by the contract. The superintendent and all other representatives of the Contractor shall act in a civil and honest manner in all dealings with the Engineer, all other State officials and representatives, and the public, in connection with the work.

All workers shall possess the proper license, certification, job classification, skill, training, and experience necessary to properly perform the work assigned to them.

The Engineer may direct the removal of any worker(s) who does not carry out the assigned work in a proper and skillful manner or who is disrespectful, intemperate, violent, or disorderly. The worker shall be removed forthwith by the Contractor and will not work again without the written permission of the Engineer.

108.05 Contract Time.

(A) Calculation of Contract Time. When the contract time is on a working day basis, the total contract time allowed for the performance of the work will be the number of working days shown in the contract plus any additional working days authorized in writing as provided hereinafter. The count of elapsed working days to be charged against contract time, will begin from the Start Work Date and will continue consecutively to the date of Substantial Completion. When multiple shifts are used to perform the work, the State will not consider the hours worked over the normal eight working hours per day or night as an additional working day.

When the contract is on a calendar day basis, the total contract time allowed for the performance of the work will be the number of days shown in the contract plus any additional days authorized in writing as provided hereinafter. The count of elapsed days to be charged against contract time will begin from the Start Work Date and will continue consecutively to the date of Substantial Completion. The Engineer will exclude days elapsing between the orders of the Engineer to suspend work and resume work for suspensions not the fault of the Contractor.

(B) Modifications of Contract Time. Whenever the Contractor believes that an extension of contract time is justified, the Contractor shall serve written notice on the Engineer not more than five working days after the occurrence of the event that causes a delay or justifies a contract time extension. Contract time may be adjusted for the following reasons or events, but only if and to the extent the critical path has been affected:

(1) Changes in the Work, Additional Work, and Delays Caused by the State. If the Contractor believes that an extension of time is justified on account of any act or omission by the State, and is not adequately provided for in a field order or change order, it must request the additional time as provided above. At the request of the Engineer, the Contractor must show how the critical path will be affected and must also support the time extension request with schedules, as well as statements from its subcontractors, suppliers, or manufacturers, as necessary. Claims for compensation for any altered or additional work will be determined pursuant to Subsection 104.02 – Changes.

Additional time to perform the extra work will be added to the time allowed in the contract without regard to the date the change directive was issued, even if the contract completion date has passed. A change requiring time issued after contract time has expired will not constitute an excusal or waiver of pre-existing Contractor delay.

(2) Delay for Permits. For delays in the routine application and processing time required to obtain necessary permits, including permits to be obtained from State agencies, the Engineer may grant an extension provided that the permit takes longer than 30 days to acquire and the delay is not caused by the Contractor, and provided that as soon as the delay occurs, the Contractor notifies the Engineer in writing that the permits are not available. Permits required by the contract that take less than 30 days to acquire from the time which the appropriate documents are granted shall be acquired between Notice to Proceed and Start Work Date or accounted for in the contractor's progress schedule. Time extensions will be the exclusive relief granted on account of such delays.

(3) Delays Beyond Contractor's Control. For delays caused by acts of God, a public enemy, fire, inclement weather days or adverse conditions resulting therefrom, earthquakes, floods, epidemics, quarantine restrictions, labor disputes impacting the Contractor or the State, freight embargoes and other reasons beyond the Contractor's control, the Contractor may be granted an extension of time provided that:

(a) In the written notice of delay to the Engineer, the Contractor describes possible effects on the completion date of the contract. The description of delays shall:

1. State specifically the reason or reasons for the delay and fully explain in a detailed chronology how the delay affects the critical path.

2. Include copies of pertinent documentation to support the time extension request.

3. Cite the anticipated period of delay and the time extension requested.

4. State either that the above circumstances have been cleared and normal working conditions restored as of a certain day or that the above circumstances will continue to prevent completion of the project.

(b) The Contractor shall notify the Engineer in writing when the delay ends. Time extensions will be the exclusive relief granted and no additional compensation will be paid the Contractor for such delays.

(4) Delays in Delivery of Materials or Equipment. For delays in delivery of materials or equipment, which occur as a result of unforeseeable causes beyond the control and without fault of the Contractor, its subcontractor(s) or supplier(s), time extensions shall be the exclusive relief granted and no additional compensation will be paid the Contractor on account of such delay. The delay shall not exceed the difference between the originally scheduled delivery date and the actual delivery date. The Contractor may be granted an extension of time provided that it complies with the following procedures:

(a) The Contractor's written notice to the Engineer must describe the delays and state the effect such delays may have on the critical path.

(b) The Contractor, if requested, must submit to the Engineer within five days after a firm delivery date for the material and equipment is established, a written statement regarding the delay. The Contractor must justify the delay as follows:

1. State specifically all reasons for the delay. Explain in a detailed chronology the effect of the delay on the critical path.

2. Submit copies of purchase order(s), factory invoice(s), bill(s) of lading, shipping manifest(s), delivery tag(s), and any other documents to support the time extension request.

3. Cite the start and end date of the delay and the time extension requested.

(5) Delays for Suspension of Work. When the performance of the work is totally suspended for one or more days (calendar or working days, as appropriate) by order of the Engineer in accordance with Subsections 108.10(A)(1), 108.10(A)(2), or 108.10(A)(5) the number of days from the effective date of the Engineer's order to suspend operations to the effective date of the Engineer's order to resume operations shall not be counted as contract time and the contract completion date will be adjusted. During periods of partial suspensions of the work, the Contractor will be granted a time extension only if the partial suspension affects the critical path. If the Contractor believes that an extension of time is justified for a partial suspension of work, it must request the extension in writing at least five working days before the partial suspension will affect the critical operation(s) in progress. The Contractor must show how the critical path was increased based on the status of the work and must also support its claim if requested, with statements from its subcontractors. A suspension of work will not constitute a waiver of pre-existing Contractor delay.

(6) Contractor Caused Delays. No time extension will be granted under the following circumstances:

(a) Delays within the Contractor's control in performing the work caused by the Contractor, subcontractor, supplier, or any combination thereof.

(b) Delays within the Contractor's control in arrival of materials and equipment caused by the Contractor, subcontractor, supplier, or any combination thereof, in ordering, fabricating, and delivery.

(c) Delays requested for changes which do not affect the critical path.

(d) Delays caused by the failure of the Contractor to make submittals in a timely manner for review and acceptance by the Engineer, such as but not limited to shop drawings, descriptive sheets, material samples, and color samples except as covered in Subsection 108.05(B)(3) – Delays Beyond Contractor's Control and 108.05(B)(4) – Delays in Delivery of Materials or Equipment.

(e) Delays caused by the failure to submit sufficient information and data in a timely manner in the proper form in order to obtain necessary permits related to the work.

(f) Failure to follow the procedure within the time allowed by contract to request a time extension.

(g) Failure of the Contractor to provide evidence sufficient to support the time extension request.

(7) Reduction in Time. If the State deletes or modifies any portion of the work, an appropriate reduction of contract time may be made in accordance with Subsection 104.02 - Changes.

108.06 Progress Schedules.

(A) Forms of Schedule. All schedules shall be submitted using the specific computer program designated in the bid documents. If no such scheduling software program is designated, then all schedules shall be submitted using the latest version of Microsoft Project by Microsoft or approved equivalent software program.

Schedule submittals shall be as follows:

(1) For Contracts $2,000,000 or less or For Contract Time 100 Working Days or 140 Calendar Days or Less. For contracts of $2,000,000 or less or for contract time of 100 working days or 140 calendar days or less, the progress schedule will be a Time Scaled Logic Diagram (TSLD). The Contractor shall submit a TSLD submittal package meeting the following requirements and having these essential and distinctive elements:

(a) The major features of work, such as but not limited to BMP installation, grubbing, roadway excavation, structure excavation, structure construction, shown in the chronological order in which the Contractor proposes to work that feature or work and its location on the project. The schedule shall account for normal inclement weather, unusual soil or other

conditions that may influence the progress of the work, schedules, and coordination required by any utility, off or on site fabrications, and other pertinent factors that relate to progress;

(b) All features listed or not listed in the contract documents that the Contractor considers a controlling factor for the timely completion of the contract work.

(c) The time span and sequence of the activities or events for each feature, and its interrelationship and interdependencies in time and logic to other features in order to complete the project.

(d) The total anticipated time necessary to complete work required by the contract.

(e) A chronological listing of critical intermediate dates or time periods for features or milestones or phases that can affect timely completion of the project.

(f) Major activities related to the location on the project.

(g) Non-construction activities, such as submittal and acceptance periods for shop drawings and material, procurement, testing, fabrication, mobilization, and demobilization or order dates of long lead material.

(h) Set schedule logic for out of sequence activities to retain logic. In addition, open ends shall be non-critical.

(i) Show target bars for all activities.

(j) Vertical and horizontal sight lines both major and minor shall be used as well as a separator line between groups. The Engineer will determine frequency and style.

(k) The file name, print date, revision number, data and project title and number shall be included in the title block.

(l) Have columns with the appropriate data in them for activity ID, description, original duration, remaining duration, early start, early finish, total float, percent complete, resources. The resource column shall list who is responsible for the work to be done in the activity. These columns shall be to the left of the bar chart.

(2) For Contracts Which Have A Contract Amount More Than $2,000,000 Or Having A Contract Time Of More Than 100 Working Days Or 140 Calendar Days. For contracts which have a contract amount more than $2,000,000 or contract time of more than 100 working days or 140 calendar days, the Contractor shall submit a Timed-Scaled Logic Diagram (TSLD) meeting the following requirements and having these essential and distinctive elements:

(a) The information and requirements listed in Subsection 108.06(A)(1) – For Contracts $2,000,000 or Less or For Contract Time 100 Working Days or 140 Calendar Days or Less.

(b) Additional reports and graphics available from the software as requested by the Engineer.

(c) Sufficient detail to allow at least weekly monitoring of the Contractor and subcontractor's operations.

(d) The time scaled schematic shall be on a calendar or working days basis. What will be used shall be determined by how the contract keeps track of time. It will be the same. Plot the critical calendar dates anticipated.

(e) Breakdown of activity, such as forming, placing reinforcing steel, concrete pouring and curing, and stripping in concrete construction. Indicate location of work to be done in such detail that it would be easily determined where work would be occurring within approximately 200 feet.

(f) Latest start and finish dates for critical path activities.

(g) Identify responsible subcontractor, supplier, and others for their respective activity.

(h) No individual activity shall have duration of more than 20 calendar days unless requested and approved by the Engineer.

(i) All activities shall have work breakdown structure codes and activity codes. The activity codes shall have coding that incorporates information for phase, location, who is responsible for doing work and type of operation and activity description.

(j) Incorporate all physical access and availability restraints.

(B) Inspection and Testing. All schedules shall provide reasonable time and opportunity for the Engineer to inspect and test each work activity.

(C) Engineer's Acceptance of Progress Schedule. The submittal of, and the Engineer's receipt of any progress schedule, shall not be deemed an agreement to modify any terms or conditions of the contract. Any modifications to the contract terms and conditions that appear in or may be inferred from an acceptable schedule will not be valid or enforceable unless and until the Engineer exercises discretion to issue an appropriate change order. Nor shall any submittal or receipt imply the Engineer's approval of the schedule's breakdown, its individual elements, any critical path that may be shown, nor shall it obligate the State to make its personnel available outside normal working hours or the working hours established by the Contract in order to accommodate such schedule. The Contractor has the risk of all elements (whether or not shown) of the schedule and its execution. No claim for additional compensation, time, or both, shall be made by the Contractor or recognized by the Engineer for delays during any period for which an acceptable progress schedule or an updated progress schedule as required by Subsection 108.06(E) – Contractor's Continuing Schedule Submittal Requirements had not been submitted. Any acceptance or approval of the schedule shall be for general format only and shall not be deemed an agreement by the State that the construction means, methods, and resources shown on the schedule will result in work that conforms to the contract requirements or that the sequences or durations indicated are feasible.

(D) Initial Progress Schedule. The Contractor shall submit an initial progress schedule. The initial progress schedule shall consist of the following:

(1) Four sets of the TSLD schedule.

(2) All the software files and data to re-create the TSLD in a computerized software format as specified by the Engineer.

(3) A listing of equipment that is anticipated to be used on the project. Including the type, size, make, year of manufacture, and all information necessary to identify the equipment in the Rental Rate Blue Book for Construction Equipment.

(4) An anticipated manpower requirement graph plotting contract time and total manpower requirement. This may be superimposed over the payment graph.

(5) A Method Statement that is a detailed narrative describing the work to be done and the method by which the work shall be accomplished for each major activity. A major activity is an activity that:

(a) Has a duration longer than five days.

(b) Is a milestone activity.

(c) Is a contract item that exceeds $10,000 on the contract cost proposal.

(d) Is a critical path activity.

(e) Is an activity designated as such by the Engineer.

Each Method Statement shall include the following items needed to fulfill the schedule:

(a) Quantity, type, make, and model of equipment.

(b) The manpower to do the work, specifying worker classification.

(c) The production rate per eight hour day, or the working hours established by the contract documents needed to meet the time indicated on the schedule. If the production rate is not for eight hours, the number of working hours shall be indicated.

(6) Two sets of color time-scaled project evaluation and review technique charts ("PERT") using the activity box template of Logic – Early Start or such other template designated by the Engineer.

If the contract documents establish a sequence or order for the work, the initial progress schedule shall conform to such sequence or order.

(E) Contractor's Continuing Schedule Submittal Requirements. After the acceptance of the initial TSLD and when construction starts, the Contractor shall submit four plotted progress schedules, two PERT charts, and reports on all construction activities every two weeks (bi-weekly). This scheduled bi-weekly submittal shall also include an updated version of the project schedule in a computerized software format as specified by the Engineer. The submittal shall have all the information needed to re-create that time period's TSLD plot and reports. The bi-weekly submittal shall include, but not limited to, an update of activities based on actual durations,

all new activities and any changes in duration or start or finish dates of any activity.

The Contractor shall submit with every update, in report form acceptable to the Engineer, a list of changes to the progress schedule since the previous schedule submittal. The Engineer may change the frequency of the submittal requirements but may not require a submittal of the schedule to be more than once a week. The Engineer may decrease the frequency of the submittal of the bi-weekly schedule.

The Contractor shall submit updates of the anticipated work completion graph, equipment listing, manpower requirement graph or method statement when requested by the Engineer. The Contractor shall submit such updates within 4 calendar days from the date of the request by the Engineer.

The Engineer may withhold progress payment until the Contractor is in compliance with all schedule update requirements

(F) Float. All float appearing on a schedule is a shared commodity. Float does not belong to or exist for the exclusive use or benefit of either the State or the Contractor. The State or the Contractor has the opportunity to use available float until it is depleted. Float has no monetary value.

(G) Scheduled Meetings. The Contractor shall meet on a bi-weekly basis with the Engineer to review the progress schedule. The Contractor shall have someone attending the meeting that can answer all questions on the TSLD and other schedule related submittals.

(H) Accelerated Schedule; Early Completion. If the Contractor submits an accelerated schedule (shorter than the contract time), the Engineer's review and acceptance of an accelerated schedule does not constitute an agreement or obligation by the State to modify the contract time or completion date. The Contractor is solely responsible for and shall accept all risks and any delays, other than those that can be directly and solely attributable to the State, that may occur during the work, until the contract completion date. The contract time or completion date is established for the benefit of the State and cannot be changed without an appropriate change order or Substantial Completion granted by the State. The State may accept the work before the completion date is established, but is not obligated to do so.

If the TSLD indicates an early completion of the project, the Contractor shall, upon submittal of the schedule, cooperate with the Engineer in explaining how it will be achieved. In addition, the Contractor shall submit the above explanation in writing which shall include the State's part, if any, in achieving the early completion date. Early completion of the project shall not rely on changes to the Contract Documents unless approved by the Engineer.

(l) Contractor Responsibilities. The Contractor shall promptly respond to any inquiries from the Engineer regarding any schedule submission. The Contractor shall adjust the schedule to address directives from the Engineer and shall resubmit the TSLD package to the Engineer until the Engineer finds it acceptable.

The Contractor shall perform the work in accordance with the submitted TSLD. The Engineer may require the Contractor to provide additional work forces and equipment to bring the progress of the work into conformance with the TSLD at no increase in contract price or contract time whenever the Engineer determines that the progress of the work does not insure completion within the specified contract time.

108.07 Weekly Meeting. In addition to the bi-weekly schedule meetings, the Contractor shall be available to meet once a week with the Engineer at the time and place as determined by the Engineer to discuss the work and its progress including but not limited to, the progress of the project, potential problems, coordination of work, submittals, erosion control reports, etc. The Contractor's personnel attending shall have the authority to make decisions and answer questions.

The Contractor shall bring to weekly meetings a detailed work schedule showing the next three weeks' work. Number of copies of the detailed work schedule to be submitted will be determined by the Engineer. The three-week schedule is in addition to the TSLD and shall in no way be considered as a substitute for the TSLD or vice versa. The three-week schedule shall show:

(a) All construction events, traffic control and BMP related activities in such detail that the Engineer will be able to determine at what location and type of work will be done for any day for the next three weeks. This is for the State to use to plan its manpower requirements for that time period.

(b) The duration of all events and delays.

(c) The critical path clearly marked in red or marked in a manner that makes it clearly distinguishable from other paths and is acceptable to the Engineer.

(d) Critical submittals and requests for information (RFI's).

(e) The project title, project number, date created, period the schedule covers, Contractor's name and creator of the schedule on each page.

Two days prior to each weekly meeting, the Contractor shall submit a list of outstanding submittals, RFIs and issues that require discussion.

108.08 Liquidated Damages for Failure to Complete the Work or Portions of the Work on Time. The actual amount of damages resulting from the Contractor's failure to complete the contract in a timely manner is difficult to accurately determine. Therefore, the amount of such damages shall be liquidated damages as set forth herein and in the special provisions. The State may, at its discretion, deduct the amount from monies due or that may become due under the contract.

When the Contractor fails to reach substantial completion of the work for which liquidated damages are specified, within the time or times fixed in the contract or any extension thereof, in addition to all other remedies for breach that may be available to the State, the Contractor shall pay liquidated damages to the State, in the amount of **$6,700** per working day.

(A) Liquidated Damages Upon Termination. If the State terminates on account of Contractor's default, liquidated damages may be charged against the defaulting Contractor and its surety until final completion of work.

(B) Liquidated Damages for Failure to Complete the Punchlist. The Contractor shall complete the work on any punchlist created after the pre-final inspection, within the contract time or any extension thereof.

When the Contractor fails to complete the work on such punchlist within the contract time or any extension thereof, the Contractor shall pay liquidated damages to the State of 20 percent of the amount of liquidated damages established for failure to substantially complete the work within contract time. Liquidated damages shall not be assessed for the period between:

(1) Notice from the Contractor that the project is substantially complete and the time the punchlist is delivered to the Contractor.

(2) The date of the completion of punchlist as determined by the Engineer and the date of the successful final inspection, and

(3) The date of the Final Inspection that results in Substantial Completion and the receipt by the Contractor of the written notice of Substantial Completion.

(C) Actual Damages Recoverable If Liquidated Damages Deemed Unenforceable. In the event a court of competent jurisdiction holds that any liquidated damages assessed pursuant to this contract are unenforceable, the State will be entitled to recover its actual damages for Contractor's failure to complete the work, or any designated portion of the work within the time set by the contract.

108.09 Rental Fees for Unauthorized Lane Closure or Occupancy. In addition to all other remedies available to the State for Contractor's breach of the terms of the contract, the Engineer will assess the rental fees in the amount of $1,000 for every one-to fifteen-minute increment for each roadway lane closed to public use or occupied beyond the time periods authorized in the contract or by the Engineer. The maximum amount assessed per day shall be $10,000. The State may, at its discretion, deduct the amount from monies due or that may become due under the contract. The rental fee may be waived in whole or part if the Engineer determines that the unauthorized period of lane closure or occupancy was due to factors beyond the control of the Contractor. Equipment breakdown is not a cause to waive liquidated damages.

108.10 Suspension of Work.

(A) Suspension of Work. The Engineer may, by written order, suspend the performance of the work, either in whole or in part, for such periods as the Engineer may deem necessary, for any cause, including but not limited to:

(1) Weather or soil conditions considered unsuitable for prosecution of the work.

(2) Whenever a redesign that may affect the work is deemed necessary by the Engineer.

(3) Unacceptable noise or dust arising from the construction even if it does not violate any law or regulation.

(4) Failure on the part of the Contractor to:

(a) Correct conditions unsafe for the general public or for the workers.

(b) Carry out orders given by the Engineer.

(c) Perform the work in strict compliance with the provisions of the contract.

(d) Provide adequate supervision on the jobsite.

(5) The convenience of the State.

(B) Partial and Total Suspension. Suspension of work on some but not all items of work shall be considered a "partial suspension". Suspension of work on all items shall be considered "total suspension". The period of suspension shall be computed from the date set out in the written order for work to cease until the date of the order for work to resume.

(C) Reimbursement to Contractor. In the event that the Contractor is ordered by the Engineer in writing as provided herein to suspend all work under the contract for the reasons specified in Subsections 108.10(A)(2), 108.10(A)(3), or 108.10(A)(5) of the "Suspension of Work" paragraph, the Contractor may be reimbursed for actual direct costs incurred on work at the jobsite, as authorized in writing by the Engineer, including costs expended for the protection of the work. An allowance of 5 percent for indirect categories of delay costs will be paid on any reimbursed direct costs, including extended branch and home-office overhead and delay impact costs. No allowance will be made for anticipated profits. Payment for equipment which is ordered to standby during such suspension of work shall be made as described in Subsection 109.06(H) - Idle and Standby Equipment.

(D) Cost Adjustment. If the performance of all or part of the work is suspended for reasons beyond the control of the Contractor except an adjustment shall be made for any increase in cost of performance of this contract (excluding profit) necessarily caused by such suspension, and the contract modified in writing accordingly.

However, no adjustment to the contract price shall be made for any suspension, delay, or interruption:

(1) For weather related conditions.

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

(3) Or, for which an adjustment is provided for or excluded under any other provision of this Contract.

(E) Claims for Adjustment. Any adjustment in contract price made shall be determined in accordance with Subsections 104.02 – Changes and 104.06 – Methods of Price Adjustment.

Any claims for such compensation shall be filed in writing with the Engineer within 30 days after the date of the order to resume work or the claim will not be considered. The claim shall conform to the requirements of Subsection 107.15(D) – Making of a Claim. The Engineer will take the claim under consideration, may make such investigations as are deemed necessary and will be the sole judge as to the equitability of the claim. The Engineer's decision will be final.

(F) No Adjustment. No provision of this clause shall entitle the Contractor to any adjustments for delays due to failure of its surety, the cancellation or expiration of any insurance coverage required by the contract documents, for suspensions made at the request of the Contractor, for any delay required under the contract, for suspensions, either partial or whole, made by the Engineer under Subsection 108.10(A)(4) of the "Suspension of work" paragraph.

108.11 Termination of Contract for Cause.

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

(B) Additional Rights and Remedies. The rights and remedies of the State provided in this contract are in addition to any other rights and remedies provided by law.

(C) Costs and Charges. All costs and charges incurred by the State, together with the cost of completing the work under contract, will be

deducted from any monies due or which would or might have become due to the Contractor had it been allowed to complete the work under the contract. If such expense exceeds the sum which would have been payable under the contract, then the Contractor and the surety shall be liable and shall pay the State the amount of the excess.

In case of termination, the Engineer will limit any payment to the Contractor to the part of the contract satisfactorily completed at the time of termination. Payment will not be made until the work has satisfactorily been completed and all required documents, including the tax clearance required by Subsection 109.11 – Final Payment are submitted by the Contractor. Termination shall not relieve the Contractor or Surety from liability for liquidated damages.

(D) Erroneous Termination for Cause. If, after notice of termination of the Contractor's right to proceed under this section, it is determined for any reason that good cause did not exist to allow the State to terminate as provided herein, the rights and obligations of the parties shall be the same as, and the relief afforded the Contractor shall be limited to, the provisions contained in Subsection 108.12 – Termination for Convenience.

108.12 Termination For Convenience.

(A) Terminations. The Director may, when the interests of the State so require, terminate this contract in whole or in part, for the convenience of the State. The Director will give written notice of the termination to the Contractor specifying the part of the contract terminated and when termination becomes effective.

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

(C) Right to Construction and Goods. The Engineer may require the Contractor to transfer title and to deliver to the State in the manner and to the extent directed by the Engineer, the following:

(1) Any completed work.

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

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

(D) Compensation.

(1) The Contractor shall submit a termination claim specifying the amounts due because of the termination for convenience together with cost or pricing data, submitted to the extent required by HAR Subchapter 15, Chapter 3-122. If the Contractor fails to file a termination claim within one year from the effective date of termination, the Engineer may pay the Contractor, if at all, an amount set in accordance with Subsection 108.12(D)(3).

(2) The Engineer and the Contractor may agree to a settlement provided the Contractor has filed a termination claim supported by cost or pricing data submitted as required and that the settlement does not exceed the total contract price plus settlement costs reduced by payments previously made by the State, the proceeds of any sales of construction, supplies, and construction materials under Subsection 108.12(C)(3), and the proportionate contract price of the work not terminated.

(3) Absent complete agreement, the Engineer will pay the Contractor the following amounts less any payments previously made under the contract:

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

be reduced to reflect the anticipated rate of loss. No anticipated profit or consequential damage will be due or paid.

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

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

(4) Cost claimed, agreed to, or established by the State shall be in accordance with HAR Chapter 3-123.

108.13 Pre-Final and Final Inspections.

(A) Inspection Requirements. Before the Engineer undertakes a final inspection of any work, a pre-final inspection must first be conducted. The Contractor shall notify the Engineer that the work has reached substantial completion and is ready for pre-final inspection.

(B) Pre-Final Inspection. Before notifying the Engineer that the work has reached substantial completion, the Contractor shall inspect the project and test all installed items with all of its subcontractors as appropriate. The Contractor shall also submit the following documents as applicable to the work:

(1) All written guarantees required by the contract.

(2) Two accepted final field-posted drawings as specified in Section 648 – Field-Posted Drawings;

(3) Complete weekly certified payroll records for the Contractor and Subcontractors.

(4) Certificate of Plumbing and Electrical Inspection.

(5) Certificate of building occupancy as required.

(6) Certificate of Soil and Wood Treatments.

(7) Certificate of Water System Chlorination.

(8) Certificate of Elevator Inspection, Boiler and Pressure Pipe Inspection.

(9) Maintenance Service Contract and two copies of a list of all equipment installed.

(10) Current Tax clearance. The contractor will be required to submit an additional tax clearance certificate when the final payment is made.

(11) And any other final items and submittals required by the contract documents.

(C) Procedure. When in compliance with the above requirements, the Contractor shall notify the Engineer in writing that the project has reached substantial completion and is ready for pre-final inspection.

The Engineer will then make a preliminary determination as to whether or not the project is substantially complete and ready for pre-final inspection. The Engineer may, in writing, postpone until after the pre-final inspection the Contractor's submittal of any of the items listed in Subsection 108.13(B) – Pre-Final Inspection, herein, if in the Engineer's discretion it is in the interest of the State to do so.

If, in the opinion of the Engineer, the project is not substantially complete, the Engineer will provide the Contractor a punchlist of specific deficiencies in writing which must be corrected or finished before the work will be ready for a pre-final inspection. The Engineer may add to or otherwise modify this punchlist from time to time. The Contractor shall take immediate action to correct the deficiencies and must repeat all steps described above including written notification that the work is ready for pre-final inspection.

After the Engineer is satisfied that the project appears substantially complete a final inspection shall be scheduled within ten working days after receipt of the Contractor's latest letter of notification that the project is ready for final inspection.

If, as a result of the pre-final inspection, the Engineer determines the work is not substantially complete, the Engineer will inform the Contractor in writing as to specific deficiencies which must be corrected before the work will be ready for another pre-final inspection. If the Engineer finds the work is substantially complete but finds deficiencies that must be corrected before the work is ready for final inspection, the Engineer will prepare in writing and deliver to the Contractor a punchlist describing such deficiencies.

At any time before final acceptance, the Engineer may revoke the determination of substantial completion if the Engineer finds that it was not warranted and will notify the Contractor in writing the reasons therefore together with a description of the deficiencies negating the declaration.

When the date of substantial completion has been determined by the State, liquidated damages for the failure to complete the punchlist, if due to the State will be assessed in pursuant to Subsection 108.08(B) - Liquidated Damages for Failure to Complete the Punchlist.

(D) Punchlist; Clean Up and Final Inspection. Upon receiving a punchlist after pre-final inspection, the Contractor shall promptly devote all required time, labor, equipment, materials and incidentals to correct and remedy all punchlist deficiencies. The Engineer may add to or otherwise modify this punchlist until substantial completion of the project.

Before final inspection of the work, the Contractor shall clean all ground occupied by the Contractor in connection with the work of all rubbish, excess materials temporary structures and equipment, shall remove all graffiti and defacement of the work and all parts of the work and the worksite must be left in a neat and presentable condition to the satisfaction of the Engineer.

Final inspection will occur within ten working days after the Contractor notifies the Engineer in writing that all punchlist deficiencies remaining after the pre-final inspection have been completed and the Engineer concurs. If the Engineer determines that deficiencies still remain at the final inspection, the work will not be accepted and the Engineer will notify the Contractor, in writing, of the deficiencies which shall be corrected and the steps above repeated.

If the Contractor fails to correct the deficiencies and complete the work by the established or agreed date, the State may correct the deficiencies by whatever method it deems appropriate and deduct the cost from any payments due the Contractor.

108.14 Substantial Completion and Final Acceptance.

(A) Substantial Completion. When the Engineer finds that the Contractor has satisfactorily completed all work for the project in compliance with the contract, with the exception of the planting period and the plant establishment period, the Engineer will notify the Contractor, in writing, of the project's substantial completion, effective as of the date of the final inspection. The substantial completion date shall determine end of contract time and relieve contractor of any additional accumulation of liquidated damages for failure to complete the punchlist.

(B) Final Acceptance. When the Engineer finds that the Contractor has satisfactorily completed all contract work in compliance with the contract including all plant establishment requirements, and all the materials have been accepted by the State, the Engineer will issue a Final Acceptance Letter. The Final Acceptance date shall determine the commencement of all guaranty periods subject to Subsection 108.16 – Contractor's Responsibility for Work; Risk of Loss or Damage.

108.15 Use of Structure or Improvement. The State has the right to use the structure, equipment, improvement, or any part thereof, at any time after it is considered by the Engineer as available. In the event that the structure, equipment or any part thereof is used by the State before final acceptance, the Contractor is not relieved of its responsibility to protect and preserve all the work until final acceptance.

108.16 Contractor's Responsibility for Work; Risk of Loss or Damage. Until the written notice of final acceptance has been received, the Contractor shall take every precaution against loss or damage to any part of the work by the action of the elements or from any other cause whatsoever, whether arising from the performance or from the non-performance of the work. The Contractor shall rebuild, repair, restore and make good all loss or damage to any portion of the work resulting from any cause before its receipt of the written notice of final acceptance and shall bear the risk and expense thereof.

