



STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS

HONOLULU, HAWAII

**SPECIAL PROVISIONS
PROPOSAL, CONTRACT,
BOND AND PLANS**

FOR

TRAFFIC SIGNAL MODERNIZATION

OAHU – PHASE 2

FEDERAL-AID PROJECT NO. STP-0300(213)

DISTRICT OF HONOLULU

ISLAND OF OAHU

FY 2024

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NOTICE TO BIDDERS
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The receiving of bids for **Traffic Signal Modernization, Oahu – Phase 2, District of Honolulu, Island of Oahu, Federal-Aid Project No. STP-0300(213)**, will begin as of the HIePRO Release Date. Bidders shall register and submit complete bids through HIePRO only. Refer to the following HIePRO link for important information on Vendor Registration: <https://hiepro.ehawaii.gov/welcome.html>.

The solicitation plans, specifications, proposal, and additional documents designated or incorporated by reference shall be available in HIePRO.

HIePRO OFFER DUE DATE & TIME is November 13, 2024, at 2:00 p.m., Hawaii Standard Time (HST). **Bidders shall submit and upload the complete proposal to HIePRO prior to the offer due 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. Bidders shall not include confidential and/or proprietary documents as part of their proposal. The record of each bidder and their respective proposal shall be open to public inspection.**

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

The scope of work consists of modernizing the existing traffic signal system at the intersections of Koko Head Avenue with H-1 Exit 26A and Koko Head Avenue with Pahoa Avenue; including removing existing traffic signal equipment; removing portions of roadway pavement, curb, gutter, sidewalks, driveways, and curb ramps; installing new traffic signal equipment, curb, gutter, sidewalks, driveways, curb ramps, signing, and pavement markings;

relocation of existing irrigation system; restoration of asphalt concrete roadway pavement and landscaping. The estimated cost of construction is between \$ 1,000,000.00 and \$ 2,000,000.00.

To be eligible for award, bidders shall possess a valid State of Hawaii General Engineering "A" license **prior to the award of contract.**

A virtual pre-bid conference is scheduled for October 23, 2024, at 9:00 a.m., HST. Interested bidders shall contact Steven Yoshida, Project Manager, directly at steven.yoshida@hawaii.gov, no later than five working days prior to the scheduled pre-bid conference to receive the meeting invitation. 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 shall be provided for clarification and information only. Any amendments to the solicitation shall be made by formal addendum and posted in HiePRO.

All Request for Information (RFI) questions and Substitution Requests shall be submitted in HiePRO **October 30, 2024, at 2:00 p.m., HST.** RFI questions received after the stated deadline shall not be addressed. Substitution Requests received after the stated deadline shall not be considered. Verbal RFI(s) shall not receive a response. All responses to RFI questions shall be provided for clarification and information only and issued by formal addendum. Any amendments to the solicitation shall be made by formal addendum and posted in HiePRO.

If there is a conflict between the solicitation and information stated in the pre-bid conference, the meeting minutes, and/or the responses to RFI questions, the solicitation shall govern and control, unless as amended by formal addendum.

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 shall affirmatively ensure that the contract entered into pursuant to this advertisement shall 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).

The U.S. Department of Transportation Regulations entitled "Participation by Disadvantaged Business Enterprise in Department of Transportation Financial Assistance Programs", Title 49, CFR, Part 26, is applicable to this project. Bidders are hereby notified that the Department of Transportation shall strictly enforce full compliance with all the requirements of the Disadvantaged Business Enterprise program with respect to this project.

Bidders shall read the Disadvantaged Business Enterprise Requirements, included in this solicitation, which establishes the program requirements pursuant to Title 49, CFR, Part 26, and includes the requirements of certification, method of award, and evidence of good faith. All Bidders shall email Steven Yoshida, Project Manager, at steven.yoshida@hawaii.gov, the following: “Disadvantaged Business Enterprise Contract Goal Verification and Good Faith Efforts Documentation for Construction”; “Disadvantaged Business Enterprise Confirmation and Commitment Agreement – Trucking Company”; and “Disadvantaged Business Enterprise

Confirmation and Commitment Agreement – Subcontractor, Manufacturer, or Supplier”, **no later than November 18, 2024, at 4:30 p.m., HST**. Failure to provide the respective documents shall be grounds for rejection of bid.

Driving While Impaired (DWI) Education. The Hawaii Department of Transportation (HDOT) encourages all organizations contracted with 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 Steven Yoshida, Project Manager, by phone at (808) 692-7679, or by email at steven.yoshida@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

HIePRO RELEASE DATE: October 14, 2024

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.

**NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL
EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)**

1. The Bidder's attention is called to the "Equal Opportunity" and the "Specific Equal Employment Opportunity Responsibilities" set forth in the "Required Federal Aid Construction Contract Provisions."

2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work on this project are as follows:

CATEGORY	TIMETABLE	GOAL
Female participation in each trade	Indefinite	6.9%
Minority participation in each	None	69.1% (Oahu)
Trade (female included)	None	70.4% (Hawaii, Maui, Kauai)

These goals are applicable to all the Contractor's aggregate on-site construction workforce whether or not part of that workforce is performing work on a Federal or Federally assisted construction contract or subcontract.

The Contractor's compliance with the Executive Order shall be based on its implementation of the Equal Opportunity Clause, and its efforts to meet the goals established for the contract resulting from this solicitation. The hours of female and minority employment and training must be substantially uniform throughout the length of the contract, and in trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract and Executive Order. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Area Director, Hawaii Area Office, Office of Federal Contract Compliance Programs, U.S. Department of Labor, 300 Ala Moana Blvd., P.O. Box 50149, Honolulu, Hawaii 96850, within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address, and telephone number of the subcontractor; employer identification number; estimated dollar amount of the subcontract; and estimated starting and completion dates of the subcontract. The Contractor shall indicate which are minority group subcontractors and the ethnic identity and sex of the owner(s) and policy-making official(s).

DISADVANTAGED BUSINESS ENTERPRISE REQUIREMENTS

I. GENERAL

This project is subject to Title 49, Code of Federal Regulations, Part 26, entitled "Participation by Disadvantaged Business Enterprise in Department of Transportation Financial Assistance Programs," hereinafter referred to as the ("DBE Regulations") and is incorporated and made a part of this contract herein by this reference. The following shall be incorporated as part of the contract documents for compliance. If any requirements herein are in conflict with the general provisions or special provisions applicable to this project, the requirements herein shall prevail unless specifically superseded or amended in the special provisions or by addendum.

II. POLICY

It is the policy of the U.S. Department of Transportation ("USDOT") and the State of Hawaii, Department of Transportation and its political subdivisions ("Department") that Disadvantaged Business Enterprises ("DBE"), as defined in the DBE Regulations, have an equal opportunity to receive and participate in federally assisted contracts.

III. DBE ASSURANCES

Each contract signed with a prime contractor (and each subcontract the prime contractor signs with a subcontractor) shall include the following assurance:

"The contractor, sub-recipient, or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of USDOT assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate which may include, but is not limited to; 1) withholding monthly progress payments; 2) assessing sanctions; 3) liquidated damages; and/or 4) disqualifying the contractor from future bidding as non-responsible."

The prime contractor agrees to include the above statements in any subsequent contracts that it enters into with other contractors and shall require those contractors to include similar statements in further agreements.

IV. BIDDER/OFFEROR RESPONSIBILITIES

All bidders/offerors are required to register with the Department's OCR, DBE Section, using the Bidder Registration Form, which can be downloaded from the Department's website at <http://hidot.hawaii.gov/administration/ocr/dbe/dbe-program-forms/>. Certified DBEs are considered registered with the Department and are not required to submit a

Bidder Registration Form. All other bidders/offerors are required to complete this form which may be faxed to (808) 831-7944, e-mailed to HDOT-DBE@hawaii.gov, or mailed to the HDOT DBE Section at 200 Rodgers Boulevard, Honolulu, Hawaii, 96819. Registered bidders/offerors are posted on the website listed above.

Bidders/offerors, subcontractors, manufacturers, vendors or suppliers, and trucking companies shall fully inform themselves with respect to the requirements of the DBE Regulations. Particular attention is directed to the following matters:

- A. Bidders/offerors shall take all necessary steps to ensure that DBEs have an opportunity to participate in this contract.
- B. DBEs may participate as a consultant, prime contractor, subcontractor, trucking company, or vendor of materials or supplies. DBEs may also team with other DBEs or non-DBE firms as part of a joint venture or partnership.
- C. Agreements between a bidder/offeror and a DBE in which an DBE promises not to provide subcontracting quotations to other bidders/offerors are strictly prohibited.
- D. A DBE shall be certified by the Department under the appropriate North American Industry Classification System (NAICS) code and work in their registered field of work in order for credit to be allowed.
- E. Information regarding the current certification status of DBEs is available on the internet at <https://hdot.dbesystem.com/>.
- F. Commercially Useful Function (“CUF”). An DBE must perform a CUF. This means that an DBE must be responsible for the execution of a distinct element of the work, must carry out its responsibility by actually performing, managing, and supervising at least 30% of the work involved by using its own employees and equipment, must negotiate price, determine quality and quantity, order and install material (when applicable), and must pay for the material itself.¹

To determine whether an DBE is performing a CUF, the Department must evaluate the amount of work subcontracted, industry practices, whether the amount the firm is to be paid under the contract is commensurate with the work it is actually performing, the DBE credit claimed for performance of the work, and other relevant factors. The prime contractor is responsible to ensure that the DBE performs a CUF.

V. PROPOSAL REQUIREMENTS

- A. DBEs must be certified by the bid opening date.

¹ The use of joint checks payable to an DBE subcontractor and supplier may be allowed to purchase materials and supplies under limited circumstances. See VII USE OF JOINT CHECKS UNDER THE DBE PROGRAM

- B. DBE subcontractors, manufacturers, suppliers, trucking companies, and any second tier subcontractors shall be listed on the respective DBE forms as specified below in order to receive credit.
- C. The following forms are due to the Department's Project Manager or designee **by the close of business, 4:30 P.M. Hawaii Standard Time (HST), five (5) days after bid opening:**²
1. DBE Confirmation and Commitment Agreement. This form must be signed by the bidder/offeror and each DBE subcontractor, manufacturer, supplier, or trucking company. Information to be provided on the form shall include, among other things, the project number, the DBE's NAICS codes, description of work, bid items with corresponding price information, prime contractor name and contact information DBE name and contact information and subcontractor name and contact information if the DBE is a second tier subcontractor.
 2. DBE Contract Goal Verification and Good Faith Efforts (GFE) Documentation for Construction. List the dollar amount of all subcontractors, manufacturers, suppliers, and trucking companies (both DBE and non-DBE firms). Bidder/offeror must also list the DBE project goal on this form (See paragraph D below regarding goal calculation). The bidder/offeror must submit documentation demonstrating how the DBE goal was met or how the bidder/offeror attempted to meet the goal if the goal was not met. This documentation shall include quotations for both DBE and non-DBE subcontractors when a non-DBE is selected over a DBE for the project. **Documentation of good faith efforts is required irrespective of whether the bidder/offeror met the DBE project goal.**
- The above forms must be complete and provide the necessary information to properly evaluate bids/proposals. Failure to provide any of the above shall be cause for bid/proposal rejection.**
- D. Calculation of the DBE contract goal for this project is the proportionate contract dollar value of work performed, materials, and goods to be supplied by DBEs. DBE credit shall not be given for mobilization, force account items and allowance items. This DBE contract goal is applicable to all the contract work performed for this project and is calculated as follows:
1. DBE contract goal percentage = Contract Dollar Value of the work to be performed by DBE subcontractors and manufacturers, plus 60% of the contract dollar value of DBE suppliers, divided by the sum of all contract items (sum of all contract items is the total amount for comparison of bids less mobilization, force account items, and allowance items).

² In computing calendar days, the day from which the period begins to run is not counted, and when the last day of the period is a Saturday, Sunday, or Federal or State holiday, the period extends to the next day that is not a Saturday, Sunday, or holiday.

2. The Department shall adjust the bidder's/offeror's DBE contract goal to the amount of the project goal if it finds that the bidder/offeror met the goal but erroneously calculated a lower percentage. If the amount the bidder/offeror submits as its contract goal exceeds the project goal, the bidder/offeror shall be held to the higher goal.

VI. COUNTING DBE PARTICIPATION TOWARDS CONTRACT GOAL

- A. Count the entire amount of the portion of a contract (or other contract not covered by paragraph B below) that is performed by the DBE's own forces. Include the cost of supplies and materials obtained by the DBE for the work on the contract, including supplies purchased or equipment leased by the DBE (except supplies and equipment the DBE subcontractor purchases or leases from the prime contractor or its affiliate).
- B. Count the entire amount of fees or commissions charged by an DBE firm for providing a bona fide service, such as professional, technical, consultant, or managerial services, or for providing bonds or insurance specifically required for the performance of a USDOT-assisted contract, toward DBE goals, provided the Department determines the fee to be reasonable and not excessive as compared with fees customarily allowed for similar services.
- C. When an DBE subcontracts part of the work of its contract to another firm, the value of the subcontracted work may be counted toward DBE goals only if the DBE's subcontractor is itself an DBE. Work that an DBE subcontracts to a non-DBE firm does not count toward DBE goals.
- D. When an DBE performs as a participant in a joint venture, count a portion of the total dollar value of the contract equal to the distinct, clearly defined portion of the work of the contract that the DBE performs with its own forces toward DBE goals.
- E. Count expenditures to an DBE contractor toward DBE goals only if the DBE is performing a CUF on that contract.
- F. The following is a list of appropriate DBE credit to be allowed for work to be performed by an DBE subcontractor. Count expenditures with DBEs for materials or supplies toward DBE goals as provided in the following:
 1. If the materials or supplies are obtained from an DBE manufacturer, count 100 percent of the cost of the materials or supplies toward DBE goals;
 2. For purposes of determining DBE goal credit, a manufacturer is a firm that operates or maintains a factory or establishment that produces (on the premises) the materials, supplies, articles, or equipment required under the contract and of the general character described by the specifications;

3. If the materials or supplies are purchased from an DBE regular dealer, count 60 percent of the cost of the materials or supplies toward DBE goals;
4. For purposes of determining DBE goal credit, a regular dealer is a firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials, supplies, articles or equipment of the general character described by the specifications and required under the contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business;
5. To be a regular dealer, the firm must be an established, regular business that engages, as its principal business and under its own name, in the purchase and sale or lease of the products in question;
6. A person may be a regular dealer in such bulk items as petroleum products, steel, cement, gravel, stone, or asphalt without owning, operating, or maintaining a place of business as provided in the DBE Regulations, if the person both owns and operates distribution equipment for the products. Any supplementing of a regular dealers' own distribution equipment shall be by a long-term lease agreement and not on an ad hoc or contract-by-contract basis;
7. Packagers, brokers, manufacturers' representatives, or other persons who arrange or expedite transactions are not regular dealers;
8. With respect to materials or supplies purchased from an DBE, which is neither a manufacturer nor a regular dealer, count the entire amount of fees or commissions charged for assistance in the procurement of the materials and supplies, or fees or transportation charges for the delivery of materials or supplies required on a job site, toward DBE goals, provided that the Department determines the fees to be reasonable and not excessive as compared with fees customarily allowed for similar services. Do not count any portion of the cost of the materials and supplies themselves toward DBE goals; however,
9. If a firm is not currently certified as an DBE in accordance with standards of this part at the time of the execution of the contract, do not count the firm's participation toward any DBE goals, except as provided for in §26.87(i);
10. Do not count the dollar value of work performed under a contract with a firm after it has ceased to be certified toward the Department's overall goal; and
11. Do not count the participation of an DBE subcontractor toward a contractor's final compliance with its DBE obligations on a contract until the amount being counted has actually been paid to the DBE.

G. The following factors are used in counting DBE participation for trucking companies:

1. The DBE must be responsible for the management and supervision of the entire trucking operation for which it is responsible on a particular

contract, and there cannot be a contrived arrangement for the purpose of meeting DBE goals;

2. The DBE must itself own and operate at least one (1) fully licensed, insured, and operational truck used on the contract;
3. The DBE receives credit for the total value of the transportation services it provides on the contract using trucks it owns, insures, and operates using drivers it employs;
4. The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as an DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the contract;
5. The DBE may also lease trucks from a non-DBE firm, including from an owner-operator. The DBE that leases trucks equipped with drivers from a non-DBE is entitled to credit for the total value of transportation services provided by non-DBE leased trucks equipped with drivers not to exceed the value of transportation services on the contract provided by DBE-owned trucks or leased trucks with DBE employee drivers. Additional participation by non-DBE owned trucks equipped with drivers receives credit only for the fee or commission it receives as a result of the lease arrangement. If a recipient chooses this approach, it must obtain written consent from the appropriate Department operating administration.
EXAMPLE: DBE firm X uses two (2) of its own trucks on a contract, leases two (2) trucks from DBE Firm Y and six (6) trucks from non-DBE Firm Z. DBE credit would be awarded for the total value of transportation services provided by Firm X and Firm Y, and may also be awarded for the total value of transportation services provided by four (4) of the six (6) trucks provided by Firm Z. In all, full credit would be allowed for the participation of eight (8) trucks. With respect to the other two (2) trucks provided by Firm Z, DBE credit could be awarded only for the fees or commissions pertaining to those trucks Firm X receives as a result of the lease with Firm Z;
6. The DBE may lease trucks without drivers from a non-DBE truck leasing company. If the DBE leases trucks from a non-DBE truck leasing company and uses its own employees as drivers, it is entitled to credit for the total value of these hauling services.
EXAMPLE: DBE Firm X uses two (2) of its own trucks on a contract. It leases two (2) additional trucks from non-DBE Firm Z. Firm X uses its own employees to drive the trucks leased from Firm Z. DBE credit would be awarded for the total value of the transportation services provided by all four (4) trucks; and
7. For purposes of determining whether a trucking firm performs a CUF, a lease must indicate that the DBE has exclusive use of and control over the truck. This does not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, so long as the lease gives the DBE absolute priority for use of the leased truck. Leased trucks must display the name and identification number of the DBE.

- H. The bidder/offeror may be a joint venture or partnership that has a certified DBE as a partner. A “Joint Venture” means an association between an DBE firm and one (1) or more other firms to carry out a single, for-profit, business enterprise for which the parties combine their property, capital, efforts, skills and knowledge, and in which the DBE is responsible for a distinct, clearly defined portion of the work of the contract, and whose share in the capital contribution, control, management, risks and profits are commensurate with its ownership interest.
- I. Effects of a Summary Suspension of an DBE. When an DBE’s certification is suspended, the DBE may not be considered to meet a contract goal on a new contract and any work it does on a contract received during the suspension shall not be counted towards the overall goal. The DBE may continue to perform work under an existing contract executed before the DBE received a Notice of Suspension and may be counted towards the contract goal during the period of suspension as long as the DBE is performing a CUF under the existing contract.
- J. Effects of Decertification of an DBE. Should an DBE become decertified during the term of the subcontract for reasons beyond the control of and with no fault or negligence on the part of the contractor, the work remaining under the subcontract may be credited towards the contract goal, but are not included in the overall accomplishments.

Should the DBE be decertified after contract award and before notice to proceed, the contractor must still meet the DBE goal by either: a) withdrawing the subcontract from the DBE and expending good faith efforts to replace it with an DBE that is currently certified for that same work; or b) continuing with the subcontract with the decertified firm and expending good faith efforts to find other work not already subcontracted out to DBEs in an amount to meet the DBE goal either by; 1) increasing the participation of other DBEs on the project; 2) documenting good faith efforts; or 3) by a combination of the above.

VII. USE OF JOINT CHECKS UNDER THE DBE PROGRAM

- A. The following guidelines apply to the use of joint checks:
 - 1. The second party (typically the prime contractor) acts solely as a guarantor;
 - 2. The DBE must release the check to the supplier;
 - 3. The use of joint checks is a commonly recognized business practice;
 - 4. The Department must approve the use of joint checks prior to use by contractors and/or DBEs. As part of this approval process the Department will analyze industry practice to confirm that the use of joint checks is commonly employed outside of the DBE program for non-DBE subcontractors on both federal and state funded contracts. Using joint checks shall not be approved if it conflicts with other aspects of the DBE Regulations regarding CUF; and
 - 5. The Department will monitor the use of joint checks closely to avoid abuse.

- B. Contractors and DBEs should review the following general guidelines when determining whether to use joint checks closely to avoid abuse:
1. That standard industry practice applies to all contractors (federal and state contracts);
 2. Use of joint checks must be available to all subcontractors;
 3. Material industry sets the standard industry practice, not prime contractors;
 4. Short term, not to exceed reasonable time (i.e., one (1) year, two (2) years) to establish/increase a credit line with the material supplier;
 5. No exclusive arrangement between one (1) prime and one (1) DBE in the use of joint checks that might bring the independence of the DBE into question;
 6. Non-proportionate ratio of DBE's normal capacity to size of contract and quantity of material to be provided under the contract;
 7. The DBE is normally responsible to install and furnish the work item; and
 8. The DBE must be more than an extra participant in releasing the check to the material supplier.
- C. The Department shall allow the use of joint checks if the following general conditions are met:
1. DBE submits request to the Department for action;
 2. There is a formalized agreement between all parties that specify the conditions under which the arrangement shall be permitted;
 3. There is a full and prompt disclosure of the expected use of joint checks;
 4. The Department will provide prior approval;
 5. DBE remains responsible for all other elements of 49 CFR 26.55(c)(1);
 6. The agreement states clearly and determines that independence is not threatened because the DBE retains final decision making responsibility;
 7. The Department will determine that the request is not an attempt to artificially inflate DBE participation;
 8. Standard industry practice is only one (1) factor;
 9. The Department will monitor and maintain oversight of the arrangement by reviewing cancelled checks and/or certification statement of payment; and
 10. The Department will verify there is no requirement by prime contractor that the DBE is to use a specific supplier nor the prime contractor's negotiated unit price.

VIII. DEMONSTRATION OF GOOD FAITH EFFORTS FOR CONTRACT AWARD

- A. When a project goal is not met, the Department shall conduct the initial review of GFE submitted by the bidder/offeror and shall determine whether the bidder/offeror has performed the quality, quantity, and intensity of efforts that demonstrate a reasonably active and aggressive attempt to meet the contract goal in accordance with 49 CFR Part 26, Appendix A.

- B. The bidder/offeror bears the responsibility of demonstrating that it met the contract goal, or if the contract goal was not met, by documenting the GFE it made in an attempt to meet the goal. It is the sole responsibility of the bidder/offeror to submit any and all documents, logs, correspondence, and any other records or information to the Department that will demonstrate that the bidder/offeror made good faith efforts to meet the DBE goal.
- C. In its good faith evaluation, the Department shall perform the following as part of its evaluation: a) compare the bidder's/offeror's bid against the bids/offers of other bidders/offerors, and compare the DBEs and DBE work areas utilized by the bidder/offeror with the DBEs listed in other bids/offers submitted for this contract (If other bidders obtained DBEs in a particular work area in which the low bidder did not, the Department shall take this into consideration in its evaluation); b) verify contacts by bidders/offerors with DBEs; and c) compare the DBE and the categories of DBE work targeted by the bidder/offeror for participation in the contract, with the total pool of available DBEs ready, willing and able to perform work on each particular subcontract targeted by the bidder/offeror.
- D. Actions on the part of the bidder/offeror that will be considered demonstrative of good faith efforts include, but are not limited to, the following:
1. Whether the bidder/offeror submitted the required information (i.e., DBE name, address, NAICS code, description of work, project name, and number), and dollar amounts for all subcontractors, within five (5) days of bid opening;
 2. Whether the bidder/offeror solicited through all reasonable and available means (e.g., attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBEs who have the capability to perform part or all of the work to be included under the contract. The Department will also consider whether the bidder/offeror solicited the participation of potential DBEs as early in the procurement process as practicable, and allowed sufficient time for the DBEs to properly inquire about the project and respond to the solicitation. The Department will also review whether the bidder/offeror took appropriate steps to follow up with interested DBEs in a timely manner to facilitate participation by DBEs in this project;
 3. Whether the bidder/offeror identified and broke up portions of work that can be performed by DBEs in order to increase the likelihood that an DBE will be able to participate, and that the DBE goal could be achieved (e.g., breaking out contract items into economically feasible units to facilitate DBE participation even when the bidder/offeror might otherwise prefer to self-perform these work items with its own forces);
 4. Whether the bidder/offeror made available or provided interested DBEs with adequate information about the plans, specifications, and requirements of the project in a timely manner, and assisted them in responding to the bidder's/offeror's solicitation;

5. Whether the bidder/offeror negotiated in good faith with interested DBEs. Evidence of such negotiations includes documenting: a) the names, addresses and telephone numbers of DBEs that were contacted; b) a description of the information that was provided to DBEs regarding the plans and specifications; and c) detailed explanation for not utilizing individual DBEs on the project;
6. Whether the bidder/offeror solely relied on price in determining whether to use an DBE. The fact that there may be additional or higher costs associated with finding and utilizing DBEs are not, by itself, sufficient reasons for a bidder's/offeror's refusal to utilize an DBE, or the failure to meet the DBE goal, provided that such additional costs are not unreasonable. Also, the ability or desire of a bidder/offeror to perform a portion of the work with its own forces, that could have been undertaken by an available DBE, does not relieve the bidder/offeror of the responsibility to make good faith efforts to meet the DBE goal, and to make available and solicit DBE participation in other areas of the project to meet the DBE goal;
7. Whether the bidder/offeror rejected DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The DBEs standing within the industry, membership in specific groups, organizations or associations, and political or social affiliation are not legitimate basis for the rejection or non-solicitation of bids from particular DBEs;
8. Whether the bidder/offeror made efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance;
9. Whether the bidder/offeror made efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials or related assistance or services;
10. Whether the bidder/offeror effectively used the services of available minority/women community organizations, minority/women business groups, contractors' groups, and local, state and federal minority/women business assistance offices or other organizations to provide assistance in recruitment and placement of DBEs;
11. Whether the bidder/offeror, who selects a non-DBE over an DBE subcontractor, has quotes of each DBE and non-DBE subcontractor submitted to the bidder for work on the contract; and for each DBE that was contacted but not utilized by the bidder/offeror for a contract, the bidder/offeror has a detailed written explanation for each DBE detailing the reasons for the bidder's/offeror's failure or inability to utilize, or to allow the DBE to participate in the contract; and
12. Whether other bidders/offerors met the goal and whether the apparent successful bidder/offeror could have met the goal with additional efforts. The Department may determine that an apparent successful bidder/offeror who fell short of meeting the goal, made good faith efforts when it met or exceeded the average DBE participation obtained by other bidders/offerors.

IX. ADMINISTRATIVE RECONSIDERATION.

If it is determined by the Department that the apparent successful bidder/offeror has failed to meet the provisions of 49 CFR Section 26.53(a), the bidder/offeror may submit a request for administrative reconsideration. If under the provisions of 49 CFR, Section 26.53(d), it is determined by the Department that the apparent successful bidder/offeror has failed to meet the provisions of this subsection, the bidder/offeror may submit a written request for administrative reconsideration.

- A. Within five (5) working days of being informed in writing by the Department that the bidder/offeror has not documented sufficient GFE, a bidder/offeror may request administrative reconsideration. Bidders/offerors should make this request in writing to the following official:

Director of Transportation
Hawaii Department of Transportation
869 Punchbowl Street, Room 509
Honolulu, Hawaii 96813

- B. The reconsideration official, or his or her designee (referred to as “reconsideration official”), shall not have played any role in the original determination that the bidder/offeror failed to meet the goal or make adequate good faith efforts to do so.
- C. As part of this reconsideration, the bidder/offeror will have the opportunity to provide written documentation or argument concerning the issue of whether it met the goal or made adequate GFE to do so. The bidder/offeror will have the opportunity to meet in person with the reconsideration official to discuss the issue of whether it met the goal or made adequate GFE to do so.
- D. In an administrative reconsideration, the reconsideration official will review all previously submitted documents, oral and written arguments, and other evidence presented in the reconsideration, in making the decision.
- E. The Department shall inform the bidder/offeror of the decision within thirty (30) days of the proceeding. The decision will state the Department’s findings, and explain the basis of those findings, with respect to whether or not the bidder/offeror met the contract goal, or whether or not the bidder/offeror made adequate GFE to achieve the contract goal.
- F. The reconsideration decision is not administratively appealable to USDOT but is appealable under HRS 103D-709.

X. AWARD OF CONTRACT

- A. In a sealed bid procurement, the Department reserves the right to reject any or all bids. The award of contract, if it is awarded, will be to the lowest responsive and responsible bidder who meets or exceeds the DBE project goal, or who makes

good faith efforts to meet or exceed the DBE project goal, as determined by the Department.

- B. If the lowest responsible bidder does not meet the DBE project goal and does not demonstrate to the satisfaction of the Department that it made good faith efforts to meet the DBE project goal, such bid shall be rejected as non-responsive. The Department will then consider the next lowest responsive and responsible bidder for award in accordance with paragraph A above.

XI. REPLACEMENT OF AN DBE ON A PROJECT WITH A CONTRACT GOAL

Under this contract, the prime contractor shall utilize the specific DBE listed to perform the work and supply the materials for which each is listed unless the contractor obtains written consent from the Department to replace an DBE. If the Department's consent is not provided, the contractor shall not be entitled to any payment for work or material unless it is performed or supplied by the listed DBE. The Department reserves the right to request copies of all DBE subcontracts.

The Department will require a contractor to make good faith efforts to replace an DBE that is terminated or has otherwise failed to complete its work on a contract with another certified DBE, to the extent needed to meet the contract goal. A prime contractor's inability to find a replacement DBE at the original price is not sufficient to demonstrate that good faith efforts have been made to replace the original DBE. The fact that the contractor has the ability and/or desire to perform the contract work with its own forces does not relieve the contractor of the obligation to make good faith efforts to find a replacement DBE, and it is not a sound basis for rejecting a prospective replacement DBE's reasonable quote.

The Department will require the prime contractor to promptly provide written notice to the project manager of the DBE's inability or unwillingness to perform and provide reasonable documentation.

The written notice by the contractor must include the following:

1. The date the contractor determined the certified DBE to be unwilling, unable or ineligible to perform work on the contract;
2. The projected date that the contractor shall require a substitution or replacement DBE to commence work if consent is granted by the Department;
3. Documentation of facts that describe and cite specific actions or inactions on the part of the affected DBE that led to the contractor's conclusion that the DBE is unwilling, unable, or ineligible to perform work on the contract;
4. A brief statement of the affected DBE's capacity and ability or inability to perform the work as determined by the contractor;
5. Documentation of contractor's good faith efforts to enable affected DBE to perform the work;
6. The current percentage of work completed on each bid item by the affected DBE;

7. The total dollar amount currently paid per bid item for work performed by the affected DBE;
8. The total dollar amount per bid item remaining to be paid to the DBE for work completed but for which the DBE has not received payment, and with which the contractor has no dispute; and
9. The total dollar amount per bid item remaining to be paid to the DBE for work completed, for which the DBE has not received payment, and with which the contractor and DBE have a dispute.

The prime contractor shall send a copy of the written notice to replace a certified DBE on a contract to the affected DBE. The affected DBE may submit a written response within five (5) calendar days to the Department to explain its position on its performance on the committed work. The Department shall consider both the prime contractor's request and DBE's stated position before approving the termination or substitution request, or determining if any action shall be taken against the contractor.