The risk of loss or damage to the work from any hazard or occurrence that may or may not be covered by a builder's risk policy is that of the Contractor and Surety, unless such risk of loss is placed elsewhere by express language in the contract documents.

108.17 Guarantee of Work.

(1) Regardless of, and in addition to, any manufacturers' warranties, all work and equipment shall be guaranteed by the Contractor against defects in materials, equipment or workmanship for one year from the date of final acceptance or as otherwise specified in the contract documents.

(2) When the Engineer determines that repairs or replacements of any guaranteed work and equipment is necessary due to materials, equipment, or workmanship which are inferior, defective, or not in accordance with the terms of the contract, the Contractor shall, at no increase in contract price or contract time, and within five working days of receipt of written notice from the State, commence to all of the following:

(a) Correct all noted defects and make replacements, as directed by the Engineer, in the equipment and work.

(b) Repair or replace to new or pre-existing condition any damages resulting from such defective materials, equipment or installation thereof.

(3) The State will be entitled to the benefit of all manufacturers and installers warranties that extend beyond the terms of the Contractor's guaranty regardless of whether or not such extended warranty is required by the contract documents. The Contractor shall prepare and submit all documents required by the providers of such warranties to make them effective, and submit copies of such documents to the Engineer. If an available extended warranty cannot be transferred or assigned to the State as the ultimate user, the Contractor shall notify the Engineer who may direct that the warranted items be acquired in the name of the State as purchaser.

(4) If a defect is discovered during a guarantee period, all repairs and corrections to the defective items when corrected shall be guaranteed for a new duration equal to the original full guarantee period. The running of the guarantee period shall be suspended for all other work affected by any defect. The guarantee period for all other work affected by any such defect shall restart for its remaining duration upon confirmation by the Engineer that the deficiencies have been repaired or remedied.

(5) Nothing in this section is intended to limit or affect the State's rights and remedies arising from the discovery of latent defects in the work after the expiration of any guarantee period.

108.18 No Waiver of Legal Rights. The following will not operate or be considered as a waiver of any portion of the contract, or any power herein reserved, or any right to damages provided herein or by law:

(1) Any payment for, or acceptance of, the whole or any part of the work.

(2) Any extension of time.

(3) Any possession taken by the Engineer.

A waiver of any notice requirement or of any noncompliance with the contract will not be held to be a waiver of any other notice requirement or any other noncompliance with the contract.

108.19 Final Settlement of Contract.

(A) Closing Requirements. The contract will be considered settled after the project acceptance date and when the following items have been satisfactorily submitted, where applicable:

(1) All written guarantees required by the contract.

(2) Complete and certified weekly payrolls for the Contractor and its subcontractor's.

(3) Certificate of plumbing and electrical inspection.

(4) Certificate of building occupancy.

(5) Certificate for soil treatment and wood treatment.

(6) Certificate of water system chlorination.

(7) Certificate of elevator inspection, boiler and pressure pipe installation.

(8) Tax clearance.

(9) All other documents required by the Contract or by law.

(B) Failure to Meet Closing Requirements. The Contractor shall meet the applicable closing requirements within 60 days from the date of Project Acceptance or the agreed to Punchlist complete date. Should the Contractor fail to comply with these requirements, the Engineer may terminate the contract for cause."

END OF SECTION 108

SECTION 109 - MEASUREMENT AND PAYMENT

Make the following amendment to said Section:

(I) Amend **Subsection 109.05 Allowances for Overhead and Profit** by revising lines 101 to 110 to read as follows:

"**(1)** 20 percent of the direct cost for any work performed by the Contractor's own labor force.

(2) 20 percent of the direct cost for any work performed by each subcontractor's own labor force.

(3) For the Contractor or any subcontractor for work performed by their respective subcontractor or tier subcontractor, 10 percent of the amount due to the performing subcontractor or tier subcontractor."

(II) Amend **109.08(A) Monthly Payment** by adding the following after line 411:

"**(1) Retainage.** If the Engineer finds that the Contractor is progressing satisfactorily in completing the project work and:

a. Less than 50% of the whole contract cost is complete, the Engineer shall retain 5% of the value of the work done until the Engineer makes final payment;

b. More than 50% of the whole contract cost is complete, the Engineer may make the remaining progress payments in full.

c. After satisfactory completion of work other than landscaping items, the Engineer may adjust the amount of retainage to 15% of the landscaping items or 2½% of the total contract amount whichever is less. Do not use this subsection if the contract is only landscaping."

(III) Amend **Subsection 109.08(B) Payment for Material On Hand** by revising lines 421 to 423 to read as follows:

"**(2)** The materials shall be stored and handled in accordance with Subsection 105.14 – Storage and Handling of Materials and Equipment."

(IV) Amend **Subsection 109.11 Final Payment** by revising lines 568 to 576 to read as follows:

"**(3)** A current "Certificate of Vendor Compliance" issued by the Hawaii Compliance Express (HCE). The Certificate of Vendor Compliance is used to certify the Contractor's compliance with

(a) Section 103D-328, HRS (for all contracts $25,000 or more) which requires a current tax clearance certificate issued by the Hawaii State Department of Taxation and the Internal Revenue Service;

(b) Chapters 383, 386, 392, and 393, HRS; and

(c) Subsection 103D-310(c), HRS. The State reserves the right to verify that compliance is current prior to the issuance of final payment. Contractors are advised that non-compliance status will result in final payment being withheld until compliance is attained.

Sums necessary to meet the claims of any governmental agencies may be withheld from the sums due the Contractor until said claims have been fully and completely discharged or otherwise satisfied."

END OF SECTION 109

SECTION 201 – CLEARING AND GRUBBING

Make the following amendments to said Section:

(I) Amend **201.04 – Measurement** by revising lines 167 to 168 to read as follows:

"**201.04 Measurement.** The Engineer will not measure clearing and grubbing when contracted on a lump sum basis."

(II) Amend **201.05 – Payment** by revising lines 170 to 179 to read as follows:

"**201.05 Payment.** The Engineer will pay for the accepted clearing and grubbing at the contract price per pay unit specified in the proposal. Payment will be full compensation for the work prescribed in this section and the contract documents.

The Engineer will pay for the following pay item when included in the proposal schedule:

Pay Item	**Pay Unit**
Clearing and Grubbing	Lump Sum"

END OF SECTION 201

SECTION 202 – REMOVAL OF STRUCTURES AND OBSTRUCTIONS

Make the following amendments to said Section:

(I) Amend **202.04 – Measurement** by revising lines 119 to 120 to read as follows:

"**202.04 Measurement.** The Engineer will not measure the removal of structures and obstructions when contracted on a lump sum basis."

(II) Amend **202.05 – Payment** by revising lines 122 to 131 to read as follows:

"**202.05 Payment.** If the proposal does not show a contract item for the removal of structures and obstructions, the Engineer will not pay for the removal of structures and obstructions separately. The Contractor shall consider them incidental to the various contract items.

The Engineer will pay for specific items stipulated for removal and disposal at the contract price bid per unit specified in the proposal. The price shall be full compensation for removal and disposal of that items, excavation, backfill, salvage of materials removed. Salvaging of materials removed includes their custody, preservation, storage on the right-of-way. Also, the price shall be full compensation for equipment, tools, labor materials and incidentals necessary to complete the work.

The Engineer will pay for the following pay item when included in the proposal schedule.

Pay Item	Pay Unit
Removal of Existing Traffic Signs	Lump Sum
Removal of Existing Curb and Gutter	Lump Sum
Removal of Existing Sidewalk	Lump Sum
Removal of Existing Grassed Median	Lump Sum
Removal of Existing Pavement	Lump Sum"

END OF SECTION 202

Amend **Section 209 - TEMPORARY WATER POLLUTION, DUST, AND EROSION CONTROL** to read as follows:

"SECTION 209 - TEMPORARY WATER POLLUTION, DUST, AND EROSION CONTROL

209.01 Description. This section describes the following:

(A) Including detailed plans, diagrams, and written Site-Specific Best Management Practices (BMP); constructing, maintaining, and repairing temporary water pollution, dust, and erosion control measures at the project site, including local material sources, work areas and haul roads; removing and disposing hazardous wastes; control of fugitive dust (defined as uncontrolled emission of solid airborne particulate matter from any source other than combustion); and complying with applicable State and Federal permit conditions.

(B) Work associated with construction stormwater, dewatering, and hydrotesting activities and complying with conditions of the National Pollutant Discharge Elimination System (NPDES) permit(s) authorizing discharges associated with construction stormwater, dewatering, and hydrotesting activities.

(C) Potential pollutant identification and mitigation measures are listed in Appendix A for use in the development of the Contractor's Site-Specific BMP.

Requirements of this section also apply to construction support activities including concrete or asphalt batch plants, rock crushing plants, equipment staging yards/areas, material storage areas, excavated material disposal areas, and borrow areas located outside the State Right-of-Way. For areas serving multiple construction projects, or operating beyond the completion of the construction project in which it supports, the Contractor shall be responsible for securing the necessary permits, clearances, and documents, and following the conditions of the permits and clearances, at no cost to the State.

209.02 Materials. Comply with applicable materials described in Chapters 2 and 3 of the current HDOT "Construction Best Management Practices Field Manual". In addition, the materials shall comply with the following:

(A) Grass. Grass shall be a quick growing species such as rye grass, Italian rye grass, or cereal grasses. Grass shall be suitable to the area and provide a temporary cover that will not compete later with permanent cover. Alternative grasses are allowable if acceptable to the Engineer.

(B) Fertilizer and Soil Conditioners. Fertilizer and soil conditioners shall be a standard commercial grade acceptable to the Engineer. Fertilizer shall conform to Subsection 619.02(H)(1) - Commercial Fertilizer.

(C) Hydro-mulching. Hydro-mulching used as a temporary vegetative stabilization measure shall consist of materials in Subsections 209.02(A) - Grass, and 209.02(B) – Fertilizer and Soil Conditioners. Mulches shall be recycled materials including bagasse, hay, straw, wood cellulose bark, wood chips, or other material acceptable to the Engineer. Mulches shall be clean and free of noxious weeds and deleterious materials. Potable water shall meet the requirements of Subsection 712.01 - Water. Submit alternate sources of irrigation water for the Engineer's acceptance if deviating from 712.01 - Water. Installation and other requirements shall be in accordance with portions of Section 641- Hydro-Mulch Seeding including 641.02(D) - Soil and Mulch Tackifier, 641.03(A) – Seeding, and 641.03(B) - Planting Period. Install non-vegetative controls including mulch or rolled erosion control products while the vegetation is being established. Water and fertilize grass. Apply fertilizer as recommended by the manufacturer. Replace grass the Engineer considers unsuitable or sick. Remove and dispose of trash and debris. Remove invasive species. Mow as needed to prevent site or signage obstructions, fire hazard, or nuisance to the public. Do not remove down stream sediment control measures until the vegetation is uniformly established, including no large bare areas, and provides 70 percent of the density of pre-disturbance vegetation. Temporary vegetative stabilization shall not be used longer than one year.

(D) Silt Fences. Comply with ASTM D6462, Standard Practice for Silt Fence Installation.

Alternative materials or methods to control, prevent, remove and dispose pollution are allowable if acceptable to the Engineer.

209.03 Construction.

(A) Preconstruction Requirements.

(1) Water Pollution, Dust, and Erosion Control Meeting. Schedule a water pollution, dust, and erosion control meeting with the Engineer after Site-Specific BMP is accepted in writing by the Engineer. Meeting shall be scheduled a minimum of 7 calendar days prior to the Start Work Date. Discuss sequence of work, plans and proposals for water pollution, dust, and erosion control.

(2) Water Pollution, Dust, and Erosion Control Submittals. Submit a Site-Specific BMP Plan within 21 calendar days of date of award. Submission of complete and acceptable Site-Specific BMP Plan is the sole responsibility of the Contractor and additional contract time will not be issued for delays due to incompleteness. Include the following:

(a) Written description of activities to minimize water pollution and soil erosion into State waters, drainage or sewer systems. BMP shall include the following:

1. An identification of potential pollutants and their sources.

2. A list of all materials and heavy equipment to be used during construction.

3. Descriptions of the methods and devices used to minimize the discharge of pollutants into State waters, drainage or sewer systems.

4. Details of the procedures used for the maintenance and subsequent removal of any erosion or siltation control devices.

5. Methods of removing and disposing hazardous wastes encountered or generated during construction.

6. Methods of removing and disposing concrete and asphalt pavement cutting slurry, concrete curing water, and hydrodemolition water.

7. Spill Control and Prevention and Emergency Spill Response Plan.

8. Fugitive dust control, including dust from grinding, sweeping, or brooming off operations or combination thereof.

9. Methods of storing and handling of oils, paints and other products used for the project.

10. Material storage and handling areas, and other staging areas.

11. Concrete truck washouts.

12. Concrete waste control.

13. Fueling and maintenance of vehicles and other equipment.

14. Tracking of sediment offsite from project entries and exits.

15. Litter management.

16. Toilet facilities.

17. Other factors that may cause water pollution, dust and erosion control.

(b) Provide plans indicating location of water pollution, dust and erosion control devices; provide plans and details of BMPs to be installed or utilized; show areas of soil disturbance in cut and fill, indicate areas used for construction staging and storage including items (1) through (17) above, storage of aggregate (indicate type of aggregate), asphalt cold mix, soil or solid waste, equipment and vehicle parking, and show areas where vegetative practices are to be implemented. Indicate intended drainage pattern on plans. Include flow arrows. Include separate drawing for each phase of construction that alters drainage patterns. Indicate approximate date when device will be installed and removed.

(c) Construction schedule.

(d) Name(s) of specific individual(s) designated responsible for water pollution, dust, and erosion controls on the project site. Include home, cellular, and business telephone numbers, fax numbers, and e-mail addresses.

(e) Description of fill material to be used.

(f) For projects with an NPDES Permit for Construction Activities, submit information to address all sections in the Storm Water Pollution Prevention Plan (SWPPP).

(g) For projects with an NPDES Permit, information required for compliance with the conditions of the Notice of General Permit Coverage (NGPC)/NPDES Permit.

(h) Site-Specific BMP Review Checklist. The checklist may be downloaded from HDOT's Stormwater Management website at http://stormwaterhawaii.com.

Date and sign Site-Specific BMP Plan. Keep accepted copy on site or at an accessible location so that it can be made available at the time of an on-site inspection or upon request by the Engineer, HDOT Third-Party Inspector, and/or DOH/EPA Representative. Amendments to the Site-Specific BMP Plan shall be included with original Site-Specific BMP Plan. Modify SWPPP if necessary to conform to revisions. Include date of installation and removal of Site-Specific BMP measures. Obtain written acceptance by the Engineer before implementing revised Site-Specific BMPs in the field.

Follow the guidelines in the current HDOT "Construction Best Management Practices Field Manual", in developing, installing, and maintaining Site-Specific BMPs for all projects. For any conflicting requirements between the Manual and applicable bid documents, the applicable bid documents will govern. Should a requirement not be clearly described within the applicable bid documents, notify the Engineer immediately for interpretation. For the purposes of clarification "applicable bid documents" include the construction plans, standard specifications, special provisions, Permits, and the SWPPP when applicable.

Follow Honolulu's City and County "Rules for Soil Erosion Standards and Guidelines" for all projects on Oahu. Use respective Soil Erosion Guidelines for Maui, Kauai and Hawaii projects.

(B) Construction Requirements. Do not begin work until submittals detailed in Subsection 209.03(A)(2) - Water Pollution, Dust, and Erosion Control Submittals are completed and accepted in writing by the Engineer.

Install, maintain, monitor, repair and replace site-specific BMP measures, such as for water pollution, dust and erosion control; installation, monitoring, and operation of hydrotesting activities; removal and disposal of hazardous waste indicated on plans, concrete cutting slurry, concrete curing water; or hydrodemolition water. Site-Specific BMP measures shall be in place, functional and accepted by HDOT personnel prior to initiating any ground disturbing activities.

If necessary, furnish and install rain gage in a secure location prior to field work including installation of site-specific BMP. Provide rain gage with a tolerance of at least 0.05 inches of rainfall. Install rain gage on project site in an area that will not deter rainfall from entering the gate opening. Do not install in a location where rain water may splash into rain gage. The rain gage installation shall be stable and plumbed. Maintain rain gage and replace rain gage that is stolen, does not function properly or accurately, is worn out, or needs to be relocated. Do not begin field work until rain gage is installed and Site-Specific BMPs are in place. Rain gage data logs shall be readily available. Submit rain gage data logs weekly to the Engineer.

Address all comments received from the Engineer.

Modify and resubmit plans and construction schedules to correct conditions that develop during construction which were unforeseen during the design and pre-construction stages.

Coordinate temporary control provisions with permanent control features throughout the construction and post-construction period.

Limit maximum surface area of earth material exposed at any time to 300,000 square feet. Do not expose or disturb surface area of earth material (including clearing and grubbing) until BMP measures are installed and accepted in writing by the Engineer. Protect temporarily or permanently disturbed soil surface from rainfall impact, runoff and wind before end of the work day.

Immediately initiate stabilizing exposed soil areas upon completion of earth disturbing activities for areas permanently or temporarily ceased on any portion of the site. Earth-disturbing activities have permanently ceased when clearing and excavation within any area of the construction site that will not include permanent structures has been completed. Earth-disturbing activities have temporarily ceased when clearing, grading, and excavation within any area of the site that will not include permanent structures will not resume for a period of 14 or more calendar days, but such activities will resume in the future. The term “immediately” is used in this section to define the deadline for initiating stabilization measures. “Immediately” means as soon as practicable, but no later than the end of the next work day, following the day when the earth-disturbing activities have temporarily or permanently ceased.

For projects with an NPDES Permit for Construction activities:

(1) For construction areas discharging into waters not impaired for nutrients or sediments, complete initial stabilization within 14 calendar days after the temporary or permanent cessation of earth-disturbing activities.

(2) For construction areas discharging into nutrient or sediment impaired waters, complete initial stabilization within 7 calendar days after the temporary or permanent cessation of earth-disturbing activities.

For projects without an NPDES Permit for Construction activities, complete initial stabilization within 14 calendar days after the temporary or permanent cessation of earth-disturbing activities.

Any of the following types of activities constitutes initiation of stabilization:

(1) Prepping the soil for vegetative or non-vegetative stabilization;

(2) Applying mulch or other non-vegetative product to the exposed area;

(3) Seeding or planting the exposed area;

(4) Starting any of the activities in items (1) – (3) above on a portion of the area to be stabilized, but not on the entire area; and

(5) Finalizing arrangements to have stabilization product fully installed in compliance with the deadline for completing initial stabilization activities.

Any of the following types of activities constitutes completion of initial stabilization activities:

(1) For vegetative stabilization, all activities necessary to initially seed or plant the area to be stabilized; and/or

(2) For non-vegetative stabilization, the installation or application of all such non-vegetative measures.

If the Contractor is unable to meet the deadlines above due to circumstances beyond the Contractor's control, and the Contractor is using vegetative cover for temporary or permanent stabilization, the Contractor may comply with the following stabilization deadlines instead as agreed to by the Engineer:

(1) Immediately initiate, and complete within the timeframe shown above, the installation of temporary non-vegetative stabilization measures to prevent erosion;

(2) Complete all soil conditioning, seeding, watering or irrigation installation, mulching, and other required activities related to the planting and initial establishment of vegetation as soon as conditions or circumstances allow it on the site; and

(3) Notify and provide documentation to the Engineer the circumstances that prevent the Contractor from meeting the deadlines above for stabilization and the schedule the Contractor will follow for initiating and completing initial stabilization and as agreed to by the Engineer.

Follow the applicable requirements of the specifications and special provisions including Section 619 Planting and Section 641 Hydro-Mulch Seeding.

Immediately after seeding or planting the area to be vegetatively stabilized, to the extent necessary to prevent erosion on the seeded or planted area, select, design, and install non-vegetative erosion controls that provide cover (e.g., mulch, rolled erosion control products) to the area while vegetation is becoming established.

Protect exposed or disturbed surface area with mulches, grass seeds or hydromulch. Spray mulches at a rate of 2,000 pounds per acre. Add tackifier to mix at a rate of 85 pounds per acre. Apply grass seeds at a rate of 125 pounds per acre. For hydromulch, use the ingredients and rates required for mulches and grass seeds. Submit recommendations from a licensed Landscape Architect when deviating from the application rates above.

Apply fertilizer to mulches, grass seed or hydromulch per manufacturer's recommendations. Submit recommendations from a licensed Landscape Architect when deviating from the manufacturer's recommendations.

Install velocity dissipation measures when exposing erodible surfaces greater than 15 feet in height.

BMP measures shall be in place and operational at the end of work day or as required by Section 209.03(B) Construction Requirements**.**

Install and maintain either or both stabilized construction entrances and wheel washes to minimize tracking of dirt and mud onto roadways. Restrict traffic to stabilized construction areas only. Clean dirt, mud, or other material tracked onto the road, sidewalk, or other paved area by the end of the same day in which the track-out occurs. Modify stabilized construction entrances to prevent mud from being tracked onto road. Stabilize entire access roads if necessary.

Chemicals may be used as soil stabilizers for either or both erosion and dust control if acceptable to the Engineer.

Provide temporary slope drains of rigid or flexible conduits to carry runoff from cuts and embankments. Provide portable flume at the entrance. Shorten or extend temporary slope drains to ensure proper function.

Protect ditches, channels, and other drainageways leading away from cuts and fills at all times by either:

(1) Hydro-mulching the lower region of embankments in the immediate area.

(2) Installing check dams and siltation control devices.

(3) Other methods acceptable to the Engineer.

Provide for controlled discharge of waters impounded, directed, or controlled by project activities or erosion control measures.

Cover exposed surface of materials completely with tarpaulin or similar device when transporting aggregate, soil, excavated material or material that may be source of fugitive dust.

Cleanup and remove any pollutant that can be attributed to the Contractor.

Install or modify Site-Specific BMP measures due to change in the Contractor's means and methods, or for omitted condition that should have been allowed for in the accepted Site-Specific BMP or a Site-Specific BMP that replaces an accepted Site-Specific BMP that is not satisfactorily performing. Modifications to Site-Specific BMP measures shall be accepted in writing by the Engineer prior to implementation.

Properly maintain all Site-Specific BMP measures.

For projects with an NPDES Permit for Construction Activities:

(1) For construction areas discharging into nutrient or sediment impaired waters, inspect, prepare a written report, and make repairs to BMP measures at the following intervals:

(a) Weekly.

(b) Within 24 hours of any rainfall of 0.25 inch or greater which occurs in a 24-hour period.

(c) When existing erosion control measures are damaged or not operating properly as required by Site-Specific BMP.

(2) For construction areas discharging to waters not impaired for nutrients or sediments, inspect, prepare a written report, and make repairs to BMP measures at the following intervals:

(a) Weekly.

(b) When existing erosion control measures are damaged or not operating properly as required by Site-Specific BMP.

For projects without an NPDES Permit for Construction activities, inspect, prepare a written report, and make repairs to BMP measures at the following intervals:

(a) Weekly.

(b) When existing erosion control measures are damaged or not operating properly as required by Site-Specific BMP.

Temporarily remove, replace or relocate any Site-Specific BMP that must be removed, replaced or relocated due to potential or actual flooding, or potential danger or damage to project or public.

Maintain records of inspections of Site-Specific BMP work. Keep continuous records for duration of the project. Submit copy of Inspection Report to the Engineer within 24 hours after each inspection.

The Contractor's designated representative specified in Subsection 209.03(A)(2)(d) shall address any Site-Specific BMP deficiencies brought up by the Engineer immediately, including weekends and holidays, and complete work to fix the deficiencies by the close of the next work day if the problem does not require significant repair or replacement, or if the problem can be corrected through routine maintenance. Address any Site-Specific BMP deficiencies brought up by the State's Third-Party Inspector in the timeframe above or as specified in the Consent Decree or MS4 NPDES

Permit, whichever is more stringent. The Consent Decree timeframe requirement applies statewide. The MS4 NPDES Permit only applies to Oahu. In this section, "immediately" means the Contractor shall take all reasonable measures to minimize or prevent discharge of pollutants until a permanent solution is installed and made operational. If a problem is identified at a time in the day in which it is too late to initiate repair, initiation of repair shall begin on the following work day. When installation of a new pollution prevention control or a significant repair is needed, complete installation or repair no later than 7 calendar days from the time of notification/Contractor discovery. Notify the Engineer and document why it is infeasible to complete the installation or repair within 7 calendar days and complete the work as soon as practicable and as agreed to by the Engineer. Address Site-Specific BMP deficiencies discovered by the Contractor within the timeframe above. The Contractor's failure to satisfactorily address these Site-Specific BMP deficiencies, the Engineer reserves the right to employ outside assistance or use the Engineer's own labor forces to provide necessary corrective measures. The Engineer will charge the Contractor such incurred costs plus any associated project engineering costs. The Engineer will make appropriate deductions from the Contractor's monthly progress estimate. Failure to apply Site-Specific BMP measures may result in one or more of the following: assessment of liquidated damages, suspension, or cancellation of Contract with the Contractor being fully responsible for all additional costs incurred by the State.

(C) Discharges of Storm Water Associated with Construction Activities. If work includes disturbance of one acre or more, an NPDES Permit authorizing Discharges of Storm Water Associated with Construction Activity (CWB-NOI Form C) or Individual Permit authorizing storm water discharges associated with construction activity is required from the Department of Health Clean Water Branch (DOH-CWB).

Do not begin construction activities until all required conditions of the permit are met and submittals detailed in Subsection 209.03(A)(2) – Water Pollution, Dust, and Erosion Control Submittals are completed and accepted in writing by the Engineer.

(D) Discharges Associated with Hydrotesting Activities. If hydrotesting activities require effluent discharge into State waters or drainage systems, an NPDES Hydrotesting Waters Permit (CWB-NOI Form F) or Individual Permit authorizing discharges associated with hydrotesting from DOH-CWB is required from the DOH-CWB.

Do not begin hydrotesting activities until the DOH-CWB has issued an Individual NPDES Permit or Notice of General Permit Coverage (NGPC). Conduct Hydrotesting operations in accordance with the conditions of the permit or NGPC.

(E) Discharges Associated with Dewatering Activities. If dewatering activities require effluent discharge into State waters or drainage systems, an NPDES Dewatering Permit (CWB-NOI Form G) or Individual Permit authorizing discharges associated with dewatering from DOH-CWB is required from the DOH-CWB.

Do not begin dewatering activities until the DOH-CWB has issued an Individual NPDES Permit or Notice of General Permit Coverage (NGPC). Conduct dewatering operations in accordance with the conditions of the permit or NGPC.

(F) Solid Waste. Submit the Solid Waste Disclosure Form for Construction Sites to the Engineer within 21 calendar days of date of award. Provide a copy of all the disposal receipts from the facility permitted by the Department of Health to receive solid waste to the Engineer monthly. This should also include documentation from any intermediary facility where solid waste is handled or processed, or as directed by the Engineer.

(G) Construction BMP Training. The Contractor's representative responsible for development of the Site-Specific BMP Plan and implementation of Site-Specific BMPs in the field shall attend the State's Construction Best Management Practices Training. The Contractor shall keep training logs updated and readily available.

209.04 Measurement.

(A) Installation, maintenance, monitoring, and removal of BMP will be paid on a lump sum basis. Measurement for payment will not apply.

(B) The Engineer will only measure additional water pollution, dust and erosion control required and requested by the Engineer on a force account basis in accordance with Subsection 109.06 – Force Account Provisions and Compensation.

209.05 Payment. The Engineer will pay for accepted pay items listed below at contract price per pay unit, as shown in the proposal schedule. Payment will be full compensation for work prescribed in this section and contract documents.

The Engineer will pay for each of the following pay items when included in proposal schedule:

Pay Item	**Pay Unit**
Installation, Maintenance, Monitoring, and Removal of BMP	Lump Sum
Additional Water Pollution, Dust, and Erosion Control	Force Account

An estimated amount for force account is allocated in proposal schedule under ‘Additional Water Pollution, Dust, and Erosion Control’, but actual amount to be paid will be the sum shown on accepted force account records, whether this sum be more or less than estimated amount allocated in proposal schedule. The Engineer will pay for BMP measures requested by the Engineer that are beyond scope of accepted Site-Specific BMP on a force account basis.

No progress payment will be authorized until the Engineer accepts in writing Site-Specific BMP or when the Contractor fails to maintain project site in accordance with accepted BMP.

For all citations or fines received by the Department for non-compliance, including compliance with NPDES Permit conditions, the Contractor shall reimburse State within 30 calendar days for full amount of outstanding cost State has incurred, or the Engineer will deduct cost from progress payment.

The Engineer will assess liquidated damages up to $27,500 per day for non-compliance of each BMP requirement and all other requirements in this section.

Appendix A

The following list identifies potential pollutant sources and corresponding BMPs used to mitigate the pollutants. Each BMP is referenced to the corresponding section of the current HDOT Construction Best Management Practices Field Manual or appropriate Supplemental Sheets. The Manual may be obtained from the HDOT Statewide Stormwater Management Program Website at *http://www.stormwaterhawaii.com/resources/contractors-and-consultants/* under Construction Best Management Practices Field Manual. Supplemental BMP sheets are located at *http://www.stormwaterhawaii.com/resources/contractors-and-consultants/storm-water-pollution-prevention-plan-swppp/* under Concrete Curing and Irrigation Water.

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Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
Construction debris, green waste, general litter	• *Separate contaminated clean up materials from construction and demolition (C&D) wastes.* • *Provide waste containers (e.g., dumpster or trash receptacle) of sufficient size and number to contain construction and domestic wastes.* • *Inspect construction waste and recycling areas regularly.* • *Schedule solid waste collection regularly.* • *Schedule recycling activities based on construction/demolition phases.* • *Empty waste containers weekly or when they are two-thirds full, whichever is sooner.* • *Do not allow containers to overflow. Clean up immediately if they do.* • *On work days, clean up and dispose of waste in designated waste containers.* • *See Solid Waste Management Section SM-6 for additional requirements.* • *Provide Storm Drain Inlet Protection and/or Perimeter Sediment Controls as applicable.* • *Collect and dispose of all waste materials in trash dumpsters. Place dumpsters, with secure watertight lids, away from storm water conveyances and drains, in a covered materials storage area.* • *Dispose of construction and non- construction solid waste in accordance with State DOH regs.* • *Load removed non- recyclable vegetation directly onto trucks; cover and transport to a licensed facility*	*See Solid Waste Management Section SM-6. Storm Drain Inlet Protection SC-1, and Perimeter Sediment Controls where applicable.*

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Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
Materials associated with the operation and maintenance of equipment, such as oil, fuel, and hydraulic fluid leakage	• *Use off-site wash racks, repair and maintenance facilities, and fueling sites when practical.* • *Designate bermed wash area if cleaning on site is necessary.* • *Place drip pans or drop cloths under vehicles and equipment to absorb spills or leaks.* • *Provide an ample supply of readily available spill cleanup materials.* • *Clean up spills immediately, using dry clean-up methods where possible, and dispose of used materials properly.* • *Do not clean surfaces or spills by hosing the area down.* • *Eliminate the source of the spill to prevent a discharge or a continuation of an ongoing discharge.* • *Inspect on-site vehicles and equipment regularly and immediately repair leaks.* • *Regularly inspect fueling areas and storage tanks.* • *Train employees on proper maintenance and spill practices and procedures and fueling and cleanup procedures.* • *Store diesel fuel, oil, hydraulic fluid, or other petroleum products or other chemicals in water-tight containers and provide cover or secondary containment.* • *Do not remove original product labels and comply with manufacturer's labels for proper disposal.* • *Dispose of containers only after all the product has been used.* • *Dispose of or recycle oil or oily wastes according to Federal, State, and Local requirements.* • *Store soaps, detergents, or solvents under cover or other means to prevent contact with rainwater.* • *See Vehicle and Equipment Cleaning, Maintenance, and Refueling, Sections SM-11, SM-12, and SM-13 and Material Storage and Handling Section SM-2 for additional requirements.*	*See Vehicle and Equipment Cleaning, Maintenance, and Refueling, Sections SM-11, SM-12, and SM-13, and Material Storage and Handling, Section SM-2, and Spill Prevention and Control SM-10.*

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Pollutant Source	Appropriate Site-Specific BMP to be Implemented	BMP Requirements
Soil erosion from the disturbed areas	• *Provide Soil Stabilization, Slope Protection, Storm Drain Inlet Protection SC-1, Perimeter Controls and Sediment Barriers, Sediment Basins and Detention Ponds, Check Dams SC-3 ,Level Spreader EC-6, Paving Operations SM-20, Construction Roads and Parking Area Stabilization SC-10, Controlling Storm Water Flowing Onto and Through the Project, Post-Construction BMPs, and Non-Structural BMPs (Construction BMP Training SM-1, Scheduling SM-14, Location of Potential Sources of Sediment SM-15, Preservation of Existing Vegetation SM-17).* • *Delineate, and clearly mark off, with flags, tape, or other similar marking device all natural buffer areas defined in the SWPPP.* • *Preserve native topsoil where practicable.* • *In areas where vegetative stabilization will occur, restrict vehicle/equipment use in areas to avoid soil compaction or condition soil to promote vegetative growth.* • *For Storm Drain Inlet Protection, clean, or remove and replace, the protection measures as sediment accumulates, the filter becomes clogged, and/or performance is compromised.* • *Where there is evidence of sediment accumulation adjacent to the inlet protection measure, remove the deposited sediment by the end of the same day in which it is found or by the end of the following work day if removal by the same day is not feasible.* • *Sediment basins shall be designed and maintained in accordance with HAR Chapter 11-55.* • *Minimize disturbance on steep slopes (Greater than 15% in grade).* • *If disturbance of steep slopes are unavoidable, phase disturbances and use stabilization techniques designed for steep grades.* • *For temporary drains and swales use velocity dissipation devices within and at the outlet to minimize erosive flow velocities.*	*Soil Stabilization* *1. SM-22 Topsoil Management* *2. EC-12 Seeding and Planting* *3. EC-14 Mulching* *4. EC-11 Geotextiles and Mats* *Slope Protection* *1. EC-12 Seeding and Planting* *2. EC-14 Mulching* *3. EC-11 Geotextiles and Mats* *4. EC-4 Slope Roughening, Terracing, and Rounding* *5. EC-7 Slope Drains and Subsurface Drains* *6. EC-9 Slope Interceptor or Diversion Ditches/Berms* *SC-1 Storm Drain Inlet Protection*

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Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	*BMP Requirements*
		Perimeter Controls and Sediment Barriers *1. SC-7 Silt Fence or Filter Fabric Fence* *2. SC-2 Vegetated Filter Strips and Buffers* *3. SC-6 Compost Filter Berm/Sock* *4. SC-8 Sandbag Barrier* *5. SC-9 Brush or Rock Filter* *Sediment Basins and Detention Ponds* *1. SC-4 Sediment Trap* *2. SC-5 Sediment Basin* *SC-3 Check Dams* *EC-6 Level Spreader* *SM-20 Paving Operations* *SC-10 Construction Roads and Parking Area Stabilization*

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Pollutant Source	Appropriate Site-Specific BMP to be Implemented	BMP Requirements
		Controlling Storm Water Flowing onto and Through the Project *1. EC-3 Run-On Diversion* *2. EC-5 Earth Dike, Swales and Ditches* *Post Construction BMPs* *1. EC-2 Flared Culvert End Sections* *2. EC-10 Rip-Rap and Gabion Inflow Protection* *3. EC-8 Outlet Protection and Velocity Dissipation Devices* *4. SM-22 Topsoil Management* *Non-Structural BMPs* *1. SM-1 Construction BMP Training* *2. SM-14 Scheduling* *3. SM-15 Location of Potential Sources of Sediment* *4. SM-17 Preservation of Existing Vegetation*

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Pollutant Source	Appropriate Site-Specific BMP to be Implemented	BMP Requirements
Sediment from soil stockpiles	• *Locate stockpiles a minimum of 50 feet or as far as practicable from concentrated runoff or outside of any natural buffers identified on the SWPPP.* • *Place bagged materials on pallets and under cover.* • *Provide physical diversion to protect stockpiles from concentrated runoff.* • *Cover stockpiles with plastic or comparable material when practicable.* • *Place silt fence, fiber filtration tubes, or straw wattles around stockpiles.* • *Do not hose down or sweep soil or sediment accumulated on pavement or other impervious surfaces into any storm water conveyance (unless connected to a sediment basin, sediment trap, or similarly effective control), storm drain inlet, or state water.* • *Unless infeasible, contain and securely protect stockpiles from the wind.* • *Provide Storm Drain Inlet Protection and/or Perimeter Sediment Controls as applicable.* *See Stockpile Management Section SM-3 for additional requirements.*	*See Stockpile Management Section SM-3. Storm Drain Inlet Protection SC-1, and Perimeter Sediment Controls where applicable.*
Emulsified asphalt or prime/tack coat	• *Provide training for employees and contractors on proper material delivery and storage practices and procedures.* • *Restrict paving operations during wet weather to prevent paving materials from being discharged.* • *Use asphalt emulsions such as prime coat when possible.* • *Protect drain inlet structures and manholes during application of tack coat, seal coat, slurry seal, and fog seal.* • *Keep ample supplies of drip pans and absorbent materials on site.* • *Inspect inlet protection devices.* • *See Material Storage and Handling Section SM-2 and Paving Operations Section SM-20 for additional requirements.* • *Provide Storm Drain Inlet Protection and/or Perimeter Sediment Controls as applicable.*	*See Material Storage and Handling Section SM-2,* and Stockpile Management Section SM-3, *Paving Operations Section SM-20, Storm Drain Inlet Protection SC-1, and Perimeter Sediment Controls where applicable.*

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Pollutant Source	Appropriate Site-Specific BMP to be Implemented	BMP Requirements
Materials associated with painting, such as paint and paint wash solvent	• *Hazardous chemicals shall be well-labeled and stored in original containers.* • *Keep ample supply of cleanup materials on site.* • *Dispose container only after all of the product has been used.* • *Remove as much paint from brushes on painted surface.* • *Rinse from water-based paints shall be discharged into the sanitary sewer system where possible. If not, direct all washwater into a leak-proof container or leak-proof pit. The container or pit must be designed so that no overflows can occur due to inadequate sizing or precipitation.* • *Locate on-site wash area a minimum of 50 feet away or as far as practicable from storm drain inlets, open drainage facilities, or water bodies.* • *Do not dump liquid wastes into the storm drainage system.* • *Filter and re-use solvents and thinners.* • *Dispose of oil-based paints and residue as a hazardous waste.* • *Ensure collection, removal, and disposal of hazardous waste complies with regulations.* • *Immediately clean up spills and leaks.* • *Properly store paints, solvents, and epoxy compounds.* • *Properly store and dispose waste materials generated from painting and structure repair and construction activities.* • *Mix paints in a covered and contained area, when possible, to minimize adverse impacts from spills.* • *Do not apply traffic paint or thermoplastic if rain is forecasted.* • *See Material Storage and Handling Use SM-2, Hazardous Materials and Waste Management Section SM-9, Spill Prevention and Control Section SM-10, and Structure Construction and Painting Section SM-21 for additional requirements.* *Provide Storm Drain Inlet Protection and/or Perimeter Sediment Controls as applicable.*	*See Material Storage and Handling Use Section SM-2, Stockpile Management Section SM-3, Hazardous Materials and Waste Management Section SM-9, Waste Management, Spill Prevention and Control Section SM-10, and Structure Construction and Painting Section SM-21, Storm Drain Inlet Protection SC-1, and Perimeter Sediment Controls where applicable.*

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Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
Industrial chemicals, fertilizers, and/or pesticides	• *Hazardous chemicals shall be well-labeled and stored in original containers.* • *Keep ample supply of cleanup materials on site.* • *Clean up spills immediately, using dry clean-up methods where possible, and dispose of used materials properly.* • *Do not clean surfaces or spills by hosing the area down.* • *Eliminate the source of the spill to prevent a discharge or a furtherance of an ongoing discharge.* • *Dispose container only after all of the product has been used.* • *Retain a complete set of safety data sheets (formerly MSDS) on site.* • *Store industrial chemicals in water-tight containers and provide either cover or secondary containment.* • *Provide cover when storing fertilizers or pesticides to prevent these chemicals from coming into contact with rainwater.* • *Restrict amount of pesticide prepared to quantity necessary for the current application.* • *Do not apply fertilizers or pesticides during or just before a rain event.* • *Do not apply to stormwater conveyance channels with flowing water.* • *Comply with fertilizer and pesticide manufacturer's recommended usage and disposal instructions. Document departures from manufacturer's specifications in Attachment J.* • *Apply fertilizers at the appropriate time of year for the location, and preferably timed to coincide as closely as possible to the period of maximum vegetation uptake and growth.* • *Follow federal, state, and local laws regarding fertilizer application.* • *Do not dispose of toxic liquid wastes (solvents, used oils, and paints) or chemicals (additives, acids, and curing compounds) in dumpsters allocated for construction debris.*	*See Material Storage and Handling Use Section SM-2, Stockpile Management Section SM-3, and Hazardous Materials and Waste Management Section SM-9, and Spill Prevention and Control SM-10*

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Pollutant Source	Appropriate Site-Specific BMP to be Implemented	BMP Requirements
	• *Ensure collection, removal, and disposal of hazardous waste complies with regulations. Hazardous waste that cannot be reused or recycled shall be disposed of by a licensed hazardous waste hauler.* *See Material Storage and Handling Use SM-2, and Hazardous Materials and Waste Management Section SM-9 for additional requirements.*	
Hazardous waste (Batteries, Solvents, Treated Lumber, etc.)	• *Do not dispose of toxic materials in dumpsters allocated for construction debris.* • *Ensure collection, removal, and disposal of hazardous waste complies with regulations.* • *Hazardous waste that cannot be reused or recycled shall be disposed of by a licensed hazardous waste hauler.* • *Segregate and recycle wastes from vehicle/equipment maintenance activities such as used oil or oil filters, greases, cleaning solutions, antifreeze, automotive batteries, and hydraulic and transmission fluids.* • *Store waste in sealed containers, which are constructed of suitable materials to prevent leakage and corrosion, and which are labeled in accordance with applicable Resource Conservation and Recovery Act (RCRA) requirements and all other applicable federal, state, and local requirements.* • *All containers stored outside shall be kept away from surface waters and within appropriately sized secondary containment (e.g., spill berms, decks, spill containment pallets). Provide cover if possible.* • *Clean up spills immediately, using dry clean-up methods where possible, and dispose of used materials properly.* • *Do not clean surfaces or spills by hosing the area down.* • *Eliminate the source of the spill to prevent a discharge or a continuation of an ongoing discharge.*	*See Hazardous Materials and Waste Management Section SM-9 and Vehicle and Equipment Maintenance SM-12*

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
	• *Ensure collection, removal, and disposal of hazardous waste complies with manufacturer's recommendations and is in compliance with federal, state, and local requirements.* • *See Hazardous Materials and Waste Management Section SM-9 and Vehicle and Equipment Management, Vehicle and Equipment Maintenance SM-12 for additional requirements.*	
Metals and Building Materials	• *Inspect construction waste and recycling areas regularly.* • *Schedule solid waste collection regularly.* • *If building materials or metals are stored on site (such as rebar or galvanized poles) store under cover under tarps or in containers.* • *Minimize the amount of material stored on site.* • *Do not stockpile uncovered metals or other building materials in close proximity to discharge points.* • *See Solid Waste Management Section SM-6 for additional requirements.*	*See Solid Waste Management Section SM-6*
Contaminated Soil	• *See Waste Management, Contaminated Soil Management Section SM-8 and/or Hazardous Materials and Waste Management Section SM-9 for additional requirements.* • *At minimum contain contaminated material soil by surrounding with impermeable lined berms or cover exposed contaminated material with plastic sheets.*	*See Waste Management, Contaminated Soil Management Section SM-8 and/or Hazardous Materials and Waste Management Section SM-9*

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Pollutant Source	Appropriate Site-Specific BMP to be Implemented	BMP Requirements
Fugitive Dust Control and Dust Control Water	• *Do not over spray water for dust control purposes which will result in runoff from the area.* • *Apply water as conditions require.* • *Washing down of debris or dirt into drainage, sewage systems, or State waters is not allowed.* • *Minimize exposed areas through the schedule of construction activities.* • *Utilize vegetation, mulching, sprinkling, and stone/gravel layering to quickly stabilize exposed soil.* • *Direct construction vehicle traffic to stabilized roadways.* • *Cover dump trucks hauling material from the site with a tarpaulin.* *See Dust Control Section SM-19 for additional requirements.*	*See Dust Control Section SM-19*
Concrete Truck Wash Water	• *Disposal of concrete truck wash water via percolation is prohibited.* • *Wash concrete-coated vehicles or equipment off-site or in the designated wash area.* • *Locate on-site wash area a minimum of 50 feet away or as far as practicable from storm drain inlets, open drainage facilities, or water bodies.* • *Runoff from the on-site concrete wash area shall be contained in a temporary pit or level bermed area where the concrete can set.* • *Design the area so that no overflow can occur due to inadequate wash area sizing or precipitation.* • *The temporary pit shall be lined with plastic to prevent seepage of wash water into the ground.* • *Allow wash water to evaporate or collect wash water and all concrete debris in a concrete washout system bin.* • *Do not dump liquid wastes into storm drainage system.* • *Dispose of liquid and solid concrete wastes in compliance with federal, state, and local standards.* • *See Waste Management, Concrete Wash and Waste Management Section SM-4 for additional requirements.*	*See Waste Management, Concrete Wash and Waste Management Section SM-4*

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Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
Sediment Track-Out	• *Include Stabilized Construction Entrance at all points that exit onto paved roads.* • *A sediment trapping device is required if a wash rack is used in conjunction with the stabilized construction entrance/exit.* • *The pavement shall not be cleaned by washing down the street.* • *If sweeping is ineffective or it is necessary to wash the streets, wash water must be contained either by construction of a sump, diverting the water to an acceptable disposal area, or vacuuming the wash water.* • *Use BMPs for adjacent drainage structures.* • *Remove sediment tracked onto the street by the end of the day in which the track-out occurs.* • *Restrict vehicle use to properly designated exit points.* • *Include additional BMPs that remove sediment prior to exit when minimum dimensions cannot be met.* *See Stabilized Construction Entrance/Exit Section SC-11 for additional requirements.*	*See Stabilized Construction Entrance/Exit Section SC-11*
Irrigation Water	• *Consider irrigation requirements.* • *Where possible, avoid species which require irrigation.* • *Design, timing and application methods of irrigation water to eliminate the runoff of excess irrigation water into the storm water drainage system.* *See Seeding and Planting Section EC-12 and California Stormwater BMP Handbook SD-12 Efficient Irrigation included in SWPPP Attachment A for additional requirements.*	*See Seeding and Planting Section EC-12 and California Stormwater BMP Handbook SD-12 Efficient Irrigation*
Hydrotesting Effluent	• *If work includes removing, relocation or installing waterlines, and Contractor elects to flush waterline or discharge hydrotesting effluent into State waters or drainage systems, the Contractor shall prepare and obtain HDOT acceptance of a NOI/NPDES Permit Form F application for HDOT submittal to DOH CWB at least 30 calendar days prior to the start of Hydrotesting Activities if necessary. Site specific BMPs will be included in the NOI/NPDES Permit Form F submittal.*	*Site specific BMPs will be included in the NOI/NPDES Permit Form F submittal.*

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Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
Dewatering Effluent	*If excavation or backfilling operations require dewatering, and Contractor elects to discharge dewatering effluent into State waters or existing drainage systems, Contractor shall prepare and obtain HDOT acceptance of a NOI/NPDES Permit Form G application for HDOT submittal to DOH CWB at least 30 calendar days prior to the start of Dewatering Activities if necessary. See Site Planning and General Practices, Dewatering Operations Section SM-18 for additional requirements.*	*See Dewatering Operations SM-18. Site specific BMPs will be included in the NOI/NPDES Permit Form G submittal.*
Saw-cutting Slurry	• *Saw cut slurry shall be removed from the site by vacuuming.* • *Provide storm drain protection during saw cutting. See Paving Operations Section SM-20 for additional requirements.* *Provide Storm Drain Inlet Protection and/or Perimeter Sediment Controls as applicable.*	*See Paving Operations Section SM-20, Storm Drain Inlet Protection SC-1, Perimeter sediment controls where applicable*
Concrete Curing Water	• *Avoid overspraying of curing compounds.* • *Apply an amount of compound that covers the surface, but does not allow any runoff of the compound.* *See California Stormwater BMP Handbook NS-12 Concrete Curing included in SWPPP Attachment A for additional requirements.*	*See California Stormwater BMP Handbook NS-12 Concrete Curing*

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Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
Plaster Waste Water	• *Direct all washwater into a leak-proof container or leak-proof pit. The container or pit must be designed so that no overflows can occur due to inadequate sizing or precipitation.* • *Locate on-site wash area a minimum of 50 feet away or as far as practicable from storm drain inlets, open drainage facilities, or water bodies.* • *Any significant residual materials remaining on the ground after the completion of construction shall be removed and properly disposed. If the residual materials contaminate the soil, then the contaminated soil shall also be removed and properly disposed of.* • *Plaster waste water shall not be allowed to flow into drainage structures or State waters. See Material, Storage and Handling Use SM-2, Stockpile Management Use Section SM-3, and Hazardous Materials and Waste Management Section SM-9 for additional requirements.*	*See Material, Storage and Handling Use Section SM-2, Stockpile Management Use Section SM-3, and Hazardous Materials and Waste Management Section SM-9*
Water-Jet Wash Water	• *For Water-Jet Wash Water used to clean vehicles, use off site wash racks or commercial washing facilities when practical.* • *See Vehicle and Equipment Cleaning Section SM-11 for additional information.* • *For Water-Jet Wash Water used to clean impervious surfaces, the runoff shall not be allowed to flow into drainage structures or State Waters.*	*See Vehicle and Equipment Cleaning Section SM-11*
Sanitary/Septic Waste	• *Locate Sanitary facilities in a convenient place away from drainage facilities.* • *Position sanitary facilities so they are secure and will not be tipped over or knocked down.* • *Wastewater shall not be discharged to the ground or buried.* • *A licensed service provider shall maintain sanitary/septic facilities in good working order.* • *Schedule regular waste collection by a licensed transporter.* • *See Sanitary Waste Section SM-7 for additional requirements.*	*See Sanitary Waste Section SM-7.*

"

END OF SECTION 209

The following Section shall be made part of the Standard Specifications:

SECTION 212 – ARCHEOLOGICAL MONITORING

"**212.01. Description.** This work includes monitoring construction activity for archaeological items as specified in the plans or as directed by the Engineer. Ground-altering activities associated with this project may have an effect on historic sites which may be present. Any adverse affects may be mitigated through archaeological monitoring. The Contractor shall be responsible for the incidental procedures and equipment required for full compliance with the requirements of the provisions for archaeological monitoring as outlined below.

The Contractor's attention is directed to the following requirements related to the archaeological monitoring work:

(a) The Contractor shall obtain the services of an Archaeologist or firm with an approved permit from the Department of Land and Natural Resources (DLNR) for conducting archaeological activities in the State of Hawaii to be present during all ground-altering activities conducted in the project area in order to document any historic properties which may be encountered during the proposed undertaking and to provide mitigation measures as necessary. Current list of Archaeological Consultants in the State of Hawaii for the calendar year is available at the link in the DLNR State Historic Preservation Division (SHPD) website. If the Archaeologist or firm is not on the current list, the Archaeologist or firm shall obtain the annual permit from DLNR at time of bid opening. Application for a permit could also be obtained at the link in the DLNR SHPD website. Monitoring must be done by, or under the direct supervision of, a person or persons meeting the professional qualifications for an Archaeologist listed in Chapter 13-281 Hawaii Administrative Rules (HAR)). The supervising archaeologist must be present at the job site during excavation.

(b) Pre-Construction Conference: A pre-construction conference between the archaeological monitor retained by contractor and the construction crew shall be required. Before work begins on the project, the archaeologist shall meet with the entire construction crew and explain what archaeological materials may be encountered and the procedures to be followed if materials are encountered.

(c) Prosecution Of Work: If surface remains, subsurface deposits or human skeletal remains are encountered during ground disturbing activities, the Contractor shall immediately suspend the operation and follow all of the requirements of this section.

(d) The SHPD (Oahu office) shall be notified in writing upon the on-set and completion of the proposed undertaking.

(e) The contractor shall submit a draft Archaeological Monitoring Report (AMR) to the Engineer within 90 days after the completion of the proposed undertaking. Upon acceptance of the draft AMR by DLNR, the contractor shall submit the final AMR to the Engineer for their record.

212.02 Materials, None Specified.

212.03 Construction Requirements. The site shall be investigated prior to excavation activity. All project related ground disturbing activities shall be monitored in accordance with the SHPD-accepted Archaeological Monitoring Plan (AMP). Whenever the Contractor encounters possible archaeological, historic or burial site findings, the contractor shall immediately suspend the operation and the finding(s) shall be protected from further damage. The Contractor shall immediately inform the Engineer verbally and follow up with a written letter. The Engineer, or with their consent the monitoring archaeological firm, will contact the DLNR and other agencies to evaluate such findings and decide the course of action.

The Contractor shall not resume operations suspended without the prior written acceptance of the Engineer. The Contractor shall not count delays resulting from the discovery, investigation, and handling of such findings against the completion date. The Engineer will govern suspensions of work according to Subsection 108.05(B)(5) —Delays for Suspension of Work. Also, the Contractor shall conform to Chapter 6E, Hawaii Revised Statutes (HRS).

Failure or refusal to comply with the terms of this Section or Chapter 6E, HRS and the amendment to Chapter 6E, HRS, may subject the Contractor to the penalties described in Section 6E-11, HRS and amendment to Chapter 6E, HRS.

Construction work and equipment shall remain within the right-of-way limits of this project.

The Archaeological Monitor will decide the limits of the site. Also, the Archaeological Monitor will decide, with the Engineer, the best means for protecting the site from further disturbances which requires further investigation or salvage as determined by the State Historical Preservation Officer (SHPO). Protection may include barricades, roping off, temporary fencing or other means.

212.04 Method of Measurement. The Engineer will measure Archaeological Monitoring, including remedial measures, on a force account basis according to 109.06 – Force Account Provisions and Compensation and as ordered by the Engineer.

212.05 Basis of Payment. The Engineer will pay for the accepted Archaeological Monitoring on a force account basis according to Subsection 109.06 Force Account Provisions and Compensation. Payment will be full compensation for the work prescribed in this Section, by the Engineer, and the contract documents.

The Engineer will make pay for the following item when included in the proposal schedule:

Pay Item	**Pay Unit**
Archaeological Monitoring	Force Account

An estimated amount for the force account is allocated in the proposal schedule under Archaeological Monitoring. The actual amount to be paid will be the sum shown on the accepted force account records whether this sum be more or less than the estimated amount allocated in the proposal schedule.

The Engineering will not pay for work required that is due to the Contractor’s convenience, negligence, carelessness or failure to properly monitor excavation activity."

END OF SECTION

SECTION 301 – HOT MIX ASPHALT BASE COURSE

Make the following amendments to said Sections:

(I) Amend **Section 301.03(B) Compaction** by revising the second paragraph from lines 84 to 87 to read as follows:

"Compact mixture immediately upon completion of spreading operations to density of not less than 92.0 percent of maximum theoretical specific gravity in accordance with AASHTO T 209, modified by deletion of Supplemental Procedure for Mixtures Containing Porous Aggregate."

(II) Amend **Section 301.04 Measurement** from lines 98 to 100 to read as follows:

"**301.04 Measurement.**

(A) The Engineer will measure HMAB course per ton in accordance with contract documents."

(III) Amend **Section 301.05 Payment,** from lines 102 to 111 to read as follows:

"**301.05 Payment.** The Engineer will pay for the accepted pay items listed below at the contract price per pay unit, as shown in the proposal schedule. Payment will be full compensation for the work prescribed in this section and the contract documents.

The Engineer will pay for one of the following pay items when included in the proposal schedule:

	Pay Item	**Pay Unit**
(A)	Hot Mix Asphalt Base Course	Ton

(1) 80% of the contract unit price upon completion of submitting a job-mix formula acceptable to the Engineer; preparing the surface, spreading, and finishing the mixture; and compacting the mixture by rolling;

(2) 20% of the contract unit price upon completion of cutting samples from the compacted pavement for testing; placing and compacting the sampled area with new material conforming to the surrounding area; protecting the pavement; and final analysis.

The Engineer may, in lieu of requiring removal and replacement, use the sliding scale factor to accept HMAB compacted below 92.0 percent. The Engineer will make payment for the material in that production day at a reduced price arrived at by multiplying the contract unit price by the pay factor shown in Table 301.05-1.

Table 301.05-1 – Sliding Scale Pay Factor	
Percent Compaction	**Percent Payment**
92.0 or greater	100
90.0 – 91.9	80
<90.0	Removal

"

END OF SECTION 301

SECTION 401 – HOT MIX ASPHALT (HMA) PAVEMENT

Make the following amendments to said Sections:

(I) Amend **Section 401.02 Materials**, by adding the following after line 14:

"Warm Mix Asphalt Additive 702.06"

(II) Amend **Section 401.02(A) General**, by adding the following paragraph after line 24:

"The manufacture of HMA may include warm mix asphalt (WMA) processes in accordance with these specifications. WMA processes include combinations of organic additives, chemical additives, and foaming."

(III) Amend **Section 401.02(A) General**, by replacing lines 36 - 37 to read as follows:

"In surface and binder courses, aggregate for HMA may include RAP quantities up to 20 percent of total mix weight."

(IV) Amend **Section 401.02(C) Submittals**, by adding the following paragraph after line 89:

"The Contractor may use warm mix asphalt (WMA) processes in the production of HMA. The Contractor shall submit to the Engineer for approval, the proposed process and how it will be used in the manufacture of HMA. The process submittal shall include the temperature range of the WMA."

(V) Amend **Section 401.03(B)(3) Asphalt Pavers**, from line 200 to include the following:

"**(h)** Equipped with a mean of preventing the segregation of the coarse aggregate particles from the remainder of the bituminous plant mix when that mix is carried from the paver hopper back to the paver augers. The means and methods used shall be approved by the paver manufacturer and may consist of chain curtains, deflector plates, or other such devices and any combination of these.

The following specific requirements shall apply to the identified bituminous pavers:

(1) Blaw-Knox bituminous pavers shall be equipped with the Blaw-Knox Materials Management Kit (MMK).

(2) Cedarapids bituminous pavers shall be those that were manufactured in 1989 or later.

(3) Barber-Green/Caterpillar bituminous pavers shall be equipped with deflector plates as identified in the December 2000 Service Magazine entitled “New Asphalt Deflector Kit {6630, 6631, 6640}”.

Prior to the start of using the paver for placing plant mix, the Contractor shall submit for approval a full description in writing of the means and methodologies that will be used to prevent bituminous paver segregation. Use of the paver shall not commence prior to receiving approval from the Engineer.

The Contractor shall supply a Certificate of Compliance that verifies that the approved means and methods used to prevent bituminous paver segregation have been implemented on all pavers used on the project and is working in accordance with the manufacturer’s requirements.”

(VI) Amend **Section 401.03(F)(1) HMA Pavement Courses One and a Half Inches Thick Or Greater**, from lines 499 to 505 to read as follows:

“**(1) HMA Pavement Courses One and a Half Inches Thick Or Greater.** Where HMA pavement compacted thickness indicated in the contract documents is 1-1/2 inches or greater, compact to not less than 92.0 percent nor greater than 97.0 percent of the maximum specific gravity determined in accordance with AASHTO T 209, modified by deletion of Supplemental Procedure for Mixtures Containing Porous Aggregate.”

(VII) Amend **Section 401.03(F)(3) HMA Pavement Courses One and a Half Inches Thick or Greater In Special Areas Not Designated For Vehicular Traffic**, from lines 530 to 538 to read as follows:

“**(3) HMA Pavement Courses One and a Half Inches Thick or Greater In Special Areas Not Designated For Vehicular Traffic.** For areas such as bikeways that are not part of roadway and other

areas not subjected to vehicular traffic, compact to not less that 90.0 percent of maximum specific gravity determined in accordance with AASHTO T 209, modified by deletion of Supplemental Procedure for Mixtures Containing Porous Aggregate. Increase asphalt content by at least 0.5 percent above that used for HMA pavements designed for vehicular traffic."

(VIII) Amend **Section 401.04 Measurement**, from lines 597 to 603 to read as follows:

"**401.04 Measurement.**

(A) The Engineer will measure asphalt concrete pavement per square yard in accordance with the contract documents.

(IX) Amend **Section 401.05 Payment**, from lines 605 to 635, to read as follows:

"**401.05 Payment.** The Engineer will pay for the accepted pay items listed below at the contract price per pay unit, as shown in the proposal schedule. Payment will be full compensation for the work prescribed in this section and the contract documents.

The Engineer will pay for each of the following pay items when included in the proposal schedule:

Pay Item	**Pay Unit**
(A) HMA Pavement, Mix No. IV	Square Yard

(1) 80% of the contract unit price upon completion of submitting a job-mix formula acceptable to the Engineer; preparing the surface, spreading, and finishing the mixture; and compacting the mixture;

(2) 20% of the contract unit price upon completion of cutting samples from the compacted pavement for testing; placing and compacting the sampled area with new material conforming to the surrounding area; protecting the pavement; and final analysis.

The Engineer will pay for cold planing in accordance with and under Section 415 – Cold Planing of Existing Pavement.

The Engineer will pay for adjusting existing frames and covers and valve boxes in accordance with and under Section 604 – Manholes, Inlets and Catch

Basins and Section 626 – Manholes and Valve Boxes for Water and Sewer Systems.