There shall be no substitution or termination of an DBE subcontractor at any time without the prior written consent of the Department. The Department will provide written consent only if the contractor has good cause, as determined by the Department, to terminate the DBE. Good cause may include, but is not limited to the following circumstances:

1. The DBE subcontractor fails or refuses to execute a written contract;
2. The listed DBE subcontractor fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards;
3. The listed DBE subcontractor fails or refuses to meet the prime contractor's reasonable, nondiscriminatory bond requirements;
4. The listed DBE subcontractor becomes bankrupt, insolvent, or exhibits credit unworthiness;
5. The listed DBE subcontractor is ineligible to work on public works projects because of suspension and debarment proceedings pursuant to 2 CFR Parts 180, 215 and 1200 or applicable state law;
6. The Department has determined that the listed DBE subcontractor is not a responsible contractor;
7. The listed DBE subcontractor voluntarily withdraws from the project and provides to the Department written notice of its withdrawal;
8. The listed DBE is ineligible to receive DBE credit for the type of work required; and
9. An DBE owner dies or becomes disabled with the result that the listed DBE contractor is unable to complete its work on the contract.

Upon approval from the Department to replace an DBE, the contractor's good faith efforts shall be documented and submitted to the Department within seven (7) calendar days. This time period may be extended for another seven (7) calendar days upon request by the prime contractor.

If an DBE subcontractor is unable to perform work under the contract, and is to be

replaced, the contractor's failure to obtain a substitute certified DBE or to make good faith efforts to obtain such a substitute DBE subcontractor to perform said work, may constitute a breach of this contract for which the Department may terminate the contract or pursue such remedy as deemed appropriate by the Department.

XII. CONTRACT COMPLIANCE

This contract is subject to contract compliance tracking, and the prime contractor and all subcontractors are required to report payments electronically in the HDOT online Certification and Contract Compliance Management System (hereafter referred to as "online tracking system"). The prime contractor shall report the date payment was made by the Department and shall report payment to all subcontractors for the audit period. The prime contractor and all subcontractors are responsible for responding by any noted response date or due date to any instructions or request for information, and to check the online tracking system on a regular basis to manage contact information and contract records.

The prime contractor is responsible for ensuring all subcontractors have completed all requested items and that their contact information is accurate and up-to-date. HDOT may require additional information related to the contract to be provided electronically through the online tracking system at any time before, during, or after contract award. Information related to contractor access of the online tracking system will be provided to designated point of contact with each contractor upon award of the contract. The online tracking system is web-based and can be accessed at the following Internet address: <https://hdot.dbesystem.com/>.

XIII. PAYMENT

- A. The Department will make an estimate in writing each month based on the items of work performed and materials incorporated in the work and the value therefore at the unit prices or lump sum prices set forth in the contract. All progress estimates and payments will be approximate only and shall be subject to correction at any time prior to or in the final estimate and payment. The Department will not withhold any amount from any payment to the contractor, including retainage.
- B. The contractor shall pay all subcontractors within ten (10) calendar days after receipt of any progress payments from the Department. This clause applies to both DBE and non-DBE subcontractors, and all tiers of subcontracts.
- C. The contractor will verify that payment or retainage has been released to the subcontractors or its suppliers within the specified time through entries in the Department's online tracking system during the corresponding monthly audits. Prompt payment will be monitored and enforced through the contractor's reporting of payments to its subcontractors and suppliers in the online tracking system.

Subcontractors, including lower tier subcontractors and/or suppliers will confirm the timeliness and the payment amounts received utilizing the online tracking system. Discrepancies will be investigated by the DBE Program Office and the project engineer. Payments to the subcontractors, including lower tier subcontractors, and including retainage released after the subcontractor or lower tier subcontractor's work has been completed to the Department's satisfaction, will be reported by the Contractor or the subcontractor.

- D. When any subcontractor has satisfactorily completed its work as specified in the subcontract, and there are no bona fide disputes, the contractor shall make prompt and full payment to the subcontractor of all monies due, including retainage, within ten (10) calendar days after the subcontractor's work is satisfactorily completed. A subcontractor's work is satisfactorily completed when all the tasks called for in the subcontract have been accomplished and documented, as required by the Department. The contractor must obtain the prior written approval from the Department before it can continue to withhold retainage from any subcontractor who has completed its portion of the work. This clause applies to both DBE and non-DBE subcontractors, and all tiers of subcontracts.

XIV. RECORDS

The contractor shall maintain and keep all records necessary for the Department to determine compliance with the contractor's DBE obligations. The records shall be available at reasonable times and places for inspection by the Department and appropriate Federal agencies. The records to be kept by the contractor shall include:

1. The names, race/ethnicity, gender, address, phone number, and contact person of all DBE and non-DBE consultants, subcontractors, manufacturers, suppliers, truckers and vendors identified as DBEs;
2. The nature of work of each DBE and non-DBE consultant, subcontractor, manufacturer, supplier, trucker and vendor;
3. The dollar amount contracted with each DBE and non-DBE consultant, subcontractor, manufacturer, supplier, trucker and vendor; and
4. Cumulative dollar amount of all change orders to the subcontract.

XV. FAILURE TO COMPLY WITH DBE REQUIREMENTS

The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of USDOT assisted contracts. All contractors, subcontractors, manufacturers and suppliers are hereby advised that failure to carry out all DBE requirements specified herein shall constitute a material breach of contract that may result in termination of the contract or such other remedy as deemed appropriate by the Department including but not limited to: 1) withholding monthly progress payments; 2) assessing sanctions; 3) liquidated damages; and/or 4) disqualifying the contractor from future bidding as non-responsible.



Disadvantaged Business Enterprise (DBE) Contract Goal Verification and Good Faith Efforts (GFE) Documentation For Construction

Project #:	County:
DBE Project Goal:	Prime Contractor:

As required by the specifications “*Disadvantaged Business Enterprise Requirements*,” the dollar amount of each subcontract (both DBE and non-DBE firms) for all subcontractors, manufacturers, suppliers, and trucking companies is due by the close of business, 4:30 P.M. Hawaii Standard Time (HST) five (5) days after bid opening. **Failure to provide required information sufficient to evaluate the bid/proposal shall be cause for bid/proposal rejection.**

Calculation of the DBE contract goal for this project is the proportionate contract dollar value of work performed, materials, and goods to be supplied by DBEs. DBE credit shall not be given for mobilization, force account items, and allowance items. This DBE contract goal is applicable to all the contract work performed for this project and is calculated as follows:

1. DBE contract goal percentage = Contract Dollar Value of the work to be performed by DBE subcontractors and manufacturers, plus 60% of the contract dollar value of DBE suppliers, divided by the sum of all contract items (sum of all contract items is the total amount for comparison of bids less mobilization, force account items, and allowance items).
2. The Department shall adjust the bidder’s/offeror’s DBE contract goal to the amount of the project goal if it finds that the bidder/offeror met the goal but erroneously calculated a lower percentage. If the amount the bidder/offeror submits as its contract goal exceeds the project goal, the bidder/offeror shall be held to the higher goal.

Name of Subcontractor, Supplier, Manufacturer, and Trucking Company	DBE (Y/N)	Bid Item Number and Description	Approx. Quantity/Hours	Unit	Unit Price/Rate	Dollar Amount

A. Dollar amount of the work to be performed by DBE subcontractors, manufacturers, and trucking companies, plus 60% of the dollar amount of DBE suppliers	
B. Sum of all work items less mobilization, force account items, allowance items	
A/B = DBE contract goal	

NAME and SIGNATURE of AUTHORIZED REPRESENTATIVE of PRIME CONTRACTOR: _____ DATE: _____

Summary of Good Faith Efforts (GFE)

As required by the specifications “*Disadvantaged Business Enterprise Requirements*,” documentation of GFE shall be submitted by the close of business, 4:30 P.M. HST five (5) days of bid opening. **The bidder/offeror shall respond to the following questions and describe efforts to obtain DBE participation whether or not the DBE project goal is met.** Responses must be sufficient to properly evaluate the bidder’s/offeror’s good faith efforts. Copies of correspondence return receipts, telephone logs, or other documentation will be required to support GFE. Attach additional sheets, if necessary. Based on responses given, HDOT shall make a determination of the bidders’ GFE. **Failure to provide required information sufficient to evaluate the bid/proposal shall be cause for bid/proposal rejection.**

1. Did you submit the required information by the close of business, 4:30 P.M. HST, five (5) days after bid opening (i.e. DBE name, address, NAICS code, description of work, project name, and number)?
2. Explain your GFE if any, to solicit through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBEs who have the capability to perform part or all of the work to be included under the contract.
 - a. Explain your GFE if any, to solicit the participation of potential DBEs as early in the procurement process as practicable.
 - b. Explain your GFE if any, to allow sufficient time for the DBEs to properly inquire about the project and respond to the solicitation.
 - c. Explain your GFE if any, to take appropriate steps to follow up with interested DBEs in a timely manner to facilitate participation by DBEs in this project.
3. Explain your GFE if any, to identify and break up portions of work that can be performed by DBEs in order to increase the likelihood that a DBE will be able to participate, and that the DBE goal could be achieved (e.g. breaking out contract items into economically feasible units to facilitate DBE participation even when you might otherwise prefer to self-perform these work items).
4. Explain your GFE if any, to make available or provide interested DBEs with adequate information about the plans, specifications, and requirements of the project in a timely manner, and assist them in responding to your solicitation.
5. Explain your GFE if any, to negotiate in good faith with interested DBEs. Evidence of such negotiations includes documenting:
 - a) the names, addresses and telephone numbers of DBEs that were contacted; b) a description of the information that was provided to DBEs regarding the plans and specifications; and c) detailed explanation for not utilizing individual DBEs on the project.
6. Did you solely rely on price in determining whether to use a DBE? If yes please explain. The fact that there may be additional or higher costs associated with finding and utilizing DBEs are not, by themselves, sufficient reasons for your refusal to utilize a DBE or

NAME and SIGNATURE of AUTHORIZED REPRESENTATIVE of PRIME CONTRACTOR:

DATE:

failure to meet the DBE goal, provided that such additional costs are not unreasonable. Also, the ability or desire to perform a portion of the work with your own forces, that could have been undertaken by an available DBE, does not relieve you of the responsibility to make good faith efforts to meet the DBE goal, and to make available and solicit DBE participation in other areas of the project to meet the DBE goal.

7. Did you reject DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities? If yes, please explain. The DBEs standing within the industry, membership in specific groups, organizations or associates, and political or social affiliation are not legitimate basis for the rejection or non-solicitation of bids from particular DBEs.
8. Explain your GFE to assist interested DBEs in obtaining bonding, lines of credit, or insurance.
9. Explain your GFE if any, to assist interested DBEs in obtaining necessary equipment, supplies, materials or related assistance or services.
10. If you selected a non-DBE over a DBE subcontractor, please provide the quotes of each DBE and non-DBE subcontractor submitted to you for work on the contract; and for each DBE that was contacted but not utilized for a contract, provide a detailed written explanation for each DBE detailing the reasons for not utilizing or allowing the DBE to participate in the contract.
11. Explain your GFE if any, to effectively use the services of available minority/women community organizations, minority/women business groups, contractors' groups, and local, state and federal minority/women business assistance offices or other organizations to provide assistance in recruitment and placement of DBEs.

NAME and SIGNATURE of AUTHORIZED REPRESENTATIVE of PRIME CONTRACTOR:

DATE:



**Disadvantaged Business Enterprise (DBE)
Contract Goal Verification and Good Faith Efforts (GFE)
Documentation For Construction
INSTRUCTIONS**

Project #	Self-explanatory
County	County where project is located
DBE Project Goal	Indicate DBE goal listed in the proposal on P-1
Prime Contractor	Name of prime contractor
Name of Subcontractor, Supplier, Manufacturer, and Trucking Company	Company name of subcontractor, supplier, manufacturer, or trucking firm
DBE (Y/N)	Y for yes and N for no
Bid Item Number and Description	Pay item and description
Approx. Quantity/ Hours	Self-explanatory
Unit	Unit of measure
Unit Price/ Rate	Self-explanatory
Dollar Amount	Total dollar amount committed to subcontractor, supplier, manufacturer, or trucking firm
A. Dollar amount of the work to be performed by DBE subcontractors, manufacturers, and trucking companies, plus 60% of the dollar amount of DBE suppliers	Total amount of DBE participation
B. Sum of all work items less mobilization, force account items, allowance items	List total of work items minus mobilization, force accounts and allowances. DBE credit shall not be given for mobilization, force account items, and allowance items.
A/B = DBE contract goal	Self-explanatory
Name and Signature of Authorized Representative of Prime Contractor	Self-explanatory (Note: bidder must sign and date every page of form.)
Date	Date form is signed
Summary of Good Faith Efforts (GFE)	Complete by answering questions in detail and providing documentation to support how bidder demonstrated good faith efforts to meet the goal, irrespective of whether or not the goal was met.



Disadvantaged Business Enterprise (DBE) Confirmation and Commitment Agreement Trucking Company

This commitment is subject to the award and receipt of a signed contract from the Hawaii Department of Transportation (HDOT) for the subject project. DBEs must be certified by the bid opening date.

Project #:	County:
NAICS CODE/DESCRIPTION OF WORK:	SECONDARY NAICS CODE:

*All quantities and units should match the bid tab item whenever possible.

The prime contractor shall inform HDOT the dates when the trucking firm starts and completes all work under the subcontract.

Estimated Beginning Date (Month/Year):	Estimated Completion Date (Month/Year):
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TRUCKING COMPANY:	Item No.	Item Description	Unit	Unit Price / Rate	Amount
				\$	\$
				\$	\$
				\$	\$
TOTAL COMMITMENT AMOUNT					\$

1. Number of hours contracted or quantities to be hauled: _____
2. Number of fully operational trucks to be used: _____ Tractor/trailers: _____ Dump trucks: _____
3. Number of fully operational trucks owned by DBE: _____ Dump trucks: _____ Tractors/trailers: _____
4. If Owner Operators or additional trucking companies are to be used answer the following:

Name of Trucking Company	DBE Y/N	Estimated Dollar Amount to be Contracted	Number and Type of Trucks (specify)
		\$	
		\$	

The prime contractor certifies by signature on this agreement to utilize the DBE trucking company as listed on the agreement form. If a DBE trucking company is unable to perform the work as listed on this agreement form, the prime contractor will follow the substitution/replacement approval process as outlined in the contract DBE requirements. **IMPORTANT! The signatures of the DBE, prime contractor, and subcontractor (only if the DBE will be a second tier sub) confirms that all information on this Agreement is true and correct. Parties should sign Agreement in the order in which they are listed.**

DBE NAME:	Name/Title (please print):
Address:	Signature:
Phone: Fax:	
Email:	
Prime Contractor:	Name/Title (please print):
Address:	Signature:
Phone: Fax:	
Email:	
Subcontractor (only if the DBE will be a second tier sub):	Name/Title (please print):
Address:	Signature:
Phone: Fax:	
Email:	

HDOT retains the information collected through this form. With few exceptions, you are entitled on request to be informed about the information that we collect about you.



**Disadvantaged Business Enterprise (DBE)
Confirmation and Commitment Agreement
Trucking Company
INSTRUCTIONS**

The purpose of this agreement is to secure the commitment of the bidder/offeror to utilize the listed DBE trucking company, and the DBE's confirmation that it will perform work for the bidder/offeror on this project. The information on this form shall be provided by the DBE.

Project #	Self-explanatory
County	County where project is located
NAICS Code/Description of Work	Primary North American Industry Classification System code under which DBE is certified to perform and description of work to be done
Secondary NAICS Code	List other NAICS codes firm is certified to perform
Estimated Beginning Date (Month/Year)	Date DBE shall begin work on the project
Estimated Completion Date (Month/Year)	Date DBE's work will be completed
Trucking Company	Name of DBE trucking company
Item No.	List pay item number
Item Description	Description of item
Unit	Unit of measure – e.g. weight or hours
Unit Price/Rate	Cost per unit or hourly rate
Amount	Total amount per pay item
Total Commitment Amount	Sum of all pay items and total commitment of bidder/offeror to DBE
Number of hours contracted or quantities to be hauled	Approximate number of hours or tonnage to be hauled
Number of fully operational trucks to be used:	Total number of trucks to be used for the project
Tractor/Trailers	Number of tractor trailers to be used
Dump Trucks	Number of dump trucks to be used
Number of fully operational trucks owned by DBE	Number of listed DBE's trucks to be used on this project
Name of Trucking Company	If other trucking companies (DBE or non-DBE) are to be leased, list name and information about type of trucks in this section
Estimated Dollar Amount to be Contracted	Provide information about estimated cost to lease trucks
Number of Dump Trucks, Tractor/Trailer	Self-explanatory
DBE NAME	DBE Company name
Name/Title	Name and title of DBE's representative
Address	Self-explanatory
Phone	Self-explanatory
Fax	Self-explanatory
Email	Self-explanatory
Signature	Signature of DBE's representative
Date	Date agreement is signed
Prime Contractor	Company name

Name/Title	Name and title of prime contractor's representative
Address	Self-explanatory
Phone	Self-explanatory
Fax	Self-explanatory
Email	Self-explanatory
Signature	Signature of prime contractor's representative
Date	Date agreement is signed
Subcontractor (only if the DBE will be a second tier sub):	Name of subcontractor only if the listed DBE trucking company will be performing work under this subcontractor
Name/Title	Name and title of the subcontractor's representative
Address	Self-explanatory
Phone	Self-explanatory
Fax	Self-explanatory
Email	Self-explanatory
Signature	Signature of subcontractor
Date	Date agreement is signed



Disadvantaged Business Enterprise (DBE) Confirmation and Commitment Agreement Subcontractor, Manufacturer, or Supplier

This commitment is subject to the award and receipt of a signed contract from the Hawaii Department of Transportation (HDOT) for the subject project. DBEs must be certified by the bid opening date.

Project #:	County:
NAICS CODE/DESCRIPTION OF WORK:	SECONDARY NAICS CODE:

*All quantities and units should match the bid tab item whenever possible.

The prime contractor shall inform HDOT of the dates when the subcontractor starts and completes all work under the subcontract.

Estimated Beginning Date (Month/Year):	Estimated Completion Date (Month/Year):
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SUBCONTRACTOR:	Item No.	Item	Approx. Quantity	Unit	Unit Price	Amount
					\$	\$
					\$	\$
					\$	\$
					\$	\$
TOTAL COMMITMENT AMOUNT						\$

MANUFACTURER:	Item No.	Item	Approx. Quantity	Unit	Unit Price	Amount
					\$	\$
					\$	\$
TOTAL COMMITMENT AMOUNT						\$

SUPPLIER:	Item No.	Item	Approx. Quantity	Unit	Unit Price	Amount
					\$	\$
					\$	\$
TOTAL COMMITMENT AMOUNT						\$

The prime contractor certifies by signature on this agreement that subcontracts will be executed between the prime contractor and the DBE subcontractors as listed on the agreement form. If a DBE subcontractor is unable to perform the work as listed on this agreement form, the prime contractor will follow the substitution/replacement approval process as outlined in the contract DBE requirements. **IMPORTANT! The signatures of the DBE, prime contractor, and subcontractor (only if the DBE will be a second tier sub) confirms that all information on this Agreement is true and correct. Parties should sign Agreement in the order in which they are listed.**

DBE NAME:	Name/Title (please print):
Address:	Signature:
Phone: <input style="width: 80%;" type="text"/>	Date:
Fax: <input style="width: 80%;" type="text"/>	
Email: <input style="width: 90%;" type="text"/>	
Prime Contractor:	Name/Title (please print):
Address:	Signature:
Phone: <input style="width: 80%;" type="text"/>	Date:
Fax: <input style="width: 80%;" type="text"/>	
Email: <input style="width: 90%;" type="text"/>	
Subcontractor (only if the DBE will be a second tier sub):	Name/Title (please print):
Address:	Signature:
Phone: <input style="width: 80%;" type="text"/>	Date:
Fax: <input style="width: 80%;" type="text"/>	
Email: <input style="width: 90%;" type="text"/>	

HDOT retains the information collected through this form. With few exceptions, you are entitled on request to be informed about the information that we collect about you.



Disadvantaged Business Enterprise (DBE) Confirmation and Commitment Agreement Subcontractor, Manufacturer, or Supplier INSTRUCTIONS

The purpose of this agreement is to secure the commitment of the bidder/offeror to utilize the listed DBE, and the DBE's confirmation that it will perform work for the bidder/offeror on this project. The information on this form shall be provided by the DBE.

Project #	Self-explanatory
County	County where project is located
NAICS Code/Description of Work	Primary North American Industry Classification System code under which DBE is certified to perform and description of work to be done
Secondary NAICS Code	List other NAICS codes firm is certified to perform
Estimated Beginning Date (Month/Year)	Date DBE shall begin work on the project
Estimated Completion Date (Month/Year)	Date DBE's work will be completed
Subcontractor	Name of DBE subcontractor (company name)
Item No.	List pay item number
Item	Description of item
Approx. Quantity	Self-explanatory
Unit	List unit of measure
Unit Price	Cost per unit
Amount	Total amount per pay item
Total Commitment Amount	Sum of all pay items and total commitment of bidder/offeror to DBE
Manufacturer	Name of DBE manufacturer
Supplier	Name of DBE supplier (aka regular dealer)
DBE NAME	DBE Company name
Name/Title	Name and title of DBE's representative
Address	Self-explanatory
Phone	Self-explanatory
Fax	Self-explanatory
Email	Self-explanatory
Signature	Signature of DBE's representative
Date	Date agreement is signed
Prime Contractor	Company name
Name/Title	Name and title of prime contractor's representative
Address	Self-explanatory
Phone	Self-explanatory
Fax	Self-explanatory
Email	Self-explanatory
Signature	Signature of prime contractor's representative
Date	Date agreement is signed
Subcontractor (only if the DBE will be a second tier sub):	Name of subcontractor only if the listed DBE will be performing work under this subcontractor as a second tier subcontractor/supplier/manufacturer

Name/Title	Name and title of the subcontractor's representative that the listed DBE will work under as a second tier subcontractor/supplier/manufacture
Address	Self-explanatory
Phone	Self-explanatory
Fax	Self-explanatory
Email	Self-explanatory
Signature	Signature of subcontractor's representative
Date	Date agreement is signed

**REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS**

- I. General
- II. Nondiscrimination
- III. Non-segregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
- XI. Certification Regarding Use of Contract Funds for Lobbying
- XII. Use of United States-Flag Vessels:

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under title 23, United States Code, as required in 23 CFR 633.102(b) (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services). 23 CFR 633.102(e).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider. 23 CFR 633.102(e).

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services) in accordance with 23 CFR 633.102. The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in solicitation-for-bids or request-for-proposals documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract). 23 CFR 633.102(b).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work

performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract. 23 CFR 633.102(d).

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. 23 U.S.C. 114(b). The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors. 23 U.S.C. 101(a).

II. NONDISCRIMINATION (23 CFR 230.107(a); 23 CFR Part 230, Subpart A, Appendix A; EO 11246)

The provisions of this section related to 23 CFR Part 230, Subpart A, Appendix A are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR Part 60, 29 CFR Parts 1625-1627, 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR Part 60, and 29 CFR Parts 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR Part 230, Subpart A, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal Employment Opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (see 28 CFR Part 35, 29 CFR Part 1630, 29 CFR Parts 1625-1627, 41 CFR Part 60 and 49 CFR Part 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140, shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR Part 35 and 29 CFR Part 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract. 23 CFR 230.409 (g)(4) & (5).

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, sexual orientation, gender identity, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action or are substantially involved in such action, will be made fully cognizant of and will implement the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to ensure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action

within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs (i.e., apprenticeship and on-the-job training programs for the geographical area of contract performance). In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. 23 CFR 230.409. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide

sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established thereunder. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors, suppliers, and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurances Required:

a. The requirements of 49 CFR Part 26 and the State DOT's FHWA-approved Disadvantaged Business Enterprise (DBE) program are incorporated by reference.

b. The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:

- (1) Withholding monthly progress payments;
- (2) Assessing sanctions;
- (3) Liquidated damages; and/or
- (4) Disqualifying the contractor from future bidding as non-responsible.

c. The Title VI and nondiscrimination provisions of U.S. DOT Order 1050.2A at Appendixes A and E are incorporated by reference. 49 CFR Part 21.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women.

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of more than \$10,000. 41 CFR 60-1.5.

As prescribed by 41 CFR 60-1.8, the contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location under the contractor's control where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size), in accordance with 29 CFR 5.5. The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. 23 U.S.C. 113. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. 23 U.S.C. 101. Where applicable law requires that projects be treated as a project on a Federal-aid highway, the provisions of this subpart will apply regardless of the location of the project. Examples include: Surface Transportation Block Grant Program projects funded under 23 U.S.C. 133 [excluding recreational trails projects], the Nationally Significant Freight and Highway

Projects funded under 23 U.S.C. 117, and National Highway Freight Program projects funded under 23 U.S.C. 167.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages (29 CFR 5.5)

a. *Wage rates and fringe benefits.* All laborers and mechanics employed or working upon the site of the work (or otherwise working in construction or development of the project under a development statute), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act ([29 CFR part 3](#))), the full amount of basic hourly wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. As provided in paragraphs (d) and (e) of 29 CFR 5.5, the appropriate wage determinations are effective by operation of law even if they have not been attached to the contract. Contributions made or costs reasonably anticipated for bona fide fringe benefits under the Davis-Bacon Act ([40 U.S.C. 3141\(2\)\(B\)](#)) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.e. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics must be paid the appropriate wage rate and fringe benefits on the wage determination for the classification(s) of work actually performed, without regard to skill, except as provided in paragraph 4. of this section. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided*, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under paragraph 1.c. of this section) and the Davis-Bacon poster (WH-1321) must be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. *Frequently recurring classifications.* (1) In addition to wage and fringe benefit rates that have been determined to be prevailing under the procedures set forth in [29 CFR part 1](#), a wage determination may contain, pursuant to § 1.3(f), wage and fringe benefit rates for classifications of laborers and mechanics for which conformance requests are regularly submitted pursuant to paragraph 1.c. of this section, provided that:

(i) The work performed by the classification is not performed by a classification in the wage determination for which a prevailing wage rate has been determined;

(ii) The classification is used in the area by the construction industry; and

(iii) The wage rate for the classification bears a reasonable relationship to the prevailing wage rates contained in the wage determination.

(2) The Administrator will establish wage rates for such classifications in accordance with paragraph 1.c.(1)(iii) of this section. Work performed in such a classification must be paid at no less than the wage and fringe benefit rate listed on the wage determination for such classification.

c. *Conformance.* (1) The contracting officer must require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract be classified in conformance with the wage determination. Conformance of an additional classification and wage rate and fringe benefits is appropriate only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is used in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) The conformance process may not be used to split, subdivide, or otherwise avoid application of classifications listed in the wage determination.

(3) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken will be sent by the contracting officer by email to DBAconformance@dol.gov. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer will, by email to DBAconformance@dol.gov, refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(5) The contracting officer must promptly notify the contractor of the action taken by the Wage and Hour Division

under paragraphs 1.c.(3) and (4) of this section. The contractor must furnish a written copy of such determination to each affected worker or it must be posted as a part of the wage determination. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 1.c.(3) or (4) of this section must be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

d. *Fringe benefits not expressed as an hourly rate.* Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor may either pay the benefit as stated in the wage determination or may pay another bona fide fringe benefit or an hourly cash equivalent thereof.

e. *Unfunded plans.* If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided*, That the Secretary of Labor has found, upon the written request of the contractor, in accordance with the criteria set forth in § 5.28, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

f. *Interest.* In the event of a failure to pay all or part of the wages required by the contract, the contractor will be required to pay interest on any underpayment of wages.

2. Withholding (29 CFR 5.5)

a. *Withholding requirements.* The contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for the full amount of wages and monetary relief, including interest, required by the clauses set forth in this section for violations of this contract, or to satisfy any such liabilities required by any other Federal contract, or federally assisted contract subject to Davis-Bacon labor standards, that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to Davis-Bacon labor standards requirements and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld. In the event of a contractor's failure to pay any laborer or mechanic, including any apprentice or helper working on the site of the work all or part of the wages required by the contract, or upon the contractor's failure to submit the required records as discussed in paragraph 3.d. of this section, the contracting agency may on its own initiative and after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with paragraph

2.a. of this section or Section V, paragraph 3.a., or both, over claims to those funds by:

- (1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;
- (2) A contracting agency for its procurement costs;
- (3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;
- (4) A contractor's assignee(s);
- (5) A contractor's successor(s); or
- (6) A claim asserted under the Prompt Payment Act, [31 U.S.C. 3901–3907](#).

3. Records and certified payrolls (29 CFR 5.5)

a. *Basic record requirements (1) Length of record retention.* All regular payrolls and other basic records must be maintained by the contractor and any subcontractor during the course of the work and preserved for all laborers and mechanics working at the site of the work (or otherwise working in construction or development of the project under a development statute) for a period of at least 3 years after all the work on the prime contract is completed.

(2) *Information required.* Such records must contain the name; Social Security number; last known address, telephone number, and email address of each such worker; each worker's correct classification(s) of work actually performed; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in [40 U.S.C. 3141\(2\)\(B\)](#) of the Davis-Bacon Act); daily and weekly number of hours actually worked in total and on each covered contract; deductions made; and actual wages paid.

(3) *Additional records relating to fringe benefits.* Whenever the Secretary of Labor has found under paragraph 1.e. of this section that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in [40 U.S.C. 3141\(2\)\(B\)](#) of the Davis-Bacon Act, the contractor must maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits.

(4) *Additional records relating to apprenticeship.* Contractors with apprentices working under approved programs must maintain written evidence of the registration of apprenticeship programs, the registration of the apprentices, and the ratios and wage rates prescribed in the applicable programs.

b. *Certified payroll requirements (1) Frequency and method of submission.* The contractor or subcontractor must submit weekly, for each week in which any DBA- or Related Acts-covered work is performed, certified payrolls to the contracting

agency. The prime contractor is responsible for the submission of all certified payrolls by all subcontractors. A contracting agency or prime contractor may permit or require contractors to submit certified payrolls through an electronic system, as long as the electronic system requires a legally valid electronic signature; the system allows the contractor, the contracting agency, and the Department of Labor to access the certified payrolls upon request for at least 3 years after the work on the prime contract has been completed; and the contracting agency or prime contractor permits other methods of submission in situations where the contractor is unable or limited in its ability to use or access the electronic system.

(2) *Information required.* The certified payrolls submitted must set out accurately and completely all of the information required to be maintained under paragraph 3.a.(2) of this section, except that full Social Security numbers and last known addresses, telephone numbers, and email addresses must not be included on weekly transmittals. Instead, the certified payrolls need only include an individually identifying number for each worker (e.g., the last four digits of the worker's Social Security number). The required weekly certified payroll information may be submitted using Optional Form WH-347 or in any other format desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division website at <https://www.dol.gov/sites/dolgov/files/WHD/legacy/files/wh347.pdf> or its successor website. It is not a violation of this section for a prime contractor to require a subcontractor to provide full Social Security numbers and last known addresses, telephone numbers, and email addresses to the prime contractor for its own records, without weekly submission by the subcontractor to the contracting agency.

(3) *Statement of Compliance.* Each certified payroll submitted must be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor, or the contractor's or subcontractor's agent who pays or supervises the payment of the persons working on the contract, and must certify the following:

(i) That the certified payroll for the payroll period contains the information required to be provided under paragraph 3.b. of this section, the appropriate information and basic records are being maintained under paragraph 3.a. of this section, and such information and records are correct and complete;

(ii) That each laborer or mechanic (including each helper and apprentice) working on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in [29 CFR part 3](#); and

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification(s) of work actually performed, as specified in the applicable wage determination incorporated into the contract.

(4) *Use of Optional Form WH-347.* The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 will satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(3) of this section.

(5) *Signature.* The signature by the contractor, subcontractor, or the contractor's or subcontractor's agent must be an original handwritten signature or a legally valid electronic signature.

(6) *Falsification.* The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under [18 U.S.C. 1001](#) and [31 U.S.C. 3729](#).