The Engineer may, in lieu of requiring removal and replacement, use the sliding scale factor to accept HMA pavements compacted below 92.0 percent and above 97.0 percent. The Engineer will make payment for the material in that production day at a reduced price arrived at by multiplying the contract unit price by the pay factor shown in Table 401.05-1.

Table 401.05-1 – Sliding Scale Pay Factor for Compaction

Percent Compaction	Percentage Payment
> 98.0	Removal
97.1 - 98.0	95
92.0 - 97.0	100
90.0 - 91.9	80
<90.0	Removal

"

END OF SECTION 401

SECTION 415 – COLD PLANING OF EXISTING PAVEMENT

Make the following amendments to said Sections:

(I) Amend **Section 415.04 Measurement**, from line 67 to 68 to read as follows:

"**415.04 Measurement.**

(A) The Engineer will measure cold planing per square yard in accordance with the contract documents."

(II) Amend **Section 415.05 Payment**, from line 70 to 79 to read as follows:

"**415.05 Payment.** The Engineer will pay for the accepted pay items listed below at the contract price per pay unit, as shown in the proposal schedule. Payment will be full compensation for the work prescribed in this section and the contract documents.

The Engineer will pay for one of the following pay items when included in the proposal schedule:

	Pay Item	**Pay Unit**
(A)	Cold Planing	Square Yard

(1) 80 percent of the contract bid price upon completion of removing the indicated thickness and clean and sweep before opening to public traffic;

(2) 20 percent of the contract bid price upon completion of removing the material and disposing of the removed material."

END OF SECTION 415

SECTION 607 – CHAIN LINK FENCES AND GATES

Make the following amendment to said Section:

(I) Amend **607.01 – Description** to read as follows:

"**607.01 Description** This section describes constructing a vinyl coated chain link fence."

(II) Amend **607.02 Materials** by adding the following after line 12 to read as follows:

"**Vinyl Coated Chain Link Fence.** All components of the Vinyl Coated Chain Link Fence including fabric, posts, rail, caps, wire, bracing, cables, fittings shall be manufactured by Master Halco, 4000 West Metropolitan Drive, Suite 400, Orange, California 92868 1-888-643-3623 or approved equal. Submit manufacturer shop drawings and catalog cuts for Engineer approval.

Vinyl Coated Chain Link Fence shall be Master Halco Permafuse II Polyolefin or approved equal. Chain link fence fabric shall be 9 gauge galvanized core wire with a Polyolefin elastomer coating, 6 mil (0.15mm) to 10 mil (0.25mm) thickness, thermally fused to zinc-coated steel core wire: Per ASTM F668 Class 2b. Minimum Core wire tensile strength of 75,000 psi (517 MPa). Helically wound and woven to height as indicated on drawings with Forest Green ASTM F 934. Selvage of fabric knuckled at top and knuckled at bottom.

Steel Fence framing shall be cold formed and welded steel pipe complying with ASTM F 1043, Group IC, with minimum yield strength of 50,000 psi (344 MPa), sizes as indicated. Protective coating per ASTM F 1043, external coating Type B, zinc with organic overcoat, 0.9 oz/ft^2 (270 g/m^2) minimum zinc coating with chromate conversion coating and verifiable polymer film. Internal coating Type B, minimum 0.9 oz/ft^2 (270 g/m^2) zinc or Type D, zinc pigmented, 81% nominal coating, minimum 3 mils (0.08mm) thick. Color coating of minimum 10 mils (0.254mm) of thermally fused polyolefin in Forest Green color to match fabric.

All accessories of the Polyolefin Vinyl Coated Chain Link Fence including posts, rail, caps, wire, bracing, cables, fittings shall meet ASTM F 626 with a minimum of 6 mils coating in Forest Green color to match fabric. Provide items required to complete fence system. Galvanize each ferrous metal item and finish to match framing. Fittings should match Master Halco specifications or equal.

Provide a manufacturer's warranty that for the Polyolefin Coated Chain Link Fence that is free from color coating flaking and peeling and other defects in material and workmanship for a period not less than fifteen years."

(III) Amend **607.05 – Payment** to read as follows:

"**616.05 Payment.** The Engineer will pay for the accepted pay items listed below at contract price per pay unit, as shown in the proposal schedule. Payment will be full compensation for the work prescribed in this Section and contracted documents.

The Engineer will pay for the following pay item when included in the proposal schedule:

Pay Item	**Pay Unit**
Vinyl Coated Chain Link Fence	Linear Foot

The Engineer will not pay separately for the cost of removal and disposal of the existing chain link fence, posts and concrete footings. Consider the cost of removal and disposal of the existing chain link fence, posts and concrete footings as included in the Vinyl Coated Chain Link Fence pay. item."

END OF SECTION 607

SECTION 619 – PLANTING

Make the following amendments to said Section:

(I) Amend **Subsection 619.02(H)(3) – Application Records** from lines 207 to 210 to read:

"**(3) Application Records.** Records shall be kept by Contractor of dates of application, type of fertilizer or manure used, quantities, and areas that were covered and shall be submitted to Engineer within 24 hours of application. Document if rates and amounts of fertilizer deviate from manufacturer's specifications."

(II) Amend **Subsection 619.03(A) – Codes and Standards** from lines 262 to 264 to read:

"**(A) Quality Assurance.**

(1) Codes and Standards. Perform work in accordance with applicable laws, codes, and regulations. Provide inspections and permits required by Federal, State, and local governmental authorities.

(2) Qualifications. To become qualified in the work class of Landscaping, the applicant shall provide a letter containing the following:

(a) A statement declaring at least five continuous years of experience of a scope similar to that required for the work, including installing temporary irrigation (where applicable), hydro-mulch application, soil preparation, and plant installation and establishment.

(b) The letter must be signed and dated by the Owner of the Company or Company Officer.

(c) Produce a list of completed projects similar to the scope and size of the required work to substantiate the experience. The list shall contain a minimum of five different landscape projects, excluding single-family residential landscape. A minimum of five different landscape projects shall be rated positive on a performance evaluation by the references in the list below. Names and references must be current and verifiable. Use separate sheets of paper that contain all of the following information:

1. Project name

2. Location of project (city, state)

3. Owner

4. Owner Contact (name and current phone number)

5. Architect or Engineer Company Name

6. Architect or Engineer Contact (name and current phone number)

7. Construction Manager (name and current phone number)

8. Description of Project, Scope of Work Performed

9. Total Value of Construction (including change orders)

10. Original Scheduled Completion Date

11. Actual Date of Completion

(d) Approval. The Contractor shall submit the items under this section to the Engineer for approval prior to construction. If the applicant does not have proof of five continuous years of experience with a minimum of five completed projects similar in scope and size, the Contractor shall remove the applicant from the project upon receipt of a written notice from the Engineer. Requests to substitute an applicant will be allowed under Subsection 105.16 Subcontracts."

(III) Amend **Subsection 619.03(I)(1) – Adding Fertilizer and Amendments** by revising the section from lines 310 to 314 to read:

"(**1)** Uniformly distribute fertilizer and amendments over planting areas as recommended by the Soil Analysis Report as specified in Section 617 – Planting Soil. Document if rates and amounts of fertilizer deviate from manufacturer's specifications. Rototill top four inches of soil to evenly incorporate fertilizer and amendments. Rototill before installing drip irrigation system."

(IV) Amend **Subsection 619.03(T)(3) – Fertilizing** by adding the following paragraph after line 478:

"Submit recommendations from a licensed Landscape Architect when deviating from the application rates and amounts above. Document if the rates and amounts of fertilizer deviate from manufacturer's specifications."

(V) Amend **619.04 – Measurement,** by adding the following paragraph after line 539:

"The Engineer will measure Arborist Services on a force account basis according to 109.06 – Force Account Provisions and Compensation and as ordered by the Engineer"

(VI) Amend 619.05 – Payment by revising lines 541 to 556 to read:

"**619.05 Payment.** The Engineer will pay for the accepted Arborist Services on a force account basis according to Subsection 109.06 Force Account Provisions and Compensation. Payment will be full compensation for the work prescribed in this Section, by the Engineer, and the contract documents.

The Engineer will pay for each of the following pay items when included in proposal schedule:

Pay Item	**Pay Unit**
Arborist Services	Force Account"

END OF SECTION 619

Make this section a part of the Standard Specifications:

"SECTION 621 - ELECTRIC AND COMMUNICATION SYSTEMS

621.01 Description. This work shall consist of furnishing all labor, materials and equipment to install in place and in operating condition underground and surface mounted structures required for the facilities of Hawaiian Electric Company, herein referred to as HECO; the Department of Transportation, herein referred to as DOT. Such works shall be performed and tested at the indicated locations in accordance with the requirements herein specified and the indicated details, or as ordered by the Engineer, and includes but is not limited to the following:

(A) Complete underground duct system including saw cutting, excavation, backfilling, concrete work, conduits, handholes, to be used by the HECO for their cables and equipment. Work shall also include securing the approval of the HECO inspector.

(C) Coordinate work and arrange for periodic inspections by DOT and Engineer.

(D) Pass test mandrel through all conduits, and make corrections as directed by the inspectors or Engineer.

(E) Provide each conduit run with a nominal 1/8-inch pull line made of polypropylene, polyester, or polyolefin extending through the entire length. Double additional 2 feet of polypropylene polyester or polyolefin pull line back into the conduit at each end of the run. The pull line installed in the conduits must have a minimum of 240 lbs. tensile strength, must be rot and mildew resistant. No slicing of the pull line is allowed.

(F) Immediately report and pay for damages to existing equipment.

(G) Obtain and pay for electrical permits, arrange for periodic inspection by local authorities and deliver certificate of final inspection to Engineer.

(H) Contractor shall check and test the installation for completeness and functional operation as described by the drawings and specified herein. Final test shall be in the presence of Engineer and representatives of utility companies. Contractor shall arrange and pay for all testing costs.

(I) Work shall include providing power to traffic signal and street light equipment, this shall include:

(1) Installation of HECO metering equipment.

(2) Supply and installation of all mounting hardware.

(3) Supply and installation of power duct systems.

(4) Supply and installation of street light standards.

(5) Supply and installation of branch circuit wiring for all services and coordinate connections with HECO for traffic signal metering and unmetered street lights.

(6) Supply of traffic management during construction.

(7) Support testing and commissioning of the components.

Incidental parts which are not shown on the plans or specified herein and which are necessary to complete the underground electric duct systems shall be furnished and installed by the Contractor as though such parts were shown on the plans, or specified herein or in the special provisions.

All electrical equipment shall conform to the NEMA Standards, and all electrical work shall conform to ordinances of City and County of Honolulu; latest edition of National Electrical Code; General Order No. 10, Public Utilities Commission, State of Hawaii; and Regulations.

Applicable rules, standards and specifications of following associations shall apply to materials and workmanship:

American National Standards Institute (ANSI)
Edison Electric Institute (EEI)
Illumination Engineer Society (IES)
National Board of Fire Underwriters (NBFU)
National Electrical Manufacturer's Association (NEMA)
National Fire Protection Association (NFPA)
Underwriters' Laboratories, Inc. (UL)

621.02 Materials. Materials shall meet the requirements specified in the following subsections of Division 700 - Materials.

(A) Rigid Steel Conduit PVC Coated.

(1) Zinc-coated rigid steel conduits prior to PVC coating shall conform to Federal Specification WW-C-581d, ANSI Standard C80.1, UL Standard #6 and NEMA RN1-1980.

(2) All conduits shall be hot dip zinc-coated inside and out with zinc-coated threads.

(3) All conduit and connectors shall be PVC coated.

(4) Prior to PVC coating, zinc-coated surfaces shall be coated with epoxy-acrylic primer to ensure bond greater than coating tensile strength.

(5) 40 mil-thick, minimum, plastic coating shall be applied by dip-method.

(6) Factory-applied plastic coating shall be applied by same manufacturer who produced the hot dip zinc-coated conduit. The coated conduit shall conform to NEMA Standard No. RN1-1980 (Type 40).

(7) Fittings and Accessories.

(a) Conduit clamps, u-bolts, nuts and conduit support system shall be stainless steel. Nuts shall be installed with manufacturer supplied wrenches.

(b) Couplings shall have 40-mil-thick longitudinal ribs.

(c) All coated conduits shall be installed in accordance with manufacturer recommendations.

(d) Fittings and accessories shall be provided to ensure a continuous grounded system.

(8) Provide 5’ maximum spacing between conduit supports and 3’ spacing between conduit support and junction box.

(9) Provide minimum three (3) inches clearances from the edge of the bottom most conduit to the bottom of the unistruct.

(10) Provide and install stainless steel spring nuts.

(11) Conduits shall have bushings/caps on the end for entrances into junction boxes.

(B) Ducts and Conduits. Ducts and Conduits shall conform to the requirements of Section 712.27 - Conduits. Ducts and conduits required shall be new and provided by the Contractor in accordance with the construction drawings and specifications.

(1) Polyvinyl Chloride (PVC) Schedule 40 type ducts shall be provided for the electrical and communication duct systems. The fittings shall be of the same material as the conduit and duct.

(2) Conduit Riser Bends shall be polyvinyl chloride (PVC) pipes with 6-foot radius for 46 KV use and 3-foot radius for 12 KV use. The fittings shall be of the same material as the conduit and duct.

(C) Concrete. Concrete shall conform to the requirements of Section 601 - Structural Concrete, except that for concrete jackets and concrete caps, the maximum size of coarse aggregate shall be 3/4 inch in lieu of the one-inch to No. 4 specified and the slump shall be 6-inch minimum and 7-inch maximum. Concrete for manholes, handholes, and pullboxes shall be Class A. Concrete for jacketing conduits and ducts shall be Class B except that the cement content shall be 5.6 sacks per cubic yard.

(D) Junction Box. NEMA 4X stainless steel. Provide as required to minimize cable pulling tension. Provide tamper proof screws on all boxes.

(E) Single Conductors: Stranded copper, XHHW-2 insulated unless otherwise noted on plans. Color coding to NEC and as shown on plans.

(F) Enclosed Circuit Breaker

(1) Enclosed circuit breaker shall be designed, manufactured, and tested in accordance with UL 489, CSA 22.2, and NEMA 250 standards and certifications.

(2) Provide NEMA 1 surface mounted general purpose enclosure intended for indoor use.

(3) Provide necessary stainless steel mounting accessories for mounting enclosed circuit breaker within new pad mounted enclosures.

(4) All enclosed circuit breakers shall have nameplates that contain a permanent record of catalog number and maximum rating.

(5) Provide handle mechanisms that are pad-lockable in the “OFF” position.

(G) Cabinet Foundation. Construction per details on drawings.

(H) Inspection. Materials will be subject to inspection at any time. Failure of the Engineer to note faulty material or workmanship during construction will not relieve the Contractor of his responsibility for

removing or replacing such materials and dredging the work at his expense.

621.03 Construction Requirements.

(A) General.

(1) The Contractor shall in performing required installation of conduit and equipment, exercise due care to avoid disturbing existing facilities. Shall remove and dispose of all demolished or excess material from the job site.

(2) Upon completion of the work, the Contractor shall submit an 'As Built' or corrected plan showing in detail thereon all construction changes.

(3) Before bidding, the Contractor shall visit project site, carefully review each section of the Specification and all Drawings of this Contract, and obtain and review the standards, specifications and drawings of the local utility companies.

The Contractor shall report any error, conflicts or omissions to the Engineer at least one week before submission of bids for interpretation or clarification. If errors or omissions are not reported, the Contractor shall provide necessary work at no cost to the State of Hawaii to properly complete intent of Specification and Plans.

(B) Installation of Conduits and Duct Banks. All joints shall be water tight.

(C) Existing Utilities. Existing utilities are shown on the drawings in approximate locations for the convenience of the Contractor. It is not the intention of plans to imply that all existing utilities are drawn and located, and the fact that any utility is not shown on the drawings shall not relieve the Contractor of his responsibility under this Section. It shall be the Contractor's responsibility to ascertain the location of all existing utilities which may be subject to damages by construction under this Contract. The Contractor shall:

(1) Support and protect all HECO, CATV, HTCO, City and/or State utilities during construction,

(2) Notify HECO, CATV, HTCO, City and/or State immediately of any damage to its system caused by construction under this Contract, and

(3) Reconstruct, at his expense, damaged portions of the

utility system in accordance with the requirements and specifications of HECO, CATV, HTCO, City and/or State.

(4) The Contractor shall be responsible for and shall pay for all damages to existing utilities of all types.

(D) HECO Facilities. The Contractor shall provide HECO with 24-hour access to all existing HECO facilities that are to remain, or, for facilities that are to be removed, until they are removed and to all new HECO facilities after they are installed. The Contractor shall be responsible for any delays in utility company work due to his failure to provide access to utility company facilities. All existing HECO facilities shall remain in place until proposed permanent facilities are completed and energized. Any cost for temporary relocations arising during construction shall be borne by the Contractor.

Electrical equipment or conductors, whether electrically energized or not, shall remain in place at all time during construction. Handling and moving of electrical equipment or conductors, when required by the Engineer, shall be done by HECO. Work by the Contractor in areas with energized electrical equipment or conductors shall be performed with extreme caution to prevent accidents and to avoid disturbing or damaging this equipment or conductors or any temporary supports or protective guards that are constructed. Unless otherwise permitted by HECO, all work by the Contractor in areas with energized equipment of conductors shall be performed in the presence of a HECO inspector and/or standby man. The Contractor shall have the sole responsibility for maintaining safe and efficient working conditions and procedures in these areas.

Any existing or new HECO facilities including equipment or conductors damaged by the Contractor during construction shall be replaced by HECO at the Contractor's expense.

The Contractor shall give HECO two weeks advance notice for any work to be done by HECO on its facilities. Unless otherwise indicated on the drawings or otherwise directed by the Engineer, HECO will:

(1) Remove the concrete envelope from existing underground HECO ducts containing electrical cables.

(2) Construct temporary supports and protective barriers for bare duct and electrical cables immediately after removal of the concrete envelope is completed. Material for such supports and barriers shall be furnished by the Contractor as an incidental cost.

(3) Remove temporary supports and protective barriers constructed under item (2) above.

(E) Excavation and Backfill. All excavation and backfill for electric, telephone and cable television underground structures and trenches shall conform to the requirements of Section 204 - Excavation and Backfill for Miscellaneous Facilities, modified as follows:

(1) Excavation.

(a) The width of trenches for concrete encased ducts shall be not less than the width of the encasement nor more than that required to properly and safely execute the work.

(b) Ducts encased in concrete jackets which are bedded in disturbed (fill) ground shall be installed in the following manner: Embankments shall be built up and thoroughly compacted to the elevation which is three feet above the top-of-jacket elevation, or to the required elevation shown on the plans, whichever is less than five times the width of the jacket. This work shall conform to the requirements of Section 203 - Excavation and Embankment. The trench to accommodate the jacket shall then be excavated through the constructed embankment.

(c) The Contractor shall not excavate for manholes, handholes and duct lines until he has the locations for these structures staked out and verified to be correct, and approved by the respective utility company inspectors.

(d) Trenches shall be excavated at least 50 feet ahead of duct placement so that any obstruction to the duct line can be avoided through gradual alignment. The profile grade may be adjusted by the Engineer to increase or decrease the excavation depth (up to 3 feet) as a result of unforeseen obstruction at no additional cost.

(e) Excavation for each handhole and manhole, plus 50 feet of trenching for all ducts connected to those structures shall be completed, and the locations and depths of the handholes and manholes shall be verified and approved by the respective utility company inspectors prior to construction or installation of the structures. All cuts in excess of depths required shall be

filled with concrete, beach sand, or Type A backfill. The lateral limit for handholes and manholes shall be the vertical surfaces two feet outside the neat lines of the structures.

(f) The bottom of the trench excavation shall be flat and smooth. All trenches shall be approved by the Engineer and the utility company inspectors before any ducts or conduits are placed or any structures and foundations are constructed.

(g) The trenches shall be widened at handholes and manholes to permit proper entry of the ducts and conduits.

(h) The Contractor shall provide all sheathing and bracing to support the sides of the excavated trench. Provision and removal of these items are incidental to the trenching work.

(i) Saw cutting work shall be considered incidental to the trenching work.

(2) Backfill.

(a) No backfilling shall be done until the duct and conduit installations, and the handhole and manhole placements have been verified to be correct, and approved by the respective utility company inspectors.

(b) Material for use as trench backfill for direct buried conduit above select backfill shall be nonexpansive and shall conform to Section 204 – Excavation and Backfill for Miscellaneous Facilities and requirements stated below. Backfilling and compaction shall be as specified in Section 204 - Excavation and Backfill for Miscellaneous Facilities. Backfill material shall be beach sand, earth or earth and gravel mixture. If earth and gravel, mixture must pass 1/2 inch mesh screen and contain no more than 20 percent of rock particles by volume.

(c) Backfilling shall be to finished grades indicated on accompanying drawings, and/or matching existing conditions. Backfill material shall be placed in maximum of 8" layers in loose thickness before compacting. Backfill shall be thoroughly compacted with hand or mechanical tampers to 95% of the ASTM D1557 maximum dry density. In no case shall tamping be

accomplished by using the wheels or tracks of a vehicle.

(F) Installation of Conduits and Duct Banks. All joints shall be water tight and all ducts shall be installed to drain towards pull points unless otherwise shown on the plans.

(1) Plastic Duct Joints.

(a) Field cutting of plastic ducts shall be performed by the Contractor and only with the use of a miter box. Burrs shall be removed by filing before the joint is made. All foreign matter shall be wiped off the sockets of the fittings and the edges of the duct with a clean cloth.

(b) Cement for plastic duct joints shall be obtained from the duct manufacturer. Thinning of the cement will not be permitted. A liberal and uniform coat of cement shall be applied with a natural bristle brush to the inside of the coupling and to the outside of the duct end. Immediately thereafter, the duct shall be slipped into the socket of the fitting with a half-twisted, and the excess cement shall be wiped off.

(c) Allow the joined members to cure for at least five minutes before disturbing or applying stress to the joint. After this initial cure, care must be exercised in handling to prevent twisting or pulling the joint. In damp weather, this interval shall be increased to allow for slower evaporation of the solvent.

(d) Another fitting or section of conduit may be added to the opposite end within 2 or 3 minutes if care is exercised in handling so that strain is not placed on the previous assembly.

(e) Any joint included in a section of conduit to be bent in the trench shall be assembled above ground and allowed to lie undisturbed for at least two hours before installation. In cases where a plastic connection is made with the union under stress due to misalignment or other factors, the union shall be staked out to relieve stress on the joint until the conduit is backfilled or encased.

(2) Plastic Duct Installation.

(a) The Contractor shall provide spacers to maintain proper separation between ducts. The bottom duct spacers shall be placed on the prepared trench bottom,

the first tier of ducts placed in the grooves of the spacers, and couplings attached to the duct ends. Spacers shall be 15 inches or more away from any coupling or joint. Successive lengths of ducts shall then be placed and connected to the preceding lengths as specified above. The second tier of duct spacers shall then be placed over the ducts previously placed and followed by installation of couplings. The operation shall be repeated for each successive tier until the top tier is set in place after which the top spacers are placed.

(b) When conduit is assembled above the ground, the spacer shall be supported in a vertical position by use of a No. 4 rebar and smooth black steel wire, No. 14 gage.

(c) Duct alignment shall be as straight as feasible. Such directional changes as are required shall be made by using field made bends or with segments using angle couplings or deflection couplings, except where otherwise indicated. The deflection angle between two adjacent lengths of duct shall not exceed five degrees, unless otherwise indicated.

Horizontal bends for conduits/ducts shall be constructed with 25-foot minimum radius curves unless indicated otherwise or approved by the respective utility company inspector. Vertical bends for conduits/ducts shall be constructed with 20-foot minimum radius curves unless indicated otherwise or approved by the respective utility company inspector.

Spacers shall not be located at the centers of a long radius bend. On pre-fabricated bends, the spacer shall be located in the tangent, free of the coupling. On trench formed bend, the spacer shall be located midway between the tangent and center of the bend.

(d) Precaution shall be taken to prevent damage in plastic duct lines from thermal expansion and contraction. All ducts shall be cool when placed in trenches and when the concrete jacket is being poured.

(e) Ducts ending in handholes and manholes shall be terminated with junior end bells. End bells, terminators or ducts shall be flush to inside wall surfaces; duct extension into boxes is not acceptable.

The terminated ends of the conduit in an

underground structure shall be free of support for a distance of at least 10 feet from the structure. The conduit shall be aligned and supported inside the structure with proper spacing and shall be cut to length after the concrete envelope has cured.

(f) The ends of the conduit shall be sealed with a plastic cap, plug, or approved substitute at the end of each day`s work, when work on duct installation has to be interrupted, where ducts may be submerged in water, and in stub outs.

(3) A minimum thickness of 4 thousandths of an inch (mils), with a solid aluminum core or aluminum backing for detection with metal detector. Tape shall be 6 inches wide, red in color for electrical power lines, and imprinted with "CAUTION BURIED ELECTRIC LINE BELOW" in black lettering. For all HECO duct lines, provide electrical detectable warning tape in accordance with HECO Specification No. M0302 – Warning Tape for Underground Conduit Systems.

(4) The Contractor shall apply a thin coat of sealing compound on ducts and conduits at couplings and bells.

(5) Conduits stubbed for future connections shall be plugged and marked.

(6) The Contractor shall securely anchor duct banks prior to pouring concrete encasement to prevent ducts from floating.

(G) The Contractor shall test the completed ducts by passing a test mandrel through the length of each duct of each duct run. For HECO conduits, the mandrel shall be a bullet shaped, blunt tipped type, unless indicated otherwise, about 14 inches long with a diameter 1/2 inch less than the inside diameter of the ducts through the length of each duct run. Scars in the mandrel deeper than 1/32 inch, other than that caused by normal abrasion between the duct line and bottom of mandrel shall be considered an indication of the presence of burrs and/or obstructions in the duct run. The Contractor shall remove such burrs and/or obstructions, after which the test mandrel will be passed through again. All tests shall be conducted in the presence of the Engineer and respective utility company inspectors, and shall be repeated until the results obtained are satisfactory to the Engineer and to the utility company inspectors.

(H) Unless indicated otherwise, the Contractor shall furnish and install a 1/8 inch Polyolefin pull line between pull points in all ducts after testing.

(l) Concrete. The Contractor shall notify the utility company's inspector a minimum of 72 hours prior to placement of any concrete.

(1) Securely anchor duct banks prior to pouring concrete encasement to prevent ducts from floating.

(2) When pouring concrete, prevent heavy masses of concrete from falling directly on ducts. If unavoidable, protect ducts with plank.

(3) Direct flow of concrete down sides of duct bank to bottom, allowing concrete to rise between ducts, filling all open spaces uniformly.

(4) To insure against voids in concrete, work a long, flat splicing bar or spatula liberally and carefully up and down the vertical rows of ducts. Mechanical vibrators shall be used for stacked duct banks of three ducts or higher.

(5) Cure concrete for a minimum of 72 hours before permitting traffic and/or backfilling.

(6) Convey concrete from mixer to forms rapidly to prevent segregation. Free drop shall be limited to five feet, unless authorized by inspector.

(7) Placing.

(a) Clean and remove all debris from inside forms and trenches before placing concrete.

(b) Place concrete only on clean damp surfaces, free from water.

(c) Place concrete in forms, in horizontal layers not exceeding 18" thickness.

(d) Place concrete to avoid segregation of materials and displacement of ducts, inserts and reinforcing.

(e) Vibrate structural concrete thoroughly during and immediately after placing to insure dense watertight concrete.

(8) Forming.

(a) Forms shall be of good sound lumber with

sufficient strength and conforming to shapes and dimensions indicated on drawings.

(b) Forms shall be treated with non-staining form oil immediately before each use.

(9) Patching: Patch all voids, pour joints and holes before concrete is thoroughly dry. Use mortar of same proportions as original concrete.

(10) Curing: Curing of concrete shall be accomplished by impervious membrane method with liquid membrane compound. Apply two or more coats to obtain a total of one gallon for each 150 square feet of concrete surface.

(J) Handholes and Pullboxes.

(1) Boxes shall be installed approximately where shown. The exact location of each box shall be determined after careful consideration has been given to the location of other utilities, grades, and pavement. Boxes shall be of the type noted on the Drawings and shall be constructed in accordance with the applicable details and standard drawings as indicated.

(2) Pullboxes shall be installed on a minimum of 3" #3 crushed rock.

(3) Ducts ending in manholes and handholes shall be terminated with junior end bells. End bells, terminators or ducts shall be flush to inside wall surfaces; duct extension into boxes is not acceptable. Verify complement and arrangement of ducts entering each manhole or handhole and location of duct entrance with the respective utility company prior to fabrication of the respective manhole and handhole.

(4) State boxes shall be provided with a tamper proof cover.

(K) Cable Installation in Duct

(1) Install cables as indicated in ducts.

(2) Do not pull spliced cables inside ducts.

(3) Install multiple cables in duct simultaneously.

(4) Use NEC approved lubricants of type compatible with cable jacket to reduce pulling tension.

(5) Perform tests using qualified personnel. Provide necessary instruments and equipment.

(6) Acceptance Tests

(7) Ensure that terminations and accessory equipment are disconnected.

(8) Ground shields, ground wires, metallic armor and conductors not under test.

(L) Grounding and Bonding. All grounding and bonding shall conform to the NEC. Connect all ground rods, plates, conductors, and galvanized steel conduits together. Connect only one wire to any one ground bushing.

(M) Labeling

(1) Label all cables, conductors, ports, and terminals as shown on the Plans.

(2) Label all cables and wiring in junction boxes, handholes, cabinets and any other access points using a permanent, durable, and waterproof printer-generated labeling system. Securely fasten the label tag to the cable using Ty-Wraps or equivalent fastening methods. Provide the Engineer with a sample of all proposed types of labels for review and approval 2 weeks prior to installation. Approval of the labeling system shall be at the sole discretion of the Engineer.

(3) All end of wire segments and all access points between source and destination shall be labeled. Wire labeling shall adhere to the following nomenclature: <Cabinet Name>.<Device Name>.<Cable Number>.<Wire Number>. Provide a sample of the proposed labeling to the Engineer for approval prior to installation.

(4) Label all electrical equipment and enclosures, including but not limited to, junction boxes, breakout boxes, and power supplies using the following systems:

a. Label inside equipment as shown on the Plans using a lamicoid style label on the front face of each enclosure with the wording shown on Plans. Use 25mm high white characters on a red background. Rivet the nameplate using a minimum of 4 stainless steel rivets.

(N) Restoration of Existing Streets and Other Improvements. Street, sidewalks, curbs, gutters, traffic detection loops, and other improvements of the State, private owners, or those of the City and County which are maintained by the State, which are damaged by rearrangements to the electric, cable television or telephone system, shall be restored by the Contractor to their original condition. Existing concrete pavement, sidewalks, curbs, gutters, concrete facilities, etc. disturbed by the Contractor shall be removed and reconstructed at the pavement, sidewalks, curbs, gutters, concrete facilities, etc. scorelines or joints. Spot repairing of the concrete pavement, sidewalks, curbs, gutters, concrete facilities, etc. must not be allowed. Materials and workmanship shall conform to the applicable sections in these specifications.

Repairing of existing City streets and other improvements not maintained by the State and where such work is called for on the plans, inside and outside of the right-of-way, publicly or privately owned, which are damaged by the Contractor's operations shall be restored to their original condition, or better, at his expense. Materials and workmanship shall conform to the "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, SEPTEMBER 1986, AS AMENDED", of the Department of Public Works, County of Kauai, City and County of Honolulu, County of Maui, and County of Hawaii, of the State of Hawaii. Copies of the Standard Specifications are on file and may be inspected at the Division of Purchasing during regular business hours of the City.

All disturbed unpaved surfaces shall be backfilled and graded to match the surrounding areas, and sodded areas shall be replanted with the same type of grass. Fences and other improvements shall be restored to their original condition.

621.04 Method of Measurement. Each site’s electrical and communication system work will be paid on a lump sum basis, and Hawaiian Electric Co. charges on a contract force account. Measurement for payment will not apply.

621.05 Basis of Payment. The Engineer will pay for the accepted electrical and communication system on a contract lump sum basis, and Hawaiian Electric Co. charges on a contractor force account. The price shall include furnishing and installing the items, and all tools, labor, equipment, and incidentals necessary to complete the work. Payment will be full compensation for the work prescribed in this section and the contract documents.

The Engineer will pay for the following pay items when included in the proposal schedule:

Pay Item	Pay Unit
Street Light Sawcut, Trench, Excavation, and Backfill	Lin. Ft.
HECO Sawcut, Trench, Excavation, and Backfill	Lin. Ft.
HECO Metering Equipment	Each
1-3" HECO Concrete Encased Conduit	Lin. Ft.
1-2" Secondary Concrete Encased Conduit	Lin. Ft.
1-1.5" Street Light Concrete Encased Conduit	Lin. Ft.
2' x 4' HECO Handhole	Each
State Street Light Standard, Base, and Single Arm and 120W Luminaire	Each
State Street Light Standard, Base, and Dual Arm and 120W Luminaire	Each
Street Light Conductors	Lin. Ft.
Secondary Cables 2#8, #8 Gnd XHHW CU Cable	Lin. Ft.
Service Cables 3#2, #8 Gnd XHHW CU Cable	Lin. Ft.
Hawaiian Electric Co. Charges	Force Account”

END OF SECTION 621

SECTION 623 - TRAFFIC SIGNAL SYSTEM

Make the following amendments to said Section:

(I) Amend **623.01 Description** from lines 4 to 95 to read as follows:

"623.01 Description. This work includes furnishing labor, materials, tools, machinery, and equipment necessary to modify or install and construct an operating traffic signal system, including trenching, excavation and backfill, asphalt concrete pavement, aggregate base course, and aggregate subbase course, complete in place according to the contract.

The traffic signal system includes:

(1) trenching, structural excavating, backfilling, restoring work, and installing pullboxes;

(2) providing a complete and operating traffic signal system with controller, firmware, cabinet, auxiliary and support equipment, vehicle detectors, signal standards, traffic signals and appurtenances, signal head mounting, back plates for all mast arm mounted traffic signal heads, emergency vehicle preemption optical receivers, concrete foundations, cables, wiring, cleaning and adjusting signal heads, painting and restoration work.

(4) coordinating work and arranging for inspection of work with the Engineer and other agencies as required.

(4) turning over to HDOT a complete and operating traffic signal system according to the contract.

Furnish and install the incidental parts that the contract does not show and that are necessary to complete the traffic signal system as though such parts were in the contract.

Electrical equipment shall conform to the NEMA Standards and this contract. Material and workmanship shall conform to the "National Electric Code", (the Code); General Order Nos. 6 and 10 of the Hawaii Public Utilities Commission; the standards of the ASTM; the ANSI; Local Joint Pole Agreement; local power company rules; and local ordinances that may apply.

Definitions.

(1) Actuation - Operation of any type of detector.

(2) Clearance Interval - Length of time of display of signal indication following right-of-way interval.

(3) Detector for Traffic Actuation - Device that pedestrians or vehicles can register their presence with traffic-actuated controller.

(4) Extendible Portion - That part of green interval that follows initial portion.

(5) Extension Limit - Maximum time that traffic phase may retain right-of-way after actuation on another traffic phase, after timimg out initial portion.

(6) Flashing Feature - Feature incorporated to stop normal signal operation and cause flashing of predetermined combination of signal lights.

(7) Initial Portion - Part of green interval that is timed-out or separately controlled by traffic-actuated controller before extendible portion of interval takes effect.

(8) Interval - Several divisions of time cycle during which signal indications do not change.

(9) Interval Sequence - Order of appearance of signal indications during successive intervals of time cycle.

(10) Magnetic Vehicle Detector - Detector actuated by movement of vehicle passing through magnetic field.

(11) Major Street - Roadway approach or approaches at intersection normally carrying greater volume of vehicular traffic.

(12) Manual Operation - Operation of signal controller by hand-operated switch.

(13) Minimum Period - In semi-traffic-actuated controllers, shortest time for which right-of-way will be given to approaches not having detectors.

(14) Minor Movement Interval - Auxiliary phase added to controller phase (parent phase) and modified by auxiliary movement controller.

(15) Minor Street - Roadway approach or approaches at intersection normally carrying smaller volume of vehicular traffic.

(16) Non-Parent Phase - Controller phase not modified by auxiliary controlunit.

(17) Parent Phase - Controller phase modified by auxiliary control unit.

(18) Passage Period - Time allowed for vehicle to travel at selected speed from detector to nearest point of conflicting traffic.

(19) Pedestrian Detector - Detector, usually of push-button type, installed near roadway and operated by hand.

(20) Pressure-Sensitive Vehicle Detector - Detector installed in roadway, actuated by pressure of vehicle passing over its surface.

(21) Pre-Timed Controller - Automatic control device for supervising operation of traffic control signals in accordance with pre-timed cycle and divisions.

(22) Recall Switch - Manually operated switch in actuated controller to provide for automatic return of right-of-way to street.

(23) Right-of-Way - Privilege of immediate use of highway.

(24) Signal Indication - Illumination of traffic signal lens or equivalent device, or of combination of several lenses or equivalent devices.

(25) Time Cycle - Number of seconds required for one complete revolution of timing dial or complete sequence of signal indications.

(26) Traffic-Actuated Controller - Digital control device for supervising operation of traffic control signals in accordance with varying demands of traffic as registered with controller by loop detectors or pedestrian push buttons.

(27) Traffic Phase - Part of cycle allocated to traffic movements receiving right-of-way or to combinations of traffic movements receiving right-of-way simultaneously during one or more intervals.

(28) Unit Extension - Minimum time, during extendible portion, for which right-of-way must remain on traffic phases following actuation on that phase, subject to extension limit"

(II) Amend **623.02 Materials** by adding the following after line 98:

"All materials noted in this section and required by the contract documents shall be ordered and delivered to the Contractor within 3 months from the Notice to Proceed."

(III) Amend **623.02 Materials** by adding the following after line 132:

"Pedestrian Signal Push Button with Integral Sign 770.12"

(IV) Amend **Subsection 623.03(C)(7)** from lines 255 to 258 to read as follows:

"(7) Conduits. Lay polyvinyl chloride (PVC) conduits carefully in trenches prepared to receive conduits. Concrete encase PVC Schedule 40 conduits."

(V) Amend Section **623.04 Measurement** and **623.05 Payment** from lines 578 to 594 to read as follows:

"623.04 Measurement. The Engineer will not measure firmware for controller, for payment.

(A) The Engineer will measure the controller assembly, foundation for traffic signal controller, traffic signal standard, foundation for traffic signal standard, pedestrian or traffic signal assembly, pedestrian pushbutton, pullbox, loop detector sensing unit, and emergency vehicle preemption receiver per each in accordance with the contract documents.

(B) The Engineer will measure traffic signal ductline, conductors, and EVP cable per linear foot in accordance with the contract documents.

623.05 Payment. The Engineer will pay for the accepted controller assembly at the contract unit price per each complete in place. The price includes full compensation for submitting the equipment list and drawing; furnishing and mounting the controller cabinet; furnishing, assembling, wiring, firmware, and housing the controller and auxiliary equipment; painting the controller cabinet; testing; providing turn-on service; submitting warranty; and furnishing equipments, tools, labor, materials and other incidentals necessary to complete the work.

The Engineer will pay for the accepted traffic signal standard at the contract unit price per each complete in place. The price includes full compensation for submitting the equipment list and drawing; furnishing and installing the traffic signal standard; wiring; bonding and grounding; testing; providing turn-on service; submitting warranty; and furnishing equipments, tools, labor, materials, and other incidentals necessary to complete the work.

The Engineer will pay for the accepted foundation for controller cabinet and traffic signal standard at the contract unit price per each complete in place. The price includes full compensation for excavating and backfilling; forming; furnishing and placing the reinforcing steel; mixing, placing, and curing the concrete; furnishing and setting the anchor bolts; restoring the pavement; and

furnishing equipments, tools, labor, materials and other incidentals necessary to complete the work.

The Engineer will pay for the accepted pedestrian and traffic signal assembly at the contract unit price per each complete in place. The price includes full compensation for submitting the equipment list and drawing; assembling the signal heads; wiring; bonding and grounding; painting the signal head mounting; testing; providing turn-on service; submitting warranty; and furnishing equipments, tools, labor, materials and other incidentals necessary to complete the work.

The Engineer will pay for the accepted emergency vehicle preemption (EVP) optical receiver at the contract unit price per each complete in place. The price includes full compensation for submitting the equipment list and drawing; assembling the EVP; wiring; bonding and grounding; testing; providing turn-on service; submitting warranty; and furnishing equipments, tools, labor, materials and other incidentals necessary to complete the work.

The Engineer will pay for the accepted pedestrian piezo electric pushbutton with instruction sign at the contract unit price per each complete in place. The price includes full compensation for submitting the equipment list and drawing; furnishing and installing the pedestrian pushbutton with the instruction sign; wiring; bonding and grounding; testing; providing turn-on service; submitting warranty; and furnishing equipments, tools, labor, materials and other incidentals necessary to complete the work.

The Engineer will pay for the accepted traffic signal ductline at the contract unit price per linear foot complete in place. The price includes full compensation for saw cutting; trenching; excavating and backfilling, including asphalt concrete pavement, aggregate base course and aggregate subbase course for trench repair; concrete curb and/or gutter and concrete sidewalk repair; furnishing, installing, bonding, and grounding the conduits and interconnect subducts; and furnishing equipments, tools, labor, materials and other incidentals necessary to complete the work.

The Engineer will pay for the accepted pullbox at the contract unit price per each complete in place. The price includes full compensation for submitting the equipment list and drawing; furnishing and installing the pullbox at the designated locations; saw cutting; excavating and backfilling; restoration of concrete sidewalks, asphalt concrete pavement and landscaping; coating the frames and covers; and furnishing equipments, tools, labor, materials and other incidentals necessary to complete the work.

The Engineer will pay for the accepted traffic signal and EVP cables at the contract unit price per linear foot complete in place. The price includes full compensation for furnishing, installing, splicing, and taping the cable; making the

connections; providing turn-on service; and furnishing equipments, tools, labor, materials and other incidentals necessary to complete the work.

The Engineer will pay for the accepted loop detector sensing unit at the contract unit price per each complete in place. The price includes full compensation for saw cutting; cleaning and blowing the saw cut area; furnishing and inserting the loop cable; splicing in the pullbox; filling the saw cut groove with epoxy sealer or hot applied rubberized sealant; and furnishing equipments, tools, labor, materials and other incidentals necessary to complete the work.

The Engineer will consider full compensation for additional materials and labor not specifically shown or called for that are necessary to complete the work incidental to the various contract items in the proposal.

The Engineer will pay for each of the following pay items when included in the proposal schedule:

Pay Item	**Pay Unit**
_____Controller Assembly with Firmware _____	Each
Type _____ Traffic Signal Standard _____	Each
Foundation for _____	Each
_____ Signal Assembly _____	Each
EVP Optical Receiver with _____	Each
Pedestrian Pushbutton with Instruction Sign	Each
Traffic Signal Ductline _____	Lin. Ft.
_____Type _____ Pullbox	Each
No. _____, _____ Cable	Lin. Ft.
EVP Cable	Lin. Ft.
Loop Detector Sensing Unit (6 Ft. x 6 Ft.) _____ Loops	Each

Payment shall be full compensation for the work prescribed in this section and the contract documents. The Engineer shall consider additional materials and labor not specifically shown or called for that are necessary to complete the work as incidental to the various contract items in the proposal schedule."

END OF SECTION 623

Make the following section part of the Standard Specifications:

"SECTION 627 – TRAFFIC MONITORING AND SIGNAL CONTROL SYSTEM

627.01 DESCRIPTION. This section shall consist of all work and materials necessary to complete a fully operational CCTV and signal control system for traffic control and surveillance of various sites shown on the plans. The work shall involve coordinating all equipment and labor necessary to incorporate and integrate the two new signalized intersections into HDOT's H-3 Traffic Operations Center (TOC) and/or City's Joint Traffic Management Center (JTMC) systems, using Internet Protocol (IP) based communications. The expanded CCTV and signal control system will assist operators at the TOC and/or JTMC to monitor traffic conditions, mitigate traffic congestion, and set the appropriate traffic plans which best suits and improves the traffic progression along Oahu's busiest arterials.

The CCTV and signal control system shall consist of remotely controlled color cameras, remote video switching, IP communications system, cellular modems and a fiber optic interconnect system. The local traffic signal control system will send control data transmitted over two single-mode fibers through a 100/1000/10000base T/FX IP switch. At the Uluoa intersection a cellular modem will transmit the control data to a traffic signal central server located at the JTMC. In addition, the traffic surveillance CCTV cameras will be connected directly to a cellular modem and video data will be transmitted to the TOC servers.

All CCTV camera equipment shall be identical and/or compatible with the City's and HDOT's existing CCTV system in terms of hardware and software.

The CCTV firm shall be responsible for testing all fiberoptic hardware and cables to provide a documented optical budget loss analysis for each link to and from a hub station. The CCTV supplier will be responsible for all hookup, assignments, dedication, testing, matching, and splicing of the fiberoptic cables. All fiberoptic splice points shall have pigtails on all fiberoptic members which attach to fiberoptic hardware and components with SC-connectors. Six strands of the same buffer tube shall be jumpered color for color using a SC-connectors fiber optic patch panel. Patch cords shall be provided for the six strands connected to the patch panel. All remaining fiber optic strands shall be fusion spliced color for color. The CCTV supplier shall be fully responsible for all splices, budget loss, attenuators, appropriate fiber hardware, accessories, and pigtail connections for a fully operational system. All other hardware, equipment, and labor necessary shall be considered incidental.

The firm shall also track and document the installation data and tension measurements when installing the fiberoptic cables. Any tension measurements which exceeds the manufacturer's recommendations will be considered means for the cable rejection. The Fiberoptic Contractor shall be fully responsible for the quality and integrity of the installed cable and the operability of the final fiberoptic cable product. The Fiberoptic Cable Contractor shall be responsible for testing all fiber optic strands and to provide a

documented optical budget loss analysis report showing the acceptable budget losses from one end to the other end of all fiber optic strands.

627.02 TRAFFIC SIGNAL CONTROL SYSTEM. For bidding purposes, the qualified, as stated in Section 627.01, CCTV Supplier shall furnish and install all the necessary items to provide traffic signal control from the JTMC, to all three traffic signal controllers, utilizing HDOT's existing central server. All other equipment necessary to complete a fully operational system will be considered incidental.

The traffic signal controller will communicate with the JTMC over an Ethernet network.

All materials noted in this section and required by the contract documents shall be ordered and delivered to the Contractor within 3 months from the Notice to Proceed.

The Contractor shall at each new signalized intersection furnish and install, but not limited to, the following items:

(A) Traffic Signal Central Server. The Contractor shall furnish and install the necessary licenses that will allow the two new signalized intersections to communicate and work with HDOT's traffic signal central server.

(B) CCTV Cabinet. A CCTV cabinet with foundation shall be provided at each new signalized intersection. All cabinet shall be furnished assembled and configured with the components stated below:

Cabinet shall be a Traffic Signal 332LS anodized aluminum cabinet with a 19" rack, 50 amp circuit breaker, surge-protected, and thermo-control fan.

Each Model 332LS Cabinet shall meet the following additional requirements:

(1) Provide Best Lock (C&C of Honolulu keyed) Security Tumbler Door locks of solid brass rim and include 4 keys.
(2) A rack mounted 6 outlet surge protector power strip
(3) A 19 inch pull out shelf
(4) Remote data port with monitor and control, Stand Alone, all connectors and cables included
(5) Rack Mounted 72 fiber optic Splice Capacity Tray
(6) Rack Mounted 72 fiber optic SC jumper connector

Surge Protection: Contractor shall install a 120V AC, 3-wire, 20 Amp inline surge protection device. The surge protection device will have an operating temperature of -40 to 85 degree C, maximum surge current of 30,000 amps and surge voltage of 10,000 volts, 138 Volts for clamping voltage, power indicator, open circuit for fail safe operation, and protection shall be between line to neutral, line to ground, ground to neutral.

Furnish and install power cables from existing traffic signal meter or new Hawaiian Electric service point.

(C) Hardened Ethernet Switch. The network managed Layer 2, with light Layer 3 managed switch is a hardened DIN-rail mounted managed PoE++ Ethernet switch equipped with 12 gigabit PoE++ ports along with 360W power and IEEE 802.3.bt protocol support and 4 dual rate 1G/10G SFP ports. The managed switch shall be optically and electrically compatible with any IEEE 802.3 compliant Ethernet devices. The managed Ethernet switch will provide transmission of eight 100/1000 BASE-TX and four 1/10G FX ports. The managed Ethernet switches shall be environmentally hardened units, designed for roadside operating environments, and are available for use with either conventional CAT 6 copper or optical transmission media. CAT 6 cables shall be provided between the switch and the traffic signal controllers. The twelve electrical ports support the 10/100/1000 Mbps Ethernet IEEE 802.3 protocol, auto-negotiating, and auto-MDI/MDIX, four 1/10G FX ports are configurable for copper or fiber media for use with multimode or single mode optical fiber, selected by optional SFP modules, plug-and-play design, and no electrical or optical adjustments required. LED indicators for monitoring the operating status of the managed switch and network and is either DIN-rail or wall mountable.

The hardened managed Ethernet switch shall meet the following minimum requirements:

(1) Layer 2 with light Layer 3 managed switch
(2) Layer 3 Features at a minimum includes IP Packet Routing (64 hardware routes, Static routing, RIP v1/v2, OSPF v2) and Routing Redundancy
(3) Transmission of 4 channels of 1/10G over one or two single-mode fibers respectively.
(4) Transmission of 12 channels of 10/100/1000 Mbps over Cat-6 cable.
(5) 2 – Hardened Single (LC), 1 Gigabit, 40 Km SFP modules.
(6) 2 – Hardened Duplex (LC), 1 Gigabit, 40 Km SFP modules.
(7) 2 – Hardened Duplex (LC), 10 Gigabit, 40 Km SFP modules (1310 nm).
(8) Up to 90W per PoE port, with a power budget of 360 Watts. Compliance to IEEE 802.3bt type 4.
(9) Shall support the Ethernet data IEEE 802.3 protocol using Auto-negotiating for port speed and duplex.
(10) Provide power, link speed, and fiber port status indicating LED's for monitoring system operation.
(11) Provide 2 - alarm contact closure.
(12) Power Supply: 480W / 10A DIN Rail, 48VDC Industrial Power Supply, similar to NDR-480-48 or equal
(13) Serial connection with cable for local management of the device.

(14) Shall operate in an environment with relative humidity of 5% to 95% (non-condensing).
(15) Shall operate in an environment with ambient temperature range of –40° C to +75° C without the assistance of fan-forced cooling.
(16) Shall be DIN rail mountable.
(17) Lifetime manufactures warranty.

(D) Cellular Modem. Procure, configure, and install a single environmentally hardened cellular modem and all required accessories with static IP addresses at the Uluoa intersection. Cellular modem shall be capable of accessing the FirstNet Band 14 as well as the 5G cellular network when available. The modem shall provide communication between the fiber optic interconnect system and HDOT's traffic signal central system.

The cellular modem shall include or comply with the following:

(1) Two Ethernet LAN/WAN ports, minimum.
(2) USB 2.0 or better port.
(3) Two cellular antenna connectors with antennas and required accessories.
(4) GPS antenna connector with antenna and required accessories.
(5) Operating temperature range: -22ºF to 158ºF.
(6) Storage temperature range: -40ºF to 185ºF.
(7) Operating and storage humidity (non-condensing) ranges: 5% to 95%.
(8) Ingress protection compliant with IP64.
(9) Networking.
1. IPsec Tunnel — up to ten concurrent sessions
2. IKEv2 support (includes MOBIKE)
3. Access Control Lists
4. NAT
5. NAT-less Routing

(10) Security.
1. 802.1x authentication for Ethernet
2. Certificate support
3. Application-level gateways
4. MAC Address Filtering

(E) Fiber Optic Cable. The fiber optic cables, which will be used to transmit video and data signals, will consist of 6 or 72 single-mode fibers. See Contract Plans. Cables will be installed.

Armored loose-tube, 6 or 72 single-mode OS2 fiber optic cable suitable for overhead or underground installation. Cable shall be 8.3/125 micron loose buffer, single-mode, step index optical fiber cable containing glass of type, SMF-28e, AFL SR-15e, or approved equal, and that meets the following specifications:
(1) ITU-T G.652 (Categories A, B, C and D)

(2) IEC Specification 60793-2-50 Type B1.3
(3) TIA/EIA 492-CAAB
(4) Telecordia GR-20

All cables shall be free of material or manufacturing defects and dimensional non-uniformity that would;

(1) Interfere with the cable installation using accepted cable installation practices.
(2) Degrade the transmission performance and environmental resistance after installation.
(3) Inhibit proper connection to interfacing elements.
(4) Otherwise yield an inferior product.

(1) Mechanical and Performance Requirements. The cable shall be a rugged all dielectric armored outdoor cable containing color coded buffer tubes with 12 single mode color-coded fibers per- buffer tube, dual window (1310 nm and 1550 nm) fibers with UV acrylate coating in color coded, gel-free, loose buffer tubes.

Strand the loose buffer tubes around an all-dielectric center strength element using a reverse oscillation lay, wrapped by water blocking core separator or functional equivalent. The maximum allowable attenuation of the fiber is .35 dB/km for 1310 nm and .25 dB/km for 1550 nm.

Each buffer tube shall contain a water blocking element for water-blocking protection. The water blocking elements shall be non-nutritive to fungus, electrically non-conductive. The buffer-tube shall be gel-free.

Apply water swellable tape longitudinally around the outside of the stranded tubes/fillers. The water swellable tape shall be non-nutritive to fungus, electrically non-conductive, and homogenous. It shall also be free from dirt and foreign matter. The cable manufacturer shall be TL 9000 registered.

(2) Outer Jacket. Cables shall be all dielectric cable (with armoring) and shall be jacketed (sheathed) with black medium density polyethylene as defined by ASTM D1248, Type II, Class C, Category 4 and Grades J4, E7 and E8.

Armored cable shall have two jackets, one molded to the outside of the armor and one that floats freely within the armor and contains the buffer tubes and other fiber optic cable construction components as required.

Apply jacketing material directly over the tensile strength members to provide mechanical protection, and to serve as the primary moisture barrier.

Design cable sheath to meet or exceed the tensile criteria defined in EIA-455-89a. Ensure the jacket or sheath is free of any holes, splits, or blisters. The

cable jacket shall contain no metal elements and shall be of a consistent thickness.The cable shall contain at least one ripcord under the sheath for easy sheath removal.

(3) Temperature. The shipping, storage, installation, and operating temperature range of the cableshall meet or exceed -20 °F to +155 °F (-29 °C to +60°C).

(4) Loose Buffer. Contain single-mode fibers in a loose buffer tube. The configuration shall be dimensionally sized to minimize local stresses and micro bend losses.

The optical fiber cable shall be an approved product of the U.S. Department of Agriculture, Rural Electrification Administration in accordance with the requirements of REA-PE-90, or as otherwise indicated, and shall conform to EIA/TIA-598.

Each optical fiber shall consist of a doped silica core surrounded by a concentric silica cladding.

Buffer tubes shall be polypropylene. Include fillers in the cable core to lend symmetry to the cable cross section where needed.

(5) Colors. All optical fibers shall be identifiable by standard color codes as defined in EIA/TIA-598. Each fiber shall be distinguishable, from others by means of color coding and shall conform to the following EIA/TIA sequence of colors:

1. Blue	7. Red
2. Orange	8. Black
3. Green	9. Yellow
4. Brown	10. Violet
5. Slate	11. Rose
6. White	12. Aqua

Buffer tubes containing fibers shall also be color-coded with distinct and recognizable colors according to the following sequence of colors:

1. Blue
2. Orange
3. Green
4. Brown
5. Slate
6. White

The color formulation shall be compatible with the fiber coating and be heat stable. Color formulation shall not fade or smear or be susceptible to migration and it shall not affectthe transmission characteristics of the optical fibers and shall not cause fibers to stick together.

(6) Cable Marking. The fiber optic cable outer jacket shall be marked with manufacturer's name, the year of manufacture, the words "optical fiber cable", fiber count, type of fiber, and sequential linear foot markings.

1. Repeat the markings every 3 feet.
2. The actual length of the cable shall be within -0/+1% of the length marking.
3. The marking shall be in a contrasting color to the cable jacket.
4. The marking shall be 2.5 mm in height and must be permanent weatherproof and shall not wearoff during the installation in the underground conduit system.

(7) Quality Assurance Provision. The fiber optic cable shall meet or exceed the requirements of this specification when measured in accordance with the methods of the individual requirements or the following methods as defined in EIA-455-A:

1. Fiber dimensions
2. Attenuation
3. Numerical aperture
4. Fiber proof test
5. Crush resistance
6. Cable bending
7. Tensile load
8. Impact resistance
9. Attenuation vs. Temperature

(8) Packaging. Top and bottom ends of the cable shall be available for testing.

Both ends of the cable shall be sealed to prevent the ingress of moisture. Each reel shall have a weather resistant reel tag attached identifying the reel and cable.

The reel tag shall include the following information:

1. Cable number
2. Gross Weight
3. Shipped length in meters
4. Job order number
5. Product Number
6. Date cable tested

Each cable shall be accompanied by a cable data sheet. Cable data shall include manufacturer number, billable length, bandwidth specs and measured attenuation of each fiber.

(9) Construction Requirements.

Material Sample and Certificate of Compliance. The Contractor shall submit material samples according to Subsection 106.04 – Material Sample, and any certificates of compliance according to Subsection 106.07 – Certificate of Compliance.

The Contractor shall submit a fiber optic cable pulling plan for review and approval by the Engineer prior to beginning fiber optic cable installation. The fiber optic cable pulling plan shall include:

(1) Location of start and end of pulls,

(2) Location of cable reel trailers during installation,

(3) Location of any “figure-eight” of fiber optic cable, and

(4) Location of staged equipment.

Upon completion of the work, submit an “As Built” or corrected plan showing in detail the following:

(1) Construction changes,

(2) Location and attenuation of every event along the installed fiber optic cable,

(3) Index of refraction of installed fiber,

(4) Fiber optic cable index of refraction, and

(5) Sequential fiber optic cable markings at each pullbox, cabinet, and splice closure.

The fiber optic cable Subcontractor shall install the new fiber optic cable underground in conduits as shown on the plans. The Contractor will be responsible for furnishing and pulling the new fiber in PVC ductlines using a breakaway swivel to prevent exceeding the tensile load during installation.

All fiber optic splices shall be fusion splices. Mechanical splices shall not be used. Fiber optic splice locations are permitted only at

splice points where splice cabinets are shown on the plans. Fiber optic fibers shall be spliced in every splice cabinet location, and it is the responsibility of the Contractor to maintain a continuous run throughout the system. The Contractor shall leave a minimum of 20-feet of cable service loops at every cabinet and 10 feet at every pullbox.

Provide documented historical cable pulling data indicating tensile forces exerted on the cable during the installation. Any tension measurements, which exceed the manufacturer's recommendation, will be considered means for the cable rejection. The fiber optic cable Subcontractor shall be fully responsible for the quality and integrity of the installed cable and the operability of the final fiber optic cable product. All fibers shall be spliced at camera cabinets, hubs, and splice cabinets and shall have no more than 0.07 dB loss per splice based on the appropriate system operating wavelength.

The Contractor shall complete all required fiber optic splices prior to final testing and acceptance. As part of the final testing and acceptance, submit optical time domain reflectometer (OTDR) readings in both hardcopy and electronic formats (such that it can be examined using the manufacturer's OTDR software) to the Engineer for review. Testing shall be conducted on all single mode fibers at 1310 nm and 1550 nm from the beginning and end of entire run; which includes patch panels and splicing. Powermeter attenuation testing should be performed at dual wavelength, bi-directionally.

All necessary equipment and plug-in, fiber optic pigtails, fittings, splice tags, enclosures, and work to complete an operational system shall be furnished and installed by the Contractor, unless otherwise indicated, at no added cost, and will be considered included in the cost of the contract items in this Section.

(F) Interconnect Fabric Subduct.

(1) Description Raceway Innerduct shall be installed in all new and existing raceways containing 6 and 72 strand fiber optic cables. A non-metallic flexible textile raceway known as interconnect fabric subduct, which is placed within PVC conduits. The interconnect fabric subduct allows for future communication upgrades, including transitioning from multipair copper cables to fiber optic media. To further that effort and achieve maximum conduit utilization, all new and empty existing conduits containing the interconnect/fiber optic cables shall contain an interconnect fabric subduct. The interconnect fabric subduct shall consist of flexible, textile material, sometimes referred to as "fabric duct".

(2) Fabric The interconnect fabric subduct shall consist of the following:

(a) Standard Outdoor Textile subduct: Micro (33mm), 2-inch, 3-inch and 4-inch multi-cell polyester/nylon textile subduct containing 1,250 lb polyester flat woven pull tape.

Number of cells shall be the maximum number allowed for the conduit size.

(b) Conduit Plugs: Compression-type conduit plugs with locking nuts for sealing and securing one or more textile subducts within a conduit.

(c) C. Pull Tape: The subduct pull tape shall be constructed of synthetic fiber, printed with accurate sequential footage marks and color-coded.

(d) D. Duct Water Seal: products suitable for closing underground and entrance conduit openings where subduct is installed, to prevent entry of gases, liquids, or rodents into the structure.

(3) Installation The contractor shall protect the interconnect fabric subduct from the effects of moisture, UV exposure, corrosion and physical damage during installation. The contractor shall install the interconnect fabric subduct prior to installing the new interconnect and fiber optic cables.

The contractor shall provide interconnect fabric subduct in conduits using continuous unspliced lengths of interconnect fabric subduct between pull boxes, and/or termination points as indicated on the drawings.

The contractor shall make a 2" incision, approximately 18" from the end of interconnect fabric subduct. Pull out and cut off approximately 2 feet of pull-tape. Thus, allowing the pull tape ends to retract back into the cells.