(7) *Length of certified payroll retention.* The contractor or subcontractor must preserve all certified payrolls during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

c. *Contracts, subcontracts, and related documents.* The contractor or subcontractor must maintain this contract or subcontract and related documents including, without limitation, bids, proposals, amendments, modifications, and extensions. The contractor or subcontractor must preserve these contracts, subcontracts, and related documents during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

d. *Required disclosures and access (1) Required record disclosures and access to workers.* The contractor or subcontractor must make the records required under paragraphs 3.a. through 3.c. of this section, and any other documents that the contracting agency, the State DOT, the FHWA, or the Department of Labor deems necessary to determine compliance with the labor standards provisions of any of the applicable statutes referenced by § 5.1, available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and must permit such representatives to interview workers during working hours on the job.

(2) *Sanctions for non-compliance with records and worker access requirements.* If the contractor or subcontractor fails to submit the required records or to make them available, or refuses to permit worker interviews during working hours on the job, the Federal agency may, after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, that maintains such records or that employs such workers, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available, or to permit worker interviews during working hours on the job, may be grounds for debarment action pursuant to § 5.12. In addition, any contractor or other person that fails to submit the required records or make those records available to WHD within the time WHD requests that the records be produced will be precluded from introducing as evidence in an administrative proceeding under [29 CFR part 6](#) any of the required records that were not provided or made available to WHD. WHD will take into consideration a reasonable request from the contractor or person for an extension of the time for submission of records. WHD will determine the reasonableness of the request and may consider, among other things, the location of the records and the volume of production.

(3) *Required information disclosures.* Contractors and subcontractors must maintain the full Social Security number and last known address, telephone number, and email address

of each covered worker, and must provide them upon request to the contracting agency, the State DOT, the FHWA, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or other compliance action.

4. Apprentices and equal employment opportunity (29 CFR 5.5)

a. *Apprentices (1) Rate of pay.* Apprentices will be permitted to work at less than the predetermined rate for the work they perform when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship (OA), or with a State Apprenticeship Agency recognized by the OA. A person who is not individually registered in the program, but who has been certified by the OA or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice, will be permitted to work at less than the predetermined rate for the work they perform in the first 90 days of probationary employment as an apprentice in such a program. In the event the OA or a State Apprenticeship Agency recognized by the OA withdraws approval of an apprenticeship program, the contractor will no longer be permitted to use apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(2) *Fringe benefits.* Apprentices must be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringe benefits must be paid in accordance with that determination.

(3) *Apprenticeship ratio.* The allowable ratio of apprentices to journeyworkers on the job site in any craft classification must not be greater than the ratio permitted to the contractor as to the entire work force under the registered program or the ratio applicable to the locality of the project pursuant to paragraph 4.a.(4) of this section. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in paragraph 4.a.(1) of this section, must be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under this section must be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(4) *Reciprocity of ratios and wage rates.* Where a contractor is performing construction on a project in a locality other than the locality in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyworker's hourly rate) applicable within the locality in which the construction is being performed must be observed. If there is no applicable ratio or wage rate for the locality of the project, the ratio and wage rate specified in the contractor's registered program must be observed.

b. *Equal employment opportunity.* The use of apprentices and journeyworkers under this part must be in conformity with

the equal employment opportunity requirements of Executive Order 11246, as amended, and [29 CFR part 30](#).

c. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. 23 CFR 230.111(e)(2). The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeyworkers shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract as provided in 29 CFR 5.5.

6. Subcontracts. The contractor or subcontractor must insert FHWA-1273 in any subcontracts, along with the applicable wage determination(s) and such other clauses or contract modifications as the contracting agency may by appropriate instructions require, and a clause requiring the subcontractors to include these clauses and wage determination(s) in any lower tier subcontracts. The prime contractor is responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this section. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and may be subject to debarment, as appropriate. 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract as provided in 29 CFR 5.5.

9. Disputes concerning labor standards. As provided in 29 CFR 5.5, disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility. a. By entering into this contract, the contractor certifies that neither it nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of [40 U.S.C. 3144\(b\)](#) or § 5.12(a).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of [40 U.S.C. 3144\(b\)](#) or § 5.12(a).

c. The penalty for making false statements is prescribed in the U.S. Code, Title 18 Crimes and Criminal Procedure, [18 U.S.C. 1001](#).

11. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#);

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#);

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#); or

d. Informing any other person about their rights under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#).

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

Pursuant to 29 CFR 5.5(b), the following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchpersons and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek. 29 CFR 5.5.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph 1. of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages and interest from the date of the underpayment. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or

mechanic, including watchpersons and guards, employed in violation of the clause set forth in paragraph 1. of this section, in the sum currently provided in 29 CFR 5.5(b)(2)* for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph 1. of this section.

* \$31 as of January 15, 2023 (See 88 FR 88 FR 2210) as may be adjusted annually by the Department of Labor, pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990.

3. Withholding for unpaid wages and liquidated damages

a. *Withholding process.* The FHWA or the contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for any unpaid wages; monetary relief, including interest; and liquidated damages required by the clauses set forth in this section on this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract subject to the Contract Work Hours and Safety Standards Act that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to the Contract Work Hours and Safety Standards Act and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with Section IV paragraph 2.a. or paragraph 3.a. of this section, or both, over claims to those funds by:

- (1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;
- (2) A contracting agency for its procurement costs;
- (3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;
- (4) A contractor's assignee(s);
- (5) A contractor's successor(s); or
- (6) A claim asserted under the Prompt Payment Act, [31 U.S.C. 3901](#)–3907.

4. Subcontracts. The contractor or subcontractor must insert in any subcontracts the clauses set forth in paragraphs 1. through 5. of this section and a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor is responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs 1. through 5. In the

event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and associated liquidated damages and may be subject to debarment, as appropriate.

5. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the Contract Work Hours and Safety Standards Act (CWHSSA) or its implementing regulations in this part;

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under CWHSSA or this part;

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under CWHSSA or this part; or

d. Informing any other person about their rights under CWHSSA or this part.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" in paragraph 1 of Section VI refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions: (based on longstanding interpretation)

- (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
- (2) the prime contractor remains responsible for the quality of the work of the leased employees;

- (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
- (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract. 23 CFR 635.102.

2. Pursuant to 23 CFR 635.116(a), the contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. Pursuant to 23 CFR 635.116(c), the contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract. (based on long-standing interpretation of 23 CFR 635.116).

5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR Part 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract. 23 CFR 635.108.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and

health standards (29 CFR Part 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704). 29 CFR 1926.10.

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR Part 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 11, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)

This provision is applicable to all Federal-aid construction contracts in excess of \$150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.327.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.327.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200. 2 CFR 180.220 and 1200.220.

1. Instructions for Certification – First Tier Participants:

- a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.
- b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction. 2 CFR 180.320.
- c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default. 2 CFR 180.325.
- d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances. 2 CFR 180.345 and 180.350.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900-180.1020, and 1200. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction. 2 CFR 180.330.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 180.300.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (<https://www.sam.gov/>). 2 CFR 180.300, 180.320, and 180.325.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default. 2 CFR 180.325.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.335;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property, 2 CFR 180.800;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification, 2 CFR 180.700 and 180.800; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default. 2 CFR 180.335(d).

(5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(6) Are not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability (USDOT Order 4200.6 implementing appropriations act requirements).

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2 CFR 180.335 and 180.340.

3. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders, and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200). 2 CFR 180.220 and 1200.220.

a. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which

this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances. 2 CFR 180.365.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900 – 180.1020, and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated. 2 CFR 1200.220 and 1200.332.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 1200.220.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (<https://www.sam.gov/>), which is compiled by the General Services Administration. 2 CFR 180.300, 180.320, 180.330, and 180.335.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily

excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment. 2 CFR 180.325.

4. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

a. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals:

(1) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;

(2) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(3) is a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. (USDOT Order 4200.6 implementing appropriations act requirements)

b. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal.

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000. 49 CFR Part 20, App. A.

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or

cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

XII. USE OF UNITED STATES-FLAG VESSELS:

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, or any other covered transaction. 46 CFR Part 381.

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. 46 CFR 381.7. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

When oceanic shipments (or shipments across the Great Lakes) are necessary for materials or equipment acquired for a specific Federal-aid construction project, the bidder, proposer, contractor, subcontractor, or vendor agrees:

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels. 46 CFR 381.7.

2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b)(1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Office of Cargo and Commercial Sealift (MAR-620), Maritime Administration, Washington, DC 20590. (MARAD requires copies of the ocean carrier's (master) bills of lading, certified onboard, dated, with rates and charges. These bills of lading may contain business sensitive information and therefore may be submitted directly to MARAD by the Ocean Transportation Intermediary on behalf of the contractor). 46 CFR 381.7.

**ATTACHMENT A - EMPLOYMENT AND MATERIALS
PREFERENCE FOR APPALACHIAN DEVELOPMENT
HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS
ROAD CONTRACTS (23 CFR 633, Subpart B, Appendix B)**

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

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".

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

3
 4 **“DIVISION 100 - GENERAL PROVISIONS**

5
 6
 7 **SECTION 101 - TERMS, ABBREVIATIONS, AND DEFINITIONS**

8
 9 **101.01 Meaning of Terms.** The specifications are generally written in the
 10 imperative mood. In sentences using the imperative mood, the subject, “the
 11 Contractor shall”, is implied. In the material specifications, the subject may also
 12 be the supplier, fabricator, or manufacturer supplying material, products, or
 13 equipment for use on the project. The word “will” generally pertains to decisions
 14 or actions of the State.

15
 16 When a publication is specified, it refers to the most recent date of issue,
 17 including interim publications, before the bid opening date for the project, unless a
 18 specific date or year of issue is provided.

19
 20 **101.02 Abbreviations.** Meanings of abbreviations used in the specifications,
 21 on the plans, or in other contract documents are as follows:

22

23	AAN	American Association of Nurserymen
24		
25	AASHTO	American Association of State Highway and Transportation Officials
26		
27		
28	ACI	American Concrete Institute
29		
30	ADA	Americans with Disabilities Act
31		
32	ADAAG	Americans with Disabilities Act Accessibility Guidelines
33		
34	AGC	Associated General Contractors of America
35		
36	AIA	American Institute of Architects
37		
38	AISC	American Institute of Steel Construction
39		
40	AISI	American Iron and Steel Institute
41		
42	ANSI	American National Standards Institute
43		
44	APA	American Plywood Association
45		

46	ARA	American Railway Association
47		
48	AREA	American Railway Engineering Association
49		
50	ASA	American Standards Association
51		
52	ASCE	American Society of Civil Engineers
53		
54	ASLA	American Society of Landscape Architects
55		
56	ASTM	American Society for Testing and Materials
57		
58	AWG	American Wire Gauge
59		
60	AWPA	American Wood Preserver's Association
61		
62	AWS	American Welding Society
63		
64	AWWA	American Water Works Association
65		
66	BMP	Best Management Practice
67		
68	CCO	Contract Change Order
69		
70	CFR	Code of Federal Regulations
71		
72	CRSI	Concrete Reinforcing Steel Institute
73		
74	DCAB	Disability and Communication Access Board, Department of Health, State of Hawaii
75		
76		
77	DOTAX	Department of Taxation, State of Hawaii
78		
79	EPA	U.S. Environmental Protection Agency
80		
81	FHWA	Federal Highway Administration, U.S. Department of Transportation
82		
83		
84	FSS	Federal Specifications and Standards, General Services Administration, U.S. Department of Defense
85		
86		
87	HAR	Hawaii Administrative Rules
88		
89	HDOT	Department of Transportation, State of Hawaii
90		

91	HIOSH	Occupational Safety and Health, Department of Labor and Industrial Relations, State of Hawaii
92		
93		
94	HMA	Hot Mix Asphalt
95		
96	HRS	Hawaii Revised Statutes
97		
98	ICEA	Insulated Cable Engineers Association (formerly IPCEA)
99		
100	IMSA	International Municipal Signal Association
101		
102	IRS	Internal Revenue Service
103		
104	ITE	Institute of Transportation Engineers
105		
106	MUTCD	Manual on Uniform Traffic Control Devices for Streets and Highways, FHWA, U.S. Department of Transportation
107		
108		
109	NCHRP	National Cooperative Highway Research Program
110		
111	NEC	National Electric Code
112		
113	NEMA	National Electrical Manufacturers Association
114		
115	NFPA	National Forest Products Association
116		
117	NPDES	National Pollutant Discharge Elimination System
118		
119	OSHA	Occupational Safety and Health Administration/Act, U.S. Department of Labor
120		
121		
122	SAE	Society of Automotive Engineers
123		
124	SI	International Systems of Units
125		
126	UFAS	Uniform Federal Accessibility Standards
127		
128	UL	Underwriter's Laboratory
129		
130	USGS	U.S. Geological Survey
131		
132	VECP	Value Engineering Cost Proposal
133		
134		

135 **101.03 Definitions.** Whenever the following words, terms, or pronouns are
136 used in the contract documents, unless otherwise prescribed therein and without
137 regards to the use or omission of uppercase letters, the intent and meaning shall
138 be interpreted as follows:

139
140 **Addendum (plural - Addenda)** - A written or graphic document, including
141 drawings and specifications, issued by the Director during the bidding period. This
142 document modifies or interprets the bidding documents by additions, deletions,
143 clarifications or corrections.

144
145 **Addition** (to the contract sum) - Amount added to the contract sum by change
146 order.

147
148 **Advertisement** - A public announcement inviting bids for work to be performed or
149 materials to be furnished.

150
151 **Amendment** - A written document issued to amend the existing contract between
152 the State and Contractor and properly executed by the Contractor and Director.

153
154 **Award** - Written notification to the bidder that the bidder has been awarded a
155 contract.

156
157 **Bad Weather Day (or Unworkable Day)** - A day when weather or other conditions
158 prevent a minimum of four hours of work with the Contractor's normal work force
159 on critical path activities at the site.

160
161 **Bag** - 94 pounds of cement.

162
163 **Barrel** - 376 pounds of cement.

164
165 **Base Course** - The layer or layers of specified material or selected material of a
166 designed thickness placed on a subbase or subgrade to support a surface course.

167
168 **Basement Material** - The material in excavation or embankments underlying the
169 lowest layer of subbase, base, pavement, surfacing or other specified layer.

170
171 **Bid** - See Proposal.

172
173 **Bidder** - An individual, partnership, corporation, joint venture or other legal entity
174 submitting, directly or through a duly authorized representative or agent, a
175 proposal for the work or construction contemplated.

176
177 **Bidding Documents (or Solicitation Documents)** - The published solicitation
178 notice, bid requirements, bid forms and the proposed contract documents including
179 all addenda and clarifications issued prior to receipt of the bid.

180

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

185
186 **Blue Book** - EquipmentWatch Cost Recovery (formerly known as
187 EquipmentWatch Rental Rate Blue Book), available from EquipmentWatch, a
188 division of Penton, Inc.

189
190 **Calendar Day** - See Day.

191
192 **Change Order (or Contract Change Order)** - A written order signed by the
193 Engineer issued with or without the consent of the Contractor directing changes in
194 the work, contract time or contract price. The purposes of a change order include,
195 but are not limited to (1) establishing a price or time adjustment for changes in the
196 work; (2) establishing full payment for direct, indirect, and consequential costs,
197 including costs of delay; (3) establishing price adjustment or time adjustment for
198 work covered and affected by one or more field orders; or (4) settling Contractor's
199 claims for direct, indirect, and consequential costs, or for additional contract time,
200 in whole or in part.

201
202 **Completion** - See Substantial Completion and Final Completion.

203
204 **Completion Date** - The date specified by the contract for the completion of all
205 work on the project or of a designated portion of the project.

206
207 **Comptroller** - the Comptroller of the State of Hawaii, Department of Accounting
208 and General Services.

209
210 **Contract** - The written agreement between the Contractor and the State, by which
211 the Contractor shall provide all labor, equipment, and materials and perform the
212 specified work within the contract time stipulated, and by which the State of Hawaii
213 is obligated to compensate the Contractor at the prices set forth in the contract
214 documents.

215
216 **Contract Certification Date** - The Date on which the Deputy Comptroller for the
217 State of Hawaii (or authorized representative) signs the Contract Certification.

218
219 **Contract Completion Date** - The calendar day on which all work on the project,
220 required by the contract, must be completed. See CONTRACT TIME.

221

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

229
230 **Contract Item (Pay Item)** - A specific unit of work for which there is a price in the
231 contract.

232
233 **Contract Modification (Modification)** - A change order that is mutually agreed to
234 and signed by the parties to the contract.

235
236 **Contract Price** - The amount designated on the face of the contract for the
237 performance of work.

238
239 **Contract Time (or Contract Duration)** - The number of calendar or working days
240 provided for completion of the contract, inclusive of authorized time extensions.
241 Contract time shall commence on the Start Work Date and end on the Substantial
242 Completion Date. If in lieu of providing a number of calendar or working days, the
243 contract requires completion by a certain date, the work shall be completed by that
244 date.

245
246 **Contracting Officer** - See Engineer.

247
248 **Contractor** - Any individual, partnership, firm, corporation, joint venture, or other
249 legal entity undertaking the execution of the work under the terms of the contract
250 with the State.

251
252 **Critical Path** - Longest logical sequence of activities that must be completed on
253 schedule for the entire project to be completed on schedule.

254
255 **Day** - Any day shown on the calendar, beginning at midnight and proceeding up
256 to, but not including, midnight the following day. If no designation of calendar or
257 working day is made, "day" shall mean calendar day.

258
259 **Department** - The Department of Transportation of the State of Hawaii
260 (abbreviated HDOT).

261
262 **Director** - The Director of the HDOT acting directly or through duly authorized
263 representatives.

264
265 **Plans (or Drawings)** - The contract drawings in graphic or pictorial form including
266 the notes, tables and other notations thereon indicating the design, location,
267 character, dimensions, and details of the work.

268

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

271

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

273

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

280

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

285

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

288

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

293

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

297

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

300

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

303

304 **HAWAII ePROCUREMENT SYSTEM (HiePRO)** - The State of Hawaii
305 eProcurement System for issuing solicitations, receiving proposals and responses,
306 and issuing notices of award.

307

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

310

311 **Highways Program** - The Highways Program of the Hawaii Department of
312 Transportation constituted under the laws of Hawaii for the administration of
313 highway work.

314

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

317

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

320

321 **Laboratory** - The testing laboratory of the Highways Program or other testing
322 laboratories that may be designated by the Engineer.

323

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

326

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

329

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

334

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

337

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

340

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

345

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

350

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

353

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

357

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

361

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

370

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

376

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

379

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

382

383 **Proposal (Bid)** - The executed document submitted by a Bidder in response to a
384 solicitation request, to perform the work required by the proposed contract
385 documents, for the price quoted and within the time allotted.

386

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

388

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

391

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

394

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

398

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

401

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

404

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

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

410
411 **Shop Drawings** - All drawings, diagrams, illustrations, schedules and other data
412 or information which are specifically prepared or assembled by or for the
413 Contractor and submitted by the Contractor to illustrate some portion of the work.

414
415 **Shoulder** - The portion of the roadway next to the traveled way for:
416 accommodation of stopped vehicles, placement of underground facilities,
417 emergency use, and lateral support of base and surface courses.

418
419 **Sidewalk** - That portion of the roadway primarily constructed for use by
420 pedestrians.

421
422 **Solicitation** - An invitation to bid or request for proposals or any other document
423 issued by the Department to solicit bids or offers to perform a contract. The
424 solicitation may indicate the time and place to receive the bids or offers and the
425 location, nature and character of the work, construction or materials to be provided.

426
427 **Specifications** - Compilation of provisions and requirements to perform
428 prescribed work.

429
430 **(A) Standard Specifications.** Specifications by the State intended for
431 general application and repetitive use.

432
433 **(B) Special Provisions.** Revisions and additions to the standard
434 specifications applicable to an individual project.

435
436 **Standard Plans** - Drawings provided by the State for specific items of work
437 approved for repetitive use.

438
439 **State** - The State of Hawaii, its Departments and agencies, acting through its
440 authorized representative(s).

441
442 **State Waters** – All waters, fresh, brackish, or salt, around and within the State,
443 including, but not limited to, coastal waters, streams, rivers, drainage ditches,
444 ponds, reservoirs, canals, ground waters, and lakes; provided that drainage
445 ditches, ponds, and reservoirs required as a part of a water pollution control system
446 are excluded.

447
448 **Start Work Date** - Date on which Contractor begins physical work on the contract.
449 This date shall also be the beginning of Contract Time.

450
451 **Structures** - Bridges, culverts, catch basins, drop inlets, retaining walls, cribbing,
452 manholes, endwalls, buildings, sewers, service pipes, underdrains, foundation
453 drains, and other such features that may be encountered in the work.

454

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

457

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

461

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

466

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

469

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

473

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

477

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

482

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

486

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

488

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

492

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

495

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

498

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

501

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

505
506 **Surfacing** - The uppermost layer of material placed on the traveled way or
507 shoulders. This term is used interchangeably with pavement.

508
509 **Traveled Way** - The portion of the roadway for the movement of vehicles,
510 exclusive of shoulders.

511
512 **Unsuitable Material** - Materials that contain organic matter, muck, humus, peat,
513 sticks, debris, chemicals, toxic matter, or other deleterious materials not suitable
514 for use in earthwork.

515
516 **Utility** - A line, facility, or system for producing, transmitting, or distributing
517 communications, power, electricity, heat, gas, oil, water, steam, waste, or storm
518 water.

519
520 **Utility Owner** - The entity, whether private or owned by a State, Federal, or County
521 governmental body, that has the power and responsibility to grant approval for, or
522 undertake construction work involving a particular utility.

523
524 **Water Pollutant** - Dredged spoil, solid refuse, incinerator residue, sewage,
525 garbage, sewage sludge, munitions, chemical waste, biological materials,
526 radioactive materials, heat, wrecked or discarded equipment, rock, sand, soil,
527 sediment, cellar dirt and industrial, municipal, and agricultural waste.

528
529 **Water Pollution** - **(1)** Such contamination or other alteration of the physical,
530 chemical, or biological properties of any state waters, including change in
531 temperature, taste, color, turbidity, or odor of the waters, or **(2)** Such discharge of
532 any liquid, gaseous, solid, radioactive, or other substances into any state waters,
533 as will or is likely to create a nuisance or render such waters unreasonably harmful,
534 detrimental, or injurious to public health, safety, or welfare, including harm,
535 detriment, or injury to public water supplies, fish and aquatic life and wildlife,
536 recreational purposes and agricultural and industrial research and scientific uses
537 of such waters or as will or is likely to violate any water quality standards, effluent
538 standards, treatment and pretreatment standards, or standards of performance for
539 new sources adopted by the Department of Health.

540
541 **Work** - The furnishing of all labor, material, equipment, and other incidentals
542 necessary or convenient for the successful execution of all the duties and
543 obligations imposed by the contract.

544
545 **Working Day** - A calendar day in which a Contractor is capable of working four or
546 more hours with its normal work force, exclusive of:

547

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

550

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

553

554

555

556

557

END OF SECTION 101

1 Make this section a part of the Standard Specifications:

2
3 **“SECTION 102 - BIDDING REQUIREMENTS AND CONDITIONS**

4
5
6 **102.01 Prequalification of Bidders.** Prospective bidders shall be capable of
7 performing the work for which they are bidding.

8
9 In accordance with HRS Chapter 103D-310, the Department may require
10 any prospective bidder to submit answers to questions contained in the 'Standard
11 Qualification Questionnaire For Prospective Bidders On Public Works Contracts'
12 furnished by the Department, properly executed and notarized, setting forth a
13 complete statement of the experience of such prospective bidder and its
14 organization in performing similar work and a statement of the equipment proposed
15 to be used, together with adequate proof of the availability of such equipment.
16 Whenever it appears to the Department, from answers to the questionnaire or
17 otherwise, that the prospective bidder is not fully qualified and able to perform the
18 intended work, the Department will, after affording the prospective bidder an
19 opportunity to be heard and if still of the opinion that the bidder is not fully qualified
20 to perform the work, refuse to receive or consider any bid offered by the
21 prospective bidder. All information contained in the answers to the questionnaire
22 shall be kept confidential. Questionnaire so submitted shall be returned to the
23 bidders after serving their purpose.

24
25 No person, firm or corporation may bid where (1) the person, firm, or
26 corporation, or (2) a corporation owned substantially by the person, firm, or
27 corporation, or (3) a substantial stockholder or an officer of the corporation, or (4)
28 a partner or substantial investor in the firm is in arrears in payments owed to the
29 State or its political subdivisions or is in default as a surety or failure to do faithfully
30 and diligently previous contracts with the State.

31
32 **102.02 Contents of Proposal Forms.** The Department will furnish prospective
33 bidders with proposal forms posted in HlePRO stating:

- 34
35 (1) The location,
36
37 (2) Description of the proposed work,
38
39 (3) The approximate quantities,
40
41 (4) Items of work to be done or materials to be furnished,
42
43 (5) A schedule of items, and
44
45 (6) The time in which the work shall be completed.
46

47 Papers bound with or attached to the proposal form are part of the proposal.
48 The bidder shall not detach or alter the papers bound with or attached to the
49 proposal when the bidder submits its proposal through HlePRO.
50

51 Also, the bidder shall consider other documents including the plans and
52 specifications a part of the proposal form whether attached or not.
53

54 **102.03 (Unassigned).**
55

56 **102.04 Estimated Quantities.** The quantities shown in the contract are
57 approximate and are for the comparison of bids only. The actual quantity of work
58 may not correspond with the quantities shown in the contract. The Department will
59 make payment to the Contractor for unit price items in accordance with the contract
60 for only the following:
61

62 (1) Actual quantities of work done and accepted, not the estimated
63 quantities; or
64

65 (2) Actual quantities of materials furnished, not the estimated quantities.
66

67 The Department may increase, decrease, or omit each scheduled quantities
68 of work to be done and materials to be furnished. When the Department increases
69 or decreases the estimated quantity of a contract item by more than 15% the
70 Department will make payment for such items in accordance with Subsection
71 104.06 - Methods of Price Adjustment.
72

73 **102.05 Examination of Contract and Site of Work.** The bidder shall examine
74 carefully the site of the proposed work and contract before submitting a proposal.
75

76 By the act of submitting a bid for the proposed contract, the bidder warrants
77 that:
78

79 (1) The bidder and its Subcontractors have reviewed the contract
80 documents and found them free from ambiguities and sufficient for the
81 purpose intended;
82

83 (2) The bidder and its workers, employees and subcontractors have the
84 skills and experience in the type of work required by the contract documents
85 bid upon;
86

87 (3) Neither the bidder nor its employees, agents, suppliers or
88 subcontractors have relied upon verbal representations from the
89 Department, its employees or agents, including architects, engineers or
90 consultants, in assembling the bid figure; and
91

92 **(4)** The basis for the bid figure are solely on the construction contract
93 documents.

94
95 Also, the bidder warrants that the bidder has examined the site of the work.
96 From its investigations, the bidder acknowledges satisfaction on:

- 97
98 **(1)** The nature and location of the work;
99
100 **(2)** The character, quality, and quantity of materials;
101
102 **(3)** The difficulties to be encountered; and
103
104 **(4)** The kind and amount of equipment and other facilities needed;

105
106 Subsurface information or hydrographic survey data furnished are for the
107 bidders' convenience only. The data and information furnished are the product of
108 the Department's interpretation gathered in investigations made at the specific
109 locations. These conditions may not be typical of conditions at other locations
110 within the project area or that such conditions remain unchanged. Also, conditions
111 found at the time of the subsurface explorations may not be the same conditions
112 when work starts. The bidder shall be solely responsible for assumptions,
113 deductions, or conclusions the bidder may derive from the subsurface information
114 or data furnished.

115
116 If the Engineer determines that the natural conditions differ from that
117 originally anticipated or contemplated by the Contractor in the items of excavation,
118 the State may treat the difference in natural conditions, as falling within the
119 meaning of Subsection 104.02 – Changes.

120
121 Whereas variances for Community Noise Control have been granted for
122 work at the intersection Kalaniana'ole Highway with Kalaniiki Street/Waieli Street
123 (Docket No. 24-NR-VN-10); the bidder also warrants that:

124
125 **(1)** The bidder shall conduct work to construct improvements at the
126 intersection of Kalaniana'ole Highway with Kalaniiki Street/Waieli Street
127 during the following days/times:

128
129 Mondays to Fridays: 8:00 p.m. to Midnight
130 Tuesdays to Saturdays: Midnight to 5:00 a.m.

131
132 **(2)** The bidder shall not use of auger drill-rig, jackhammers and drills,
133 and concrete-saws after midnight within 500 feet of residences.

134
135 **(3)** The bidder shall notify the Indoor and Radiological Health Branch as
136 to the date and time of variance hour activity as soon as the dates are
137 confirmed, and when the project is completed.

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(4) The bidder shall make every effort to minimize noise from heavy vehicles travelling to and from the project.

(5) The bidder use of reverse signal alarms shall be prohibited from 8:00 p.m. to 7:00 a.m. Alternative methods such as utilizing a ground guide shall be employed.

(6) The bidder shall minimize traffic noise near residences from heavy vehicles travelling to and from the project site.

(7) The bidder shall have a job-site person to whom immediate complaints can be forwarded for prompt response, and who shall have the general responsibility of monitoring quiet work procedures.

(8) The bidder shall give sufficient notification to residences and businesses that may be impacted by the activity. The notification for the planned nighttime activity shall contain the name and telephone number of the bidder's job-site person. In addition, a copy of any notifications, as well as progress reports shall be sent to the Indoor and Radiological Health Branch.

(9) If noise level is such that numerous complaints are received by the Department of Health, the bidder shall cease operations upon receipt of an order and complete the project during the weekdays and weekends as directed.

(10) The bidder shall perform noise sampling during the variance hours and report the results of such sampling to the Indoor and Radiological Health Branch.

(11) The bidder warrants that all equipment operating within 1,000 feet of a residence during the noise variance period will comply with the following noise level parameters. Unless authorized by the Contracting Officer, noise levels produced by the Contractor's operations:

(a) Will not exceed 85dBA for more than 10 percent of the time at a 100-foot distance from 6:00 pm to midnight each day; and

(b) Will not exceed 75 dBA at a 100-foot distance for more than 10 percent of the time between midnight and 6:00 am each night.

(12) The bidder shall comply with the following requirements during the noise variance period:

183 (a) Construction equipment with exposed engine compartments
184 will not be used on the job site.

185
186 (b) Applicable State Department of Health daytime and nighttime
187 noise limits will not be exceeded at the property plane of any
188 residence, unless authorized by the Engineer, or unless it can be
189 demonstrated by sound level measurements that the normal
190 background ambient noise levels are equal to or greater than the
191 construction noise levels.

192
193 Also, the bidder warrants that the bidder will not disturb, remove or trim
194 woody plants greater than 15 feet tall from June 1 through September 15 to avoid
195 impacts to the Hawaiian hoary bat.

196
197 **102.06 Preparation of Proposal.** The submittal of its proposal shall be on
198 forms furnished by the Department. The bidder shall specify in words or figures:

- 199
200 (1) A unit price for each pay item with a quantity given;
201
202 (2) The products of the respective unit prices and quantities
203
204 (3) The lump sum amount; and
205
206 (4) The total amount of the proposal obtained by adding the amounts of
207 the several items.

208
209 The words and figures shall be in ink or typed. If a discrepancy occurs
210 between the prices written in words and those written in figures, the prices written
211 in words shall govern.

212
213 When an item in the proposal contains an option to be made, the bidder
214 shall choose in accordance with the contract for that particular item. Determination
215 of an option will not permit the Contractor to choose again.

216
217 The bidder shall sign the proposal properly in ink. A duly authorized
218 representatives of the bidder or by an agent of the bidder legally qualified and
219 acceptable to the Department shall sign, including one or more partners of the
220 bidder and one or more representatives of each entity comprising a joint venture.

221
222 When an agent, other than the officer(s) of a corporation authorized to sign
223 contracts for the corporation or a partner of a partnership, signs the proposals, a
224 'Power of Attorney' shall be on file with the Department or submitted with the
225 proposal. Otherwise, the Department will reject the proposal as irregular and
226 unauthorized.

227

1 Make this section a part of the Standard Specifications:
2

3 **“SECTION 103 - AWARD AND EXECUTION OF CONTRACT**
4

5 **103.01 Consideration of Proposals.** The Department will compare the
6 proposals in terms of the summation of the products of the approximate quantities
7 and the unit bid prices after the submittal date and time established in HlePRO. If
8 a discrepancy occurs between the unit bid price and the bid price, the unit bid price
9 shall govern.
10

11 The “Buy America” provisions in the Surface Transportation Assistance Act
12 of 1982 is applicable to Federal-aid projects. Bidders may submit a bid based
13 upon the furnishing and use of domestic steel or foreign steel. Manufacturing
14 processes for domestic steel shall occur in the United States.
15

16 The Department reserves the right to reject proposals, waive technicalities
17 or advertise for new proposals, if the rejection, waiver, or new advertisement favors
18 the Department.
19

20 **103.02 Award of Contract.** The award of contract, if it be awarded, will be
21 made within 60 calendar days after the opening of bids, to the lowest responsible
22 and responsive bidder whose proposal complies with all the prescribed
23 requirements. The Department may request the bidders to allow the Department
24 to consider the bids for the issuance of an award beyond the 60-calendar day
25 period. Agreement to such an extension must be made by a bidder in writing. Only
26 bidders who have agreed to such an extension will be eligible for the award.
27

28 **(1) Requirement for Award.** The Bidder, as proof of compliance
29 with the requirements of section 103D-310(c), HRS, upon award of a
30 contract made pursuant to section 103D-302, HRS, shall provide the
31 documents listed below. The documents shall be submitted promptly
32 to the Department. If a valid certificate/clearance is not submitted
33 on a timely basis upon award, the Bidder may be deemed non-
34 responsible. See also Subsection 108.03 – Preconstruction Data
35 Submittal.
36

37 **(A) Tax Clearance.** Pursuant to §103D-310(c), 103-53 and 103D-328,
38 HRS, the bidder shall submit a tax clearance certificate from the State of
39 Hawaii Department of Taxation (DOTAX) and the Internal Revenue Service
40 (IRS), subject to section 103D-328, HRS, current within six months of
41 issuance date.
42

43 FORM A6, TAX CLEARANCE CERTIFICATE, is available at the
44 following website:
45

46 <https://tax.hawaii.gov/>

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To receive DOTAX Forms by fax or mail, phone:
(808) 587-4242 or 1-800-222-3229.

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

(B) DLIR Certificate of Compliance. Pursuant to §103D-310(c), HRS, the bidder shall submit a certificate of compliance for Hawaii Employment Security Law (Chapter 383, HRS), Workers' Compensation Law (Chapter 386, HRS), Temporary Disability Insurance (Chapter 392, HRS), and Prepaid Health Care Act (Chapter 393, HRS), from the State of Hawaii Department of Labor and Industrial Relations (DLIR), current within six months of issuance date.

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

<http://labor.hawaii.gov/>

Contact the DLIR Unemployment Insurance Division at (808) 586-8926 for additional information.

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. Bidder shall submit directly to the DLIR. The approved certificate may then be submitted to the Department.

(C) DCCA Certificate of Good Standing. Pursuant to §103D-310(c), HRS, the bidder shall submit a certificate of good standing from the business registration division (BREG) of the State of Hawaii Department of Commerce and Consumer Affairs (DCCA), current within six months of issuance date, to demonstrate 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.

A Hawaii business that is a sole proprietorship, is not required to register with the BREG, and therefore not required to submit a certificate of

92 good standing. Bidders are advised of costs associated with registering
93 and obtaining a Certificate of Good Standing from the DCCA.

94
95 To purchase a CERTIFICATE OF GOOD STANDING, go to On-Line
96 Services at the following website:

97
98 <http://cca.hawaii.gov/>
99

100 The application for the Certificate of Good Standing is the
101 responsibility of the bidder. Bidder shall submit directly to the DCCA. The
102 approved certificate may then be submitted to the Department.

103
104 **(D) Hawaii Compliance Express (HCE).** In lieu of the certificates
105 referenced in subsection A, B, and C, the bidder may make available proof
106 of compliance through a state procurement office designated certification
107 process.

108
109 **103.03 Cancellation of Award.** The Department reserves the right to cancel
110 the award of contracts before the execution of said contract by the parties. There
111 will be no liability to the awardee and to other bidders.

112
113 **103.04 Return of Proposal Guaranty.** The Department will return the proposal
114 guaranties, except those of the three lowest bidders, after the Department checks
115 the proposals. The Department will return the proposal guaranties of the remaining
116 two lowest bidders, not awarded the contract, within five working days following
117 the execution of the contract. The Department will return the successful bidder's
118 proposal guaranty after the successful bidder furnishes a bond and executes the
119 contract.

120
121 **103.05 Requirement of Contract Bond.** At the time of execution of the
122 contract, the successful bidder shall file a good and sufficient performance bond
123 and a payment bond on the forms furnished by the Department conditioned for the
124 full and faithful performance of the contract in accordance with the terms and intent
125 thereof and for the prompt payment to all others for all labor and material furnished
126 by them to the bidder and used in the prosecution of the work provided for in the
127 contract. The bonds shall be of an amount equal to 100 percent of the amount of
128 the contract price and include 5 percent of the contract amount estimated to be
129 required for extra work. The bidder shall limit the acceptable performance and
130 payment bonds to the following:

131
132 **(a)** Legal tender;

133
134 **(b)** Surety bond underwritten by a company licensed to issue bonds in
135 the State of Hawaii; or
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(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 insure 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

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

232
233 **102.07 Irregular Proposals.** The Department may consider proposals irregular
234 and may reject the proposals for the following reasons:

235
236 (1) The proposal is a form not furnished by the Department, altered, or
237 detached;

238
239 (2) The proposal contains unauthorized additions, conditions, or
240 alternates. Also, the proposal contains irregularities that may tend to make
241 the proposal incomplete, indefinite, or ambiguous to its meaning;

242
243 (3) The bidder adds provisions reserving the right to accept or reject an
244 award. Also, the bidder adds provisions into a contract before an award;

245
246 (4) The proposal does not contain a unit price for each pay item listed
247 except authorized optional pay items; and

248
249 (5) Prices for some items are out of proportion to the prices for other
250 items.

251
252 (6) If in the opinion of the Director, the bidder and its listed
253 subcontractors do not have the Contactor's licenses or combination of
254 Contractor's licenses necessary to complete the work.

255
256 Where the prospective bidder is bidding on multiple projects simultaneously
257 and the proposal limits the maximum gross amount of awards that the bidder can
258 accept at one bid letting, the proposal is not irregular if the limit on the gross
259 amount of awards is clear, and the Department selects the awards that can be
260 given.

261
262 **102.08 Proposal Guaranty.** The Department will not consider a proposal of
263 \$25,000 or more unless accompanied by:

264
265 (1) A deposit of legal tender; or

266
267 (2) A valid surety bid bond, underwritten by a company licensed to issue
268 bonds in the State of Hawaii, in the form and composed, substantially, with
269 the same language as provided herewith and signed by both parties; or

270
271 (3) A certificate of deposit, share certificate, cashier's check, treasurer's
272 check, teller's check, or official check drawn by, or a certified check
273 accepted by and payable on demand to the State by a bank, savings

274 institution, or credit union insured by the Federal Deposit Insurance
275 Corporation (FDIC) or the National Credit Union Administration (NCUA).

276
277 (a) The bidder may use these instruments only to a maximum of
278 \$100,000.

279
280 (b) If the required security or bond amount totals over \$100,000
281 more than one instrument not exceeding \$100,000 each and issued
282 by different financial institutions shall be acceptable.

283
284 (c) The instrument shall be made payable at sight to the
285 Department.

286
287 (d) **If bidder elects options (1) or (3) above for its bid security,**
288 **said bid security shall be in its original form and shall be**
289 **submitted before the bid deadline to the Contract Office,**
290 **Department of Transportation, Aliiimoku Hale, 869 Punchbowl**
291 **Street, Room 105, Honolulu, Hawaii 96813. Original surety bid**
292 **bonds do not need to be submitted to the Contracts Office.**
293 **Bidders are reminded that a copy of its surety bid bond shall be**
294 **included with its bid submitted and uploaded to HlePRO.**
295

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

298
299 **102.09 Delivery of Proposal. Bidders shall submit and upload the**
300 **complete proposal to HlePRO prior to the bid opening date and time.**
301 **Proposals received after said due date and time shall not be considered.**
302 **Any additional support documents explicitly designated as confidential**
303 **and/or proprietary shall be uploaded as a separate file to HlePRO. Bidders**
304 **shall not include confidential and/or proprietary documents with the**
305 **proposal. The record of each bidder and respective bid shall be open to**
306 **public inspection. Original (wet ink, hard copy) proposal documents are not**
307 **required to be submitted. Contract award shall be based on evaluation of**
308 **proposals submitted and uploaded to HlePRO.**
309

310 **FAILURE TO UPLOAD THE COMPLETE PROPOSAL TO HlePRO**
311 **SHALL BE GROUNDS FOR REJECTION OF THE BID.**
312

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

315
316 **102.10 Withdrawal or Revision of Proposals.** Bids may be modified or
317 withdrawn prior to the bid opening date and time. Withdrawal or revision of
318 proposal shall be completed, and submitted and uploaded to HlePRO prior to the
319 bid opening date and time.

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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

366 person listed in HlePRO for the solicitation and also post a question in
367 HlePRO under the question/answer tab referencing the email with the
368 request. The request must be posted in HlePRO no later than 14 calendar
369 days before the bid opening date, not including the bid opening date.

370
371 An addendum will be issued to inform all prospective bidders of any
372 accepted substitution in accordance with Subsection 102.17 – Addenda.

373
374 **(B) Statement of Variances.** The statement of variances must list all
375 features of the proposed substitution that differ from the contract documents
376 and must further certify that the substitution has no other variant features.
377 The brochure and information submitted shall be clearly marked showing
378 make, model, size, options, and any other features requested by the
379 Engineer and must include sufficient evidence to evaluate each feature
380 listed as a variance. A request will be denied if submitted without sufficient
381 evidence. If after installing the substituted product, an unlisted variance is
382 discovered, the Contractor shall immediately replace the product with a
383 specified product at no increase in contract price and contract time.

384
385 **(C) Substitution Denial.** Any substitution request not complying with
386 the above requirements will be denied.

387
388 **102.15 Preferences.** Preferences shall not apply to this project.

389
390 **102.16 Certification for Safety and Health Program for Bids in excess of**
391 **\$100,000.** In accordance with HRS Chapter 396-18, the bidder or offeror, by
392 signing and submitting this proposal, certifies that a written safety and health plan
393 for this project will be available and implemented by the notice to proceed date for
394 this project. Details of the requirements of this plan may be obtained from the
395 State Department of Labor and Industrial Relations, Occupational Safety and
396 Health Division (HIOSH).

397
398 **102.17 Addenda.** Addenda issued shall become part of the contract
399 documents. Addenda to the bid documents will be provided to all prospective
400 bidders via HlePRO. Each addendum shall be an addition to the contract
401 documents. The terms and requirements of the bid documents (i.e., drawings,
402 specifications and other bid and contract documents) cannot be changed prior to
403 the bid opening except by a duly issued addendum.”

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406

END OF SECTION 102

1 **SECTION 104 – SCOPE OF WORK**
2

3 Make the following amendment to said Section:
4

5 **(I) Amend Section 104.11(B) Contractor’s Duty to Locate and Protect**
6 **Utility** by adding the following after line 291:
7

8 **“(4) The Contractor shall contact the Hawaii One Call Center at 811 prior**
9 **to any execution in a public right of way or on private property.”**
10

11 **(II) Amend Section 104.06 Methods of Price Adjustment** as follows:
12

13 **“104.06 Methods of Price Adjustment.** Any adjustment in the contract price
14 pursuant to a change or claim shall be made in one or more of the following ways:
15

16 **(1)** By written agreement on a fixed price adjustment before
17 commencement of the pertinent performance.
18

19 **(2)** By unit prices or other price adjustments specified in the contract or
20 subsequently agreed upon before commencement of the pertinent
21 performance.
22

23 **(3)** The Engineer may base the adjustment for a lump sum item on a
24 calculated proportionate unit price. The Engineer will calculate the
25 proportionate unit price by dividing the original contract lump sum price by
26 the actual or original estimated quantity established by the contract
27 documents.
28

29 **(4)** In any other lawful manner as the parties may mutually agree upon
30 before commencement of the pertinent performance.
31

32 **(5)** At the sole option of the Engineer, work may be paid for on a force
33 account basis in accordance with Subsection 109.06 - Force Account
34 Provisions and Compensation.
35

36 **(6)** By the cost variations attributable to the events or situations with
37 adjustment of profit and fee, all as specified in the contract or subsequently
38 agreed upon before commencement of the pertinent performance.
39

40 **(7)** In the absence of agreement by the parties:
41

42 **(A)** For change orders with value not exceeding \$50,000 by
43 documented actual costs of the work, allowing for overhead and
44 profit as set forth in Section 109.05 - Allowances for Overhead and
45 Profit. A change order shall be issued within fifteen days of
46 submission by the contractor of proper documentation of completed
47 force account work, whether periodic (conforming to the applicable

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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 non-adjustment of the contract time or contract price, the contractor shall file a notice of intent to claim within thirty days after the receipt of the written unilateral change order. Failure to file a protest within the time specified shall constitute agreement on the part of the contractor with the terms, conditions, amounts, and adjustment or non-adjustment of the contract time or the contract price set forth in the unilateral change order.

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

47 **(C) Authority of the Consultant and Construction Management.** The
48 State may engage consultants and construction managements to perform
49 duties in connection with the work. Unless otherwise specified in writing to
50 the Contractor, such retained consultants and construction managements
51 shall have no greater authority than an Inspector.”
52

53 **(II) Amend Subsection 105.02 - Submittals** by revising the first paragraph
54 from lines 52 to 61 to read as follows:
55

56 **“105.02 Submittals.** The contract contains the description of various items that
57 the Contractor must submit to the Engineer for review and acceptance. The
58 Contractor shall review all submittals for correctness, conformance with the
59 requirements of the contract documents and completeness before submitting them
60 to the Engineer. The submittal shall indicate the contract items and specifications
61 subsections for which the submittal is provided. The submittal shall be legible and
62 clearly indicate what portion of the submittal is being submitted for review. The
63 Contractor shall provide six copies of the required submissions at the earliest
64 possible date.”
65

66 **(III) Amend Subsection 105.08 (A) - Furnishing Drawings and Special**
67 **Provisions** to read as follows:
68

69 **“(A) Furnishing Drawings and Special Provisions.** The State will
70 furnish the Contractor an electronic set of the special provisions and plans.”
71 The Contractor shall have and maintain at least one set of plans and
72 specifications on the work site, at all times.”
73

74 **(IV) Amend Subsection 105.14(D) – No Designated Storage Area** from lines
75 421 to 432 to read as follows:
76

77 **“(D) No Designated Storage Area.** If no storage area is designated
78 within the contract documents, materials and equipment may be stored
79 anywhere within the State highway right-of-way, provided such storage and
80 access to and from such site, within the sole discretion of the Engineer,
81 does not create a public or traffic hazard or an impediment to the movement
82 of traffic.”
83

84 **(V) Amend 105.16(A) – Subcontract Requirements** by adding the following
85 paragraph after line 483:
86

87 The 'Specialty Items' of work for this project are as follows:
88

	Section No.	Description
89		
90		
91		
92	401	Contract Item No. 401.0100 under Section 401 – Hot Mix Asphalt Pavement
93		
94		
95	623	All Contract Items under Section 623 - Traffic Signal System
96		
97	629	All Contract Items under Section 629 - Pavement Markings
98		
99	630	All Contract Items under Section 630 - Traffic Control Guide Signs
100		
101		
102	631	All Contract Items under Section 631 - Traffic Control Regulatory, Warning, and Miscellaneous Signs
103		
104		
105	632	All Contract Items under Section 632 - Markers
106		
107	645	Contract Item No. 645.0100 under Section 645 – Work Zone Traffic Control”
108		
109		

110 **(VI)** Amend **Subsection 105.16(B) – Substituting Subcontractors** from line
 111 487 to line 494 to read:

112
 113 **“(B) Substituting Subcontractors.** Under HRS Chapter 103D-302, the
 114 Contractor is required to list the names of persons or firms to be engaged
 115 by the Contractor as a subcontractor or joint contractor in the performance
 116 of the contract. No subcontractor may be added or deleted, unless
 117 authorized by the Engineer. Substitutions will be allowed only if the
 118 subcontractor:

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 122
 123

END OF SECTION 105

1 Make the following amendment to said Section:
2

3 **SECTION 106 – MATERIAL RESTRICTIONS AND REQUIREMENTS**
4
5

6 **(I)** Amend **106.05(B) – Deviation** by revising the third sentence from line 106
7 to 108 to read as follows:
8

9 “Any deviations will be subject to Subsection 102.14 – Substitution of
10 Materials and Equipment Before Bid Opening.
11

12 **(II)** Amend **Section 106 – Material Restrictions and Requirements** by
13 adding the following after line 334
14

15 **106.14 Construction Materials.**
16

17 **(A)** Buy America requirements apply to the following construction
18 materials if permanently incorporated into the project unless otherwise
19 specified:
20

- 21 **(1)** Non-ferrous metals.
- 22 **(2)** Plastic and polymer-based products such as:
 - 23 **(a)** High Density Polyethylene
 - 24 **(b)** Polyvinylchloride.
 - 25 **(c)** Composite building materials.
 - 26 **(d)** Polymers used in fiber optic cables.
- 27 **(3)** Glass (including optic glass).
- 28 **(4)** Fiber optic cable (including drop cable).
- 29 **(5)** Optical fiber.
- 30 **(6)** Lumber.
- 31 **(7)** Engineered wood.
- 32 **(8)** Drywall.
- 33 **(9)** Manufactured products containing steel and iron material
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Where one or more of these construction materials have been combined by a manufacturer with other materials through a manufacturing process, Buy America requirements do not apply unless otherwise specified. Furnish construction materials to be incorporated into the work with certificates of compliance with each project delivery. Manufacturer's certificate of compliance must identify where the construction material was manufactured and attest specifically to Buy America compliance. All manufacturing processes for these materials must occur in the United States.

Non-ferrous metals, such as aluminum, copper, lead, nickel, tin, titanium, zinc, brass, and bronze, are subject to Buy America requirements if used as construction materials in various shapes, sizes, and gauges including channels, bars, pipe, couplers, fittings, bolts, nuts, and products made of 100 percent of the non-ferrous metal. If the non-ferrous metal is combined with other construction materials during a manufacturing process, the product is considered a manufactured product and not subject to Buy America requirements.

One hundred percent plastic or polymer materials are subject to Buy America requirements. This includes high-density polyethylene or polyvinyl chloride pipe and fittings. Plastics or polymers that are combined with other construction materials in a manufacturing process are considered a manufactured product and not subject to these requirements.

Glass construction materials subject to Buy America requirements are composed solely of glass. This includes glass beads incorporated into pavement striping and 100 percent Fiberglass material.

Fiber optic cable (including drop cable) and optical fiber are subject to Buy America requirements.

Lumber products including engineered lumber are subject to Buy America requirements.

Manufactured products containing steel or iron including pre-cast concrete products are subject to Buy America requirements.

END OF SECTION 106

1 **SECTION 107 - LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC**

2
3 Make the following amendments to said Section:

4
5 **(I)** Amend **Section 107.01 Insurance Requirements** from lines 5 to 81 to
6 read as follows:

7
8 **“(A) Obligation of Contractor.** Contractor shall not commence any
9 work until it obtains, at its own expense, all required insurance described
10 herein. Such insurance shall be provided by an insurance company
11 authorized by the laws of the State to issue such insurance in the State of
12 Hawaii. Coverage by a “Non-Admitted” carrier is permissible provided the
13 carrier has a Best’s Rating of “A-VII” or better. The Contractor shall
14 maintain and ensure all insurance policies are current for the full period of
15 the contract until final acceptance of the work by the State.

16
17 The Certificate of Insurance shall contain: a clause that it is agreed
18 that any insurance maintained by the State of Hawaii will apply in excess
19 of, and not contribute with, insurance provided by this policy; and shall be
20 accompanied by endorsement form CG2010 or equivalent naming the State
21 as an additional insured to the policy which status shall be maintained for
22 the full period of the contract until final acceptance of the work by State.

23
24 The Contractor shall obtain all required insurance as part of the
25 contract price. Where there is a requirement for the State of Hawaii and its
26 officers and employees to be named as additional insureds under any
27 Contractor’s insurance policy, before the State of Hawaii issues the Notice
28 to Proceed, the Contractor shall obtain and submit to the Engineer a
29 Certificate of Insurance and a written policy endorsement that confirms the
30 State of Hawaii and its officers and employees are additional insureds for
31 the specific State project number and project title under such insurance
32 policies. The written policy endorsement must be issued by the insurance
33 company insuring the Contractor for the specified policy type or by an agent
34 of such insurance company who is vested with the authority to issue a
35 written policy endorsement. The insurer’s agent shall also submit written
36 confirmation of such authority to bind the insurer. Any delays in the
37 issuance of the Notice to Proceed attributed to the failure to obtain the proof
38 of the State of Hawaii and its officers and employees’ additional insured
39 status shall be charged to the Contractor.

40
41 A mere Certificate of Insurance issued by a broker who represents
42 the Contractor (but not the Contractor’s insurer), or by any other party who
43 is not authorized to contractually name the State as an additional insured
44 under the Contractor’s insurance policy, is not sufficient to meet the
45 Contractor’s insurance obligations.

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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

93 applicable State of Hawaii Worker's Compensation Insurance laws
94 in effect on the date of the execution of this contract and as modified
95 during the duration of the contract.
96

97 **(2) Auto Liability.** The Contractor shall obtain Auto Liability
98 Insurance covering all owned, non-owned and hired autos with a
99 Combined single Limit of not less than \$1,000,000 per occurrence
100 for bodily injury and property damage with the State of Hawaii named
101 as additional insured. Refer to SPECIAL CONDITIONS for any
102 additional requirements.
103

104 **(3) General Liability.** The Contractor shall obtain General
105 Liability insurance with a limit of not less than \$2,000,000 per
106 occurrence and in the Aggregates for each of the following:
107

- 108 (a) Products - Completed/Operations Aggregate,
- 109
- 110 (b) Personal & Advertising Injury, and
- 111
- 112 (c) Bodily Injury & Property Damage
113

114 The General Liability insurance shall include the State as an
115 Additional Insured. The required limit of insurance may be provided
116 by a single policy or with a combination of primary and excess
117 policies. Refer to SPECIAL CONDITIONS for any additional
118 requirements.
119

120 **(4) Builders Risk For All Work.** The Contractor shall take out a
121 policy of builder's risk insurance for the full replacement value of the
122 project work; from a company licensed or otherwise authorized to do
123 business in the State of Hawaii; naming the State as an additional
124 insured under each policy; and covering all work, labor, and materials
125 furnished by such Contractor and all its subcontractors against loss
126 by fire, windstorm, tsunamis, earthquakes, lightning, explosion, other
127 perils covered by the standard Extended Coverage Endorsement,
128 vandalism, and malicious mischief. Refer to SPECIAL
129 CONDITIONS for any additional requirements."
130
131

132 **END OF SECTION 107**

1 Amend **Section 108 – PROSECUTION AND PROGRESS** to read as follows:
2

3 **“SECTION 108 – PROSECUTION AND PROGRESS**
4

5
6 **108.01 Notice to Proceed (NTP).** A Notice To Proceed will be issued to the
7 Contractor not more 30 calendar days after the contract certification date. The
8 Engineer may suspend the contract before issuing the Notice To Proceed, in which
9 case the Contractor’s remedies are exclusively those set forth in Subsection 108.10
10 – Suspension of Work.
11

12 The Contractor shall be allowed up to 60 calendar days after the Notice to
13 Proceed to begin physical work. The Start Work Date will be established when this
14 period ends or on the actual day that physical work begins, whichever is first.
15 Charging of Contract Time will begin on the Start Work Date. The Contractor shall
16 notify the Engineer, in writing, at least five working days before beginning physical
17 work.
18

19 In the event that the Contractor fails to start physical work within the time
20 specified, the Engineer may terminate the contract in accordance with Subsection
21 108.11 – Termination of Contract for Cause.
22

23 During the period between the Notice to Proceed and the Start Work Date
24 the Contractor should adjust work forces, equipment, schedules, and procure
25 materials and required permits, prior to beginning physical work.
26

27 Any physical work done prior to the Start Work Date will be considered
28 unauthorized work. If the Engineer does not direct that the unauthorized work be
29 removed, it shall be paid for after the Start Work Date and only if it is acceptable.
30

31 In the event that the Engineer establishes, in writing, a Start Work Date that
32 is beyond 60 calendar days from the Notice to Proceed date, the Contractor may
33 submit a claim in accordance with, Subsection 107.15 – Disputes and Claims for
34 increased labor and material costs which are directly attributable to the delay
35 beyond the first 60 calendar days after the Notice to Proceed date.
36

37 The Contractor shall notify the Engineer at least 24 hours before restarting
38 physical work after a suspension of work pursuant to Subsection 108.10 –
39 Suspension of Work.
40

41 Once physical work has begun, the Contractor shall work expeditiously and
42 pursue the work diligently to completion with the contract time. If a portion of the
43 work is to be done in stages, the Contractor shall leave the area safe and usable for
44 the user agency and the public at the end of each stage.
45

46 **108.02 Prosecution of Work.** Unless otherwise permitted by the Engineer, in
47 writing, the Contractor shall not commence with physical construction unless
48 sufficient materials and equipment are available for either continuous construction
49 or completion of a specified portion of the work.

50
51 **108.03 Preconstruction Submittals.** The awardee shall submit to the Engineer
52 for information and review the pre-construction submittals within 21 calendar days
53 from award. Until the items listed below are received and found acceptable by the
54 Engineer, the Contractor shall not start physical work unless otherwise authorized
55 to do so in writing and subject to such conditions set by the Engineer. Charging of
56 Contract Time will not be delayed, and additional contract time will not be granted
57 due to Contractor delay in submitting acceptable preconstruction submittals. No
58 progress payment will be made to the Contractor until the Engineer acknowledges,
59 in writing, receipt of the following preconstruction submittals acceptable to the
60 Engineer:

- 61
62 (1) List of the Superintendent and other Supervisory Personnel, and their
63 contact information.
- 64
65 (2) Name of person(s) with signature specimen(s) authorized to sign for
66 the Contractor.
- 67
68 (3) Work Schedule including hours of operation.
- 69
70 (4) Initial Progress Schedule (See Subsection 108.06 – Progress
71 Schedule).
- 72
73 (5) Water Pollution and Siltation Control Submittals, including Site-
74 Specific Best Management Practice Plan.
- 75
76 (6) Solid Waste Disposal form.
- 77
78 (7) Tax Rates.
- 79
80 (8) Insurance Rates.
- 81
82 (9) Certificate of Insurance, satisfactory to the Engineer, indicating that
83 the Contractor has in place all insurance coverage required by the contract
84 documents.
- 85
86 (10) Schedule of agreed prices.
- 87
88 (11) List of suppliers.
- 89
90 (12) Traffic Control Plan, if applicable.

91 **108.04 Character and Proficiency of Workers.** The Contractor shall at all times
92 provide adequate supervision and sufficient labor and equipment for prosecuting the
93 work to full completion in the manner and within the time required by the contract.
94 The superintendent and all other representatives of the Contractor shall act in a civil
95 and honest manner in all dealings with the Engineer, all other State officials and
96 representatives, and the public, in connection with the work.

97
98 All workers shall possess the proper license, certification, job classification,
99 skill, training, and experience necessary to properly perform the work assigned to
100 them.

101
102 The Engineer may direct the removal of any worker(s) who does not carry
103 out the assigned work in a proper and skillful manner or who is disrespectful,
104 intemperate, violent, or disorderly. The worker shall be removed forthwith by the
105 Contractor and will not work again without the written permission of the Engineer.

106
107 **108.05 Contract Time.**

108
109 **(A) Calculation of Contract Time.** When the contract time is on a
110 working day basis, the total contract time allowed for the performance of the
111 work will be the number of working days shown in the contract plus any
112 additional working days authorized in writing as provided hereinafter. The
113 count of elapsed working days to be charged against contract time, will begin
114 from the Start Work Date and will continue consecutively to the date of
115 Substantial Completion. When multiple shifts are used to perform the work,
116 the State will not consider the hours worked over the normal eight working
117 hours per day or night as an additional working day.

118
119 When the contract is on a calendar day basis, the total contract time
120 allowed for the performance of the work will be the number of days shown in
121 the contract plus any additional days authorized in writing as provided
122 hereinafter. The count of elapsed days to be charged against contract time
123 will begin from the Start Work Date and will continue consecutively to the
124 date of Substantial Completion. The Engineer will exclude days elapsing
125 between the orders of the Engineer to suspend work and resume work for
126 suspensions not the fault of the Contractor.

127
128 **(B) Modifications of Contract Time.** Whenever the Contractor believes
129 that an extension of contract time is justified, the Contractor shall serve
130 written notice on the Engineer not more than five working days after the
131 occurrence of the event that causes a delay or justifies a contract time
132 extension. Contract time may be adjusted for the following reasons or
133 events, but only if and to the extent the critical path has been affected:

134
135 **(1) Changes in the Work, Additional Work, and Delays Caused**
136 **by the State.** If the Contractor believes that an extension of time is

137 justified on account of any act or omission by the State, and is not
138 adequately provided for in a field order or change order, it must
139 request the additional time as provided above. At the request of the
140 Engineer, the Contractor must show how the critical path will be
141 affected and must also support the time extension request with
142 schedules, as well as statements from its subcontractors, suppliers, or
143 manufacturers, as necessary. Claims for compensation for any
144 altered or additional work will be determined pursuant to Subsection
145 104.02 – Changes.
146

147 Additional time to perform the extra work will be added to the
148 time allowed in the contract without regard to the date the change
149 directive was issued, even if the contract completion date has passed.
150 A change requiring time issued after contract time has expired will not
151 constitute an excusal or waiver of pre-existing Contractor delay.
152

153 **(2) Delay for Permits.** For delays in the routine application and
154 processing time required to obtain necessary permits, including
155 permits to be obtained from State agencies, the Engineer may grant
156 an extension provided that the permit takes longer than 30 days to
157 acquire and the delay is not caused by the Contractor, and provided
158 that as soon as the delay occurs, the Contractor notifies the Engineer
159 in writing that the permits are not available. Permits required by the
160 contract that take less than 30 days to acquire from the time which the
161 appropriate documents are granted shall be acquired between Notice
162 to Proceed and Start Work Date or accounted for in the contractor's
163 progress schedule. Time extensions will be the exclusive relief
164 granted on account of such delays.
165

166 **(3) Delays Beyond Contractor's Control.** For delays caused by
167 acts of God, a public enemy, fire, inclement weather days or adverse
168 conditions resulting therefrom, earthquakes, floods, epidemics,
169 quarantine restrictions, labor disputes impacting the Contractor or the
170 State, freight embargoes and other reasons beyond the Contractor's
171 control, the Contractor may be granted an extension of time provided
172 that:
173

174 **(a)** In the written notice of delay to the Engineer, the
175 Contractor describes possible effects on the completion date of
176 the contract. The description of delays shall:
177

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

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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.

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(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

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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.

356 **(2) For Contracts Which Have A Contract Amount More Than**
357 **\$2,000,000 Or Having A Contract Time Of More Than 100 Working**
358 **Days Or 140 Calendar Days.** For contracts which have a contract
359 amount more than \$2,000,000 or contract time of more than 100
360 working days or 140 calendar days, the Contractor shall submit a
361 Timed-Scaled Logic Diagram (TSLD) meeting the following
362 requirements and having these essential and distinctive elements:

363
364 **(a)** The information and requirements listed in Subsection
365 108.06(A)(1) – For Contracts \$2,000,000 or Less or For
366 Contract Time 100 Working Days or 140 Calendar Days or
367 Less.