Using approximately 6 feet of pull tape, tie a non-slip knot to the incision. Then tie 3 to 6 half-hitch knots down to the end of interconnect fabric subduct. Apply black vinyl tape over all knots and the end of interconnect fabric subduct. Using a Bow Line knot tie a swivel to the end of 3 feet pull tape. For multi-pack installations one swivel is sufficient but stagger each interconnect fabric subduct.

Using a Bow Line knot, attach the pull rope located in the rigid conduit to the other end of the swivel. Install interconnect fabric subduct - ensuring that no twist is introduced to the interconnect fabric subduct.

Provide suitable interconnect fabric subduct slack in the pull boxes, and at turns to ensure there is no kinking or binding of the product.

At locations where interconnect fabric subduct will be continuous through a pullbox, allow sufficient slack so that the interconnect fabric subduct may be secured to the side of the pullbox maintaining the minimum bending radius.

At pullboxes serving as the junction location, pull the exposed end of the interconnect fabric subduct to the far end of the pullbox, install termination bag, and secure to the pullbox.

Seal all conduit and interconnect fabric subduct entering the pullboxes to prevent entrance into the pullboxes of gases, liquids or rodents.

627.03 EXISTING TRAFFIC SIGNAL CONTROLLER FIBER INTERFACE. At the Kalanianaole Highway/Kailua Road (Waimanalo Junction) intersection, the Contractor shall install a signal controller fiber interface within the existing traffic signal cabinet. The signal controller fiber interface shall include, but not limited to, a hardened ethernet switch, (see Section 627.02(C)) and a fiber splice enclosure which shall be able to fit in the spare space within the existing traffic signal cabinet. The traffic signal controller fiber interface shall allow the existing traffic signal controller to be interconnected with the two new signals.

627.04 CCTV TRAFFIC CAMERA ASSEMBLY. The camera assemblies are for traffic monitoring and traffic signal operations at the H-3 Traffic Operations Center (TOC) and/or Joint Traffic Management Center (JTMC). The CCTV cameras shall be directly connected to the cellular modems via an outdoor rated CAT 6 Ethernet cable. Contractor shall supply two CAT 6 cables between the modem and the CCTV cameras; one as a spare. It shall be an integrated camera unit consisting of a receiver, pan & tilt, housing, and cables built as a single assembly having 360 degree of continuous pan rotation. The camera shall have full HD 1080p 30 image resolution with integral 30x optical zoom lens. The positioning device shall include true day-night with variable speed pan and tilt technology with a minimum sensitivity of 0.0 lux @30 IRE. The camera shall provide up to 5 independent output video streams configurable for H.264 and MJPEG and analog video output, electronic image stabilization, and wide dynamic range. Camera assembly shall be furnished with components assembled, complete, and a ready-to-install system. Camera system shall meet FHWA's Buy America requirement.

(A) CCTV Camera

(1) CAMERA IMAGING

(a) Image Sensor: Progressive Scan CMOS
(b) Image Size: Diagonal 6mm
(c) Image Resolution: 1920 horizontal x 1080 vertical pixels
(d) Picture Elements (total) 1920 (H) x 1440 (V)
(e) Sensitivity: Scene Illumination; F1.4 @ 50% Video
(1) 0.4 Lux (0.04 fc) @ 1/30 shutter, color mode
(2) 0.0025 Lux (0.00025 fc) @ ½ shutter, mono mode
(f) Day/Night Operation: Adjustable (Auto, Color and Mono Modes)
(g) Optical Zoom Range: 30x, minimum
(h) Digital Zoom: 1x to 12x in 1x increments. The camera system shall support digital zoom limit setting

(i) Auto Focus: Selectable Auto/Manual; Minimum Scene Illumination for Reliable Auto Focus shall be no more than 50% video output.
(j) Auto Iris; Selectable auto/manual; Iris shall automatically adjust to compensate for changes in scene illumination to maintain constant video level output.
(k) Electronic Image Stabilization: Shall support On/Off mode
(l) Backlight Compensation: Shall support On/Off mode
(m) White Balance: Shall support Auto/Manual mode
(n) IR Correction: Shall support On/Off mode
(o) Sharpness: Shall provide user control of increases or decreases in image sharpness through 4 user selectable settings of soft, normal, sharp and sharpest

(2) H.264/MJPEG ENCODING ENGINE

(a) The video encoding shall allow the following possible video stream configurations:
(1) H.264 Streams: (1) 1920x1080 @ 30fps, (1) 1280x720 @ 30 fps, 720x480 @ 15 fps
(2) MJPEG Streams: 1920x1080 @ 10 fps, 1280x720 @ 20 fps
(3) Analog Video Output: (1).
(b) Each video encoder channel shall provide the following configurable properties;
(1) Codec.
(2) Video frame shall be adjustable from 30 fps to 1 fps in increments of 1 fps.
(3) Bite Rate control
(c) Video Stream Protocols; the camera system shall support the following protocols:
(1) RTSP/RTP; The RTSP communication shall occur over a TCP socket. RTP video packets shall be sent over UDP.
(2) RTSP Interleaved; RTSP commands and the RTP video packets shall be transmitted over a single TCP connection.
(3) HTTP tunneling; this mode shall use two separate TCP connections for sending and the other for received data from the client over port 80
(4) RTP multicast; this mode shall send RTP video packets to the user assigned multicast destination. This mode shall be required to be enabled or disabled.
(d) Network Protocol Layers: TCP, UDP, IPv4, IGMP, ICMP, DNS, DHCP, RTP, RTSP, NTP, HTTP, HTTPS, ARP, and ONVIF Profile S as a minimum.

(3) PAN AND TILT DRIVE UNIT SPECIFICATIONS

(a) Pan Movement; 360 degrees continuous rotation.

(b) Pan Speed; Variable from 0.05 to 45 degrees/second .
(c) Pan Repeatability; +/- 0.05 degree precision.
(d) Pan Preset Speed; 180 degree movement 2.5 < Seconds.
(e) Tilt Movement; Minimum of +90 to –90 degrees.
(f) Tilt Speed; Variable from 0.05 to 45 degrees/second.
(g) Tilt Repeatability; +/- 0.05 degree precision.
(h) Tilt Preset Speed; 180 degree movement < 2.5 Seconds.
(i) Proportional Zoom Control; Positioning control shall allow variable pan/tilt. speeds based on zoom position.
(j) Home Position: Shall be a user defined point.
(k) The Inter Process Communication System (IPCS) shall not have any exposed wiring from the positioning drive to the camera head enclosure.

(4) Electrical

Operating Voltage; The camera system shall provide flexible power input as required by the installation to include:

(a) Power over Ethernet, LTPoE++.
(b) Power injector

(5) Certifications/Ratings

(a) FCC Class A.
(b) International Electrotechnical Commission (IEC) / European Conformity (CE) cover product emission and immunity requirements (CISPR) 22 24.
(c) Restriction of Certain Hazardous Substances (RoHs)

(6) Enclosure

(a) Aluminum
(b) Dust-tight
(c) Waterproof & Pressurized

(7) Controls

Shall be controllable or interoperable by a Pelco analog switcher and control System using Pelco P protocol IP protocol shall be controllable by either Pelco P or Onvif protocol.

(8) Adapter Plate

A Stainless Steel, ¼" minimum, adapter plate shall be provided to integrate the supplied camera mounting to the existing mounting.

(9) Warranty

Manufacturer's warranty period shall be three (3) years minimum.

Mount

- Outdoor type
- Aluminum or stainless steel components
- Mount cantilever style on pole shafts using straps, or on horizontal mast arm shaft
- Constructed of marine grade stainless steel
- Has cable feed-through
- Supports up to 100 lbs
- Painted White
- Wall to pole mount adapter, as required
- Provide ability to level and adjust camera to plumb

(B) Cellular Modem

Procure, configure, and install environmentally hardened cellular modems and all required accessories with static IP addresses. Cellular modems shall be capable of accessing the FirstNet Band 14 as well as the 5G cellular network when available. The modem shall provide communication between the CCTV cameras and HDOT's CCTV systems up at the H-3 TOC.

All cellular modems shall include or comply with the following:

(1) Two Ethernet LAN/WAN ports, minimum.
(2) USB 2.0 or better port.
(3) Two cellular antenna connectors with antennas and required accessories.
(4) GPS antenna connector with antenna and required accessories.
(5) Operating temperature range: -22ºF to 158ºF.
(6) Storage temperature range: -40ºF to 185ºF.
(7) Operating and storage humidity (non-condensing) ranges: 5% to 95%.
(8) Ingress protection compliant with IP64.
(9) If wifi capable, the modem shall be able to disable the wifi capabilities.
(10) Networking.
- **(a)** IPsec Tunnel — up to ten concurrent sessions
- **(b)** IKEv2 support (includes MOBIKE)
- **(c)** Access Control Lists
- **(d)** NAT
- **(e)** NAT-less Routing

(11) Security.
- **(a)** 802.1x authentication for Ethernet
- **(b)** Certificate support
- **(c)** Application-level gateways
- **(d)** MAC Address Filtering

627.06 MEASUREMENT. Traffic Signal Control System and Existing Traffic Signal Controller Fiber Interface will be paid on a lump sum basis. Measurement for payment will not apply.

The Engineer will measure CCTV Traffic Camera Assembly per each, in accordance with the contract documents, complete in place.

627.05 PAYMENT. The Engineer will pay for the accepted Traffic Signal Control System, complete in place, on a lump sum basis. The price shall include furnishing and installing server licenses; CCTV cabinets, conduits and foundations; modems; switches with SFP modules; fiber optic cables and splice trays; cables; splicing; OTDR testing and furnishing results; furnishing and installing any additional items and all tools, labor, equipment, and incidentals necessary to complete the work.

The Engineer will pay for the accepted Existing Traffic Signal Controller Fiber Interface, complete in place, on a lump sum basis. The price shall include furnishing and installing the items, and all tools, labor, equipment, and incidentals necessary to complete the work.

The Engineer will pay for accepted quantities of the CCTV Traffic Camera Assembly at the contract unit price per each completed in place. The price shall include CCTV cameras; modems; cables; splicing; making the connections; testing; providing turn-on service; furnishing and installing any additional items, and all tools, labor, equipment, and incidentals necessary to complete the work.

The Engineer will consider full compensation for additional materials and labor not specifically shown or called for that are necessary to complete the work incidental to the various contract items in the proposal. The Engineer will pay for each of the following pay items when included in the proposal schedule:

Pay Item	**Pay Unit**
Traffic Signal Control System	Lump Sum
Existing Traffic Signal Controller Fiber Interface	Lump Sum
CCTV Traffic Camera Assembly	Each

END OF SECTION 627

SECTION 629 - PAVEMENT MARKINGS

Make the following amendments to said Section:

(I) Amend **Subsection 629.03(B) – Temporary Pavement Markings** by revising the third paragraph from line 62 to 63 to read:

"Maintain and replace temporary pavement markings, flexible delineators, and barricades. "

(II) Amend **Table 629.03 – 1 – Temporary Pavement Markings** to read as follows:

"**TABLE 629.03-1 TEMPORARY PAVEMENT MARKINGS**	
TYPE	**PAVEMENT MARKINGS**
Passing Permitted - Both Sides	Single 4-inch yellow stripe 5 feet in length spaced 20 feet on center with Type D markers spaced 40 feet on center and located on center of 5-foot length of stripe.
Passing Prohibited - Both Sides	Double solid 4-inch yellow stripes with Type D markers placed 20 feet on center on one of 4-inch yellow stripes selected by the Engineer.
Passing Permitted - One Side Only	Single continuous 4-inch yellow stripe with Type D markers placed on stripe 20 feet on center on no-passing side and single 4-inch yellow stripes 5 feet in length spaced 20 feet on center on passing side.
Lane Lines - Lane Changing Permitted	Single 4-inch yellow or white stripe 5 feet in length spaced 20 feet on center with Type C or Type D markers spaced 40 feet on center.
Lane Lines - Lane Changing Prohibited	Double solid 4-inch white stripes with Type C markers placed 20 feet on center on one of the 4-inch white stripes selected by the Engineer.
Crosswalk	Two 12-inch white transverse lines spaced 8 feet on center or as ordered by the Engineer.
Stop Line	Single 12-inch white transverse line.
Note: Paint may be used for temporary markings in areas where final paving is not complete."	

(III) Amend **629.04 – Measurement** by revising lines 292 to 294 to read as follows:

"**629.04 Measurement.**

(A) The Engineer will measure thermoplastic and preformed pavement marking tape per linear foot in accordance with the contract documents. The longitudinal pavement markings will be measured per linear foot as a single stripe for the width specified in the contract and in the proposal. The Engineer will include the longitudinal gaps for skip striping, up to thirty (30) feet long, in the measurement.

The Engineer will measure the transverse markings by the linear foot according to the contract.

The Engineer will measure the crosswalk markings per lane according to the contract.

The Engineer will not measure temporary pavement markings including flexible delineator posts with reflector makers or Type I Barricades and temporary signs installed for the longitudinal guidance of public traffic over reconstructed areas, cold planed surfaces, newly paved surfaces or other unmarked or scarified areas for payment.

The Contractor shall consider the work required for the removal of pavement markings incidental to the various contract items, except as provided in the proposal or elsewhere in the contract. If the contract stipulates that the Engineer will make payment for the removal of pavement markings, the Engineer will measure the removal of pavement markings.

(B) The Engineer will measure the pavement markers per each for the types shown in the proposal.

(C) The Engineer will measure the painted stripes that are twelve (12) inches wide or less as a single stripe. The Engineer will measure the painted stripes over twelve (12) inches wide as two (2) stripes. The Engineer will measure the double stripes that are twelve (12) inches or less in total width including the transverse space between the stripes as a single stripe.

The Engineer will not measure the painted pavement striping including curb markings when contracted on a lump sum basis.

(IV) Amend **629.05 – Payment** by revising lines 296 to 330 to read as follows:

"**629.05 Payment.**

(A) The Engineer will pay for thermoplastic and preformed pavement marking tape at the contract price per linear foot or on a lump sum basis according to the contract, complete in place, including primers.

The Engineer will pay for double four (4) inch striping with a four (4) inch space between stripes at the contract price per linear foot according to the contract.

The Engineer will pay for crosswalk markings at the contract price per lane of traffic marked according to the contract.

The Engineer will pay for pavement arrows (single and multiple heads), symbols, and words at the contract price per each according to the contract.

The contract unit price paid shall be full compensation for furnishing labors, materials, tools, equipment and incidentals and for doing the work involved in furnishing and installing pavement markings complete in place according to the contract.

The Engineer will not pay for the temporary pavement markings including flexible delineator posts with reflector markers or Type I Barricades and temporary signs installed for the longitudinal guidance of public traffic over reconstructed areas, cold planed surfaces, newly paved surfaces or other unmarked or scarified areas for payment if not shown in the proposal separately. The Engineer will consider them incidental to the various contract items.

If the contract specifies payment for temporary pavement markings installed as ordered by the Engineer for special temporary traffic patterns, the Engineer will pay from an allowance for “Temporary Construction Zone Markings”.

(B) The Engineer will pay for the various types of pavement markers at the contract price per each according to the contract, complete in place, including adhesives.

(C) The Engineer will pay for painted pavement striping at the contract price on a lump sum basis according to the contract.

The Engineer will pay for quantities of crosswalk marking at the contract price per lane of traffic marked, per each or on a lump sum basis according to the contract.

The Engineer will pay for pavement arrows (single or multiple arrow heads), symbols, and words at the contract price per each according to the contract.

The Engineer will pay for the accepted quantities of curb markings at the contract price per linear foot or on a lump sum basis.

The Engineer will pay for the following pay items when included in the proposal schedule:

Pay Item	Pay Unit
4-Inch Pavement Striping (Type I Tape or Thermoplastic)	Linear Foot
4-Inch Pavement Striping (Type III Tape or Thermoplastic)	Linear Foot
6-Inch Pavement Striping (Type II Tape or Thermoplastic)	Linear Foot
6-Inch Pavement Striping (Type III Tape or Thermoplastic)	Linear Foot
8-inch Pavement Striping (Tape, Type I or Thermoplastic)	Linear Foot
12-inch Pavement Striping (Tape, Type III or Thermoplastic)	Linear Foot
Crosswalk Marking (Tape, Type III or Thermoplastic)	Lane
Pavement Arrow (Paint, Type I Tape, or Thermoplastic)	Each
Pavement Symbol (Paint, Tape, Type I Tape or Thermoplastic)	Each
Type “C” Pavement Marker	Each
Type “D” Pavement Marker	Each
Type “H” Pavement Marker	Each
Temporary Construction Zone Markings	Lump Sum
Curb, 4-inch Markings (Paint) (250 L.F.)	Lump Sum”

END OF SECTION 629

SECTION 631 – TRAFFIC CONTROL, REGULATORY, WARNING, AND MISCELLANEOUS SIGNS

Make the following amendment to said Section:

(I) Amend Section 631.03(C) Labeling of Signs, from lines 42 to 51 to read:

"**(C) Labeling of Signs**. Label back of each sign with sign stickers as directed by the State. Sign stickers will be provided by the State."

(II) Amend **Section 631.04 – Measurement** by replacing lines 67 to 69 to read:

"**631.04 Measurement.** The Engineer will measure regulatory, warning, and miscellaneous signs as complete units of the type and design specified in the proposal.

The Engineer will not measure removal and disposal and storing of existing and temporary signs that the Contractor will not incorporate in the completed highway for payment."

(III) Amend **Section 631.05 – Payment** by replacing lines 71 to 99 to read as follows:

"**631.05 Payment.** The Engineer will pay for regulatory, warning, and miscellaneous signs at the contract price per each for the type and design specified complete in place. Payment will be full compensation for excavating and backfilling, furnishing and installing materials, furnishing equipment, tools, labors and incidentals necessary to complete the work.

The Engineer will not pay for removing and disposing or storing of existing and temporary signs that the Contractor will not incorporate in the completed highway separately. The Engineer will consider them incidental to the various contract items.

The Engineer will pay for the following pay items when included in the proposal schedule:

Pay Item	**Pay Unit**
Regulatory Sign (10 Square Feet or Less)	Each
Warning Sign (10 Square Feet or Less)	Each"

END OF SECTION 631

SECTION 632 – MARKERS

Make the following amendment to said Section:

(I) Amend **Section 632.04 - Measurement** by replacing lines 79 to 81 to read:

"**632.04 Measurement.** The Engineer will measure Type II object marker per each as complete units of the type and design specified in the proposal."

(II) Amend **Section 632.05 – Payment** by replacing lines 83 to 100 to read:

"**632.05 Payment.** The Engineer will pay for Type II object marker at the contract price per each for the type and design specified complete in place. Payment will be full compensation for excavating and backfilling, furnishing and installing materials, furnishing equipment, tools, labors and incidentals necessary to complete the work.

The Engineer will pay for the following pay items when included in the proposal schedule:

Pay Item	**Pay Unit**
Type II Object Marker	Each"

END OF SECTION 632

SECTION 634 – PORTLAND CEMENT CONCRETE SIDEWALKS

Make the following amendment to said Section:

(I) Amend **Section 634.04 - Measurement** by replacing lines 60 to 61 to read:

"**634.04 Measurement.** The Engineer will measure Portland cement concrete sidewalks by the square yard of finished surface.

(II) Amend **Section 634.05 – Payment** by replacing lines 62 to 72 to read:

"**634.05 Payment.** The Engineer will pay for the accepted quantities of Portland cement concrete sidewalk at the contract unit price per square yard complete in place as shown in the proposal.

Payment will be full compensation for work prescribed in this section and contract documents.

The Engineer will pay for following pay item when included in proposal schedule:

Pay Item	**Pay Unit**
Portland Cement Concrete Sidewalk	Square Yard

The Engineer will pay for excavation of unsuitable material and backfill with material acceptable to the Engineer under Section 203 – Excavation and Embankment. If no pay item exists, refer to Subsection 104.02 – Changes."

END OF SECTION 634

SECTION 638 – PORTLAND CEMENT CONCRETE CURB AND GUTTER

Make the following amendments to said Section:

(I) Amend **638.04 – Measurement** by revising lines 130 to 131 to read as follows:

"**638.04 Measurement.** The Engineer will measure curb and/or gutter, both new and reset, by the linear foot. The Engineer will measure along the front face of the curb at the finished grade elevation. If the Engineer measures gutter separately, the Engineer will measure gutter along the front face of the gutter. The Engineer will not make deduction in gutter length for drainage appurtenances installed such as catch basins and drop inlets.

The Engineer will measure curb and/or gutter transition for payment as follows:

From	To	Measurement for Payment
Cast-in-place Curb or Precast Curb	Cast-in-place Curb and Gutter	Cast-in-place Curb and Gutter
Cast-in-place Curb and Gutter	Precast Curb and Cast-in-place Gutter	Cast-in-place Curb and Gutter

The Engineer will measure precast concrete drop curb and driveway curb or cast-in-place integral driveway curb and gutter under the adjacent normal curb and/or gutter."

(II) Amend **638.05 – Payment** by revising lines 133 to 148 to read as follows:

"**638.05 Payment.** The Engineer will pay for the accepted quantities of curb and/or gutter at the contract lump sum price or at the contract unit price per linear foot for each type of curb and/or gutter specified.

Payment will be full compensation for work prescribed in this section and contract documents.

The Engineer will pay for each of the following pay items when included in proposal schedule:

Pay Item	Pay Unit
Curb, Type 2D	Linear Foot

Curb and Gutter, Type 2DG Linear Foot”

END OF SECTION 638

SECTION 639 – ASPHALT CONCRETE CURB AND GUTTER

Make the following amendments to said Section:

(I) Amend **639.04 – Measurement** by revising lines 88 to 89 to read as follows:

"**639.04 Measurement.** The Engineer will measure accepted asphalt curb per linear foot in accordance with the contract documents. The Engineer will measure along the front face of the curb at the finished grade elevation.

(II) Amend **639.05 – Payment** by revising lines 91 to 101 to read as follows:

"**639.05 Payment.** The Engineer will pay for accepted asphalt concrete curb at contract unit price per linear foot. Payment will be full compensation for the work prescribed in this section and the contract documents.

The Engineer will pay for the following pay item when included in the proposal schedule:

Pay Item	**Pay Unit**
Curb, Type 6	Linear Foot
Curb, 4-inch	Linear Foot"

END OF SECTION 639

SECTION 641 – HYDRO-MULCH SEEDING

Make the following amendments to said Section:

(I) Amend **Subsection 641.02(B) – Fertilizer** by revising the section from line 33 to 36 to read:

> "**(B) Fertilizer.** Proper fertilizer shall be used in hydro-mulch mix, depending on condition of soil. Apply at rates and in amounts consistent with manufacturer's specifications. Contractor shall provide a Soil Analysis Report, if requested by Engineer, and shall use report to determine quantity and ratio of fertilizer for sustained growth of grass. Submit recommendations from a licensed Landscape Architect when deviating from the application rates and amounts above."

(II) Amend **Subsection 641.03(A) – Seeding** by revising the first paragraph from line 100 to 103 to read:

> **"(A) Seeding.** Apply seeded mulch within the timeframe in Subsection 209.03(B), if temporary stabilization will not be utilized, after completion of slopes or portion of slope when exposed face attains height of 15 feet. Notify Engineer not less than 24 hours ahead of hydro-mulch seeding operation. Do not hydro-mulch until the Engineer inspects and accepts areas for planting."

END OF SECTION 641

SECTION 650 – CURB RAMPS

Make the following amendments to said Section:

(I) Amend **650.04 – Measurement** by revising lines 41 to 42 to read as follows:

"**650.04 Measurement.**

(A) The Engineer will measure accepted curb ramps and detectable warning mats per each in accordance with the contract documents."

(II) Amend **650.05 – Payment** by revising lines 45 to 51 to read as follows:

"**650.05 Payment.**

(A) The Engineer will pay for the accepted curb ramps and detectable warning mats at the contract unit price per each. Payment will be full compensation for the work prescribed in this section and the contract documents.

The Engineer will pay for the following pay item when included in the proposal schedule:

	Pay Item	**Pay Unit**
(A)	Curb Ramp, Type "A"	Each
(B)	Curb Ramp, Type "C"	Each
(C)	Curb Ramp, Combination	Each
(D)	Detectable Warning Mat	Each"

END OF SECTION 650

SECTION 699 – MOBILIZATION

Make the following amendments to said Section:

(I) Amend **699.03 Applicability** by revising from lines 21 to 24 to read as follows:

"**699.03 Applicability.** Maximum bid allowed for this item is an amount not to exceed 6 percent of the sum of all items excluding the bid price of this item."

(II) Amend **699.05 Payment** by revising from lines 44 to 47 to read as follows:

"Mobilization (Not to exceed 6 percent of the sum of all items excluding the bid price of this item) Lump Sum"

END OF SECTION 699

SECTION 702 – BITUMINOUS MATERIALS

Make the following amendments to said Section:

(I) Amend **Subsection 702.06 (Unassigned)** by replacing line 23 to read:

"**702.06 Warm Mix Asphalt (WMA) Additive.** Additives for WMA shall be approved by the Engineer."

END OF SECTION 702

SECTION 750 – TRAFFIC CONTROL SIGN AND MARKER MATERIALS

Make the following amendments to said Section:

(I) Amend **Subsection 750.01(A)(1) Retroreflectorization** by replacing lines 8 through 31 to read:

"(1) Retroreflectorization. The following shall be retroreflectorized:

(a) Background for illuminated guide signs and exit number panels ("E" designation) with ASTM D 4956 Type XI retroreflective sheeting.

(b) Background for non-illuminated guide signs and exit number panels ("D" designation) with ASTM D 4956 Type XI retroreflective sheeting.

(c) Messages, arrows, and borders of guide signs and exit number panels ("D" and "E" designations) with ASTM D 4956 Type XI retroreflective sheeting.

(d) Regulatory and warning signs, directional signs ("DIR" designation), route and auxiliary markers, shield symbols, yellow "EXIT ONLY" panels, construction warning signs, and barricade rails, completely, with Type III, IV, or IX retroreflective sheeting.

(e) Pedestrian, school, bicycle crossing series, completely with Type IX fluorescent yellow green retroreflective sheeting."

(II) Amend **Subsection 750.01(B) Backing** by replacing lines 72 through 73 to read:

"Aluminum sheet shall conform to ASTM B 209, alloy 5052-H38 or 6061-T6 flat sheet."

(III) Amend **Subsection 750.01(E) Retroreflective Sheeting Materials** by replacing lines 1126 through 1137 to read:

"**(E) Retroreflective Sheeting Materials.** Retroreflective sheeting includes white or colored sheeting having smooth outer surface.

Retroreflective sheeting shall be classified in accordance with ASTM D 4956.

The coefficient of retroflection shall meet the minimum requirements of ASTM D 4956 for the type of reflective sheeting specified.

The color shall conform to the latest appropriate standard color tolerance chart issued by the U.S. Department of Transportation, Federal Highway Administration and to the daytime and nighttime color requirements of ASTM D 4956.

Test methods and procedures shall be in accordance with ASTM.

(IV) Amend **Subsection 750.02 Sign Posts** by replacing lines 1168 through 1172 to read:

"**750.02 Square Tube Posts.** Square and other tube posts shall conform to ASTM A 653 for cold-rolled, carbon steel sheet, commercial quality; or ASTM A 787 for electric-resistance-welded, metallic-coated carbon steel mechanical tubing."

END OF SECTION 750

SECTION 755 – PAVEMENT MARKING MATERIALS

Make the following amendments to said Section:

(I) Amend **Subsection 755.02 (C) Retroreflective Pavement Markers** by revising lines 223 to 236 to read:

"Exterior surface of shell shall be smooth and contain one or two retroreflective faces of specified color."

(II) Amend **Subsection 755.05 (C)(1) Material Properties** by adding the following after line 869:

> "**(f)** The glass spheres shall not contain more than 200 ppm (total) arsenic, 200 ppm (total) antimony nor more than 200 ppm (total) lead, when tested according to EPA Methods 3052 and 6010C. Other suitable x-ray fluorescence spectrometry analysis methods may be used to screen samples of glass spheres for arsenic and lead content."

END OF SECTION 755

SECTION 770 – TRAFFIC SIGNAL MATERIALS

Make the following amendments to said Section:

(I) Amend **Subsection 770.02(A) – Standard Traffic Signal Heads** by revising the first paragraph from line 211 to 216 to read:

"(b) To ensure quality and performance, LED head shall have prior history of testing and use by CALTRANS and shall exceed ITE standards. Failure on one LED shall not affect other LED's. LED head shall have fully-encapsulated electronic circuitry and configuration for 12-inch ball."

(II) **Amend Subsection 770.02(A)(4) – Back Plates** from line 285 to 290 to read:

"(4) Back Plates. Louvered back plates shall be furnished and installed on mast arm mounted signal heads. Back plates shall be constructed of aluminum alloy 3003-H14 sheet having minimum thickness of 0.058 inch and minimum dimensions equal to signal head size plus five-inch border, with a one-inch retro-reflective border around the outside edge of the front surface. Back plates shall be dull black in color."

(III) Amend **Subsection 770.04 – Pedestrian Signal** from line 444 to 600 to read:

"(A) Purpose.

The purpose of this specification is to provide the minimum requirements for the LED "walking person" and "hand" icon pedestrian signal modules with countdown. This specification is only for the nominal overall message-bearing surface of 16 x 18 in. This specification is not intended to impose restrictions upon specific designs and materials that conform to the purpose and the intent of this specification. This specification refers to definitions and practices described in "Pedestrian Traffic Control Signal Indications" published in the *Equipment and Materials Standards of the Institute of Transportation Engineers*, (referred to in this document as "PTCSI") and in the Applicable Sections of Manual on Uniform Traffic Control Devices (MUTCD) 2009 Section 4E.

(B) Physical and Mechanical Requirements.

The modules shall fit into existing pedestrian signal housings built for the PTCSI sizes stated in Section 1 of the "walking person" and "hand" icon pedestrian signal indication Standard without modification to the housing and shall not require special tools for installation.

Installation of a retrofit replacement module into existing pedestrian signal housing shall only require the removal of the existing optical unit components, shall be weather tight and fit securely in the housing; and shall connect directly to existing electrical wiring. The LED module shall have a visual appearance similar to that of an incandescent lamp (ie: Smooth and non-pixilated). Screwed on lenses are not allowed. Only modules with internal mask shall be utilized. No external silk-screen shall be permitted.

When not illuminated, the WALKING PERSON, UPRAISED HAND, and COUNTDOWN DIGITS shall not be readily visible. The countdown digits of the pedestrian signal module shall be located to the right of the associated UPRAISED HAND. The display of the number of remaining seconds shall begin only at the beginning of the pedestrian change interval. After the countdown displays zero, the display shall remain dark until the beginning of the next countdown. The walking person, hand icons and countdown digits shall be incandescent looking.

The units shall not have any external attachments, dip switches, toggle switches or options that will allow the mode to be changed from counting the clearance cycle, to the full walk/don't walk cycle or any other modification to the icons or digits.