368
369 **(b)** Additional reports and graphics available from the
370 software as requested by the Engineer.

371
372 **(c)** Sufficient detail to allow at least weekly monitoring of the
373 Contractor and subcontractor's operations.

374
375 **(d)** The time scaled schematic shall be on a calendar or
376 working days basis. What will be used shall be determined by
377 how the contract keeps track of time. It will be the same. Plot
378 the critical calendar dates anticipated.

379
380 **(e)** Breakdown of activity, such as forming, placing
381 reinforcing steel, concrete pouring and curing, and stripping in
382 concrete construction. Indicate location of work to be done in
383 such detail that it would be easily determined where work would
384 be occurring within approximately 200 feet.

385
386 **(f)** Latest start and finish dates for critical path activities.

387
388 **(g)** Identify responsible subcontractor, supplier, and others
389 for their respective activity.

390
391 **(h)** No individual activity shall have duration of more than 20
392 calendar days unless requested and approved by the Engineer.

393
394 **(i)** All activities shall have work breakdown structure codes
395 and activity codes. The activity codes shall have coding that
396 incorporates information for phase, location, who is responsible
397 for doing work and type of operation and activity description.

398
399 **(j)** Incorporate all physical access and availability
400 restraints.
401

402 **(B) Inspection and Testing.** All schedules shall provide reasonable time
403 and opportunity for the Engineer to inspect and test each work activity.
404

405 **(C) Engineer's Acceptance of Progress Schedule.** The submittal of,
406 and the Engineer's receipt of any progress schedule, shall not be deemed an
407 agreement to modify any terms or conditions of the contract. Any
408 modifications to the contract terms and conditions that appear in or may be
409 inferred from an acceptable schedule will not be valid or enforceable unless
410 and until the Engineer exercises discretion to issue an appropriate change
411 order. Nor shall any submittal or receipt imply the Engineer's approval of the
412 schedule's breakdown, its individual elements, any critical path that may be
413 shown, nor shall it obligate the State to make its personnel available outside
414 normal working hours or the working hours established by the Contract in
415 order to accommodate such schedule. The Contractor has the risk of all
416 elements (whether or not shown) of the schedule and its execution. No claim
417 for additional compensation, time, or both, shall be made by the Contractor
418 or recognized by the Engineer for delays during any period for which an
419 acceptable progress schedule or an updated progress schedule as required
420 by Subsection 108.06(E) – Contractor's Continuing Schedule Submittal
421 Requirements had not been submitted. Any acceptance or approval of the
422 schedule shall be for general format only and shall not be deemed an
423 agreement by the State that the construction means, methods, and resources
424 shown on the schedule will result in work that conforms to the contract
425 requirements or that the sequences or durations indicated are feasible.
426

427 **(D) Initial Progress Schedule.** The Contractor shall submit an initial
428 progress schedule. The initial progress schedule shall consist of the
429 following:
430

- 431 **(1)** Four sets of the TSLD schedule.
- 432
- 433 **(2)** All the software files and data to re-create the TSLD in a
434 computerized software format as specified by the Engineer.
435
- 436 **(3)** A listing of equipment that is anticipated to be used on the
437 project. Including the type, size, make, year of manufacture, and all
438 information necessary to identify the equipment in the Rental Rate
439 Blue Book for Construction Equipment.
440
- 441 **(4)** An anticipated manpower requirement graph plotting contract
442 time and total manpower requirement. This may be superimposed
443 over the payment graph.
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(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,

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

492
493 The Contractor shall submit with every update, in report form
494 acceptable to the Engineer, a list of changes to the progress schedule since
495 the previous schedule submittal. The Engineer may change the frequency
496 of the submittal requirements but may not require a submittal of the schedule
497 to be more than once a week. The Engineer may decrease the frequency of
498 the submittal of the bi-weekly schedule.

499
500 The Contractor shall submit updates of the anticipated work
501 completion graph, equipment listing, manpower requirement graph or
502 method statement when requested by the Engineer. The Contractor shall
503 submit such updates within 4 calendar days from the date of the request by
504 the Engineer.

505
506 The Engineer may withhold progress payment until the Contractor is
507 in compliance with all schedule update requirements

508
509 **(F) Float.** All float appearing on a schedule is a shared commodity. Float
510 does not belong to or exist for the exclusive use or benefit of either the State
511 or the Contractor. The State or the Contractor has the opportunity to use
512 available float until it is depleted. Float has no monetary value.

513
514 **(G) Scheduled Meetings.** The Contractor shall meet on a bi-weekly basis
515 with the Engineer to review the progress schedule. The Contractor shall have
516 someone attending the meeting that can answer all questions on the TSLD
517 and other schedule related submittals.

518
519 **(H) Accelerated Schedule; Early Completion.** If the Contractor submits
520 an accelerated schedule (shorter than the contract time), the Engineer's
521 review and acceptance of an accelerated schedule does not constitute an
522 agreement or obligation by the State to modify the contract time or completion
523 date. The Contractor is solely responsible for and shall accept all risks and
524 any delays, other than those that can be directly and solely attributable to the
525 State, that may occur during the work, until the contract completion date. The
526 contract time or completion date is established for the benefit of the State
527 and cannot be changed without an appropriate change order or Substantial
528 Completion granted by the State. The State may accept the work before the
529 completion date is established, but is not obligated to do so.

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

537
538 **(I) Contractor Responsibilities.** The Contractor shall promptly respond
539 to any inquiries from the Engineer regarding any schedule submission. The
540 Contractor shall adjust the schedule to address directives from the Engineer
541 and shall resubmit the TSLD package to the Engineer until the Engineer finds
542 it acceptable.
543

544 The Contractor shall perform the work in accordance with the
545 submitted TSLD. The Engineer may require the Contractor to provide
546 additional work forces and equipment to bring the progress of the work into
547 conformance with the TSLD at no increase in contract price or contract time
548 whenever the Engineer determines that the progress of the work does not
549 insure completion within the specified contract time.
550

551 **108.07 Weekly Meeting.** In addition to the bi-weekly schedule meetings, the
552 Contractor shall be available to meet once a week with the Engineer at the time and
553 place as determined by the Engineer to discuss the work and its progress including
554 but not limited to, the progress of the project, potential problems, coordination of
555 work, submittals, erosion control reports, etc. The Contractor's personnel attending
556 shall have the authority to make decisions and answer questions.
557

558 The Contractor shall bring to weekly meetings a detailed work schedule
559 showing the next three weeks' work. Number of copies of the detailed work
560 schedule to be submitted will be determined by the Engineer. The three-week
561 schedule is in addition to the TSLD and shall in no way be considered as a substitute
562 for the TSLD or vice versa. The three-week schedule shall show:
563

564 **(a)** All construction events, traffic control and BMP related activities in
565 such detail that the Engineer will be able to determine at what location and
566 type of work will be done for any day for the next three weeks. This is for the
567 State to use to plan its manpower requirements for that time period.
568

569 **(b)** The duration of all events and delays.
570

571 **(c)** The critical path clearly marked in red or marked in a manner that
572 makes it clearly distinguishable from other paths and is acceptable to the
573 Engineer.
574

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

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(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 \$ 3,000.00 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.

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

627
628 **108.09 Rental Fees for Unauthorized Lane Closure or Occupancy.** In
629 addition to all other remedies available to the State for Contractor's breach of the
630 terms of the contract, the Engineer will assess the rental fees in the amount of
631 \$1,500 for every one-to fifteen-minute increment for each roadway lane closed to
632 public use or occupied beyond the time periods authorized in the contract or by the
633 Engineer. The maximum amount assessed per day shall be \$15,000. The State
634 may, at its discretion, deduct the amount from monies due or that may become due
635 under the contract. The rental fee may be waived in whole or part if the Engineer
636 determines that the unauthorized period of lane closure or occupancy was due to
637 factors beyond the control of the Contractor. Equipment breakdown is not a cause
638 to waive liquidated damages.

639
640 **108.10 Suspension of Work.**

641
642 (A) **Suspension of Work.** The Engineer may, by written order, suspend
643 the performance of the work, either in whole or in part, for such periods as
644 the Engineer may deem necessary, for any cause, including but not limited
645 to:

646
647 (1) Weather or soil conditions considered unsuitable for
648 prosecution of the work.

649
650 (2) Whenever a redesign that may affect the work is deemed
651 necessary by the Engineer.

652
653 (3) Unacceptable noise or dust arising from the construction even
654 if it does not violate any law or regulation.

655
656 (4) Failure on the part of the Contractor to:

657
658 (a) Correct conditions unsafe for the general public or for
659 the workers.

660
661 (b) Carry out orders given by the Engineer.

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

664
665 (d) Provide adequate supervision on the jobsite.
666 (5) The convenience of the State.
667

668 (B) **Partial and Total Suspension.** Suspension of work on some but not
669 all items of work shall be considered a “partial suspension”. Suspension of
670 work on all items shall be considered “total suspension”. The period of
671 suspension shall be computed from the date set out in the written order for
672 work to cease until the date of the order for work to resume.
673

674 (C) **Reimbursement to Contractor.** In the event that the Contractor is
675 ordered by the Engineer in writing as provided herein to suspend all work
676 under the contract for the reasons specified in Subsections 108.10(A)(2),
677 108.10(A)(3), or 108.10(A)(5) of the “Suspension of Work” paragraph, the
678 Contractor may be reimbursed for actual direct costs incurred on work at the
679 jobsite, as authorized in writing by the Engineer, including costs expended
680 for the protection of the work. An allowance of 5 percent for indirect
681 categories of delay costs will be paid on any reimbursed direct costs,
682 including extended branch and home-office overhead and delay impact
683 costs. No allowance will be made for anticipated profits. Payment for
684 equipment which is ordered to standby during such suspension of work shall
685 be made as described in Subsection 109.06(H) - Idle and Standby
686 Equipment.
687

688 (D) **Cost Adjustment.** If the performance of all or part of the work is
689 suspended for reasons beyond the control of the Contractor except an
690 adjustment shall be made for any increase in cost of performance of this
691 contract (excluding profit) necessarily caused by such suspension, and the
692 contract modified in writing accordingly.
693

694 However, no adjustment to the contract price shall be made for any
695 suspension, delay, or interruption:
696

697 (1) For weather related conditions.
698

699 (2) To the extent that performance would have been so
700 suspended, delayed, or interrupted by any other cause, including the
701 fault or negligence of the Contractor.
702

703 (3) Or, for which an adjustment is provided for or excluded under
704 any other provision of this Contract.
705

706 **(E) Claims for Adjustment.** Any adjustment in contract price made shall
707 be determined in accordance with Subsections 104.02 – Changes and
708 104.06 – Methods of Price Adjustment.
709

710 Any claims for such compensation shall be filed in writing with the
711 Engineer within 30 days after the date of the order to resume work or the
712 claim will not be considered. The claim shall conform to the requirements of
713 Subsection 107.15(D) – Making of a Claim. The Engineer will take the claim
714 under consideration, may make such investigations as are deemed
715 necessary and will be the sole judge as to the equitability of the claim. The
716 Engineer’s decision will be final.
717

718 **(F) No Adjustment.** No provision of this clause shall entitle the
719 Contractor to any adjustments for delays due to failure of its surety, the
720 cancellation or expiration of any insurance coverage required by the contract
721 documents, for suspensions made at the request of the Contractor, for any
722 delay required under the contract, for suspensions, either partial or whole,
723 made by the Engineer under Subsection 108.10(A)(4) of the “Suspension of
724 work” paragraph.
725

726 **108.11 Termination of Contract for Cause.**
727

728 **(A) Default.** If the Contractor refuses or fails to perform the work, or any
729 separable part thereof, with such diligence as will assure its completion within
730 the time specified in this contract, or any extension thereof, or commits any
731 other material breach of this contract, and further fails within seven days after
732 receipt of written notice from the Engineer to commence and continue
733 correction of the refusal or failure with diligence and promptness, the
734 Engineer may, by written notice to the Contractor, declare the Contractor in
735 breach and terminate the Contractor’s right to proceed with the work or the
736 part of the work as to which there has been delay or other breach of contract.
737 In such event, the State may take over the work, perform the same to
738 completion, by contract or otherwise, and may take possession of, and utilize
739 in completing the work, the materials, appliances, and plants as may be on
740 the site of the work and necessary therefore. Whether or not the Contractor’s
741 right to proceed with the work is terminated, the Contractor and the
742 Contractor’s sureties shall be liable for any damage to the State resulting
743 from the Contractor’s refusal or failure to complete the work within the
744 specified time.
745

746 **(B) Additional Rights and Remedies.** The rights and remedies of the
747 State provided in this contract are in addition to any other rights and remedies
748 provided by law.
749

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

752 from any monies due or which would or might have become due to the
753 Contractor had it been allowed to complete the work under the contract. If
754 such expense exceeds the sum which would have been payable under the
755 contract, then the Contractor and the surety shall be liable and shall pay the
756 State the amount of the excess.
757

758 In case of termination, the Engineer will limit any payment to the
759 Contractor to the part of the contract satisfactorily completed at the time of
760 termination. Payment will not be made until the work has satisfactorily been
761 completed and all required documents, including the tax clearance required
762 by Subsection 109.11 – Final Payment are submitted by the Contractor.
763 Termination shall not relieve the Contractor or Surety from liability for
764 liquidated damages.
765

766 **(D) Erroneous Termination for Cause.** If, after notice of termination of
767 the Contractor's right to proceed under this section, it is determined for any
768 reason that good cause did not exist to allow the State to terminate as
769 provided herein, the rights and obligations of the parties shall be the same
770 as, and the relief afforded the Contractor shall be limited to, the provisions
771 contained in Subsection 108.12 – Termination for Convenience.
772

773 **108.12 Termination For Convenience.**

774

775 **(A) Terminations.** The Director may, when the interests of the State so
776 require, terminate this contract in whole or in part, for the convenience of the
777 State. The Director will give written notice of the termination to the Contractor
778 specifying the part of the contract terminated and when termination becomes
779 effective.
780

781 **(B) Contractor's Obligations.** The Contractor shall incur no further
782 obligations in connection with the terminated work and on the date set in the
783 notice of termination the Contractor shall stop work to the extent specified.
784 The Contractor shall also terminate outstanding orders and subcontracts as
785 they relate to the terminated work. The Contractor shall settle the liabilities
786 and claims arising out of the termination of subcontracts and orders
787 connected with the terminated work subject to the State's approval. The
788 Engineer may direct the Contractor to assign the Contractor's right, title, and
789 interest under terminated orders or subcontracts to the State. The Contractor
790 must still complete the work not terminated by the notice of termination and
791 may incur obligations as necessary to do so.
792

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

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- (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

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

844
845 **(b)** Subcontractors shall be paid a markup of 10 percent on
846 their direct job costs incurred to the date of termination. No
847 anticipated profit or consequential damage will be due or paid
848 to any subcontractor. These costs must not include payments
849 made to the Contractor for subcontract work during the contract
850 period.

851
852 **(c)** The total sum to be paid the Contractor shall not exceed
853 the total contract price reduced by the amount of any sales of
854 construction supplies, and construction materials.

855
856 **(4)** Cost claimed, agreed to, or established by the State shall be in
857 accordance with HAR Chapter 3-123.

858
859 **108.13 Pre-Final and Final Inspections.**

860
861 **(A) Inspection Requirements.** Before the Engineer undertakes a final
862 inspection of any work, a pre-final inspection must first be conducted. The
863 Contractor shall notify the Engineer that the work has reached substantial
864 completion and is ready for pre-final inspection.

865
866 **(B) Pre-Final Inspection.** Before notifying the Engineer that the work has
867 reached substantial completion, the Contractor shall inspect the project and
868 test all installed items with all of its subcontractors as appropriate. The
869 Contractor shall also submit the following documents as applicable to the
870 work:

871
872 **(1)** All written guarantees required by the contract.

873
874 **(2)** Two accepted final field-posted drawings as specified in
875 Section 648 – Field-Posted Drawings;

876
877 **(3)** Complete weekly certified payroll records for the Contractor
878 and Subcontractors.

879
880 **(4)** Certificate of Plumbing and Electrical Inspection.

881
882 **(5)** Certificate of building occupancy as required.

883
884 **(6)** Certificate of Soil and Wood Treatments.

885
886 **(7)** Certificate of Water System Chlorination.

887

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

890
891 (9) Maintenance Service Contract and two copies of a list of all
892 equipment installed.

893
894 (10) Current Tax clearance. The contractor will be required to
895 submit an additional tax clearance certificate when the final payment
896 is made.

897
898 (11) And any other final items and submittals required by the
899 contract documents.

900
901 (C) **Procedure.** When in compliance with the above requirements, the
902 Contractor shall notify the Engineer in writing that the project has reached
903 substantial completion and is ready for pre-final inspection.

904
905 The Engineer will then make a preliminary determination as to whether
906 or not the project is substantially complete and ready for pre-final inspection.
907 The Engineer may, in writing, postpone until after the pre-final inspection the
908 Contractor's submittal of any of the items listed in Subsection 108.13(B) –
909 Pre-Final Inspection, herein, if in the Engineer's discretion it is in the interest
910 of the State to do so.

911
912 If, in the opinion of the Engineer, the project is not substantially
913 complete, the Engineer will provide the Contractor a punchlist of specific
914 deficiencies in writing which must be corrected or finished before the work
915 will be ready for a pre-final inspection. The Engineer may add to or otherwise
916 modify this punchlist from time to time. The Contractor shall take immediate
917 action to correct the deficiencies and must repeat all steps described above
918 including written notification that the work is ready for pre-final inspection.

919
920 After the Engineer is satisfied that the project appears substantially
921 complete a final inspection shall be scheduled within ten working days after
922 receipt of the Contractor's latest letter of notification that the project is ready
923 for final inspection.

924
925 If, as a result of the pre-final inspection, the Engineer determines the
926 work is not substantially complete, the Engineer will inform the Contractor in
927 writing as to specific deficiencies which must be corrected before the work
928 will be ready for another pre-final inspection. If the Engineer finds the work
929 is substantially complete but finds deficiencies that must be corrected before
930 the work is ready for final inspection, the Engineer will prepare in writing and
931 deliver to the Contractor a punchlist describing such deficiencies.

932 At any time before final acceptance, the Engineer may revoke the
933 determination of substantial completion if the Engineer finds that it was not
934 warranted and will notify the Contractor in writing the reasons therefore
935 together with a description of the deficiencies negating the declaration.
936

937 When the date of substantial completion has been determined by the
938 State, liquidated damages for the failure to complete the punchlist, if due to
939 the State will be assessed in pursuant to Subsection 108.08(B) - Liquidated
940 Damages for Failure to Complete the Punchlist.
941

942 **(D) Punchlist; Clean Up and Final Inspection.** Upon receiving a
943 punchlist after pre-final inspection, the Contractor shall promptly devote all
944 required time, labor, equipment, materials and incidentals to correct and
945 remedy all punchlist deficiencies. The Engineer may add to or otherwise
946 modify this punchlist until substantial completion of the project.
947

948 Before final inspection of the work, the Contractor shall clean all
949 ground occupied by the Contractor in connection with the work of all rubbish,
950 excess materials temporary structures and equipment, shall remove all
951 graffiti and defacement of the work and all parts of the work and the worksite
952 must be left in a neat and presentable condition to the satisfaction of the
953 Engineer.
954

955 Final inspection will occur within ten working days after the Contractor
956 notifies the Engineer in writing that all punchlist deficiencies remaining after
957 the pre-final inspection have been completed and the Engineer concurs. If
958 the Engineer determines that deficiencies still remain at the final inspection,
959 the work will not be accepted and the Engineer will notify the Contractor, in
960 writing, of the deficiencies which shall be corrected and the steps above
961 repeated.
962

963 If the Contractor fails to correct the deficiencies and complete the work
964 by the established or agreed date, the State may correct the deficiencies by
965 whatever method it deems appropriate and deduct the cost from any
966 payments due the Contractor.
967

968 **108.14 Substantial Completion and Final Acceptance.**

969
970 **(A) Substantial Completion.** When the Engineer finds that the
971 Contractor has satisfactorily completed all work for the project in compliance
972 with the contract, with the exception of the planting period and the plant
973 establishment period, the Engineer will notify the Contractor, in writing, of the
974 project's substantial completion, effective as of the date of the final
975 inspection. The substantial completion date shall determine end of contract
976 time and relieve contractor of any additional accumulation of liquidated
977 damages for failure to complete the punchlist.

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(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.

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(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:

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- (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

1 **SECTION 109 – MEASUREMENT AND PAYMENT**

2
3 Make the following amendment to said Section:

4
5 **(I)** Amend **Subsection 109.05 Allowances for Overhead and Profit** by
6 revising lines 101 to 110 to read as follows:

7
8 **“(1)** 20 percent of the direct cost for any work performed by the
9 Contractor’s own labor force.

10
11 **(2)** 20 percent of the direct cost for any work performed by each
12 subcontractor’s own labor force.

13
14 **(3)** For the Contractor or any subcontractor for work performed
15 by their respective subcontractor or tier subcontractor, 10 percent of
16 the amount due to the performing subcontractor or tier
17 subcontractor.”

18
19 **(II)** Amend **Subsection 109.08(B) Payment for Material On Hand** by revising
20 lines 421 to 423 to read as follows:

21
22 **“(2)** The materials shall be stored and handled in accordance with
23 Subsection 105.14 – Storage and Handling of Materials and
24 Equipment.”

25
26
27 **(III)** Amend **Subsection 109.11 Final Payment** by revising lines 568 to 576 to
28 read as follows:

29
30 **“(3)** A current “Certificate of Vendor Compliance” issued by the
31 Hawaii Compliance Express (HCE). The Certificate of Vendor
32 Compliance is used to certify the Contractor’s compliance with

33
34 **(a)** Section 103D-328, HRS (for all contracts \$25,000 or
35 more) which requires a current tax clearance certificate issued
36 by the Hawaii State Department of Taxation and the Internal
37 Revenue Service;

38
39 **(b)** Chapters 383, 386, 392, and 393, HRS; and

40
41 **(c)** Subsection 103D-310(c), HRS. The State reserves the
42 right to verify that compliance is current prior to the issuance
43 of final payment. Contractors are advised that non-
44 compliance status will result in final payment being withheld
45 until compliance is attained.
46

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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

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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 measure clearing and grubbing per square yard in accordance with the contract documents.

The Engineer will measure ISA Certified Arborist fees on a force account basis according to Subsection 109.06 – Force Account Provisions and Compensation.”

(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 per square yard. Payment will be full compensation for the work prescribed in this section and the contract documents.

The Engineer will pay for ISA Certified Arborist fees on a force account basis according to Subsection 109.06 – Force Account Provisions and Compensation. An estimate amount for the force account is allocated in the proposal schedule under ISA Certified Arborist. 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 Engineer will pay for the following pay item when included in the proposal schedule:

Pay Item	Pay Unit
Clearing and Grubbing	Square Yard
ISA Certified Arborist	Force Account”

END OF SECTION 201

1 **SECTION 202 – REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

2
3 Make the following amendments to said Section:

4
5 **(I)** Amend **202.04 – Measurement** by revising lines 119 to 120 to read as
6 follows:

7
8 **“202.04 Measurement.** If the proposal provides a contract item for the removal
9 of structure and obstructions, the Engineer will measure the removal of structures
10 and obstructions by the square yard, each, or linear foot.

11
12 The Engineer will not measure the removal of structures and obstructions
13 when contracted on a lump sum basis.”

14
15 **(II)** Amend **202.05 – Payment** by revising lines 122 to 131 to read as follows:

16
17 **“202.05 Payment.** If the proposal does not show a contract item for the removal
18 of structures and obstructions, the Engineer will not pay for the removal of
19 structures and obstructions separately. The Contractor shall consider them
20 incidental to the various contract items.

21
22 The Engineer will pay for specific items stipulated for removal and disposal at the
23 contract price bid per unit specified in the proposal. The price shall be full
24 compensation for removal and disposal of the items, excavation, backfill, and
25 salvage of materials removed. Salvaging of materials removed includes their
26 custody, preservation, storage within the right-of-way, delivery to State Dept. of
27 Transportation baseyard, and delivery to City & County of Honolulu Dept. of
28 Transportation Services baseyard. Also, the price shall be full compensation for
29 equipment, tools, labor, materials, and incidentals necessary to complete the work.

30
31 The Engineer will pay for the following pay item when included in the proposal
32 schedule.

33

Pay Item	Pay Unit
Removal of _____	Lump Sum
Removal of _____	Each
Removal of _____	Linear Foot
Removal of _____	Square Yard”

34
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45 **END OF SECTION 202**

1 **SECTION 203 – EXCAVATION AND EMBANKMENT**

2
3 Make the following amendments to said Section:

4
5 **(I)** Amend **203.03(C)(2)(a) – Maximum Dry Unit Weight** from line 245 to line
6 255 to read as follows:

7
8 **“(a) Maximum Dry Unit Weight.** Test for maximum dry
9 unit weight according to AASHTO T 180, and apply the
10 correction for fraction larger than 3/4 inch. Use Hawaii Test
11 Method HDOT TM 5 for sample preparation of sensitive soils
12 when so designated by the Engineer.”

13
14 **(II)** Amend **203.04 – Measurement** by revising lines 345 to 366 to read as
15 follows:

16
17 **“203.04 Measurement.**

18
19 **(A)** The Engineer will measure roadway excavation per cubic yard. The
20 Engineer will compute quantities of roadway excavation by average end
21 area method and centerline distances. Curvature correction will not be
22 applied to quantities within roadway prism, as indicated in the contract
23 documents. In computing excavation quantities from outside the roadway
24 prism, where roadway centerline is used as a base, curvature correction will
25 be applied when centerline radius is 1,000 feet or less.

26
27 When roadway excavation quantities by average end area method
28 cannot be computed due to the nature of a particular operation or changed
29 conditions, the Engineer will determine and use computation method that
30 will produce an accurate quantity estimate.

31
32 **(B)** The Engineer will measure borrow excavated material per cubic
33 yard. The Engineer will compute quantities of borrow material incorporated
34 into the work on a volume basis, using average end area method in place
35 at work site.

36
37 **(C)** The Engineer will measure imported borrow per cubic yard in
38 accordance with the contract documents. The Engineer will compute
39 quantities of imported borrow incorporated into the work on a volume basis,
40 using average end area method in place at work site.”

41
42 **(III)** Amend **203.05 – Payment** by revising lines 368 to 457 to read as follows:

43
44 **“203.05 Payment.** The Engineer will pay for the accepted pay items listed below
45 at the contract price per pay unit, as shown in the proposal schedule. Payment

46 will be full compensation for the work prescribed in this section and the contract
47 documents.

48
49 The Engineer will pay for each of the following pay items when included in
50 the proposal schedule:

51

52	Pay Item	Pay Unit
53		
54	(A) Roadway Excavation	Cubic Yard

55
56 The Engineer will pay for:

- 57
- 58 (1) 15 percent of the contract bid price upon completion of
59 obliterating old roadways and hauling.
 - 60
 - 61 (2) 30 percent of the contract bid price upon completion of
62 preparing subgrade.
 - 63
 - 64 (3) 40 percent of the contract bid price upon completion of placing
65 selected material in final position, rounding of slopes, and using water
66 for compaction.
 - 67
 - 68 (4) 15 percent of the contract bid price upon completion of
69 disposing of surplus excavation material.
 - 70

71 The Engineer will pay for accepted quantities of subexcavation, as roadway
72 excavation at the contract unit price per cubic yard, when ordered by the Engineer,
73 for work prescribed in Subsection 203.03(A)(4) – Subexcavation. Payment will be
74 full compensation for the work prescribed therein and in the contract documents.

75
76 The Engineer will pay for accepted quantities of unlined gutter excavation
77 as roadway excavation at the contract unit price per cubic yard, when gutter is
78 located as follows: within median area of a divided highway; and between roadbed
79 shoulder and adjacent cut slope. Payment will be full compensation for removing
80 and disposing of excavated material; backfilling and compacting; and for the work
81 prescribed in the contract documents.

82
83 The Engineer will not pay for stockpiling selected material, placing selected
84 material in final position, or placing selected material in windrows along tops of
85 roadway slopes for erosion control work, separately and will consider the cost as
86 included in the unit prices for the various excavation contract pay items. The cost
87 is for work prescribed in this section and the contract documents.

88
89 The Engineer will not pay for overhaul separately and will consider the cost
90 as included in the unit prices for the various excavation contract pay items. The
91 cost is for work prescribed in this section and the contract documents.

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The Engineer will not pay for embankment separately and will consider the cost as included in the unit price for roadway excavation. The cost is for work prescribed in this section and the contract documents.”

END OF SECTION 203

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

3
4
5 **“SECTION 209 - TEMPORARY WATER POLLUTION, DUST, AND EROSION**
6 **CONTROL**

7
8
9 **209.01 Description.** This section describes the following:

10
11 **(A)** Including detailed plans, diagrams, and written Site-Specific Best
12 Management Practices (BMP); constructing, maintaining, and repairing
13 temporary water pollution, dust, and erosion control measures at the project
14 site, including local material sources, work areas and haul roads; removing
15 and disposing hazardous wastes; control of fugitive dust (defined as
16 uncontrolled emission of solid airborne particulate matter from any source
17 other than combustion); and complying with applicable State and Federal
18 permit conditions.

19
20 **(B)** Work associated with construction stormwater, dewatering, and
21 hydrotesting activities and complying with conditions of the National Pollutant
22 Discharge Elimination System (NPDES) permit(s) authorizing discharges
23 associated with construction stormwater, dewatering, and hydrotesting
24 activities.

25
26 **(C)** Potential pollutant identification and mitigation measures are listed in
27 Appendix A for use in the development of the Contractor’s Site-Specific BMP.

28
29 Requirements of this section also apply to construction support
30 activities including concrete or asphalt batch plants, rock crushing plants,
31 equipment staging yards/areas, material storage areas, excavated material
32 disposal areas, and borrow areas located outside the State Right-of-Way.
33 For areas serving multiple construction projects, or operating beyond the
34 completion of the construction project in which it supports, the Contractor
35 shall be responsible for securing the necessary permits, clearances, and
36 documents, and following the conditions of the permits and clearances, at no
37 cost to the State.

38
39 **209.02 Materials.** Comply with applicable materials described in Chapters 2 and
40 3 of the current HDOT “Construction Best Management Practices Field Manual”. In
41 addition, the materials shall comply with the following:

42
43 **(A) Grass.** Grass shall be a quick growing species such as rye grass,
44 Italian rye grass, or cereal grasses. Grass shall be suitable to the area and
45 provide a temporary cover that will not compete later with permanent cover.
46 Alternative grasses are allowable if acceptable to the Engineer.

47 **(B) Fertilizer and Soil Conditioners.** Fertilizer and soil conditioners shall
48 be a standard commercial grade acceptable to the Engineer. Fertilizer shall
49 conform to Subsection 619.02(H)(1) - Commercial Fertilizer.
50

51 **(C) Hydro-mulching.** Hydro-mulching used as a temporary vegetative
52 stabilization measure shall consist of materials in Subsections 209.02(A) -
53 Grass, and 209.02(B) – Fertilizer and Soil Conditioners. Mulches shall be
54 recycled materials including bagasse, hay, straw, wood cellulose bark, wood
55 chips, or other material acceptable to the Engineer. Mulches shall be clean
56 and free of noxious weeds and deleterious materials. Potable water shall
57 meet the requirements of Subsection 712.01 - Water. Submit alternate
58 sources of irrigation water for the Engineer’s acceptance if deviating from
59 712.01 - Water. Installation and other requirements shall be in accordance
60 with portions of Section 641- Hydro-Mulch Seeding including 641.02(D) - Soil
61 and Mulch Tackifier, 641.03(A) – Seeding, and 641.03(B) - Planting Period.
62 Install non-vegetative controls including mulch or rolled erosion control
63 products while the vegetation is being established. Water and fertilize grass.
64 Apply fertilizer as recommended by the manufacturer. Replace grass the
65 Engineer considers unsuitable or sick. Remove and dispose of trash and
66 debris. Remove invasive species. Mow as needed to prevent site or signage
67 obstructions, fire hazard, or nuisance to the public. Do not remove down
68 stream sediment control measures until the vegetation is uniformly
69 established, including no large bare areas, and provides 70 percent of the
70 density of pre-disturbance vegetation. Temporary vegetative stabilization
71 shall not be used longer than one year.
72

73 **(D) Silt Fences.** Comply with ASTM D6462, Standard Practice for Silt
74 Fence Installation.
75

76 Alternative materials or methods to control, prevent, remove and dispose
77 pollution are allowable if acceptable to the Engineer.
78

79 **209.03 Construction.**
80

81 **(A) Preconstruction Requirements.**
82

83 **(1) Water Pollution, Dust, and Erosion Control Meeting.**
84 Schedule a water pollution, dust, and erosion control meeting with the
85 Engineer after Site-Specific BMP is accepted in writing by the
86 Engineer. Meeting shall be scheduled a minimum of 7 calendar days
87 prior to the Start Work Date. Discuss sequence of work, plans and
88 proposals for water pollution, dust, and erosion control.
89

90 **(2) Water Pollution, Dust, and Erosion Control Submittals.**

91 Submit a Site-Specific BMP Plan within 21 calendar days of date of
92 award. Submission of complete and acceptable Site-Specific BMP
93 Plan is the sole responsibility of the Contractor and additional contract
94 time will not be issued for delays due to incompleteness. Include the
95 following:

96
97 **(a)** Written description of activities to minimize water
98 pollution and soil erosion into State waters, drainage or sewer
99 systems. BMP shall include the following:

- 100
101 **1.** An identification of potential pollutants and their
102 sources.
- 103
104 **2.** A list of all materials and heavy equipment to be
105 used during construction.
- 106
107 **3.** Descriptions of the methods and devices used to
108 minimize the discharge of pollutants into State waters,
109 drainage or sewer systems.
- 110
111 **4.** Details of the procedures used for the
112 maintenance and subsequent removal of any erosion or
113 siltation control devices.
- 114
115 **5.** Methods of removing and disposing hazardous
116 wastes encountered or generated during construction.
- 117
118 **6.** Methods of removing and disposing concrete and
119 asphalt pavement cutting slurry, concrete curing water,
120 and hydrodemolition water.
- 121
122 **7.** Spill Control and Prevention and Emergency Spill
123 Response Plan.
- 124
125 **8.** Fugitive dust control, including dust from grinding,
126 sweeping, or brooming off operations or combination
127 thereof.
- 128
129 **9.** Methods of storing and handling of oils, paints
130 and other products used for the project.
- 131
132 **10.** Material storage and handling areas, and other
133 staging areas.
- 134
135 **11.** Concrete truck washouts.

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- 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.

181 (h) Site-Specific BMP Review Checklist. The checklist may
182 be downloaded from HDOT’s Stormwater Management
183 website at <http://stormwaterhawaii.com>.
184

185 Date and sign Site-Specific BMP Plan. Keep accepted
186 copy on site or at an accessible location so that it can be made
187 available at the time of an on-site inspection or upon request by
188 the Engineer, HDOT Third-Party Inspector, and/or DOH/EPA
189 Representative. Amendments to the Site-Specific BMP Plan
190 shall be included with original Site-Specific BMP Plan. Modify
191 SWPPP if necessary to conform to revisions. Include date of
192 installation and removal of Site-Specific BMP measures.
193 Obtain written acceptance by the Engineer before
194 implementing revised Site-Specific BMPs in the field.
195

196 Follow the guidelines in the current HDOT “Construction
197 Best Management Practices Field Manual”, in developing,
198 installing, and maintaining Site-Specific BMPs for all projects.
199 For any conflicting requirements between the Manual and
200 applicable bid documents, the applicable bid documents will
201 govern. Should a requirement not be clearly described within
202 the applicable bid documents, notify the Engineer immediately
203 for interpretation. For the purposes of clarification “applicable
204 bid documents” include the construction plans, standard
205 specifications, special provisions, Permits, and the SWPPP
206 when applicable.
207

208 Follow Honolulu’s City and County “Rules for Soil
209 Erosion Standards and Guidelines” for all projects on Oahu.
210 Use respective Soil Erosion Guidelines for Maui, Kauai and
211 Hawaii projects.
212

213 **(B) Construction Requirements.** Do not begin work until submittals
214 detailed in Subsection 209.03(A)(2) - Water Pollution, Dust, and Erosion
215 Control Submittals are completed and accepted in writing by the Engineer.
216

217 Install, maintain, monitor, repair and replace site-specific BMP
218 measures, such as for water pollution, dust and erosion control; installation,
219 monitoring, and operation of hydrotesting activities; removal and disposal of
220 hazardous waste indicated on plans, concrete cutting slurry, concrete curing
221 water; or hydrodemolition water. Site-Specific BMP measures shall be in
222 place, functional and accepted by HDOT personnel prior to initiating any
223 ground disturbing activities.
224

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

235
236 Address all comments received from the Engineer.

237
238 Modify and resubmit plans and construction schedules to correct
239 conditions that develop during construction which were unforeseen during
240 the design and pre-construction stages.

241
242 Coordinate temporary control provisions with permanent control
243 features throughout the construction and post-construction period.

244
245 Limit maximum surface area of earth material exposed at any time to
246 300,000 square feet. Do not expose or disturb surface area of earth material
247 (including clearing and grubbing) until BMP measures are installed and
248 accepted in writing by the Engineer. Protect temporarily or permanently
249 disturbed soil surface from rainfall impact, runoff and wind before end of the
250 work day.

251
252 Immediately initiate stabilizing exposed soil areas upon completion of
253 earth disturbing activities for areas permanently or temporarily ceased on any
254 portion of the site. Earth-disturbing activities have permanently ceased when
255 clearing and excavation within any area of the construction site that will not
256 include permanent structures has been completed. Earth-disturbing
257 activities have temporarily ceased when clearing, grading, and excavation
258 within any area of the site that will not include permanent structures will not
259 resume for a period of 14 or more calendar days, but such activities will
260 resume in the future. The term "immediately" is used in this section to define
261 the deadline for initiating stabilization measures. "Immediately" means as
262 soon as practicable, but no later than the end of the next work day, following
263 the day when the earth-disturbing activities have temporarily or permanently
264 ceased.

265
266 For projects with an NPDES Permit for Construction activities:
267

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

272
273 (2) For construction areas discharging into nutrient or sediment
274 impaired waters, complete initial stabilization within 7 calendar days
275 after the temporary or permanent cessation of earth-disturbing
276 activities.

277
278 For projects without an NPDES Permit for Construction activities,
279 complete initial stabilization within 14 calendar days after the temporary or
280 permanent cessation of earth-disturbing activities.

281
282 Any of the following types of activities constitutes initiation of
283 stabilization:

- 284
285 (1) Prepping the soil for vegetative or non-vegetative stabilization;
286
287 (2) Applying mulch or other non-vegetative product to the exposed
288 area;
289
290 (3) Seeding or planting the exposed area;
291
292 (4) Starting any of the activities in items (1) – (3) above on a portion
293 of the area to be stabilized, but not on the entire area; and
294
295 (5) Finalizing arrangements to have stabilization product fully
296 installed in compliance with the deadline for completing initial
297 stabilization activities.

298
299 Any of the following types of activities constitutes completion of initial
300 stabilization activities:

- 301
302 (1) For vegetative stabilization, all activities necessary to initially
303 seed or plant the area to be stabilized; and/or
304
305 (2) For non-vegetative stabilization, the installation or application
306 of all such non-vegetative measures.

307
308 If the Contractor is unable to meet the deadlines above due to
309 circumstances beyond the Contractor's control, and the Contractor is using
310 vegetative cover for temporary or permanent stabilization, the Contractor
311 may comply with the following stabilization deadlines instead as agreed to by
312 the Engineer:

313

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

317
318 (2) Complete all soil conditioning, seeding, watering or irrigation
319 installation, mulching, and other required activities related to the
320 planting and initial establishment of vegetation as soon as conditions
321 or circumstances allow it on the site; and

322
323 (3) Notify and provide documentation to the Engineer the
324 circumstances that prevent the Contractor from meeting the deadlines
325 above for stabilization and the schedule the Contractor will follow for
326 initiating and completing initial stabilization and as agreed to by the
327 Engineer.

328
329 Follow the applicable requirements of the specifications and special
330 provisions including Section 619 Planting and Section 641 Hydro-Mulch
331 Seeding.

332
333 Immediately after seeding or planting the area to be vegetatively
334 stabilized, to the extent necessary to prevent erosion on the seeded or
335 planted area, select, design, and install non-vegetative erosion controls that
336 provide cover (e.g., mulch, rolled erosion control products) to the area while
337 vegetation is becoming established.

338
339 Protect exposed or disturbed surface area with mulches, grass seeds
340 or hydromulch. Spray mulches at a rate of 2,000 pounds per acre. Add
341 tackifier to mix at a rate of 85 pounds per acre. Apply grass seeds at a rate
342 of 125 pounds per acre. For hydromulch, use the ingredients and rates
343 required for mulches and grass seeds. Submit recommendations from a
344 licensed Landscape Architect when deviating from the application rates
345 above.

346
347 Apply fertilizer to mulches, grass seed or hydromulch per
348 manufacturer's recommendations. Submit recommendations from a licensed
349 Landscape Architect when deviating from the manufacturer's
350 recommendations.

351
352 Install velocity dissipation measures when exposing erodible surfaces
353 greater than 15 feet in height.

354
355 BMP measures shall be in place and operational at the end of work
356 day or as required by Section 209.03(B) Construction Requirements.

357

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

365
366 Chemicals may be used as soil stabilizers for either or both erosion
367 and dust control if acceptable to the Engineer.

368
369 Provide temporary slope drains of rigid or flexible conduits to carry
370 runoff from cuts and embankments. Provide portable flume at the entrance.
371 Shorten or extend temporary slope drains to ensure proper function.

372
373 Protect ditches, channels, and other drainageways leading away from
374 cuts and fills at all times by either:

- 375
376 (1) Hydro-mulching the lower region of embankments in the
377 immediate area.
378
379 (2) Installing check dams and siltation control devices.
380
381 (3) Other methods acceptable to the Engineer.

382
383 Provide for controlled discharge of waters impounded, directed, or
384 controlled by project activities or erosion control measures.

385
386 Cover exposed surface of materials completely with tarpaulin or
387 similar device when transporting aggregate, soil, excavated material or
388 material that may be source of fugitive dust.

389
390 Cleanup and remove any pollutant that can be attributed to the
391 Contractor.

392
393 Install or modify Site-Specific BMP measures due to change in the
394 Contractor's means and methods, or for omitted condition that should have
395 been allowed for in the accepted Site-Specific BMP or a Site-Specific BMP
396 that replaces an accepted Site-Specific BMP that is not satisfactorily
397 performing. Modifications to Site-Specific BMP measures shall be accepted
398 in writing by the Engineer prior to implementation.

399
400 Properly maintain all Site-Specific BMP measures.

401
402 For projects with an NPDES Permit for Construction Activities:
403

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

- 407
- 408 (a) Weekly.
 - 409
 - 410 (b) Within 24 hours of any rainfall of 0.25 inch or greater
411 which occurs in a 24-hour period.
 - 412
 - 413 (c) When existing erosion control measures are damaged
414 or not operating properly as required by Site-Specific BMP.
 - 415

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

- 419
- 420 (a) Weekly.
 - 421
 - 422 (b) When existing erosion control measures are damaged
423 or not operating properly as required by Site-Specific BMP.
 - 424

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

- 428
- 429 (a) Weekly.
 - 430
 - 431 (b) When existing erosion control measures are damaged
432 or not operating properly as required by Site-Specific BMP.
 - 433

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

437

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

441

442 The Contractor's designated representative specified in Subsection
443 209.03(A)(2)(d) shall address any Site-Specific BMP deficiencies brought up
444 by the Engineer immediately, including weekends and holidays, and
445 complete work to fix the deficiencies by the close of the next work day if the
446 problem does not require significant repair or replacement, or if the problem
447 can be corrected through routine maintenance. Address any Site-Specific
448 BMP deficiencies brought up by the State's Third-Party Inspector in the
449 timeframe above or as specified in the Consent Decree or MS4 NPDES

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

473
474 **(C) Discharges of Storm Water Associated with Construction**
475 **Activities.** If work includes disturbance of one acre or more, an NPDES
476 Permit authorizing Discharges of Storm Water Associated with Construction
477 Activity (CWB-NOI Form C) or Individual Permit authorizing storm water
478 discharges associated with construction activity is required from the
479 Department of Health Clean Water Branch (DOH-CWB).

480
481 Do not begin construction activities until all required conditions of the
482 permit are met and submittals detailed in Subsection 209.03(A)(2) – Water
483 Pollution, Dust, and Erosion Control Submittals are completed and accepted
484 in writing by the Engineer.

485
486 **(D) Discharges Associated with Hydrotesting Activities.** If
487 hydrotesting activities require effluent discharge into State waters or drainage
488 systems, an NPDES Hydrotesting Waters Permit (CWB-NOI Form F) or
489 Individual Permit authorizing discharges associated with hydrotesting from
490 DOH-CWB is required from the DOH-CWB.

491
492 Do not begin hydrotesting activities until the DOH-CWB has issued an
493 Individual NPDES Permit or Notice of General Permit Coverage (NGPC).
494 Conduct Hydrotesting operations in accordance with the conditions of the
495 permit or NGPC.

496 **(E) Discharges Associated with Dewatering Activities.** If dewatering
497 activities require effluent discharge into State waters or drainage systems, an
498 NPDES Dewatering Permit (CWB-NOI Form G) or Individual Permit
499 authorizing discharges associated with dewatering from DOH-CWB is
500 required from the DOH-CWB.
501

502 Do not begin dewatering activities until the DOH-CWB has issued an
503 Individual NPDES Permit or Notice of General Permit Coverage (NGPC).
504 Conduct dewatering operations in accordance with the conditions of the
505 permit or NGPC.
506

507 **(F) Solid Waste.** Submit the Solid Waste Disclosure Form for
508 Construction Sites to the Engineer within 21 calendar days of date of award.
509 Provide a copy of all the disposal receipts from the facility permitted by the
510 Department of Health to receive solid waste to the Engineer monthly. This
511 should also include documentation from any intermediary facility where solid
512 waste is handled or processed, or as directed by the Engineer.
513

514 **(G) Construction BMP Training.** The Contractor's representative
515 responsible for development of the Site-Specific BMP Plan and
516 implementation of Site-Specific BMPs in the field shall attend the State's
517 Construction Best Management Practices Training. The Contractor shall
518 keep training logs updated and readily available.
519

520 **209.04 Measurement.**
521

522 **(A)** Installation, maintenance, monitoring, and removal of BMP will be paid
523 on a lump sum basis. Measurement for payment will not apply.
524

525 **(B)** The Engineer will only measure additional water pollution, dust and
526 erosion control required and requested by the Engineer on a force account
527 basis in accordance with Subsection 109.06 – Force Account Provisions and
528 Compensation.
529

530 **209.05 Payment.** The Engineer will pay for accepted pay items listed below at
531 contract price per pay unit, as shown in the proposal schedule. Payment will be full
532 compensation for work prescribed in this section and contract documents.
533

534 The Engineer will pay for each of the following pay items when included in
535 proposal schedule:
536

537 Pay Item	538 Pay Unit
539 Installation, Maintenance, Monitoring, and Removal of BMP	540 Lump Sum

541 Payment for all work prescribed in this section including submittals,

542 sampling, testing, reporting, dust control measures, installation,
543 maintenance, monitoring, implementation of the SWPPP, and removal of
544 BMPs shall be paid for under the lump sum pay item shown in the
545 proposal schedule. This includes payment for: installation or
546 modification of Site-Specific BMP measures due to changes in the
547 Contractor's means and methods, omitted conditions that should have
548 been allowed for in the Contractor's accepted SWPPP, Site-Specific BMP
549 repairs, or replacement of an accepted Site-Specific BMP that is not
550 satisfactorily performing.

551
552 **Additional Water Pollution, Dust, and Erosion Control** **Force Account**

553
554 An estimated amount for force account is allocated in the proposal
555 schedule under 'Additional Water Pollution, Dust, and Erosion Control',
556 but the actual amount to be paid will be the sum shown on accepted force
557 account records, whether this sum is more or less than estimated amount
558 allocated in proposal schedule. The Engineer will pay for BMP measures
559 requested by the Engineer that are beyond the scope of the original contract
560 work on a force account basis.

561
562 No progress payment will be authorized until the Engineer accepts
563 in writing Site-Specific BMP or when the Contractor fails to maintain
564 project site in accordance with accepted BMP.

565
566 For all citations or fines received by the Department for non-
567 compliance, including compliance with NPDES Permit conditions, the
568 Contractor shall reimburse State within 30 calendar days for full amount
569 of outstanding cost the State has incurred, or the Engineer will deduct
570 cost from progress payment.

571
572 The Engineer will not pay for work to repair or compensate for
573 damages caused by dust or water.

574
575 The Engineer may assess liquidated damages up to \$27,500
576 per day for non-compliance of each BMP requirement and all other
577 requirements in this section in accordance with HDOT's Enforcement
578 Response Plan.

579

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

586
587 No progress payment will be authorized until the Engineer accepts in writing
588 Site-Specific BMP or when the Contractor fails to maintain project site in accordance
589 with accepted BMP.

590
591 For all citations or fines received by the Department for non-compliance,
592 including compliance with NPDES Permit conditions, the Contractor shall reimburse
593 State within 30 calendar days for full amount of outstanding cost State has incurred,
594 or the Engineer will deduct cost from progress payment.

595
596 The Engineer will assess liquidated damages up to \$27,500 per day for non-
597 compliance of each BMP requirement and all other requirements in this section.
598

599 **Appendix A**

600

601 The following list identifies potential pollutant sources and corresponding
602 BMPs used to mitigate the pollutants. Each BMP is referenced to the corresponding
603 section of the current HDOT Construction Best Management Practices Field Manual
604 or appropriate Supplemental Sheets. The Manual may be obtained from the HDOT
605 Statewide Stormwater Management Program Website at
606 <http://www.stormwaterhawaii.com/resources/contractors-and-consultants/> under
607 Construction Best Management Practices Field Manual. Supplemental BMP sheets
608 are located at [http://www.stormwaterhawaii.com/resources/contractors-and-](http://www.stormwaterhawaii.com/resources/contractors-and-consultants/storm-water-pollution-prevention-plan-swppp/)
609 [consultants/storm-water-pollution-prevention-plan-swppp/](http://www.stormwaterhawaii.com/resources/contractors-and-consultants/storm-water-pollution-prevention-plan-swppp/) under Concrete Curing
610 and Irrigation Water.

611

Pollutant Source	Appropriate Site-Specific BMP to be Implemented	BMP Requirements
<p><i>Construction debris, green waste, general litter</i></p>	<ul style="list-style-type: none"> • <i>Separate contaminated clean up materials from construction and demolition (C&D) wastes.</i> • <i>Provide waste containers (e.g., dumpster or trash receptacle) of sufficient size and number to contain construction and domestic wastes.</i> • <i>Inspect construction waste and recycling areas regularly.</i> • <i>Schedule solid waste collection regularly.</i> • <i>Schedule recycling activities based on construction/demolition phases.</i> • <i>Empty waste containers weekly or when they are two-thirds full, whichever is sooner.</i> • <i>Do not allow containers to overflow. Clean up immediately if they do.</i> • <i>On work days, clean up and dispose of waste in designated waste containers.</i> • <i>See Solid Waste Management Section SM-6 for additional requirements.</i> • <i>Provide Storm Drain Inlet Protection and/or Perimeter Sediment Controls as applicable.</i> • <i>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.</i> • <i>Dispose of construction and non- construction solid waste in accordance with State DOH regs.</i> • <i>Load removed non- recyclable vegetation directly onto trucks; cover and transport to a licensed facility</i> 	<p><i>See Solid Waste Management Section SM-6. Storm Drain Inlet Protection SC-1, and Perimeter Sediment Controls where applicable.</i></p>

Pollutant Source	Appropriate Site-Specific BMP to be Implemented	BMP Requirements
<p><i>Materials associated with the operation and maintenance of equipment, such as oil, fuel, and hydraulic fluid leakage</i></p>	<ul style="list-style-type: none"> • <i>Use off-site wash racks, repair and maintenance facilities, and fueling sites when practical.</i> • <i>Designate bermed wash area if cleaning on site is necessary.</i> • <i>Place drip pans or drop cloths under vehicles and equipment to absorb spills or leaks.</i> • <i>Provide an ample supply of readily available spill cleanup materials.</i> • <i>Clean up spills immediately, using dry cleanup methods where possible, and dispose of used materials properly.</i> • <i>Do not clean surfaces or spills by hosing the area down.</i> • <i>Eliminate the source of the spill to prevent a discharge or a continuation of an ongoing discharge.</i> • <i>Inspect on-site vehicles and equipment regularly and immediately repair leaks.</i> • <i>Regularly inspect fueling areas and storage tanks.</i> • <i>Train employees on proper maintenance and spill practices and procedures and fueling and cleanup procedures.</i> • <i>Store diesel fuel, oil, hydraulic fluid, or other petroleum products or other chemicals in water-tight containers and provide cover or secondary containment.</i> • <i>Do not remove original product labels and comply with manufacturer's labels for proper disposal.</i> • <i>Dispose of containers only after all the product has been used.</i> • <i>Dispose of or recycle oil or oily wastes according to Federal, State, and Local requirements.</i> • <i>Store soaps, detergents, or solvents under cover or other means to prevent contact with rainwater.</i> • <i>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.</i> 	<p><i>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.</i></p>

Pollutant Source	Appropriate Site-Specific BMP to be Implemented	BMP Requirements
Soil erosion from the disturbed areas	<ul style="list-style-type: none"> • 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. 	<p>Soil Stabilization</p> <ol style="list-style-type: none"> 1. SM-22 Topsoil Management 2. EC-12 Seeding and Planting 3. EC-14 Mulching 4. EC-11 Geotextiles and Mats <p>Slope Protection</p> <ol style="list-style-type: none"> 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 <p>SC-1 Storm Drain Inlet Protection</p>

Pollutant Source	Appropriate Site-Specific BMP to be Implemented	BMP Requirements
		<p><i>Perimeter Controls and Sediment Barriers</i></p> <ol style="list-style-type: none"> 1. <i>SC-7 Silt Fence or Filter Fabric Fence</i> 2. <i>SC-2 Vegetated Filter Strips and Buffers</i> 3. <i>SC-6 Compost Filter Berm/Sock</i> 4. <i>SC-8 Sandbag Barrier</i> 5. <i>SC-9 Brush or Rock Filter</i> <p><i>Sediment Basins and Detention Ponds</i></p> <ol style="list-style-type: none"> 1. <i>SC-4 Sediment Trap</i> 2. <i>SC-5 Sediment Basin</i> <p><i>SC-3 Check Dams</i></p> <p><i>EC-6 Level Spreader</i> <i>SM-20 Paving Operations</i> <i>SC-10 Construction Roads and Parking Area Stabilization</i></p>

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Pollutant Source	Appropriate Site-Specific BMP to be Implemented	BMP Requirements
		<p><i>Controlling Storm Water Flowing onto and Through the Project</i></p> <ol style="list-style-type: none"> 1. <i>EC-3 Run-On Diversion</i> 2. <i>EC-5 Earth Dike, Swales and Ditches</i> <p><i>Post Construction BMPs</i></p> <ol style="list-style-type: none"> 1. <i>EC-2 Flared Culvert End Sections</i> 2. <i>EC-10 Rip-Rap and Gabion Inflow Protection</i> 3. <i>EC-8 Outlet Protection and Velocity Dissipation Devices</i> 4. <i>SM-22 Topsoil Management</i> <p><i>Non-Structural BMPs</i></p> <ol style="list-style-type: none"> 1. <i>SM-1 Construction BMP Training</i> 2. <i>SM-14 Scheduling</i> 3. <i>SM-15 Location of Potential Sources of Sediment</i> 4. <i>SM-17 Preservation of Existing Vegetation</i>

Pollutant Source	Appropriate Site-Specific BMP to be Implemented	BMP Requirements
<i>Sediment from soil stockpiles</i>	<ul style="list-style-type: none"> • <i>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.</i> • <i>Place bagged materials on pallets and under cover.</i> • <i>Provide physical diversion to protect stockpiles from concentrated runoff.</i> • <i>Cover stockpiles with plastic or comparable material when practicable.</i> • <i>Place silt fence, fiber filtration tubes, or straw wattles around stockpiles.</i> • <i>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.</i> • <i>Unless infeasible, contain and securely protect stockpiles from the wind.</i> • <i>Provide Storm Drain Inlet Protection and/or Perimeter Sediment Controls as applicable. See Stockpile Management Section SM-3 for additional requirements.</i> 	<i>See Stockpile Management Section SM-3. Storm Drain Inlet Protection SC-1, and Perimeter Sediment Controls where applicable.</i>
<i>Emulsified asphalt or prime/tack coat</i>	<ul style="list-style-type: none"> • <i>Provide training for employees and contractors on proper material delivery and storage practices and procedures.</i> • <i>Restrict paving operations during wet weather to prevent paving materials from being discharged.</i> • <i>Use asphalt emulsions such as prime coat when possible.</i> • <i>Protect drain inlet structures and manholes during application of tack coat, seal coat, slurry seal, and fog seal.</i> • <i>Keep ample supplies of drip pans and absorbent materials on site.</i> • <i>Inspect inlet protection devices.</i> • <i>See Material Storage and Handling Section SM-2 and Paving Operations Section SM-20 for additional requirements.</i> • <i>Provide Storm Drain Inlet Protection and/or Perimeter Sediment Controls as applicable.</i> 	<i>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.</i>

Pollutant Source	Appropriate Site-Specific BMP to be Implemented	BMP Requirements
<p><i>Materials associated with painting, such as paint and paint wash solvent</i></p>	<ul style="list-style-type: none"> • <i>Hazardous chemicals shall be well-labeled and stored in original containers.</i> • <i>Keep ample supply of cleanup materials on site.</i> • <i>Dispose container only after all of the product has been used.</i> • <i>Remove as much paint from brushes on painted surface.</i> • <i>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.</i> • <i>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.</i> • <i>Do not dump liquid wastes into the storm drainage system.</i> • <i>Filter and re-use solvents and thinners.</i> • <i>Dispose of oil-based paints and residue as a hazardous waste.</i> • <i>Ensure collection, removal, and disposal of hazardous waste complies with regulations.</i> • <i>Immediately clean up spills and leaks.</i> • <i>Properly store paints, solvents, and epoxy compounds.</i> • <i>Properly store and dispose waste materials generated from painting and structure repair and construction activities.</i> • <i>Mix paints in a covered and contained area, when possible, to minimize adverse impacts from spills.</i> • <i>Do not apply traffic paint or thermoplastic if rain is forecasted.</i> • <i>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.</i> <p><i>Provide Storm Drain Inlet Protection and/or Perimeter Sediment Controls as applicable.</i></p>	<p><i>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.</i></p>

Pollutant Source	Appropriate Site-Specific BMP to be Implemented	BMP Requirements
<p><i>Industrial chemicals, fertilizers, and/or pesticides</i></p>	<ul style="list-style-type: none"> • <i>Hazardous chemicals shall be well-labeled and stored in original containers.</i> • <i>Keep ample supply of cleanup materials on site.</i> • <i>Clean up spills immediately, using dry clean-up methods where possible, and dispose of used materials properly.</i> • <i>Do not clean surfaces or spills by hosing the area down.</i> • <i>Eliminate the source of the spill to prevent a discharge or a furtherance of an ongoing discharge.</i> • <i>Dispose container only after all of the product has been used.</i> • <i>Retain a complete set of safety data sheets (formerly MSDS) on site.</i> • <i>Store industrial chemicals in water-tight containers and provide either cover or secondary containment.</i> • <i>Provide cover when storing fertilizers or pesticides to prevent these chemicals from coming into contact with rainwater.</i> • <i>Restrict amount of pesticide prepared to quantity necessary for the current application.</i> • <i>Do not apply fertilizers or pesticides during or just before a rain event.</i> • <i>Do not apply to stormwater conveyance channels with flowing water.</i> • <i>Comply with fertilizer and pesticide manufacturer's recommended usage and disposal instructions. Document departures from manufacturer's specifications in Attachment J.</i> • <i>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.</i> • <i>Follow federal, state, and local laws regarding fertilizer application.</i> • <i>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.</i> 	<p><i>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</i></p>

Pollutant Source	Appropriate Site-Specific BMP to be Implemented	BMP Requirements
	<ul style="list-style-type: none"> • <i>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.</i> • <i>See Material Storage and Handling Use SM-2, and Hazardous Materials and Waste Management Section SM-9 for additional requirements.</i> 	
<p><i>Hazardous waste (Batteries, Solvents, Treated Lumber, etc.)</i></p>	<ul style="list-style-type: none"> • <i>Do not dispose of toxic materials in dumpsters allocated for construction debris.</i> • <i>Ensure collection, removal, and disposal of hazardous waste complies with regulations.</i> • <i>Hazardous waste that cannot be reused or recycled shall be disposed of by a licensed hazardous waste hauler.</i> • <i>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.</i> • <i>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.</i> • <i>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.</i> • <i>Clean up spills immediately, using dry clean-up methods where possible, and dispose of used materials properly.</i> • <i>Do not clean surfaces or spills by hosing the area down.</i> • <i>Eliminate the source of the spill to prevent a discharge or a continuation of an ongoing discharge.</i> 	<p><i>See Hazardous Materials and Waste Management Section SM-9 and Vehicle and Equipment Maintenance SM-12</i></p>

Pollutant Source	Appropriate Site-Specific BMP to be Implemented	BMP Requirements
	<ul style="list-style-type: none"> • 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. 	
<i>Metals and Building Materials</i>	<ul style="list-style-type: none"> • 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
<i>Contaminated Soil</i>	<ul style="list-style-type: none"> • 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

Pollutant Source	Appropriate Site-Specific BMP to be Implemented	BMP Requirements
<i>Fugitive Dust Control and Dust Control Water</i>	<ul style="list-style-type: none"> • <i>Do not over spray water for dust control purposes which will result in runoff from the area.</i> • <i>Apply water as conditions require.</i> • <i>Washing down of debris or dirt into drainage, sewage systems, or State waters is not allowed.</i> • <i>Minimize exposed areas through the schedule of construction activities.</i> • <i>Utilize vegetation, mulching, sprinkling, and stone/gravel layering to quickly stabilize exposed soil.</i> • <i>Direct construction vehicle traffic to stabilized roadways.</i> • <i>Cover dump trucks hauling material from the site with a tarpaulin.</i> <p><i>See Dust Control Section SM-19 for additional requirements.</i></p>	<i>See Dust Control Section SM-19</i>
<i>Concrete Truck Wash Water</i>	<ul style="list-style-type: none"> • <i>Disposal of concrete truck wash water via percolation is prohibited.</i> • <i>Wash concrete-coated vehicles or equipment off-site or in the designated wash area.</i> • <i>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.</i> • <i>Runoff from the on-site concrete wash area shall be contained in a temporary pit or level bermed area where the concrete can set.</i> • <i>Design the area so that no overflow can occur due to inadequate wash area sizing or precipitation.</i> • <i>The temporary pit shall be lined with plastic to prevent seepage of wash water into the ground.</i> • <i>Allow wash water to evaporate or collect wash water and all concrete debris in a concrete washout system bin.</i> • <i>Do not dump liquid wastes into storm drainage system.</i> • <i>Dispose of liquid and solid concrete wastes in compliance with federal, state, and local standards.</i> • <i>See Waste Management, Concrete Wash and Waste Management Section SM-4 for additional requirements.</i> 	<i>See Waste Management, Concrete Wash and Waste Management Section SM-4</i>