For each nominal module, use the corresponding minimum H (height) and W (width) measurements:

Module Size	Icon Height	Icon Width	Countdown Height	Countdown Width	Countdown Segment Width
(16 x 18 in)	11 in	7 in	9 in	7 in	0.7 in

All exposed components of a module shall be suitable for prolonged exposure to the environment. As a minimum, the module shall be rated for use in the ambient operating temperature range, measured at the exposed rear of the module, of -40°C to +74°C (-40°F to +165°F).

The module shall be a single, self-contained device, not requiring on-site assembly for installation into an existing pedestrian signal housing. The power supply shall be located inside the pedestrian signal module. The assembly and manufacturing process for the module shall be designed to assure all internal LED and electronic components are adequately supported to withstand mechanical shock and vibration from high winds and other sources.

The front window shall be a transparent polycarbonate material with internal masking to prevent the icons and digits from being visible when not in operation. External masking or silk-screen technology shall not be permitted.

Each module shall be identified on the backside with the manufacturer's name, model, serial number and operating characteristics. The operating characteristics shall include the nominal operating voltage and stabilized power consumption, in watts and/or Volt-Amperes.

(C) Photometric Requirements

For a minimum period of 60 months, the maintained minimum luminance values for the modules under operating conditions, when measured normal to the plane of the icon surface, shall not be less than:

- Walking person: 2,200 cd/m^2;
- Hand: 1,400 cd/m^2.
- Countdown digits: 1,400 cd/m^2;

The luminance of the emitting surface, measured at angles from the normal of the surface, may decrease linearly to a value of 50% of the values listed above at an angle of 15 degrees. The LED module shall have a visual appearance similar to that of an incandescent lamp (ie: Smooth and non-pixilated).
Maximum permissible luminance: When operated within the temperature range, the actual luminance for a module shall not exceed three times the required peak value of the minimum maintained luminance. Luminance uniformity: The uniformity of the signal output across the emitting section of the module lens (i.e. the hand, person or countdown icon) shall not exceed a ratio of 5 to 1 between the maximum and minimum luminance values (cd/m^2).

The standard colors for the LED Pedestrian Signal Module shall be White for the walking person and Portland Orange for the hand icon and the countdown digits.

(D) Electrical Requirements

All wiring and terminal blocks shall meet the requirements of Section 13.02 of the VTCSH Standard. Maximum of three secured, color coded, 1 meter (39 in) long 600 V, 16 AWG minimum, jacketed wires, conforming to the National Electrical Code, rated for service at +105°C, are to be provided for electrical connection. The

conductors shall be color coded with orange for the hand, blue for the walking person and white as the common lead.

LED modules shall operate from a 60 ± 3 Hertz ac line power over a voltage range from 80 to 135 VAC RMS. Nominal operating voltage for all measurements shall be 120 ± 3 VAC RMS. Fluctuations in line voltage over the range of 80 to 135 VAC RMS shall not affect luminous intensity by more than ± 10 %. To prevent the appearance of flicker, the module circuitry shall drive the LEDs at frequencies greater than 100 Hz when modulated, or at DC, over the voltage range specified.

Low Voltage Turn Off: There should be no illumination of the module when the applied voltage is less than 35 VAC RMS. To test for this condition, each icon must first be fully illuminated at the nominal operating voltage. The applied voltage shall then be reduced to the point where there is no illumination. This point must be greater than 35 VAC RMS.

Turn-ON and Turn-OFF Time: A module shall reach 90% of full illumination (turn-ON) within 75 msec of the application of the nominal operating voltage. The signal shall cease emitting visible illumination (turn-OFF) within 75 msec of the removal of the nominal operating voltage.

Default Condition: For abnormal conditions when nominal voltage is applied to the unit across the two-phase wires (rather than being applied to the phase wire and the neutral wire) the pedestrian signal unit shall default to the hand symbol. The on-board circuitry of a module shall include voltage surge protection:

- To withstand high-repetition noise transients and low-repetition high-energy transients as specified in NEMA Standard TS-2 2003; Section 2.1.8
- Section 8.2 IEC 1000-4-5 & Section 6.1.2 ANSI/IEEE C62.41.2-2002, 3kV, 2 ohm
- Section 8.0 IEC 1000-4-12 & Section 6.1.1 ANSI/IEEE C62.41.2-2002, 6kV, 30 ohm

The LED signal and associated on-board circuitry shall meet the requirements of the Federal Communications Commission (FCC) Title 47, Subpart B, Section 15 regulations concerning the emission of electronic noise by Class A digital devices. The modules shall provide a power factor of 0.90 or greater when operated at nominal operating voltage, and 25ºC (77ºF). Total harmonic distortion

induced into an AC power line by the module, operated at nominal operating voltage, and at 25ºC (77ºF) shall not exceed 20%.

The current draw shall be sufficient to ensure compatibility and proper triggering and operation of load current switches and conflict monitors in signal controller units. Off State Voltage Decay: When the module is switched from the On state to the Off state the terminal voltage shall decay to a value less than 10 VAC RMS in less than 100 milliseconds when driven by a maximum allowed load switch leakage current of 10 milliamps peak (7.1 milliamps AC).

(E) Module Functions

The module shall operate in one mode: *Clearance Cycle Countdown Mode Only.* The module shall start counting when the flashing don't walk turns on and will countdown to "0" and turn off when the steady "Don't Walk" signal turns on. The m*odule shall not have user accessible switches or controls for the purpose of modifying the cycle, icons or digits.* At power on, the module enters a single automatic learning cycle. During the automatic learning cycle, the countdown display shall remain dark. The unit shall re-program itself if it detects any increase or decrease of Pedestrian Timing. The digits shall go blank once a change is detected and then take one complete pedestrian cycle (with no counter during this cycle) to adjust its buffer timer.

The module shall allow for consecutive cycles without displaying the steady Hand icon ("Don't Walk"). The module shall recognize preemption events and temporarily modify the crossing cycle accordingly. If the controller preempts during the walking man, the countdown shall follow the controller's directions and shall adjust from walking man to flashing hand. It shall start to count down during the flashing hand. If the controller preempts during the flashing hand, the countdown shall continue to count down without interruption. The next cycle, following the preemption event, shall use the correct, initially programmed values. This specification is worded such that the flashing don't walk time is not modified.

If the controller output displays Don't Walk steady condition or if both the hand /person go dark and the unit has not arrived to zero, the unit suspends any timing and the digits shall go dark.

(F) Warranty

Manufacturers will provide the following warranty provisions. Replacement or repair of an LED signal module that fails to function

as intended due to workmanship or material defects within the first 5 years (60 months) from the date of project acceptance."

(IV) Amend **Subsection 770.05(A)- Controller Assembly** from line 617 to 625 to read:

"(1) Model 332A controller cabinet refers to latest Model 332LS controller cabinet listed on CALTRANS QPL.

The traffic signal controller shall be a 2070 LX on CALTRANS QPL. Each controller shall be furnished with the latest firm ware. Each controller shall be able to communicate with HDOT's traffic signal central server via Contractor provided cellular modem. (See Section 627.02 for cellular modem)

(3) Each controller assembly listed in Table 770.05-1 – Controller Assembly Requirements contains sufficient equipment for full 8-vehicle, 4-pedestrian, and 4-preemption phase intersection, even though the contract documents may not require it.

TABLE 770.05-1 – CONTROLLER ASSEMBLY REQUIREMENTS

Item	Quantity
Model 2070 LX Controller	1
332LS Aluminum Cabinet	1
Model 200 Load Switches	12
Model 204 Flasher	All
Model 242 Isolators	2
Model FS/ST Isolator	All
Flash Transfer Relays	All
Firmware	1
Model 2010ECL Conflict Monitor (Crimp and Poke Type, such as Molex Dualcon TM Straight/on Edge Dual Position Connectors, or approved equal)	1
Model 262C Detector Amplifiers (Rotary Sw Type)	8
Model M762 Preempt. Car (Non-QPL) with M768 Auxiliary Input Panel	2

(V) Amend **Subsection 770.05(B)- Model 170E Controller** by deleting line 643.

(VI) Amend **Subsection 770.05(C)(5)- Cabinet** by deleting lines 660 to 665.

(VII) Amend **Subsection 770.05(D)- Auxiliary Equipment** from line 697 to 741 to read:

(1) Model M762 Optical Preemption Module with M768 Auxiliary Input Panel. M762 shall be card-type and shall interface with Model 170 cabinet preemption slots of input file. Each M762 Module shall have two channels of preemption. M762 shall include firmware to discriminate between two valid priority signals, to prioritize valid same priority signals on a first come, first served basis, and to override low priority signal if high priority is received. M762 Module shall receive input signals (9.639 and 14.035 Hz) to permit priority preemption operation within 170 local intersection program. M762 shall optically isolate output signals and shall trigger active low signal to controller for high priority and pulsed active low signal for low priority. M768 Auxiliary Input Panel shall be used to interconnect M762 with the terminals inside the traffic cabinet. The State's preemption systems employ the 3M/Global Traffic Technologies Opticom System. New preemption equipment shall be 3M/Global Traffic Technologies Opticom or accepted equal that is fully compatible with 3M/Global Traffic Technologies Opticom.

(2) Security Tumbler for Signal Cabinet. The signal control cabinet door locks (2 locks for each cabinet) are keyed to take Best Lock Series tumblers. The contractor shall furnish and install 2 lock cylinders that will fit in the current locks on the signal cabinet. The lock cylinders keys shall be one of a kind, licensed to DTS, and each cylinder shall have 2 sets of keys with "do not duplicate" stamped on each key.

(VIII) Amend **Subsection 770.06(C) - Type 3 – Interconnect Cable Tie-in Signalized Intersection to Another** from line 759 to 765 to read:

"**(C) Type 3 – Interconnect Cable Tie-in Signalized Intersection to Another**. Fiber optic cables shall be utilized. See Section 627.02 for details.

(IX) Amend **Subsection 770.06(G) – Type 7 Preemption Detector (Opticom) Cables** from line 788 to 798 to read:

"(G) Type 7 - Preemption Detector (Opticom) Cables. Preemption detector (Opticom) cables are specific cables that run continuously from optical detectors mounted on traffic signal standards to terminal blocks for M762 phase module located in controller cabinet. Each detector shall be furnished with its own cable running back to controller cabinet. 3M/Global Traffic Technologies' M138 Optical Detector Cable shall be furnished for detector cable because it is compatible and consistent with requirements for Opticom Preemption System. M138 cable shall be furnished that is BerkTek Type B, shield jacket, three - insulated conductor cable, 20 AWG, one - 20 AWG bare stranded ground, 600 Volts, orange-blue-yellow color coded and 5/16 inch diameter."

(X) Amend **Subsection 770.11 – Preemption Detectors** from line 997 to 1009 to read:

"(A) Description. Preemption Detectors shall be located on traffic signal standards to convert optical signals emitted from an emergency vehicle to electrical pulses for emergency preemption of traffic signals. Electrical signals from optical detector shall be transmitted by 4-conductor cable to preemption module M762 located in input slot of controller cabinet. M762 preemption module shall direct and hold controller in preemption mode until signal disappears. Preprogrammed selection of phases and signal displays shall be controlled by Local Intersection Program. The State's preemption system employ 3M/Global Traffic Technologies Opticom System. New preemption equipment shall be by 3M/Global Traffic Technologies Opticom or equal accepted by the Engineer, that is fully compatible with 3M/Global Traffic Technologies Opticom. Astro-mini brackets or similar device for attaching preemption detector to poles shall be included."

(XI) Amend **Subsection 770.11 – Preemption Detectors** from line 1012 to 1021 to read:

"(1) Type 7 Cable. Type 7 preemption detector (Opticom) cables shall be specific cables that run continuously from optical detectors mounted on traffic signal standards to terminal blocks for M762 phase module in controller cabinet. Type 7 preemption detector cable shall be compatible with 3M/Global Traffic Technologies' M138 Optical Detector cable and shall be consistent with requirements for Opticom Preemption System. M138 cable shall be BerkTek Type B, shield jacket, 3-insulated conductor, 20AWG stranded copper, 1-20AWG bare stranded ground, 600 volts, orange-blue-yellow color coded, and 5/16-inch diameter."

(XII) Add **Subsection 770.12 – Pedestrian Signal Push Button With Integral Sign** to read:

"(A) Description. The pedestrian push button unit shall consist of an assembly that can be secured to traffic poles with standard screws, be tamper proof, weatherproof, and constructed so that electrical shocks are impossible to receive.

(B) Materials.

(1) The housing for the push button assembly shall be of cast and/or machined aluminum. The push button assembly shall be weatherproof with a water diverting groove set in the outside diameter of the actuator button receptor. The housing shall be designed to reduce vandalism and shall mount on the side or top of a pole with a minimum 2-inch diameter button. The push button

housing shall be capable of mounting in an ‘up button’ or ‘down button’ configuration. All wire connections shall be accessible from the back of the assembly.

(2) An ADA acceptable raised directional sign shall be installed with stainless steel fasteners to the housing. The sign shall consist of a raised walking person and a raised arrow indication. Paint the unit black and paint the raised walking person and arrow white. The sign shall be capable of mounting in an ‘up button’ or ‘down button’ configuration. The raised walking person and arrows shall be directional and match the indication as shown in the plans.

(3) The pushbutton shall extend from the sign faceplate approximately three inches. The pushbutton actuator shall be convex in design having a flat area on the face for uses of a stylus, ADA acceptable, two inches in diameter, and have a tension of less than five pounds when pressed. The button shall be manufactured in a way that it cannot be stuck in a closed (constant call) position.

The pedestrian push button shall be a piezo electric type and be UL listed. The button shall have a stainless steel actuator and shall be mounted within the housing with stainless steel, non-corrosive, tamper proof fasteners. The unit shall operate between 12-24V DC or AC, 3 inch round mounts with 4 mounting bolts. The pedestrian button shall give an audio and visual signal each time the pedestrian button is activated.”

END OF SECTION 770

Requirements of Chapter 104, HRS
Wages and Hours of Employees on Public Works Law

Chapter 104, HRS, applies to every public works construction project over $2,000, regardless of the method of procurement or financing (purchase order, voucher, bid, contract, lease arrangement, warranty, SPRB).

Rate of Wages for Laborers and Mechanics

- Minimum prevailing wages (basic hourly rate plus fringe benefits), as determined by the Director of Labor and Industrial Relations and published in wage rate schedules, shall be paid to the various classes of laborers and mechanics working on the job site. [§104-2(a), (b), Hawaii Revised Statutes (HRS)]

- If the Director of Labor determines that prevailing wages have increased during the performance of a public works contract, the rate of pay of laborers and mechanics shall be raised accordingly. [§104-2(a) and (b), HRS; §12-22-3(d) Hawaii Administrative Rules (HAR)]

Overtime

- Laborers and mechanics working on a Saturday, Sunday, or a legal holiday of the State or more than eight hours a day on any other day shall be paid overtime compensation at not less than one and one-half times the basic hourly rate plus the cost of fringe benefits for all hours worked. If the Director of Labor determines that a prevailing wage is defined by a collective bargaining agreement, the overtime compensation shall be at the rates set by the applicable collective bargaining agreement [§§104-1, 104-2(c), HRS; §12-22-4.1, HAR]

Weekly Pay

- Laborers and mechanics employed on the job site shall be paid their full wages at least once a week, without deduction or rebate, except for legal deductions, within five working days after the cutoff date. [§104-2(d), HRS]

Posting of Wage Rate Schedules

- Wage rate schedules with the notes for prevailing wages and special overtime rates, shall be posted by the contractor in a prominent and easily accessible place at the job site. A copy of the entire wage rate schedule shall be given to each laborer and mechanic employed under the contract, except when the employee is covered by a collective bargaining agreement. [§104-2(d), HRS]

Withholding of Accrued Payments

- If necessary, the contracting agency may withhold accrued payments to the contractor to pay to laborers and mechanics employed by the contractor or subcontractor on the job site any difference between the wages required by the public works contract or specifications and the wages received. [§104-2(e), HRS]

Certified Weekly Payrolls and Payroll Records

- A certified copy of all payrolls shall be submitted weekly to the contracting agency. [§104-3(a), HRS; §12-22-10, HAR]

- The contractor is responsible for the submission of certified copies of the payrolls of all subcontractors. The certification shall affirm that the payrolls are correct and complete, that the wage rates listed are not less than the applicable rates contained in the applicable wage rate schedule, and that the classifications for each laborer or mechanic conform with the work the laborer or mechanic performed. [§104-3(a), HRS; §12-22-10, HAR]

- Payroll records shall be maintained by the contractor and subcontractors for three years after completion of construction. The records shall contain: [§104-3(b), HRS; §12-22-10, HAR]
  - the name and home address of each employee
  - the last four digits of social security number
  - a copy of the apprentice's registration with DLIR
  - the employee's correct classification
  - rate of pay (basic hourly rate + fringe benefits)
  - itemized list of fringe benefits paid
  - daily and weekly hours worked
  - weekly straight time and overtime earnings
  - amount and type of deductions
  - total net wages paid
  - date of payment

- Records shall be made available for examination by the contracting agency, the Department of Labor and Industrial Relations (DLIR), or any of its authorized representatives, who may also interview employees during working hours on the job. [§§104-3(c), 104-22(a), HRS; §12-22-10, HAR]

Termination of Work on Failure to Pay Wages

- If the contracting agency finds that any laborer or mechanic employed on the job site by the contractor or any subcontractor has not been paid prevailing wages or overtime, the contracting agency may, by written notice to the contractor, terminate the contractor's or subcontractor's right to proceed with the work or with the part of the work in which the required wages or overtime compensation have not been paid. The contracting agency may complete this work by contract or otherwise, and the contractor or contractor's sureties shall be liable to the contracting agency for any excess costs incurred. [§104-4, HRS]

Apprentices

- Apprentice wage rates apply to contractors who are a party to a bona fide apprenticeship program which has been registered with the DLIR. In order to be paid apprentice rates, apprentices must be parties to an agreement either registered with or recognized as a USDOL nationally approved apprenticeship program by the DLIR, Workforce Development Division, (808) 586-8877, and the apprentice must be individually registered by name with the DLIR. [§12-22-6(1) and (2), HAR]

- The number of apprentices on any public work in relation to the number of journeyworkers in the same craft classification as the apprentices employed by the same employer on the same public work may not exceed the ratio allowed under the apprenticeship standards registered with or recognized by the DLIR. A registered or recognized apprentice receiving the journeyworker rate will not be considered a journeyworker for the purpose of meeting the ratio requirement. [§12-22-6(3), HAR]

Enforcement

- To ensure compliance with the law, DLIR and the contracting agency will conduct investigations of contractors and subcontractors. If a contractor or subcontractor violates the law, the penalties are: [§104-24, HRS]

  - First Violation — Equal to 25% of back wages found due or $250 per offense up to $2,500, whichever is greater.
  - Second Violation — Equal to amount of back wages found due or $500 for each offense up to $5,000, whichever is greater.
  - Third Violation — Equal to two times the amount of back wages found due or $1,000 for each offense up to $10,000, whichever is greater; and
    Suspension from doing any new work on any public work of a governmental contracting agency for three years.

  - A violation would be deemed a second violation if it occurs within two years of the **first notification of violation**, and a third violation if it occurs within three years of **the second notification of violation**. [§104-24, HRS; §12-22-25(b), HAR]

  - **Suspension**: For a first or second violation, the department shall immediately suspend a contractor who fails to pay wages or penalties until all wages and penalties are paid in full. For a third violation, the department shall penalize and suspend the contractor as described above, **except that if the contractor continues to violate the law, then the department shall immediately suspend the contractor for a mandatory three years. The contractor shall remain suspended until all wages and penalties are paid in full.** [§§104-24, 104-25, HRS]

- **Suspension**: Any contractor who fails to make payroll records accessible or provide requested information within 10 days, or fails to keep or falsifies any required record, shall be assessed a penalty including suspension as provided in Section 104-22(b) and 104-25(a)(3), HRS. [§104-3(c), HRS; §12-22-26, HAR]

- If any contractor interferes with or delays any investigation, the contracting agency shall withhold further payments until the delay has ceased. Interference or delay includes failure to provide requested records or information within ten days, failure to allow employees to be interviewed during working hours on the job, and falsification of payroll records. The department shall assess a penalty of $10,000 per project, and $1,000 per day thereafter, for interference or delay. [§104-22(b), HRS; §12-22-26, HAR]

- Failure by the contracting agency to include in the provisions of the contract or specifications the requirements of Chapter 104, HRS, relating to coverage and the payment of prevailing wages and overtime, is not a defense of the contractor or subcontractor for noncompliance with the requirements of this chapter. [§104-2(f), HRS]

For additional information, visit the department's website at *http://labor.hawaii.gov/wsd* or contact any of the following DLIR offices:

Oahu (Wage Standards Division).....(808) 586-8777
Hawaii Island .....(808) 974-6464
Maui and Kauai.....(808) 243-5322

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

HONOLULU, HAWAII

P R O P O S A L

6/02/98

PROPOSAL TO THE

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

PROJECT: **KAILUA ROAD INTERSECTION IMPROVEMENTS VICINITY OF ULUOA STREET AND ULUMANU DRIVE, DISTRICT OF KOOLAUPOKO, ISLAND OF OAHU**

PROJECT NO.: **61D-01-23**

COMPLETION TIME: **180 Working days from the Start Work Date from the Department.**

DESIGN PROJECT MANAGER:

NAME: **Reid Tokuhara**
ADDRESS: **Department of Transportation**
601 Kamokila Boulevard, Room 602
Kapolei, HI 96707
PHONE NO.: **(808) 692-7691**
EMAIL: **reid.tokuhara@hawaii.gov**
FAX NO.: **(808) 692-7690**

ELECTRONIC SUBMITTAL: **Bidders shall submit and upload the complete proposal to HIePRO prior to the bid opening date and time. Any additional support documents explicitly designated as confidential and/or proprietary shall be uploaded as a separate file to HIePRO. Bidders shall refer to SPECIAL PROVISIONS 102.09 DELIVERY OF PROPOSAL for complete details. FAILURE TO UPLOAD THE COMPLETE PROPOSAL TO HIePRO SHALL BE GROUNDS FOR REJECTION OF THE BID.**

Director of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813

Dear Sir:

The undersigned bidder declares the following:

1. It has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with this proposal.

2. It has not been assisted or represented on this matter by any individual who has, in a State capacity, been involved in the subject matter of this contract within the past two years.

3. It has not and will not, either directly or indirectly offered or given a gratuity (i.e.. an entertainment or gift) to any State or County employee to obtain a contract or favorable treatment under a contract.

The undersigned bidder further agrees to the following:

1. If this proposal is accepted, it shall execute a contract with the Department to provide all necessary labor, machinery, tools, equipment, apparatus and any other means of construction, to do all the work and to furnish all the materials specified in the contract in the manner and within the time therein prescribed in the contract, and that it shall accept in full payment therefore the sum of the unit and/or lump sum prices as set forth in the attached proposal schedule for the actual quantities of work performed and materials furnished and furnish satisfactory security in accordance with Section 103D-324, Hawaii Revised Statutes, within 10 days after the award of the contract or within such time as the Director of Transportation may allow after the undersigned has received the contract documents for execution, and is fully aware that non-compliance with the aforementioned terms will result in the forfeiture of the full amount of the bid guarantee required under Section 103D-323, Hawaii Revised Statutes.

2. That the quantities given in the attached proposal schedule are approximate only and are intended principally to serve as a guide in determining and comparing the bids.

3. That the Department does not either expressly or by implication, agree that the actual amount of work will correspond therewith, but reserves the right to increase or decrease the amount of any class or portion of the work, or to omit portions of the work, as may be deemed necessary or advisable by the Director of Transportation, and that all increased or decreased quantities of work shall be performed at the unit prices set forth in the attached proposal schedule except as provided for in the specifications.

4. In case of a discrepancy between unit prices and the totals in said Proposal Schedule, the unit prices shall prevail.

5. Agrees to begin work within 10 working days after the date of notification to commence with the work, which date is in the notice to proceed, and shall finish the entire project within the time prescribed.

6. The Director of Transportation reserves the right to reject any or all bids and to waive any defects when in the Director's opinion such rejections or waiver will be for the best interest of the public.

The bidder acknowledges receipt of and certifies that it has completely examined the following listed items: Hawaii Standard Specifications for Road and Bridge Construction, 2005, the Notice to Bidders, the Special Provisions, the Technical Provisions, the Proposal, the Contract and Bond Forms, and the Project Plans.

In accordance with Section 103D-323, Hawaii Revised Statutes, this proposal is accompanied with a bid security in the amount of 5% of the total amount bid, in the form checked below. (Check applicable bid security submitted with bid.)

_____ Surety Bid Bond (Use standard form),

_____ Cash,

_____ Cashier's Check,

_____ Certified Check, or

_____ _____
(Fill in other acceptable security.)

The undersigned bidder acknowledges receipt of any addendum issued by the Department by recording in the space below the date of receipt.

Addendum No. 1 _____ Addendum No. 3 _____

Addendum No. 2 _____ Addendum No. 4 _____

In accordance with Section 103D-302, Hawaii Revised Statutes, the undersigned as bidder has listed the name of each person or firm, who will be engaged by the bidder on the project as Joint Contractor or Subcontractor and the nature of work to be done by each. It is understood that failure to comply with the aforementioned requirements may be cause for rejection of the bid submitted.

	Name of Subcontractor	Nature and Scope of Work
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		

	Name of Joint contractor	Nature and Scope of Work
1.		
2.		
3.		

("None" or if left blank indicates no Subcontractor or Joint Contractor; if more space is needed, attach additional sheets.)

The undersigned hereby certifies that the bid prices contained in the attached proposal schedule have been carefully checked and are submitted as correct and final.

This declaration is made with the understanding that the undersigned is subject to the penalty of perjury under the laws of the United States and is in violation of the Hawaii Penal Code, Section 710-1063, unsworn falsification to authorities, of the Hawaii Revised Statutes, for knowingly rendering a false declaration.

_____
Bidder

By _____
Authorized Signature

_____
Title

_____
Business Address

_____

_____
Email Address

_____
Date

_____
Contact Person (If different from above.)

_____
Phone Number and Email Address

NOTE:

If bidder is a CORPORATION, the legal name of the corporation shall be set forth above, the corporate seal affixed, together with the signature(s) of the officer(s) authorized to sign contracts for the corporation. Please attach to this page current (not more than six months old) evidence of the authority of the officer(s) to sign for the corporation.

If bidder is a PARTNERSHIP, the true name of the partnership shall be set forth above, with the signature(s) of the general partner(s). Please attach to this page current (not more than six months old) evidence of the authority of the partner authorized to sign for the partnership.

If bidder is an INDIVIDUAL, the bidder's signature shall be placed above.

If signature is by an agent, other than an officer of a corporation or a partner of a partnership, a POWER OF ATTORNEY must be on file with the Department before opening bids or submitted with the bid. Otherwise, the Department may reject the bid as irregular and unauthorized.

PREFERENCES

Bidders agree that preferences shall be taken into consideration to determine the low bidder in accordance with said Sections and the rules promulgated, however, the award of contract will be in the amount of the bid offered exclusive of any preferences.

A. HAWAII PRODUCTS PREFERENCE

In accordance with ACT 174, SLH 2022, effective June 27, 2022, Hawaii Products Preference shall not apply to solicitations for public works construction. Therefore, the Hawaii Products Preference shall not apply to this project.

B. APPRENTICESHIP PROGRAMS PREFERENCE

In accordance with ACT 17, SLH 2009 – Apprenticeship Program, a 5% bid adjustment for bidders that are parties to apprenticeship agreements pursuant to Hawaii Revised Statutes (HRS) Section 103-55.6 may be applied to the bidder's price for evaluation purposes.

Any bidder seeking this preference must be a party to an apprenticeship agreement registered with the Department of Labor and Industrial Relations at the time the offer is made for each apprenticeable trade the bidder will employ to construct the public works projects for which the offer is being made.

The bidder is responsible for complying with all submission requirements for registration of its apprenticeship program before requesting the preference.

( ) Yes, I wish to be considered for the Apprenticeship Programs Preference. I have included Certification Form(s) 1 with my bid.

C. RECYCLED PRODUCT PREFERENCE

Recycled product preference shall not apply to this proposal.