Pollutant Source	Appropriate Site-Specific BMP to be Implemented	BMP Requirements
<i>Sediment Track-Out</i>	<ul style="list-style-type: none"> • <i>Include Stabilized Construction Entrance at all points that exit onto paved roads.</i> • <i>A sediment trapping device is required if a wash rack is used in conjunction with the stabilized construction entrance/exit.</i> • <i>The pavement shall not be cleaned by washing down the street.</i> • <i>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.</i> • <i>Use BMPs for adjacent drainage structures.</i> • <i>Remove sediment tracked onto the street by the end of the day in which the track-out occurs.</i> • <i>Restrict vehicle use to properly designated exit points.</i> • <i>Include additional BMPs that remove sediment prior to exit when minimum dimensions cannot be met.</i> <p><i>See Stabilized Construction Entrance/Exit Section SC-11 for additional requirements.</i></p>	<i>See Stabilized Construction Entrance/Exit Section SC-11</i>
<i>Irrigation Water</i>	<ul style="list-style-type: none"> • <i>Consider irrigation requirements.</i> • <i>Where possible, avoid species which require irrigation.</i> • <i>Design, timing and application methods of irrigation water to eliminate the runoff of excess irrigation water into the storm water drainage system.</i> <p><i>See Seeding and Planting Section EC-12 and California Stormwater BMP Handbook SD-12 Efficient Irrigation included in SWPPP Attachment A for additional requirements.</i></p>	<i>See Seeding and Planting Section EC-12 and California Stormwater BMP Handbook SD-12 Efficient Irrigation</i>
<i>Hydrotesting Effluent</i>	<ul style="list-style-type: none"> • <i>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.</i> 	<i>Site specific BMPs will be included in the NOI/NPDES Permit Form F submittal.</i>

Pollutant Source	Appropriate Site-Specific BMP to be Implemented	BMP Requirements
<i>Dewatering Effluent</i>	<i>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.</i>	<i>See Dewatering Operations SM-18. Site specific BMPs will be included in the NOI/NPDES Permit Form G submittal.</i>
<i>Saw-cutting Slurry</i>	<ul style="list-style-type: none"> • <i>Saw cut slurry shall be removed from the site by vacuuming.</i> • <i>Provide storm drain protection during saw cutting. See Paving Operations Section SM-20 for additional requirements.</i> <i>Provide Storm Drain Inlet Protection and/or Perimeter Sediment Controls as applicable.</i>	<i>See Paving Operations Section SM-20, Storm Drain Inlet Protection SC-1, Perimeter sediment controls where applicable</i>
<i>Concrete Curing Water</i>	<ul style="list-style-type: none"> • <i>Avoid overspraying of curing compounds.</i> • <i>Apply an amount of compound that covers the surface, but does not allow any runoff of the compound.</i> <i>See California Stormwater BMP Handbook NS-12 Concrete Curing included in SWPPP Attachment A for additional requirements.</i>	<i>See California Stormwater BMP Handbook NS-12 Concrete Curing</i>

Pollutant Source	Appropriate Site-Specific BMP to be Implemented	BMP Requirements
<i>Plaster Waste Water</i>	<ul style="list-style-type: none"> • <i>Direct all wastewater 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.</i> • <i>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.</i> • <i>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.</i> • <i>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.</i> 	<i>See Material, Storage and Handling Use Section SM-2, Stockpile Management Use Section SM-3, and Hazardous Materials and Waste Management Section SM-9</i>
<i>Water-Jet Wash Water</i>	<ul style="list-style-type: none"> • <i>For Water-Jet Wash Water used to clean vehicles, use off site wash racks or commercial washing facilities when practical.</i> • <i>See Vehicle and Equipment Cleaning Section SM-11 for additional information.</i> • <i>For Water-Jet Wash Water used to clean impervious surfaces, the runoff shall not be allowed to flow into drainage structures or State Waters.</i> 	<i>See Vehicle and Equipment Cleaning Section SM-11</i>
<i>Sanitary/Septic Waste</i>	<ul style="list-style-type: none"> • <i>Locate Sanitary facilities in a convenient place away from drainage facilities.</i> • <i>Position sanitary facilities so they are secure and will not be tipped over or knocked down.</i> • <i>Wastewater shall not be discharged to the ground or buried.</i> • <i>A licensed service provider shall maintain sanitary/septic facilities in good working order.</i> • <i>Schedule regular waste collection by a licensed transporter.</i> • <i>See Sanitary Waste Section SM-7 for additional requirements.</i> 	<i>See Sanitary Waste Section SM-7.</i>

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END OF SECTION 209

**STP-0300(213)
209-29a**

1-14-22

1 Make the following Section a part of the Standard Specifications:
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3 **SECTION 219 – DETERMINATION AND CHARACTERIZATION OF FILL**
4 **MATERIAL**
5
6

7 **219.01 Description.** This section describes determination and characterization
8 of fill material for project sites.
9

10 Requirements of this section apply to all waste generated from construction
11 and demolition (C&D) activities on the project.
12

13 **219.02 Definitions.**
14

15 **(A) Inert Fill Material.** Inert Fill Material is defined in the Hawaii Revised
16 Statutes (HRS) 342H-1. Materials that do not meet this definition shall be
17 disposed of at the appropriate Hawaii Department of Health (HDOH) Solid
18 and Hazardous Waste Branch permitted solid waste management facility.
19

20 The October 2021 State of Hawaii Department of Transportation,
21 Highways Division, Construction Best Management Practices Field Manual,
22 specifies inert fill material shall not be contaminated with asbestos or lead-
23 based paint. In addition, inert fill materials do not decompose or produce
24 leachate or other products harmful to the environment.
25

26 **(B) Lead-Based Paint (LBP).** Lead Based Paint (LBP) is defined by
27 Section 403 of the Toxic Substances Control Act (TSCA), as amended by
28 the Environmental Protection Agency (EPA) or as defined in approved
29 subsequent revisions.
30

31 **219.03 Construction.**
32

33 **(A) Preconstruction Requirements.** Retain the services of an
34 Environmental Professional as accepted by the Engineer. Submit
35 documentation the Environmental Professional has a minimum of five (5)
36 years of experience in solid and hazardous waste management and fill
37 material characterization within 30 calendar days of contract certification
38 date.
39

40 **(B) Construction Requirements.**
41

42 **(1) Reclassification of Solid Waste into Inert Fill Material.** If
43 reclassifying solid waste as inert fill, obtain written acceptance from
44 the Engineer before following the requirements of Section
45 219.03(B)(2) Inert Fill Material.
46

47 **(2) Inert Fill Material.** The State reserves the right to reject

48 imported fill from sources known to contain hazardous material or if
49 any of the requirements in this specification are not met. The source
50 and/or stockpiled location of the material shall remain accessible at
51 all times to State personnel for sampling, testing, and inspection as
52 determined by the Engineer. Prior to importing/removal of material,
53 the Contractor shall provide the specific location and quantity of
54 material that is to be transported to/from the project site.
55

56 **(a) Certificates.** Provide a written certificate indicating that
57 the fill material meets the inert fill material definition specified
58 herein. The written certificate shall include a description of
59 the evidence (including but not limited to historical
60 documentation of land use, test results, fill material
61 characterization report, and/or Phase I Environmental Site
62 Assessment) used by the Contractor to determine that the fill
63 material is inert fill material. The written certificate shall be
64 prepared and signed by an Environmental Professional.
65 Submit the written certificate to the Engineer 14 calendar days
66 before the fill material is imported to or removed from the
67 project site. Do not import the fill material to, or export the fill
68 material from the project site until the Engineer has accepted
69 the certificate. Revise the written certificate as requested by
70 the Engineer until the Engineer has accepted the certificate at
71 no additional cost to the State. If the Engineer does not
72 accept the certificate, the fill material shall not be considered
73 inert fill material; and the Contractor shall dispose of the fill
74 material in accordance with all applicable Federal, state, and
75 Local laws and regulations at no additional cost to the State.
76

77 **(b) Documentation.** Provide documentation that the
78 material will be taken to a properly permitted site. At minimum
79 the documentation shall include the location of the disposal
80 site (name, address, Tax Map Key No., telephone number,
81 and map) with a revised Solid Waste Disclosure Form to
82 indicate the material that was reclassified as inert fill and the
83 location that the inert fill will be taken to.
84

85 **(c) Laboratory Certification.** Samples shall be tested by
86 a laboratory certified to perform the specific analyses.
87

88 **(d) Hawaii Department of Health Guidance Documents.**
89 The HDOH has published guidance documents for the
90 characterization of fill material and construction and
91 demolition (C&D) waste. Comply with all applicable Federal,
92 State, and Local laws and regulations. The procedures of the
93 most recent versions of the following guidance documents or
94 their replacements for the determination and characterization

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of the fill material or waste may be used as a reference:

1. Guidance for Soil Stockpile Characterization and Evaluation of Imported and Exported Fill Material.
2. Evaluation of Fill Material for Chemical Contaminants (Fact Sheet).
3. Guidance for Construction & Demolition (C&D) Waste Disposal.
4. Technical Guidance Manual for the Implementation of the Hawai'i State Contingency Plan.

Obtain and follow the latest versions of the applicable HDOH guidance documents.

(e) Lead Based Paint Restriction. Test for lead based paint as directed by the Engineer a minimum of five (5) working days prior to cold planing existing pavement or other demolition activities. Remove lead based paint from cold planed asphalt prior to use as a fill material. Lead based paint does not have to be removed if recycled for reclaimed asphalt for pavement.

219.04 Measurement. Determination and characterization of fill material will be paid on a lump sum basis. Measurement for payment will not apply. The Engineer will only measure testing for lead based paint required and requested by the Engineer on a force account basis in accordance with Subsection 109.06 – Force Account Provisions and Compensation.

219.05 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 work prescribed in this section and contract documents.

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

Pay Item	Pay Unit
Determination and Characterization of Fill Material	Lump Sum
Testing for Lead Based Paint	Force Account

An estimated amount for force account is allocated in the proposal schedule under "Testing for Lead Based Paint", but actual amount to be paid will be the sum shown on accepted force account records, whether this sum be more or less than

142 the estimated amount allocated in the proposal schedule.

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

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END OF SECTION 219

1 **SECTION 301 – HOT MIX ASPHALT BASE COURSE**

2
3 Make the following amendments to said Sections:

4
5 **(I)** Amend **Section 301.03(B) Compaction** by revising the second
6 paragraph from lines 84 to 87 to read as follows:

7
8 “Compact mixture immediately upon completion of spreading
9 operations to density of not less than 92.0 percent of maximum theoretical
10 specific gravity in accordance with AASHTO T 209, modified by deletion of
11 Supplemental Procedure for Mixtures Containing Porous Aggregate.”

12
13
14 **(II)** Amend **Section 301.04 Measurement** from lines 98 to 100 to read as
15 follows:

16
17 **“301.04 Measurement.** The Engineer will measure HMAB course per ton in
18 accordance with contract documents.”

19
20
21 **(III)** Amend **Section 301.05 Payment,** from lines 102 to 111 to read as follows:

22
23 **“301.05 Payment.** The Engineer will pay for the accepted pay items listed
24 below at the contract price per pay unit, as shown in the proposal schedule.
25 Payment will be full compensation for the work prescribed in this section and the
26 contract documents.

27
28 The Engineer will pay for one of the following pay items when included in
29 the proposal schedule:

30

Pay Item	Pay Unit
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.	

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45 The Engineer may, in lieu of requiring removal and replacement, use the
46 sliding scale factor to accept HMAB compacted below 92.0 percent. The Engineer

47 will make payment for the material in that production day at a reduced price
48 arrived at by multiplying the contract unit price by the pay factor shown in Table
49 301.05-1.
50

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

51
52
53
54

END OF SECTION 301

1 **SECTION 304 – AGGREGATE BASE COURSE**

2
3 Make the following amendments to said Section:

4
5 **(I)** Amend **304.04 – Measurement** by revising lines 54 to 55 to read as follows:

6
7 **“304.04 Measurement.** The Engineer will measure aggregate base course
8 per cubic yard in accordance with the contract documents.”

9
10 **(II)** Amend **304.05 – Payment** by revising lines 57 to 66 to read as follows:

11
12 **“304.05 Payment.** The Engineer will pay for the accepted aggregate base
13 course at the contract price per pay unit, as shown in the proposal schedule.
14 Payment will be full compensation for the work prescribed in this section and the
15 contract documents.

16
17 The Engineer will pay for the following pay item when included in the
18 proposal schedule:

19

Pay Item	Pay Unit
Aggregate Base Course	Cubic Yard”

20
21
22
23
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25

26 **END OF SECTION 304**

1 **SECTION 314 – CONTROLLED LOW STRENGTH MATERIALS (CLSM) FOR**
 2 **UTILITIES AND STRUCTURES**

3
 4 Make the following amendments to said Section:

5
 6 **(I)** Amend **314.04 – Measurement** by revising line 83 to read as follows:

7
 8 **“314.04 Measurement.** The Engineer will measure CLSM per cubic yard in
 9 accordance with the contract documents.”

10
 11 **(II)** Amend **314.05 – Payment** by revising lines 85 to 90 to read as follows:

12
 13 **“314.05 Payment.**

14
 15 **(A)** The Engineer will pay for the accepted CLSM at the contract unit
 16 price per cubic yard, as shown in the proposal schedule. Payment will be
 17 full compensation for the work prescribed in this section and the contract
 18 documents.

19
 20 The Engineer will pay for the following pay item when included in the
 21 proposal schedule:

22
 23 **Pay Item** **Pay Unit**

24 Controlled Low-Strength Material Cubic Yard”

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END OF SECTION 314

1 Amend SECTION 401 – HOT MIX ASPHALT (HMA) PAVEMENT to read as
2 follows:

3
4 “SECTION 401 – HOT MIX ASPHALT (HMA) PAVEMENT
5

6 **401.01 Description.** This section describes furnishing and placing dense
7 graded HMA pavement (herein referred to as HMA) on a prepared surface.

8
9 **401.02 Materials.**

10
11 Asphalt Cement (PG 64-16) 702.01(A)

12
13 Use for non-surface mixes, unless otherwise specified in the project documents.
14

15 Asphalt Cement (PG 64E-22) 702.01(B)

16
17 Use for all surface mixes, except for on Lanai and Molokai, and unless otherwise
18 specified in the project documents. Polymer modified asphalt (PMA) pavement
19 refers to asphalt mix using PG 64E-22, unless otherwise indicated.
20

21 Emulsified Asphalt 702.04

22
23 Warm Mix Asphalt Additive 702.06

24
25 Aggregate for Hot Mix Asphalt Pavement 703.09

26
27 Filler 703.15

28
29 Hydrated Lime or a liquid anti-strip approved by the engineer 712.03
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31 **(A) General.** HMA pavement shall be plant mixed and shall include
32 mixture of aggregate and asphalt binder and may include reclaimed asphalt
33 pavement (RAP) or filler, or both.
34

35 The manufacture of HMA may include warm mix asphalt (WMA)
36 processes in accordance with these specifications. WMA processes
37 include combinations of organic additives, chemical additives, and
38 foaming.
39

40 HMA pavement shall include surface course and may include one or
41 more binder courses, depending on HMA pavement thickness indicated in
42 the contract documents.
43

44 RAP is defined as removed or reprocessed pavement materials
45 containing asphalt and aggregates. Process RAP by crushing until 100
46 percent of RAP passes 3/4-inch sieve. Size, grade uniformly, and combine
47 materials such that blend of RAP and aggregate material conforms to
48 grading requirements of Subsection 703.09 - Aggregate for Hot Mix Asphalt
49 Pavement.

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

Quantity of filler material to correct deficiencies in aggregate gradation passing the No. 200 sieve shall not exceed 3 percent by weight of fine aggregates.

(B) Job-Mix Formula and Tests. Design job-mix formula in accordance with procedures contained in current edition of Asphalt Institutes *Mix Design Methods for Asphalt Concrete and Other Hot Mix Types*, Manual Series No. 2 (MS-2) for either Marshall Method or Hveem Method of Mix Design.

Limit compacted lift thickness and asphalt content of job-mix formula as specified in Table 401.02-1 - Limits of Compacted Lift Thickness and Asphalt Content.

TABLE 401.02-1 - LIMITS OF COMPACTED LIFT THICKNESS AND ASPHALT CONTENT				
MIX NO.	II	III	IV	V
Minimum to Maximum Compacted Thickness for Individual Lifts (Inches)	2-1/4	2	1-1/2	1-1/4
	to	to	to	to
	3	3	3	3
Asphalt Content Limits (Percent of Total Weight of Mix)	3.8	4.3	4.3	4.8
	to	to	to	to
	6.1	6.1	6.5	7.0

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Asphalt content limits for porous aggregate may be exceeded only if it is requested ahead of placement and is reviewed then accepted in writing by the Engineer.

Meet job-mix formula design criteria specified in Table 401.02-2 - Job-Mix Formula Design Criteria.

TABLE 401.02-2 - JOB-MIX FORMULA DESIGN CRITERIA	
Hveem Method Mix Criteria (AASHTO T 246 and AASHTO T 247)	
Stability, minimum	37
Air Voids (percent) ¹	3 - 5
Marshall Method Mix Criteria (AASHTO T 245)	
Compaction (number of blows each end of specimen)	75
Stability, minimum (pounds)	1,800
Flow (x 0.01 inch)	8 - 16
Air Voids (percent) ¹	3-5
Notes:	
1. Air Voids: AASHTO T 166 or AASHTO T 275; AASHTO T 209, AASHTO T 269.	

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Minimum percent voids in mineral aggregates (VMA) of job-mix formula shall be as specified in Table 401.02-3 - Minimum Percent Voids in Mineral Aggregates (VMA).

TABLE 401.02-3 - MINIMUM PERCENT VOIDS IN MINERAL AGGREGATES (VMA)					
Nominal Maximum Particle Size, (Inches)	1-1/2	1	3/4	1/2	3/8
VMA, (percent) ¹	11.0	12.0	13.0	14.0	15.0
Notes:					
1. VMA: See Asphalt Institute Manual MS-2					

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(C) Submittals. Establish and submit job-mix formula for each type of HMA pavement mix indicated in the contract documents a minimum of 30 days before paving production. Job mix shall include the following applicable information:

(1) Design percent of aggregate passing each required sieve size.

(2) Design percent of asphalt binder material (type determined by type of mix) added to the aggregate (expressed as% by weight of total mix),

(3) Design proportion of processed RAP.

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- (4) Design temperature of mixture at point of discharge at paver.
- (5) Source of aggregate.
- (6) Grade of asphalt binder.
- (7) Test data used to develop job-mix formula.

Except for item (4) in this subsection, if design requirements are modified after the Engineer accepts job-mix formula, submit new job-mix formula before using HMA produced from modified mix design. Submit any changes to the design temperature of mixture at point of discharge for acceptance by the Engineer.

Submit a certificate of compliance for the asphalt binder, accompanied by substantiating test data from a certified testing laboratory.

(D) Range of Tolerances for HMA. Provide HMA within allowable tolerances of accepted job mix formula as specified in Table 401.02-4 - Range of Tolerances HMA. These tolerances are not to be used for the design of the job mix, they are solely to be used during the testing of the production field sample of the HMA mix.

TABLE 401.02-4-RANGE OF TOLERANCES HMA	
Passing No. 4 and larger sieves (percent)	± 7.0
Passing No. 8 to No. 100 sieves (inclusive) (percent)	±4.0
Passing No. 200 sieve (percent)	±3.0
Asphalt Content (percent)	± 0.4
Mixture Temperature (degrees F)	± 20

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The tolerances shown are the allowable variance between the physical characteristics of laboratory job mix submitted mix design and the production or operational mix, i.e., field samples.

401.03 Construction.

(A) Weather Limitations. Placement of HMA shall not be allowed under the following conditions:

- (1) On wet surfaces, e.g., surface with ponding or running water, surface that has aggregate or surface that appears beyond surface saturated dry, as determined by the Engineer.

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(2) When air temperature is below 50 degrees F and falling. HMA may be applied when air temperature is above 40 degrees F and rising. Air temperature will be measured in shade and away from artificial heat.

(3) When weather conditions prevent proper method of construction.

(B) Equipment.

(1) **Mixing Plant.** Use mixing plants that conform to AASHTO M 156, supplemented as follows:

(a) All Plants.

1. **Automated Controls.** Control proportioning, mixing, and mix discharging automatically. When RAP is incorporated into mixture, provide positive controls for proportioning processed RAP.

2. **Dust Collector.** AASHTO M 156, Requirements for All Plants, Emission Controls is amended as follows:

Equip plant with dust collector. Dispose of collected material. In the case of baghouse dust collectors, dispose of collected material or return collected material uniformly.

3. **Modifications for Processing RAP.** When RAP is incorporated into mixture, modify mixing plant in accordance with plant manufacturer's recommendations to process RAP.

(b) Drum Dryer-Mixer Plants.

1. **Bins.** Provide separate bin in cold aggregate feeder for each individual aggregate stockpile in mix. Use bins of sufficient size to keep plant in continuous operation and of proper design to prevent overflow of material from one bin to another.

2. **Stockpiling Procedures.** Separate aggregate for Mix II, Mix III and Mix IV into at least three stockpiles with different gradations as follows: coarse, intermediate, and fine. Separate aggregates for Mix V into at least two stockpiles. Stockpile RAP separately from virgin aggregates.

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3. Checking Aggregate Stockpile. Check condition of the aggregate stockpile often enough to ensure that the aggregate is in optimal condition.

(c) Batch and Continuous Mix Plants.

1. Hot Aggregate Bin. Provide bin with three or more separate compartments for storage of screened aggregate fractions to be combined for mix. Make partitions between compartments tight and of sufficient height to prevent spillage of aggregate from one compartment into another.

2. Load Cells. Calibrated load cells may be used in batch plants instead of scales.

(2) Hauling Equipment. Use trucks that have tight, clean, smooth metal beds for hauling HMA.

Thinly coat truck beds with a minimum quantity of non-stripping release agent to prevent mixture from adhering to beds. Diesel or petroleum-based liquid release agents, except for paraffin oil, shall not be used. Drain excess release agent from truck bed before loading with HMA.

Provide a designated clean up area for the haul trucks.

Equip each truck with a tarpaulin conforming to the following:

(a) In good condition, without tears and holes.

(b) Large enough to be stretched tightly over truck bed, completely covering mix. The tarpaulin shall be secured in such a manner that it remains stretched tightly over truck bed and HMA mix until the bed is about to be raised up in preparation for discharge.

(3) Asphalt Pavers. Use asphalt pavers that are:

(a) Self-contained, power-propelled units.

(b) Equipped with activated screed or strike-off assembly, heated if necessary.

(c) Capable of spreading and finishing courses of HMA mixtures in lane widths applicable to typical section and thicknesses indicated in the contract documents.

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(d) Equipped with receiving hopper having sufficient capacity for uniform spreading operation.

(e) Equipped with automatic feed controls to maintain uniform depth of material ahead of screed.

(f) Equipped with automatic screed controls with sensors capable of sensing grade from outside reference line, sensing transverse slope of screed, and providing automatic signals to control screed grade and transverse slope.

(g) Capable of operating at constant forward speeds consistent with satisfactory laying of mixture.

(h) Equipped with a means 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.** Blaw-Knox bituminous pavers shall be equipped with the Blaw-Knox Materials Management Kit (MMK).
2. **Cedarapids Bituminous Pavers.** Cedarapids bituminous pavers shall be those that were manufactured in 1989 or later.
3. **Barber-Green/Caterpillar Bituminous Pavers.** 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}".

Bituminous pavers not listed above shall have similar attachments or designs that shall make them equivalent to the bituminous pavers listed above. The Engineer will solely decide if it is equal to or better than the setups described for the equipment listed above.

Submit for review and acceptance, prior to the start of using the paver for the placing of plant mix, a full description in writing of the means and methods that will be used to prevent the bituminous paver from having both aggregate and

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temperature segregation. Use of any paver that has not been accepted is prohibited until acceptance of the paver is received from the Engineer. Any pavement placed with an unaccepted paver will be regarded as not compliant work and may not be paid for and may require removal.

Supply a Certificate of Compliance that verifies that the manufacturer's approved means and methods used to prevent bituminous paver from having both aggregate and temperature segregation have been implemented on all pavers used on the project and are working in accordance with the manufacturer's requirements and Contract Documents.

(4) Rollers. Rollers shall be self-propelled, steel-tired tandem, pneumatic-tired, or vibratory-type rollers capable of reversing without shoving or tearing the just placed HMA mixture. Provide sufficient number, sequencing, type, and rollers of sufficient weight to compact the mixture to required density while mixture is still in workable condition. Equipment shall not excessively crush aggregate. Operate rollers in accordance with manufacturer's recommendations and Contract Documents. The use of intelligent compaction is encouraged and may be required elsewhere in the Contract Documents.

(a) Steel-Tired Tandem Rollers. Steel-tired tandem rollers used for initial breakdown or intermediate roller passes shall have minimum gross weight of 12 tons and shall provide minimum 250-pound weight per linear inch of width on drive wheel.

Steel-tired tandem rollers used for finish roller passes shall have minimum total gross weight of 3 tons.

Do not use roller with grooved or pitted rolling drum or worn scrapers or wetting pads. Replace excessively worn scrapers and wetting pads before use.

(b) Pneumatic-Tired Rollers. Pneumatic-tired rollers shall be oscillating-type, equipped with smooth-tread pneumatic tires of equal size and diameter. Maintain tire pressure within 5 pounds per square inch of designated operational pressure when hot. Space tires so that gaps between adjacent tires are covered by following set of tires.

Pneumatic-tired rollers used for breakdown or intermediate roller passes shall have a ballast capable of establishing an operating weight per tire of not less than 3,000 pounds. Equip rollers with tires having minimum 20-inch

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wheel diameter with tires inflated to 70 to 75 pounds per square inch pressure when cold and 90 pounds per square inch when hot. Equip rollers with skirt-type devices to maintain temperature of tires during rolling operations.

Pneumatic-tired rollers used for kneading finished asphalt surfaces shall have a ballast capable of establishing an operating weight per tire of not less than 1,500 pounds. Equip rollers with tires having minimum 15-inch wheel diameter with tires inflated to 50 to 60 pounds per square inch pressure. If required, equip rollers with skirt-type devices to maintain temperature of tires during rolling operations.

(c) Vibratory Rollers. Vibratory rollers shall be steel-tired tandem rollers having minimum total weight of 3 tons. Equip vibratory rollers with amplitude and frequency controls and speedometer. Operate vibratory roller in accordance with manufacturer's recommendations. For very thin lifts, 1 inch or less in thickness, vibratory rollers shall not be used in the vibratory mode. Instead, operate the unit in the static mode.

(5) Hand Tools. Keep hand tools used in production, hauling, and placement of HMA clean and free of contaminants. Diesel or mineral spirits or other cleaning material that is potentially deleterious to HMA may be used to clean hand tools providing:

- (a)** It does not contaminate HMA with cleaning material.
- (b)** Clean hand tools over catch pan with capacity to hold all the cleaning material.
- (c)** Remove all diesel or mineral spirits or other cleaning material that is potentially deleterious to HMA from hand tools before using with HMA.
- (d)** Hand tools used shall be in a condition such that it meets the requirements that it was manufactured for, e.g., a straightedge shall meet the straightness requirement of the manufacturer.

(6) Material Transfer Vehicle (MTV).

(a) Usage. MTV usage applies to surface courses of paving projects on all Islands except Lanai, unless otherwise indicated. When placing HMA surface course use MTV to independently deliver mixtures from hauling equipment to paving equipment MTV usage will not be required for the following:

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1. Projects with less than 1,000 tons of HMA.
2. Temporary pavements.
3. Bridge deck approaches.
4. Shoulders.
5. Tapers.
6. Turning lanes.
7. Driveways.
8. Areas with low overhead clearances.

(b) Equipment. When using MTV, install minimum 10-ton-capacity hopper insert in conventional paver hopper. Provide the following equipment:

1. High-capacity truck unloading system in MTV capable of receiving HMA from hauling equipment.
2. MTV storage bin with minimum 15-ton capacity.
3. An auger mixing system in one of the following: the MTV storage bin, or paver hopper insert, or paver hopper to continuously mix HMA prior to discharging to the paver's conveyor system.

Avoid stop-and-go operations by coordinating plant production rate, number of haul units, and MTV and paver speeds to provide a continuous, uniform, segregation-free material flow and smooth HMA pavement. Maintain uniform paver speed to produce smooth pavements.

(c) Performance Evaluation. Evaluate the performance of MTV and mixing equipment by measuring mat temperature profile immediately behind paver screed on first day of paving and when it feels the need to do so due to perceived changes in performance or as directed by the Engineer.

Use a hand-held temperature device that has been calibrated within the past 12 months. It shall be an infrared temperature gun is capable of measuring in one degree or finer increments between the temperatures of 80 degrees to 400 degrees F with a laser to indicate where the temperature reading is being taken. Six temperature profile measurements shall be taken of mat surface using infrared

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temperature gun at 50-foot intervals behind paver. Each temperature profile shall consist of three surface temperature measurements taken transversely across the mat in approximately a straight line from screed while paver is operating. For each profile, temperatures shall be measured approximately 1 foot from each edge and in middle of mat. The difference between maximum and minimum temperature measurements for each temperature profile shall not exceed 10 degrees F. If any two or more temperature profiles exceeds the allowable 10-degree F temperature differential, halt paving operation and adjust MTV or mixing equipment to ensure that material placed by paver meets specified temperature requirements. Redo the measuring of mat temperature profile until adjustment of the MTV or mixing equipment is adequate. Submit all temperature profiles to the Engineer by next business day. Information on the report shall show location and temperature readings and time test was performed. Enough information shall be given, so the Engineer will be able to easily locate the test site of the individual measurement.

When requested temperature profile measurements shall be done in the presence of the Engineer.

Once adjustments are made, repeat measurement procedure for the next two placements to verify that material placed by paver meets specified temperature requirements. Terminate paving if temperature profile requirements are not met during repeated measurement procedure. If equipment fails to meet requirements after measurement procedure is repeated once, replace equipment before conducting any further temperature profile measurements.

The Engineer may perform surface temperature profile measurements at any time during project. The Engineer may in lieu of a hand-held infrared temperature device use an infrared camera or device that is capable of measuring temperatures to locate cold spots. If such cold spots exist, the Engineer may require adjustments to the MTV.

If bleeding or fat spots occur in the pavement adjust means and methods to eliminate such pavement defects and perform remedial repair to pavement acceptable to the Engineer. Bleeding is defined as excess binder occurring on the surface of the pavement. It may create a shiny, glass-like, reflective appearance and may be tacky to the touch. Fat spots are localized bleeding.

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(d) Transport.

1. Trailered MTV. Transport MTV by means of truck-tractor/trailer combination in accordance with Chapter 104 of Title 19, Department of Transportation, entitled "The Movement by Permit of Oversize and Overweight Vehicles on State Highways".

2. Crossing Bridges for Self-Powered MTV.

When self-powered MTV exceeds legal axle or total weight limits for vehicles under the HRS, Chapter 291, conform to the following when crossing bridges within project limits unless otherwise indicated in the Contract Documents:

- a. Completely remove mix from MTV.
- b. Move MTV at relatively constant speed not exceeding 5 miles per hour. MTV will not be allowed to stop on bridge.
- c. No other vehicle or equipment will be allowed on bridge.
- d. The MTV shall not attempt to cross a bridge where the posted load limit is less than or equal to the weight of the MTV empty. Permission to cross the bridge shall be obtained from the Engineer and HWY-DB in writing.