PROPOSAL SCHEDULE					
ITEM NO.	**ITEM**	**APPROX. QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**
201.0400	Clearing and Grubbing	L.S.	L.S.	L.S.	$_____
202.0420	Removal of Existing Traffic Signs	L.S.	L.S.	L.S.	$_____
202.0050	Removal of Existing Curb and Gutter	L.S.	L.S.	L.S.	$_____
202.0030	Removal of Existing Sidewalk	L.S.	L.S.	L.S.	$_____
202.0430	Removal of Existing Grassed Median	L.S.	L.S.	L.S.	$_____
202.0440	Removal of Existing Pavement	L.S.	L.S.	L.S.	$_____
209.0100	Installation, Maintenance, Monitoring, and Removal of BMP	L.S.	L.S.	L.S.	$_____
209.0200	Additional Water Pollution, Dust, and Erosion Control	F.A.	F.A.	F.A.	$ 50,000.00
212.0100	Archaeological Monitoring	F.A.	F.A.	F.A.	$ 100,000.00
301.0400	Hot Mix Asphalt Base Course	L.S.	L.S.	L.S.	$_____
401.0400	Asphalt Concrete Pavement Mix No. IV	135	S.Y.	$ _____	$_____
415.0400	Cold Planing of Existing Pavement	370	S.Y.	$ _____	$_____
607.0400	Green Vinyl Coated Chain Link Fence	60	L.F.	$ _____	$_____
617.0400	Imported Planting Soil	L.S.	L.S.	L.S.	$_____
619.0400	Arborist Services	F.A.	F.A.	F.A.	$ 50,000.00

PROPOSAL SCHEDULE					
ITEM NO.	**ITEM**	**APPROX. QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**
621.0001	Street Light Sawcut, Trench, Excavation, and Backfill	400	L.F.	$ _____	$_____
621.0002	HECO Sawcut, Trench, Excavation and Backfill	150	L.F.	$ _____	$_____
621.0003	HECO Metering Equipment	2	Each	$ _____	$_____
621.0004	1-3” HECO Concrete Encased Conduit	100	L.F.	$ _____	$_____
621.0005	1-2” Secondary Concrete Encased Conduit	50	L.F.	$ _____	$_____
621.0006	1-1.5” Street Light Concrete Encased Conduit	400	L.F.	$ _____	$_____
621.0007	2’ x 4’ HECO Handhole	2	Each	$ _____	$_____
621.0008	State Street Light Standard, Base, and Single Arm and 120W Luminaire	8	Each	$ _____	$_____
621.0009	State Street Light Standard, Base, and Dual Arm and 120W Luminaire	1	Each	$ _____	$_____
621.0010	Street Light Conductors	400	L.F.	$ _____	$_____
621.0011	Secondary Cables 2#8, #8 Gnd XHHW CU Cable	50	L.F.	$ _____	$_____
621.0012	Service Cables 3#2, #8 Gnd XHHW CU Cable	10	L.F.	$ _____	$_____
621.0013	Hawaiian Electric Co. Charges	F.A.	F.A.	F.A.	$ 20,000.00

PROPOSAL SCHEDULE					
ITEM NO.	**ITEM**	**APPROX. QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**
623.1000	Furnish and Install Controller Assembly with Firmware (Model 2070 Traffic Signal Controller Unit, Type 332A Cabinet and Auxiliary Equipment)	2	Each	$ _____	$_____
623.2001	Type I Traffic Signal Standard, H=8 Ft	2	Each	$ _____	$_____
623.2002	Type I Traffic Signal Standard, H=10 Ft	12	Each	$ _____	$_____
623.2003	Type II Traffic Signal Standard With 30-Foot Mast Arm	4	Each	$ _____	$_____
623.2011	Foundation For Type I Signal Standard	14	Each	$ _____	$_____
623.2012	Foundation For Type II Signal Standard	4	Each	$ _____	$_____
623.2013	Foundation For Controller Cabinet	2	Each	$ _____	$_____
623.3001	Traffic Signal Assembly, (1-Way, 12-Inch, 1-3 Section Vertical With Type Tp-1w Mounting)	9	Each	$ _____	$_____
623.3002	Traffic Signal Assembly, (1-Way, 12-Inch, 1-3 Section Vertical With Type B-1w Mounting)	3	Each	$ _____	$_____
623.3003	Traffic Signal Assembly, (1-Way, 12-Inch, 1-3 Section Vertical With Type Ma-1w(1) Mounting)	8	Each	$ _____	$_____
623.3004	Traffic Signal Assembly, (1-Way, 12-Inch, 1-3 Section Vertical, Programmable Visibility Head With Type With Type Tp-1w Mounting)	2	Each	$ _____	$_____

PROPOSAL SCHEDULE					
ITEM NO.	**ITEM**	**APPROX. QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**
623.3005	Traffic Signal Assembly, (1-Way, 12-Inch, 1-3 Section Vertical, Programmable Visibility Head With Type Ma-1w(1) Mounting)	1	Each	$ _____	$_____
623.3011	Evp Optical Receiver With Mast Arm Mounting	4	Each	$ _____	$_____
623.3012	Evp Optical Receiver With Top Of Pole Mounting	3	Each	$ _____	$_____
623.3021	Pedestrian Signal Assembly, (1-Way, 12-Inch, One Vertical With Type B-1w Mounting)	2	Each	$ _____	$_____
623.3022	Pedestrian Signal Assembly, (1-Way, 12-Inch, One Vertical With Type C-1w Mounting)	7	Each	$ _____	$_____
623.3023	Pedestrian Signal Assembly, (1-Way, 12-Inch, One Vertical With Type C-2w Mounting)	1	Each	$ _____	$_____
623.3024	Pedestrian Signal Assembly, (1-Way, 12-Inch, One Vertical With Type Tp-1w Mounting)	1	Each	$ _____	$_____
623.3025	Pedestrian Signal Assembly, (1-Way, 12-Inch, One Vertical With Type Tp-2w Mounting)	1	Each	$ _____	$_____
623.4001	Pedestrian Push Button With Instruction Sign	13	Each	$ _____	$_____
623.5001	Traffic Signal Ductline, One 2-Inch Conduit, Sch 40 Pvc, Concrete Encased	50	L.F.	$ _____	$_____
623.5002	Traffic Signal Ductline, Two 2-Inch Conduit, Sch 40 Pvc, Concrete Encased	2,600	L.F.	$ _____	$_____
623.5003	Traffic Signal Ductline, Four 2-Inch Conduit, Sch 40 Pvc, Concrete Encased	400	L.F.	$ _____	$_____

PROPOSAL SCHEDULE					
ITEM NO.	**ITEM**	**APPROX. QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**
623.5004	Traffic Signal Ductline, Five 2-Inch Conduit, Sch 40 Pvc, Concrete Encased	250	L.F.	$ _____	$_____
623.5005	Traffic Signal Ductline, Six 2-Inch Conduit, Sch 40 Pvc, Concrete Encased	200	L.F.	$ _____	$_____
623.5006	Traffic Signal Ductline, Seven 2-Inch Conduit, Sch 40 Pvc, Concrete Encased	125	L.F.	$ _____	$_____
623.5007	Traffic Signal Ductline, Eight 2-Inch Conduit, Sch 40 Pvc, Concrete Encased	125	L.F.	$ _____	$_____
623.5008	Traffic Signal Ductline, Four 2-Inch Conduit And Two 3-Inch Conduit, Sch 40 Pvc, Concrete Encased	10	L.F.	$ _____	$_____
623.5009	Traffic Signal Ductline, Four 2-Inch Conduit And Three 3-Inch Conduit, Sch 40 Pvc, Concrete Encased	10	L.F.	$ _____	$_____
623.6001	Type A Pullbox	3	Each	$ _____	$_____
623.6002	Type B Pullbox	31	Each	$ _____	$_____
623.6003	Type C Pullbox	2	Each	$ _____	$_____
623.6004	Replace Type B Pullbox	2	Each	$ _____	$_____
623.7001	No. 14, 2-Conductor Loop Detector Lead-In Cable	8,600	L.F.	$ _____	$_____
623.7002	No. 14, 26-Conductor Traffic Control Cable	2,000	L.F.	$ _____	$_____

PROPOSAL SCHEDULE					
ITEM NO.	**ITEM**	**APPROX. QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**
623.7003	No. 8, 3-Conductor Power Cable	100	L.F.	$ _____	$_____
623.7004	EVP Cable	1,300	L.F.	$ _____	$_____
623.8001	Loop Detector Sensing Unit (6 Ft X 6 Ft) Two Loops	16	Each	$ _____	$_____
623.8002	Loop Detector Sensing Unit (6 Ft X 6 Ft) Four Loops	6	Each	$ _____	$_____
623.8003	Loop Detector Sensing Unit (6 Ft X 6 Ft) Six Loops	3	Each	$ _____	$_____
627.1000	Traffic Signal Control System	L.S.	L.S.	L.S.	$_____
627.1001	Existing Traffic Signal Control Fiber Interface	L.S.	L.S.	L.S.	$_____
627.1002	CCTV Traffic Camera Assembly	2	Each	$ _____	$_____
629.0401	4-inch Pavement Striping (Tape, Type I or Thermoplastic)	300	L.F.	$ _____	$_____
629.0402	4-inch Pavement Striping (Tape, Type III or Thermoplastic)	1,350	L.F.	$ _____	$_____
629.0403	6-inch Pavement Striping (Tape, Type II or Thermoplastic)	3,100	L.F.	$ _____	$_____
629.0404	6-inch Pavement Striping (Tape, Type III or Thermoplastic)	440	L.F.	$ _____	$_____
629.0405	8-inch Pavement Striping (Tape, Type I or Thermoplastic)	340	L.F.	$ _____	$_____
629.0406	12-inch Pavement Striping (Tape, Type III or Thermoplastic)	245	L.F.	$ _____	$_____

PROPOSAL SCHEDULE					
ITEM NO.	**ITEM**	**APPROX. QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**
629.0407	Crosswalk Marking (Tape, Type III or Thermoplastic)	24	Lane	$ _____	$_____
629.0408	Pavement Arrow (Tape, Type III or Thermoplastic)	20	Each	$ _____	$_____
629.0409	Pavement Symbol (Paint, Tape, Type I, or Thermoplastic)	4	Each	$ _____	$_____
629.0410	Type “C” Pavement Marker	86	Each	$ _____	$_____
629.0411	Type “D” Pavement Marker	7	Each	$ _____	$_____
629.0412	Type “H” Pavement Marker	42	Each	$ _____	$_____
629.0413	Temporary Construction Zone Markings	L.S.	L.S.	L.S.	$_____
629.0414	Curb, 4-inch Markings (Paint) (250 L.F.)	L.S.	L.S.	L.S.	$_____
630.0400	Street Name Sign on Traffic Signal Mast Arm	4	Each	$ _____	$_____
631.0300	Regulatory Sign (10 Square Feet or Less) with post	6	Each	$ _____	$_____
631.0400	Warning Sign (10 Square Feet or Less) with post	1	Each	$ _____	$_____
632.0400	Type II Object Marker	7	Each	$ _____	$_____
634.0400	Portland Cement Concrete Sidewalk	615	S.Y.	$ _____	$_____
638.0401	Curb, Type 2D	30	L.F.	$ _____	$_____

PROPOSAL SCHEDULE					
ITEM NO.	**ITEM**	**APPROX. QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**
638.0402	Curb and Gutter, Type 2DG	600	L.F.	$ _____	$_____
639.0401	Curb, Type 6	1,500	L.F.	$ _____	$_____
639.0402	Curb, 4-inch	250	L.F.	$ _____	$_____
641.0400	Hydro-mulch Seeding	L.S.	L.S.	L.S.	$_____
643.0100	Maintenance of Existing Landscape Areas	F.A.	F.A.	F.A.	$ 25,000.00
645.1000	Traffic Control	L.S.	L.S.	L.S.	$_____
645.2000	Additional Police Officers And/or Additional Control Device	F.A.	F.A.	F.A.	$ 50,000.00
648.0100	Field-Posted Drawings	L.S.	L.S.	L.S.	$_____
650.0401	Curb Ramp, Type “A”	7	Each	$ _____	$_____
650.0402	Curb Ramp, Type “C”	2	Each	$ _____	$_____
650.0403	Curb Ramp, Type Combination	2	Each	$ _____	$_____
650.0404	Detectable Warning Mat	13	Each	$ _____	$_____
699.1000	Mobilization (Not to Exceed 6 Percent of the Sum of All Items Excluding the Bid Price of this Item)	L.S.	L.S.	L.S.	$_____

PROPOSAL SCHEDULE					
ITEM NO.	**ITEM**	**APPROX. QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**
	Sum of All Items ……				$ _____
NOTE: Bidders must complete all unit prices and amounts. Failure to do so may be grounds for rejection of bid.					

PROPOSAL SCHEDULE

The bidder is directed to Subsection 105.16 – Subcontracts.

The bidder's attention is directed to Sections 696 - Field Office and Project Site Laboratory and 699 - Mobilization for the limitation of the amount bidders are allowed to bid.

If the bid price for any proposal item having a maximum allowable bid indicated therefore in any of the contract documents is in excess of such a maximum amount, the bid price for such proposal item shall be adjusted to reflect the limitation thereon. The comparison of bids to determine the successful bidder and the amount of contract to be awarded shall be determined after such adjustments are made, and such adjustments shall be binding upon the bidder.

The bidder is directed to Section 717 – Cullet and Cullet-Made Materials regarding recycling of waste glass.

PROPOSAL SCHEDULE NOTE

Bidders shall submit and upload the complete proposal to HIePRO prior to the bid opening date and time. Proposals received after said due date and time shall bot be considered. Original (wet ink, hard copy) proposal documents are not required to be submitted. **Contract award shall be based on evaluation of proposals submitted and uploaded to HIePRO. Any additional support documents explicitly designated as confidential and/or proprietary shall be uploaded as a separate file to HIePRO. Do not include confidential and/or proprietary documents with the proposal. The record of each bidder and respective bid shall be open to public inspection.**

FAILURE TO UPLOAD THE COMPLETE PROPOSAL TO HIePRO SHALL BE GROUNDS FOR REJECTION ON THE BID.

If there is a conflict between the specification document and the HIePRO solicitation, the specifications shall govern and control, unless otherwise specified.

SURETY BID BOND

Bond No. _____

KNOW ALL BY THESE PRESENTS:

That we, _____
(Full name or legal title of offeror)

as Offeror, hereinafter called the Principal, and

_____
(Name of bonding company)

as Surety, hereinafter called Surety, a corporation authorized to transact business as a Surety in the State of Hawaii, are held and firmly bound unto

_____
(State/county entity)

as Owner, hereinafter called Owner, in the penal sum of

_____
(Required amount of bid security)

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

WHEREAS:

The Principal has submitted an offer for _____

_____
(Project by number and brief description)

NOW, THEREFORE:

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

Signed this _____ day of _____, _____

(Seal) _____
Name of Principal (Offeror)

_____
Signature

_____
Title

(Seal) _____
Name of Surety

_____
Signature

_____
Title

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HONOLULU, HAWAII

FORMS

Contents

CONTRACT

THIS AGREEMENT, made this day of _____, by and between the STATE OF HAWAII, by its Director of Transportation, hereinafter referred to as "STATE", and «CONTRACTOR», «STATE_OF_INCORPORATON», whose business/post office address is «ADDRESS», hereinafter referred to as CONTRACTOR";

WITNESSETH: That for and in consideration of the payments hereinafter mentioned, the CONTRACTOR hereby covenants and agrees with the STATE to complete in place, furnish and pay for all labor and materials necessary for "«PROJECT_NAME_AND_NO»", or such a part thereof as shall be required by the STATE, the total amount of which labor, material and construction shall be computed at the unit and/or lump sum prices set forth in the attached proposal schedule and shall be the sum of «BASIC»----DOLLARS ($«BASIC_NUMERIC») as follows:

TOTAL AMOUNT FOR COMPARISON OF BIDS……$«BASIC_NUMERIC»

which sum shall be provided from State funds, all in accordance with the specifications, the special provisions, if any, the notice to bidders, the instructions to bidders, the proposal and plans for «PROJECT_NO_ONLY», and any supplements thereto, on file in the office of the Director of Transportation. These documents, together with all alterations, amendments, and additions thereto and deductions therefrom, are attached hereto or incorporated herein by reference and made a part of this contract.

The CONTRACTOR hereby covenants and agrees to complete such construction within «WORKING_DAYS» from the date indicated in the Notice to Proceed from the State subject, however, to such extensions as may be provided for in writing under the specifications.

For and in consideration of the covenants, undertakings and agreements of the CONTRACTOR herein set forth and upon the full and faithful performance thereof by the CONTRACTOR, the STATE hereby agrees to pay the CONTRACTOR the sum of «BASIC»---DOLLARS ($«BASIC_NUMERIC») in lawful money, but not more than such part of the same as is actually earned according to the STATE's determination of the actual quantities of work performed and materials furnished by the CONTRACTOR at the unit or lump sum prices set forth in the attached proposal schedule. Such payment, including any extras, shall be made, subject to such additions or deductions hereto or hereafter made in the manner and at the time prescribed in the specifications and this contract.

An additional sum of «EXTRAS»-----DOLLARS ($«EXTRA_NUMERIC») is hereby provided for extra work.

All words used herein in the singular shall extend to and include the plural. All words used in the plural shall extend to and include the singular. The use of any gender shall extend to and include all genders.

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be duly executed the day and year first above written.

STATE OF HAWAII

_____
Director of Transportation

«CONTRACTOR» (Seal)

_____
Signature

_____
Print name

_____
Print Title

_____
Date

PERFORMANCE BOND (SURETY)
(6/21/07)

KNOW TO ALL BY THESE PRESENTS:

That _____,
(Full Legal Name and Street Address of Contractor)

as Contractor, hereinafter called Principal, and _____

_____
(Name and Street Address of Bonding Company)

as Surety, hereinafter called Surety, a corporation(s) authorized to transact business as a surety in the State of Hawaii, are held and firmly bound unto the _____,
(State/County Entity)

its successors and assigns, hereinafter called Obligee, in the amount of _____

_____
DOLLARS ($_____), to which payment Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the above-bound Principal has signed a Contract with Obligee on _____, for the following project:_____
_____
_____
_____
_____
_____
hereinafter called Contract, which Contract is incorporated herein by reference and made a part hereof.

NOW THEREFORE, the condition of this obligation is such that:

If the Principal shall promptly and faithfully perform, and fully complete the Contract in strict accordance with the terms of the Contract as said Contract may be modified or amended from time to time; then this obligation shall be void; otherwise to remain in full force and effect.

Surety to this Bond hereby stipulates and agrees that no changes, extensions of time, alterations, or additions to the terms of the Contract, including the work to be performed thereunder, and the specifications or drawings accompanying same, shall in any way affect its obligation on this bond, and it does hereby waive notice of any such changes, extensions of time, alterations, or additions, and agrees that they shall become part of the Contract.

In the event of Default by the Principal, of the obligations under the Contract, then after written Notice of Default from the Obligee to the Surety and the Principal and subject to the limitation of the penal sum of this bond, Surety shall remedy the Default, or take over the work to be performed under the Contract and complete such work, or pay moneys to the Obligee in satisfaction of the surety's performance obligation on this bond.

Signed this _____ day of _____, _____.

(Seal) _____
Name of Principal (Contractor)

* _____
Signature

_____
Title

(Seal) _____
Name of Surety

* _____
Signature

_____
Title

*ALL SIGNATURES MUST BE ACKNOWLEDGED
BY A NOTARY PUBLIC

PERFORMANCE BOND

KNOW ALL BY THESE PRESENTS:

That we,_____
(full legal name and street address of Contractor)

as Contractor, hereinafter called Contractor, is held and firmly bound unto the

_____
(State/County entity)

its successors and assigns, as Obligee, hereinafter called Obligee, in the amount

_____DOLLARS ($_____),
(Dollar amount of Contract)

lawful money of the United States of America, for the payment of which to the said Obligee, well and truly to be made, Contractor binds itself, its heir, executors, administrators, successors and assigns, firmly by these presents. Said amount is evidenced by:

- ❑ **Legal Tender**;

- ❑ **Share Certificate** unconditionally assigned to or made payable at sight to _____

  Description:_____
  _____;

- ❑ **Certificate of Deposit**, **No.** _____, dated _____ issued by _____ drawn on _____ a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to _____;

- ❑ **Cashier's Check No.** _____, dated _____ drawn on _____ a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to _____;

- ❑ **Teller's Check No.** _____, dated _____ drawn on _____ a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to _____;

- ❑ **Treasurer's Check No.** _____, dated _____ drawn on _____ a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to _____;

- ❑ **Official Check No.** _____, dated _____ drawn on _____ a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to _____;

- ❑ **Certified Check No.** _____, dated _____ accepted by a bank, savings institution or credit union insured by the Federal Deposit Insurance

Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to _____;

WHEREAS:

The Contractor has by written agreement dated _____ entered into a contract with Obligee for the following Project:_____
_____
_____hereinafter called Contract, which Contract is incorporated herein by reference and made a part hereof.

NOW THEREFORE,

The Condition of this obligation is such that, if Contractor shall promptly and faithfully perform the Contract in accordance with, in all respects, the stipulations, agreements, covenants and conditions of the Contract as it now exists or may be modified according to its terms, and shall deliver the Project to the Obligee, or to its successors or assigns, fully completed as in the Contract specified and free from all liens and claims and without further cost, expense or charge to the Obligee, its officers, agents, successors or assigns, free and harmless from all suits or actions of every nature and kind which may be brought for or on account of any injury or damage, direct or indirect, arising or growing out of the doing of said work or the repair or maintenance thereof or the manner of doing the same or the neglect of the Contractor or its agents or servants or the improper performance of the Contract by the Contractor or its agents or servants or from any other cause, then this obligation shall be void; otherwise it shall be and remain in full force and effect.

AND IT IS HEREBY STIPULATED AND AGREED that suit on this bond may be brought before a court of competent jurisdiction without a jury, and that the sum or sums specified in the said Contract as liquidated damages, if any, shall be forfeited to the Obligee, its successors or assigns, in the event of a breach of any, or all, or any part of, covenants, agreements, conditions, or stipulations contained in the Contract or in this bond in accordance with the terms thereof.

The amount of this bond may be reduced by and to the extent of any payment or payments made in good faith hereunder.

Signed and sealed this _____ day of _____, _____.

(Seal) _____
Name of Contractor

* _____
Signature

_____
Title

*ALL SIGNATURES MUST BE
ACKNOWLEDGED BY A NOTARY PUBLIC

LABOR AND MATERIAL PAYMENT BOND (SURETY)
(6/21/07)

KNOW TO ALL BY THESE PRESENTS:

That _____,
(Full Legal Name and Street Address of Contractor)

as Contractor, hereinafter called Principal, and _____

_____,
(Name and Street Address of Bonding Company)
as Surety, hereinafter called Surety, a corporation(s) authorized to transact business as a surety in the State of Hawaii, are held and firmly bound unto the _____,
(State/County Entity)

its successors and assigns, hereinafter called Obligee, in the amount of _____

_____
_____ Dollars ($_____), to which payment Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the above-bound Principal has signed Contract with the Obligee on _____ for the following project:_____
_____
_____
_____
_____
hereinafter called Contract, which Contract is incorporated herein by reference and made a part hereof.

NOW THEREFORE, the condition of this obligation is such that if the Principal shall promptly make payment to any Claimant, as hereinafter defined, for all labor and materials supplied to the Principal for use in the performance of the Contract, then this obligation shall be void; otherwise to remain in full force and effect.

1. Surety to this Bond hereby stipulates and agrees that no changes, extensions of time, alterations, or additions to the terms of the Contract, including the work to be performed thereunder, and the specifications or drawings accompanying same, shall in any way affect its obligation on this bond, and it does hereby waive notice of any such changes, extensions of time, alterations, or additions, and agrees that they shall become part of the Contract.

2. A "Claimant" shall be defined herein as any person who has furnished labor or materials to the Principal for the work provided in the Contract.

Every Claimant who has not been paid amounts due for labor and materials furnished for work provided in the Contract may institute an action against the Principal and its Surety on this bond at the time and in the manner prescribed in Section 103D-324, Hawaii Revised Statutes, and have the rights and claims adjudicated in the action, and judgment rendered thereon; subject to the Obligee's priority on this bond. If the full amount of the liability of the Surety on this bond is insufficient to pay the full amount of the claims, then after paying the full amount due the Obligee, the remainder shall be distributed pro rata among the claimants.

Signed this _____ day of _____, _____.

(Seal) _____
Name of Principal (Contractor)

* _____
Signature

_____
Title

(Seal) _____
Name of Surety

* _____
Signature

_____
Title

*ALL SIGNATURES MUST BE ACKNOWLEDGED
BY A NOTARY PUBLIC

LABOR AND MATERIAL PAYMENT BOND

KNOW ALL BY THESE PRESENTS:

That we, _____
(full legal name and street address of Contractor)

as Contractor, hereinafter called Contractor, is held and firmly bound unto _____
(State/County entity)

its successors and assigns, as Obligee, hereinafter called Obligee, in the amount

_____ DOLLARS ($_____),
(Dollar amount of Contract)

lawful money of the United States of America, for the payment of which to the said Obligee, well and truly to be made, Contractor binds itself, its heir, executors, administrators, successors and assigns, firmly by these presents. Said amount is evidenced by:

- ❑ **Legal Tender**;

- ❑ **Share Certificate** unconditionally assigned to or made payable at sight to_____
  Description:_____

- ❑ **Certificate of Deposit, No.** _____, dated _____
  issued by _____
  drawn on _____
  a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to _____;

- ❑ **Cashier's Check No.** _____, dated _____
  drawn on _____
  a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to _____;

- ❑ **Teller's Check No.** _____, dated _____
  drawn on _____
  a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to _____;

- ❑ **Treasurer's Check No.** _____, dated _____
  drawn on _____
  a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to _____;

- ❑ **Official Check No.** _____, dated _____
  drawn on _____
  a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to _____;

- ❑ **Certified Check No.** _____, dated _____
  accepted by a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to _____;

WHEREAS:

The Contractor has by written agreement dated _____ entered into a contract with Obligee for the following Project:_____

_____

hereinafter called Contract, which Contract is incorporated herein by reference and made a part hereof.

NOW THEREFORE,

The condition of this obligation is such that, if Contractor shall promptly and faithfully perform the Contract in accordance with, in all respects, the stipulations, agreements, covenants and conditions of the Contract as it now exists or may be modified according to its terms, free from all liens and claims and without further cost, expense or charge to the Obligee, its officers, agents, successors or assigns, free and harmless from all suits or actions of every nature and kind which may be brought for or on account of any injury or damage, direct or indirect, arising or growing out of the doing of said work or the repair or maintenance thereof or the manner of doing the same or the neglect of the Contractor or its agents or servants or the improper performance of the Contract by the Contractor or its agents or servants or from any other cause, then this obligation shall be void; otherwise it shall be and remain in full force and effect.

AND IT IS HEREBY STIPULATED AND AGREED that suit on this bond may be brought before a court of competent jurisdiction without a jury, and that the sum or sums specified in the said Contract as liquidated damages, if any, shall be forfeited to the Obligee, its successors or assigns, in the event of a breach of any, or all, or any part of, covenants, agreements, conditions, or stipulations contained in the Contract or in this bond in accordance with the terms thereof.

AND IT IS HEREBY STIPULATED AND AGREED that this bond shall inure to the benefit of any and all persons entitled to file claims for labor performed or materials furnished in said work so as to give any and all such persons a right of action as contemplated by Sections 103D-324(d) and 103D-324(e), Hawaii Revised Statutes.

The amount of this bond may be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payments of mechanics' liens which may be filed of record against the Project, whether or not claim for the amount of such lien be presented under and against this bond.

Signed this _____ day of _____, _____.

(Seal) _____
Name of Contractor

* _____
Signature

_____
Title

*ALL SIGNATURES MUST BE
ACKNOWLEDGED BY A NOTARY PUBLIC

CHAPTER 104, HRS COMPLIANCE CERTIFICATE

The undersigned bidder does hereby certify to the following:

1. Individuals engaged in the performance of the contract on the job site shall be paid:

   A. Not less than the wages that the director of labor and industrial relations shall have determined to be prevailing for corresponding classes of laborers and mechanics employed on public works projects; and

   B. Overtime compensation at one and one-half times the basic hourly rate plus fringe benefits for hours worked on Saturday, Sunday, or a legal holiday of the State or in excess of eight hours on any other day.

2. All applicable laws of the federal and state governments relating to workers' compensation, unemployment compensation, payment of wages, and safety shall be fully complied with.

DATED at Honolulu, Hawaii, this _____ day of _____, 20___.

«CONTRACTOR»
Name of Corporation, Partnership, or Individual

_____
Signature and Title of Signer

Notary Seal
NOTARY ACKNOWLEDGEMENT

Subscribed and sworn before me this
_____day of_____
Notary signature_____
Notary public, State of _____
My Commission Expires:_____

Notary Seal
NOTARY CERTIFICATION

Doc. Date: _____ #Pages: ____
Notary Name: _____ _____Circuit
Doc. Description: _____
_____
Notary signature_____
Date _____

PROVISIONS TO BE INCLUDED IN CONSTRUCTION PROCUREMENT SOLICITATIONS

1. Definitions for terms used in HRS Chapter 103B as amended by Act 192, SLH 2011:

   a. "Contract" means contracts for construction under 103D, HRS.

   b. "Contractor" has the same meaning as in Section 103D-104, HRS, provided that "contractor" includes a subcontractor where applicable.

   c. "Construction" has the same meaning as in Section 103D-104, HRS.

   d. "General Contractor" means any person having a construction contract with a governmental body.

   e. "Procurement Officer" has the same meaning as in Section 103D-104, HRS.

   f. "Resident" means a person who is physically present in the State of Hawai'i at the time the person claims to have established the person's domicile in the State of Hawai'i and shows the person's intent is to make Hawai'i the person's primary residence.

   g. "Shortage trade" means a construction trade in which there is a shortage of Hawai'i residents qualified to work in the trade as determined by the Department of Labor and Industrial Relations.

2. HRS Chapter 103B as amended by Act 192, SLH 2011–Employment of State Residents Requirements:

   a. A Contractor awarded a contract shall ensure that Hawai'i residents comprise not less than 80% of the workforce employed to perform the contract work on the project. The 80% requirement shall be determined by dividing the total number of hours worked on the contract by Hawai'i residents, by the total number of hours worked on the contract by all employees of the Contractor in the performance of the contract. The hours worked by any Subcontractor of the Contractor shall count towards the calculation for this section. The hours worked by employees within shortage trades, as determined by the Department of Labor and Industrial Relations (DLIR), shall not be included in the calculation for this section.

EXHIBIT 1

b. Prior to award of a contract, an Offeror/Bidder may withdraw an offer/bid without penalty if the Offeror/Bidder finds that it is unable to comply with HRS Chapter 103B as amended by Act 192, SLH 2011.

c. Prior to starting any construction work, the Contractor shall submit the subcontract dollar amount for each of its Subcontractors.

d. The requirements of this section shall apply to any subcontract of $50,000 or more in connection with the Contractor; that is, such Subcontractors must also ensure that Hawai'i residents comprise not less than 80% of the Subcontractor's workforce used to perform the subcontract.

e. The Contractor and any Subcontractor whose subcontract is $50,000 or more shall comply with the requirements of HRS Chapter 103B as amended by Act 192, SLH 2011.

1) Certification of compliance shall be made in writing under oath by an officer of the General Contractor and applicable Subcontractors and submitted with the final payment request.

2) The certification of compliance shall be made under oath by an officer of the company by completing a "Certification of Compliance for Employment of State Residents" form and executing the Certificate before a licensed notary public.

3) In addition to the certification of compliance as indicated above, the Contractor and Subcontractors shall maintain records such as certified payrolls for laborers and mechanics who performed work at the site and time sheets for all other employees who performed work on the project. These records shall include the names, addresses and number of hours worked on the project by all employees of the Contractor and Subcontractor who performed work on the project to validate compliance with HRS Chapter 103B as amended by Act 192, SLH 2011. The Contractor and Subcontractors shall retain these records and provide access to the State for a minimum period of four (4) years after the final payment, except that if any litigation, claim, negotiation, investigation, audit or other action involving the records has been started before the expiration of the four-year period, the Contractor and Subcontractors shall retain the records until completion of the action and resolution of all issues that arise from it, or until the end of the four-year period, whichever occurs later. Furthermore, it shall be the Contractor's responsibility to enforce compliance with this provision by any Subcontractor.

f. A General Contractor or applicable Subcontractor who fails to comply with this section shall be subject to any of the following sanctions:

1) With respect to the General Contractor, withholding of payment on the contract until the Contractor or its Subcontractor complies with HRS Chapter 103B as amended by Act 192, SLH 2011.

2) Proceedings for debarment or suspension of the Contractor or Subcontractor under Hawai'i Revised Statues §103D-702.

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

EXHIBIT 1

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

Project Title: _____

Agency Project No: _____

Contract No.: _____

As required by Hawai'i Revised Statutes Chapter103B, as amended by Act 192, Session Laws of Hawaii 2011–Employment of State Residents on Construction Procurement Contracts, I hereby certify under oath, that I am an officer of _____ and
(Name of Contractor or Subcontractor Company)
for the Project Contract indicated above, _____ was in
(Name of Contractor or Subcontractor Company)
compliance with HRS Chapter 103B, as amended by Act 192, SLH 2011, by employing a workforce of which not less than eighty percent are Hawai'i residents, as calculated according to the formula in the solicitation, to perform this Contract.

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

☐ I am an officer of a **Subcontractor** for this contract.

CORPORATE SEAL

_____
(Name of Company)

_____
(Signature)

_____
(Print Name)

_____
(Print Title)

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

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

Doc. Date: _____ # of Pages_____ 1st Circuit
Notary Name: _____
Doc. Description: _____
_____
_____

_____
Notary Signature Date
NOTARY CERTIFICATION

EXHIBIT 2