(C) Preparation of Surface. Clean existing pavement in accordance with Section 310 - Brooming Off. Apply tack coat in accordance with Section 407 - Tack Coat. Tack coat shall not be applied to surfaces to receive an application of joint adhesive.

Where indicated in the Contract Documents, bring irregular surfaces to uniform grade and cross section by furnishing and placing one or more leveling courses of HMA Mix V. Spread leveling course in variable thicknesses to eliminate irregularities in existing surface. Place leveling course such that maximum depth of each course, when thoroughly compacted, does not exceed 3 inches.

In multiple-lift leveling course construction, spread subsequent lifts beyond edges of previously spread lifts in accordance with procedures contained in current edition of the Asphalt institute's *Construction of Hot Mix Asphalt Pavements*, Manual Series No. 22 (MS-22) for leveling wedges.

Notify the Engineer of existing surfaces that may not be in a condition that will have enough strength to be a good bonding surface or foundation

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and should be removed or have remedial repairs done before new pavement placement.

(D) Plant Operation.

(1) Preparation of Asphalt Binder. Uniformly heat asphalt binder and provide continuous supply of heated asphalt cement from storage to mixer. Do not heat asphalt binder above the recommendation of the supplier for modified binders or above 350 degrees F for neat binders.

(2) Preparation of Aggregate. Dry and heat aggregate material at temperature sufficient to produce design temperature of job-mix formula. Do not exceed 350 degrees F. Adjust heat source used for drying and heating to avoid damage to and contamination of aggregate. When dry, aggregate shall not contain more than 1 percent moisture by weight.

For batch plants, screen aggregates immediately after heating and drying into three or more fractions. Convey aggregates into separate compartments ready for batching and mixing with asphalt binder.

(3) Mixing. Measure aggregate and asphalt; or aggregate, RAP, and asphalt into mixer in accordance with an accepted job-mix formula. Mix until components are completely mixed and adequately coated with asphalt binder in accordance with AASHTO M 156. Percent of coated particles shall be 95 percent when tested in accordance with AASHTO T 195.

(4) Plant Inspection. For control and acceptance testing during periods of production, provide a testing laboratory that meets the requirements of AASHTO M 156. Provide space, utilities, and equipment required for performing specified tests.

(E) Spreading and Finishing. Prior to each day's paving operation, check screed or strike-off assembly surface with straight edge to ensure straight alignment and there is no damage or wear to the machine that will affect performance. Provide screed or strike-off assembly that produces finished surface without tearing, shoving, and gouging HMA. Discontinue using spreading equipment that leaves ridges, indentations, or other marks, or combination thereof in surface that cannot be eliminated by rolling or affects the final smoothness of the pavement or be prevented by adjustment in operation.

Maintain HMA at minimum 250 degrees F temperature at discharge to paver. The Engineer shall observe the contractor measuring the temperature of mix in hauling vehicle just before depositing into spreader or paver or MTV.

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Deposit HMA in a manner that minimizes segregation. Raise truck beds with tailgates closed before discharging HMA.

Lay, spread, and strike off HMA upon prepared surface. Where practical, use asphalt pavers to distribute mixture.

Where practical, control horizontal alignment using automatic grade and slope controls from reference line, slope control device. Existing pavements or features shall not be used for grade control alone.

Obtain sensor grade reference, horizontal alignment by using established grade and slope controls. For subsequent passes, substitution of one ski with joint-matching shoe riding on finished adjacent pavement is acceptable. Use of a comparable non-contact mobile reference system and joint matching shoe is acceptable.

Avoid stop-and-go operation. Maintain a constant forward speed of paver during paving operation and minimize other methods that impact smoothness.

Offset longitudinal joint in successive lifts by approximately 6 inches. Incorporate into paving method an overlap of material of 1-inch +/- 0.5 inches at the longitudinal joint. The HMA overlap material shall be left alone when initially placed and shall not be bumped back or pushed back with a lute or any other hand-held device. If the overlap exceeds the maximum amount remove the excess with a flat shovel, allowing recommended amount of overlap HMA material to remain in place to be compacted. Do not throw the removed excess HMA material on to the paving mat. The longitudinal joint in a surface course when total roadway width is comprised of two lanes shall be near the centerline of pavement or near lane lines when roadway is more than two lanes in width. The longitudinal joint shall not be constructed in the wheel path or under the longitudinal lane lines. Make a paving plan drawing showing how the longitudinal joint will not be located in these areas.

Control the horizontal alignment of the longitudinal edge of the HMA mat being installed so that the edge is parallel to the centerline or has a uniform alignment, e.g., the edge of the mat is straight line or uniform curve, no wavy edge, etc. to have a consistent amount of HMA material at the joint.

Check the compaction of the longitudinal joint during paving often enough to ensure that it will meet the compaction requirements.

If nuclear gauges and ground penetrating radar are used as the contractor's quality control method, they shall be properly calibrated and periodically checked by comparison to cores taken from the pavement. The

622 use of sand as an aid in properly seating the gauge may also be considered
623 for improving the accuracy of the gauge.

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625 In areas where irregularities or unavoidable obstacles make use of
626 mechanical spreading and finishing equipment impracticable, spread, rake,
627 and lute mixture by hand tools. For such areas, deposit, spread evenly,
628 and screed mixture to required compacted thickness.

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630 Demonstrate competence of personnel operating grade and crown
631 control device before placing surface courses. If automatic control system
632 becomes inoperative during the day's work, the Engineer will permit the
633 Contractor to finish day's work using manual controls. The Engineer may
634 also allow additional HMA to be ordered and placed using manual controls
635 if it will provide a safer work site for the public to travel through. Do not
636 resume work until automatic control system is made operative. The
637 Engineer may waive requirement for electronic screed control device when
638 paving gores, shoulders, transitions, and miscellaneous reconstruction
639 areas where the use of the devices is not practical.

640
641 When production of HMA can be maintained and when practicable,
642 use pavers in echelon shall be used to place surface course in adjacent
643 lanes.

644
645 At the end of each workday, HMA pavement that is open to traffic shall
646 not extend beyond the panel of the adjacent new lane pavement by more
647 than the distance normally placed in one workday. At end of each day's
648 production, construct tapered transitions along all longitudinal and
649 transverse pavement drop-offs; this shall apply to areas where existing
650 pavement is to meet newly placed pavement. Use slopes of 6:1 for
651 longitudinal taper transitions and 48:1 for transverse tapered transitions.
652 Maximum drop-off height along the joints shall be 2 inches. Also, using a
653 48:1 slope provides a taper around any protruding object, e.g., manholes,
654 drain boxes, survey monuments, inlets, etc., that may be above pavement
655 surface when opened to the public. If the object is below the surface of the
656 pavement then fill the depression until it is level with the surrounding
657 pavement or raise depressed objects to the finish grade of the placed
658 pavement. Remove and dispose of all transition tapers before placing
659 adjoining panel or next layer of HMA. Notify traveling public of pavement
660 drop-offs or raised objects with signs placed in every direction of traffic that
661 may use and encounter pavement drop-offs or protruding objects or holes.

662
663 Use the same taper rates for areas where there is a difference in
664 elevation due to construction work.

665
666 At end of each workweek, complete full width of the roadway's
667 pavement, including shoulders, to same elevation with no drop-offs.

668
669 **(F) Compaction.** Immediately after spreading and striking off HMA and
670 adjusting surface irregularities, uniformly compact mixture by rolling.

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Initiate compaction at highest mix temperature allowing compaction without excessive horizontal movement. Temperature shall not be less than 220 degrees F.

Finish rolling using tandem roller while HMA temperature is at or above 175 degrees F.

On superelevated curves, begin rolling at lower edge and progress to higher edge by overlapping of longitudinal trips parallel to centerline.

If necessary, repair damage immediately using rakes and fresh mix. Do not displace line and grade of HMA edges during rolling.

Keep roller wheels properly moistened with water or water mixed with small quantities of detergent. Use of excess liquid, diesel, and petroleum-based liquids will not be allowed on rollers.

Along forms, curbs, headers, walls and other places not accessible to rollers, compact mixture with hot hand tampers, smoothing irons, or mechanical tampers. On depressed areas, trench roller or cleated compression strips under roller may be used to transmit compression.

Before the start of compaction or during compaction or both remove pavement that is loose, broken, or contaminated, or combination thereof; pavement that shows an excess or deficiency in asphalt binder content; and pavement that is defective in anyway. Replace with fresh HMA pavement of same type, and compact. Remove and replace defective pavement and compact at no increase in contract price or contract time.

Operate rollers at slow and uniform speed with no sudden stops. The drive wheels shall be nearest to the paver. Continue rolling to attain specified density and until roller marks are eliminated.

Rollers shall not be parked on the pavement placed that day or shift.

(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 93.0 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.

Place HMA pavement in individual lifts that are within minimum and maximum allowable compacted thickness for various types of mixture as specified in Table 401.02-1 - Limits of Compacted Lift Thickness and Asphalt Content.

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(2) HMA Pavement Courses Less Than One and a Half Inches Thick. Where HMA pavement compacted thickness indicated in the contract documents is less than 1-1/2 inches, compaction to a specified density will not be required.

Use only non-vibratory, steel-tired, tandem roller. Roll entire surface with minimum of two roller passes. A roller pass is defined as one trip of the roller in one direction over any one spot.

For intermediate rolling, roll entire surface with minimum of four passes of roller.

Finish rolling using steel-tired, tandem roller. Continue rolling until entire surface has been compacted with minimum of three passes of roller, and roller marks have been eliminated.

Do not use rollers that will excessively crush aggregate.

(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 than 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. Paved shoulders shall be compacted in the same manner as pavements designed for vehicular traffic.

(G) Joints, Trimming Edges and Utility Marking. At HMA pavement connections to existing pavements, make joints vertical to depth of new pavement. Saw cut existing pavement and cold plane in accordance with Section 415 - Cold Planing of Existing Pavement to depth equal to thickness of surface course or as indicated in the Contract Documents.

At HMA connections to previously placed lifts, form transverse joints by cutting back on previous run to expose full depth of course. Dispose of material trimmed from edges. Protect end of freshly laid mixture from rollers.

Before and after paving, identify and mark location of existing utility manholes, valves, and handholes on finished surface. Adjust existing frames and covers and valve boxes to final pavement finish grade in accordance with Section 604- Manholes, Inlets and Catch Basins and Section 626 -Manholes and Valve Boxes for Water and Sewer Systems.

(1) Longitudinal joints. Submit for review the means and methods that will be used to install longitudinal joints at the required

769 compaction and density. Compact longitudinal joints to be not less than
770 91.0 percent of the maximum specific gravity determined in accordance
771 with AASHTO T 209, modified by deletion of Supplemental Procedure for
772 Mixtures Containing Porous Aggregate. Verify the compaction of the
773 longitudinal joints meets requirements by using non-destructive testing
774 methods during paving and submit the results on the daily quality control
775 test reports.

776
777 Test for compaction and density regardless of layer thickness.
778 Compaction and density of the longitudinal joint shall be determined by
779 using six-inch diameter cores. For longitudinal joints made using butt
780 joints cores shall be taken over the joint with half of the core being on
781 each side of the joint. For longitudinal joints using notched wedge joints,
782 center core over the center of the wedge so that 50 percent of the material
783 is from the most recently paved material and the remaining 50 percent of
784 the core is from the material used to pave the previous layer. One core
785 shall be taken at a maximum frequency of every 1,500 lineal feet (LF) of
786 the second side of the longitudinal joint and any fraction of that length for
787 each day of paving with a minimum of one core taken for each longitudinal
788 joint per day. Cores taken for the testing of the longitudinal joint may be
789 used to determine pavement thickness.

790
791 When the longitudinal joints are found to have less than 91.0
792 percent of the maximum specific gravity, overband all longitudinal joints
793 within the entire lot represented by the non-compliant core, PG binder
794 seal coat, or other type of joint enrichment accepted by the Engineer.
795 The overband shall not decrease the skid resistance of the pavement
796 under any ambient weather condition. Submit overband material's
797 catalog cuts, test results and application procedure for review and
798 acceptance by the Engineer before use. Center the overband over the
799 longitudinal joint. The overband shall be placed in a uniform width and
800 horizontal alignment. The overband shall have no holidays or
801 streaking in its placement. The width of the overband shall be based
802 on how the longitudinal joint was constructed or as directed by the
803 Engineer. If a butt joint is used, the overband width shall be a minimum
804 of 12-inches. For notch wedge or wedge joints the overband width shall
805 be the width of the wedge plus an additional six-inches minimum.
806 Replace any pavement markings damaged or soiled by the overband
807 remedial repair process.

808
809 For longitudinal joints that have a compaction of less than 89
810 percent of the maximum specific gravity; removal may be required by the
811 Engineer instead of overbanding the non-compliant joint.

812
813 Persistent low compaction results may be cause to suspend work
814 and remove non-conforming work. During the suspension of paving,
815 revise means and methods used in constructing longitudinal joints and
816 submit to the Engineer for review and acceptance. Suspension may
817 occur when:

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(1) Two or more longitudinal joints tests fail to meet the minimum compaction

(2) One sample reveals that the joint compaction is 89 percent or less.

(H) HMA Pavement Samples. Obtain test samples from compacted HMA pavement within 72 hours of lay down. Provide minimum 4-inch diameter cores consisting of undisturbed, full-depth portion of compacted mixture taken at locations designated by the Engineer in accordance with the "Sampling and Testing Guide for Acceptance and Verification" in Hawaii DOT Highways Division, *Quality Assurance Manual for Materials*, Appendix 3. Cores shall be taken in the presence of the Engineer. Turn cores over to Engineer immediately after cores have been taken.

For pavement samples for longitudinal joints provide 6-inch diameter cores minimum. For pavement samples for other than longitudinal joints 4-inch diameter cores minimum shall be taken. All cores shall consist of undisturbed, full-depth of the lift of the compacted mixture taken at locations designated by the Engineer in accordance with the "Sampling and Testing Guide for Acceptance and Verification" in Hawaii DOT Highways Division, *Quality Assurance Manual for Materials*, appendix 3.

Cores that separate shall indicate to the Engineer that there is insufficient bonding of layers. Modify the previously used paving means and methods to prevent future debonding of layers. Debonding of a core sample after adjustment of the Contractor's methods will be an indication of continued non-conforming work and the Engineer may direct removal of the layer at no additional cost or contract time.

Restore HMA pavement immediately after obtaining samples. Clean core hole and walls of all deleterious material that will prevent the complete filling of the core hole and the bonding of the new HMA to the existing. Apply tack coat to vertical faces of sample holes. Fill sampled area with new HMA pavement of same type as that removed. If hand compaction is used; fill in layers not exceeding the minimum thickness stated in Table 401.02-1 -Limits of Compacted Lift Thickness And Asphalt Content. Compact each layer to compaction requirements. If Mechanical Compaction methods are used, then layers may be the maximum layer thickness stated in Table 401.02-1 - Limits of Compacted Lift Thickness And Asphalt Content. Using tires or hand tamping to compact the HMA material to restore the pavement shall not be considered as mechanical compaction.

Only sample and test leveling course if 1-1/2 inches or greater. No compaction requirements for less than 1-1/2 inches.

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(I) HMA Pavement Thickness Tolerances.

Thickness of finished HMA pavement shall be within 0.25 inch of thickness indicated in the Contract Documents. Pavement not meeting the thickness requirements of the Contract Documents may be required by the Engineer to be removed and replaced.

Corrective methods taken on pavement exceeding specified tolerances, e.g., insufficient thickness by methods accepted by the Engineer, including removal and replacement, shall be at no increase in contract price or contract time.

The checking of pavement thickness shall be done after all remedial repairs, e.g., smoothness compliance repairs, compaction, have been completed, reviewed, and accepted by the Engineer.

(J) Quality Control Using New Technology. The Engineer and MTRB reserves the right to utilize new technology and methods to improve the detection of noncompliant work on the project. The technology or method may be used to locate defects in the work, e.g., ground penetrating radar to locate delaminations, moisture damage, thin sections, voids, non-compliant compaction, other non-destructive testing to locate flaws. The defect will be verified by the methods stated in the Contract Documents or by other established conventional means. If the technology or method has already been accepted elsewhere or has standardized testing procedures the results may be judged acceptable by the Engineer and no further testing will be required. These new technologies and methods may be used for the selection of sampling locations.

(K) Protection of HMA Pavement. Except for construction equipment directly connected with paving operations, keep traffic off HMA pavement.

Protect HMA pavement from damage until it has cooled and set.

Do not refuel equipment or clean equipment or hand tools over paved surfaces unless catch pan or device that will contain spilled fuel and other products is provided. After completion of refueling or cleaning, remove catch pan or device without spilling any of the collected content.

Do not park roller or other paving equipment on HMA pavement paved within 24 hours of laydown.

(L) Pavement Joint Adhesive

(1) Pavement Joint Adhesive on Joints. Use on all asphalt pavement construction where joints are formed at such locations but not limited to the following:

- 916 (a) Adjacent asphalt pavements, e.g., trafficked lanes,
 917 shoulders, etc.
 918
 919 (b) Asphalt pavement and adjacent concrete pavement
 920 or curb and gutter or any other surface where the bonding of
 921 the asphalt pavement and concrete surface is desired,
 922
 923 (c) Transverse joints between asphalt pavements not
 924 placed at the same time or if the pavement's temperature on
 925 one side of the joint is below the minimum temperature the mix
 926 can be at, during asphalt pavement compaction or installation.
 927
 928 (d) Cut face of an existing pavement where it will have
 929 new HMA pavement placed against it, e.g., utility trenches,
 930 partial or full depth repairs, etc.

931
 932 Pavement joint adhesive is not required on a longitudinal
 933 construction joint between adjacent hot mix asphalt pavements
 934 formed by echelon paving. Echelon paving is defined as paving
 935 multiple lanes side-by-side with adjacent pavers slightly offset at
 936 the same time.
 937

938 A longitudinal construction joint between one shift's work
 939 and another shall have pavement joint adhesive applied at the
 940 joint. Any longitudinal construction joint formed, with the
 941 temperature on one side of the joint that is below the minimum
 942 temperature the mix can be when compacted to contract
 943 requirements during asphalt pavement installation, shall have
 944 pavement joint adhesive applied at the joint.
 945

946 (2) **Material requirements.** Asphalt joint adhesive shall meet
 947 requirements as specified in Table 401.03-1 - Asphalt Joint
 948 Adhesive 924 Specifications.
 949

TABLE 401.03-1 -ASPHALT JOINT ADHESIVE SPECIFICATIONS		
TEST		SPECIFICATION
Brookfield Viscosity, 204°C [400°F]	ASTM D 3236	4,000-10,000 cp
Cone Penetration, 25°C [77°F]	ASTM D 5329	60-100 dmm
Resilience, 25°C [77°F]	ASTM D 5329	30% minimum
Ductility, 25°C [77°F]	ASTM D 113	30 cm minimum
Ductility, 4°C [39.2°F]	ASTM D 113	30 cm minimum
Tensile Adhesion, 25°C [77°F]	ASTM D 5329	500% minimum
Softening Point	ASTM D 36	77 °C [170 °F] min.
Asphalt Compatibility	ASTM D 5329	Pass

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(3) Construction Requirements for Asphalt Joint Adhesive

(a) Equipment Requirements. Use a jacketed double boiler type melting unit, with both agitation and recirculation systems. Provide a pressure feed wand application system.

(b) Material Handling. Submit a copy of the manufacturer's recommendations for heating, re-heating, and applying the joint adhesive material. Follow manufacturer's recommendations. Do not remove the joint adhesive from the package until immediately before it is placed in the melter. Joint adhesive boxes must be clearly marked with the name of the manufacturer, the trade name of the adhesive, the manufacturer's batch and lot number, the application/pour temperature, and the safe heating temperature. Feed additional material into the melter at a rate equal to the rate of material used.

Verify the pouring temperature of the joint adhesive at least once per hour at the point of discharge. Stop production if the adhesive falls below the recommended application/pour temperature. When the temperature of the adhesive exceeds the maximum safe heating temperature, stop production, empty the melter, and dispose of that adhesive in an environmentally safe method. No payment will be made for this material or its disposal.

Do not blend or mix different manufacturer's brands or different types of adhesives.

(c) Joint Adhesive Application: The face of the joint that the new asphalt pavement will bind to shall be clean and dry before the joint adhesive is applied. Apply the pavement joint adhesive material to the entire face of the surface where HMA pavement shall be installed. The thickness of the asphalt adhesive application shall be approximately 1/8 inch. Use an application shoe attached to the end of application wand. Do not overlap the joint by greater than 1/2-inch at the top of the joint or two-inches at the bottom of the joint. Apply the joint adhesive immediately in front of the paving operation. If the adhesive is tracked by construction vehicles, repair the damaged area, and restrict traffic from driving on the adhesive.

(d) Field Sampling. Take a sample from the application wand during the first 20 minutes of placing sealant. One sample should be taken per manufacturer's batch or minimum

998 of every 6 months on the Project in the presence of the
999 Engineer.

1000 Each sample shall consist of one quart in an aluminum
1001 or steel sample container. The sampling container shall be
1002 labeled with Contractor's name; project name and number;
1003 date and time sample taken; location of where material was
1004 used at, e.g., from where to where it was used at in stations;
1005 manufacturer and lot number of the sealant. Turn over
1006 samples to Engineer without Engineer losing sight of the
1007 sample. The Engineer reserves the right to conduct
1008 supplementary sampling and testing of the sealant material.
1009

1010 **(M) Pavement Smoothness Rideability Test.** Perform surface
1011 profile tests frequently to ensure that the means and methods being used
1012 produces pavement that is compliant with the surface profile smoothness
1013 requirement. Test the pavement surface for smoothness with High-
1014 Speed Inertial Profiler to determine the International Roughness Index
1015 (IRI) of the pavement. For the locations determined by the Engineer, a
1016 10-foot straightedge shall be used to measure smoothness.
1017

1018 All smoothness testing must be performed with the presence of the
1019 Engineer. The High-Speed Inertial Profiler operator shall be a certified
1020 operator by MTRB or the manufacturer.
1021

1022 The High-Speed Inertial Profiler operator's certification shall be no
1023 older than five years old at the date of the Notice to Proceed and at the day
1024 of the pavement profile measurement.
1025

1026 The finished pavement shall comply to all the following requirements:
1027

1028 **(a) Smoothness Test using 10-Foot Straightedge (Manual**
1029 **or rolling)** The 10-foot straightedge is used to identify the locations
1030 that vary more than 3/16 inch from the lower edge when the 10-
1031 foot straightedge is laid on finished pavement on the direction
1032 parallel with the centerline or perpendicular to centerline. Remove
1033 the high points that cause the surface to exceed that 3/16 inch
1034 tolerance by grinding.
1035

1036 The Contractor shall use a 10-foot straightedge for the
1037 following locations:
1038

- 1039 1. Longitudinal profiling parallel to centerline, when within
1040 15 feet of a bridge approach or existing pavement which
1041 is being joined.
- 1042 2. Transverse profiling of cross slopes, approaches,
1043 and as otherwise directed. Lay the straightedge in a direction
1044 perpendicular to the centerline.
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3. When pavement abuts bridge approaches or pavement not under this Contract, ensure that the longitudinal slope deviations of the finished pavement comply with Contract Document's requirements.

4. Short pavement sections up to 600 feet long, including both mainline and non-mainline sections on tangent sections and on horizontal curves with a centerline radius of curve less than 1,000 feet.

5. Within a superelevation transition on horizontal curves having centerline curve radius less than 1,000 feet, e.g., curves, turn lanes, ramps, tapers, and other non-mainline pavements.

6. Within 15 feet of transverse joint that separates pavement from existing pavement not constructed under the contract, or from bridge deck or approach slab for longitudinal profiling.

7. At miscellaneous areas of improvement where width is less than 11 feet, such as medians, gore areas, and shoulders.

8. As otherwise directed by the Engineer. The Engineer may confine the checking of through traffic lanes with the straightedge to joints and obvious irregularities or choose to use it at locations not specifically stated in this Section.

(b) High-Speed Inertial Profiler

There shall be a minimum 3 profile runs per lane, for each wheel path (left and right) which is approximately three feet from edge lane line. The segment length shall be 0.1 mi. The final segments in a lane that are less than 0.1 mi shall be evaluated as an independent segment and pay adjustments will be prorated for length. The profiles shall be taken in the direction of traffic only.

The latest version of FHWA ProVAL software shall be used to conduct profile analysis to determine IRI and areas of localized roughness. The IRI values shall be reported in units of in/mi.

Areas of localized roughness will be identified by using ProVAL's "Smoothness Assurance" analysis, calculating IRI with a continuous short interval of 25 feet and the 250-mm filter applied.

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Additional runs may be required by the Engineer if the data indicate a lack of repeatability of results. A 92% agreement is required for repeatability and IRI values shall have at minimum a 95% confidence level.

(N) Required Pavement Smoothness

The IRI for the left and right wheel paths in an individual lane will be computed and then averaged to determine the Mean Roughness Index (MRI) values. The MRI will be used to determine acceptance and pay adjustment. Each lane shall be tested and evaluated separately.

There are three (3) categories of target MRI values:

TABLE 401.03-2 - PAVEMENT SMOOTHNESS CATEGORIES		
Category	Description	MRI
Type A	Three or more opportunities for improving ride	Shall not exceed 60 in/mi
Type B	Two opportunities for improving ride	Shall not exceed 70 in/mi
Type C	One opportunity for improving ride	Shall not exceed 75 in/mi

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An opportunity for improving ride is considered as one (1) lift of asphalt pavement, including but not limited to HMAB, HMA, PMA, and SMA.

For the location where a 10-foot manual straightedge is required, the surface shall not vary more than 3/16 inch from the lower edge of a straightedge.

No pre-final inspection, final inspection, and substantial completion granted will be made until the pavement meets smoothness requirement and all required profile reports are submitted to the Engineer and MTRB and are accepted.

(O) Request for Profile Testing by the Department.

For Type C, prior to pavement activities, the Engineer will measure the smoothness of the existing pavement.

The Contractor shall submit a written request to the Engineer to perform all required profile tests.

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The request shall be made at least 30 days before desired testing date and shall include an approximate acceptance profile testing date, a plan view drawing of the area to be tested with the limits of the test area highlighted.

The Contractor shall reimburse HOOT for any incurred cost related to any Contractor-caused cancellation or a deduction to the monthly payment will be made.

(P) Department Requirements for Profile Testing. When a request for testing is made, the requested area to be tested shall be 100% of the total area indicated to be paved in the Contract Documents unless the requirement is waived by the Engineer and MTRB.

Department acceptance surface tests will not be performed earlier than 14 days after HMA placement.

Clean debris and clear obstructions from area to be tested, as well as a minimum of 100 feet before and beyond the area to be tested before testing starts for use as staging areas. Provide traffic control for all profile testing.

The Engineer or MTRB or both may cancel the profile testing if the test area is not sufficiently clean, traffic control is unsatisfactory, or the area is not a safe work environment or test area does not meet Contract Document requirements. This canceled profile test will count as one profile test.

(Q) Cost of Acceptance Profile Testing by The Department. The Engineer, MTRB, or State's Third-Party Consultant will perform one initial profile test, at no cost to the Contractor for each area to be tested.

The Department's High-Speed Inertial Profiler pavement profile will be used to determine if the pavement's profile, i.e., smoothness is acceptable.

If the profile of the pavement does not meet the requirements of the Contract Documents, the Contractor shall perform remedial work, i.e. corrective work then retest the area to ensure that the area has the required MRI, i.e., smoothness, before requesting another profile test by the Engineer.

(1) Additional testing. Additional testing, by the Department beyond the initial test will be performed at cost to the Contractor as follows:

(a) \$2,500 per test will be required when Department personnel or State's Third-Party Consultant is used.

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(R) Remedial Work for Pavements.

(1) Corrective work shall be required for any 25 ft interval with a localized roughness in excess of 160 in/ mi. The Engineer may waive localized roughness requirements for deficiencies resulting from manholes or other similar appurtenances. Adjust manholes or other similar appurtenances so that using a 10-ft. straightedge the area around that manhole or other similar appurtenance shall not have more than 3/16-in. variation between any 2 contacts on the straightedge.

If corrective action is not successful, the Engineer may require continued corrective action, or apply a payment adjustment of \$250 per occurrence.

(2) Corrective work shall also be required for any 0.1 mile interval with an average MRI above 95.0 in/mi for Types A and B. For Type A, correct the deficient section to an MRI of 60 in/mi or less. For Type B, correct the deficient section to an MRI of 70 in/mi or less. For Type C, corrective work may be required by the Engineer for 0.1 mile intervals that have an average MRI above the threshold shown in Tables 401.03-4 and 5 as applicable.

If corrective action does not produce the required improvement, the Engineer may require continued corrective action, or apply payment adjustment as shown in Tables 401.03-4 and 5.

(3) The Contractor shall notify the Engineer at least 24 hours prior to commencement of the corrective work. The Contractor shall not commence corrective work until the methods and procedure have been approved in writing by the Engineer.

(4) All smoothness corrective work for areas of localized roughness shall be for the entire lane width. Pavement cross slope shall be maintained through corrective areas.

(5) The remedial repair areas shall be neat, rectangular areas having a uniform surface appearance.

(6) If grinding is used on HMA pavement, the surface shall have nearly invisible grinding marks to passing motorist.

(7) Other methods may include milling and overlaying HMA pavement. The length, depth of the milling and the replacement material will be solely decided by the Engineer.

(8) The finished repaired pavement surface shall leave no ridges or valleys or fins of pavement other than those allowed below.

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(9) Remedial repairs shall not leave any drainage structures' inlets higher than the surrounding pavement or alter the Contract Document's drainage pattern.

(10) For items in the pavement other than drainage structures, e.g., manhole frame and covers, survey monuments, expansion joints etc., the finish pavement, ground or not, shall not be more than 1/4 inch in elevation difference. Submit to the Engineer remedial repair method to correct these conditions for acceptance.

(11) Pick up immediately grinding operation residue by using a vacuum attached to grinding machine or other method acceptable to the Engineer.

(a) Any remaining residue shall be picked up before the end of shift or before the area is open to traffic, whichever is earlier.

(b) Prevent residue from flowing across pavement or from being left on pavement surface or both.

(c) Residue shall not be allowed to enter the drainage system.

(d) The residue shall not be allowed to dry or remain on the pavement.

(e) Dispose of all material that is the result of the remedial repair operation, e.g., HMA residue, wastewater, and dust at a legal facility.

(12) Complete corrective work before determining pavement thickness for HMA pavements in accordance with Subsection 401.03(1) - HMA Pavement Thickness Tolerances.

(13) All HMA wearing surface areas that have been ground shall receive a coating, e.g., a coating material that will restore any lost impermeability of the HMA due to the grinding of the surface. The coating used shall not be picked up or tracked by passing vehicles or be degraded after a short period of time has passed, i.e., it shall have a service life equal to or greater than the HMA pavement. The coating shall not decrease the pavement's friction value. The coating's limits shall be the full width of the lane regardless how small. If the remedial repair area extends into the next lane, then the repair area will be full lane width also. Extend the length of coating areas in order for the coating area to look like the rest of the road and does not have patches on it, i.e., make the road look uniform in color. The coating shall be of a color that matches the surrounding

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pavement. The areas receiving the coating shall not be open to traffic until it has cured enough so that it cannot be picked up or tracked by passing vehicles or degrade. Submit means and methods of the coating and type of coating to the Engineer or MTRB for review and acceptance. Do not proceed with the coating without acceptance from the Engineer.

(14) Recompacting cold HMA, i.e., HMA that has reached ambient temperature is not an acceptable remedial repair method.

(15) Replace all pavement markings damaged or discolored by remedial repairs.

(16) Reprofile the corrected area and provide the Engineer the results that show the corrective action, i.e., remedial repairs were successful.

(S) Pavement Smoothness and Acceptance.

(1) Price and payment in various paving sections, e.g., 401 (Hot Mix Asphalt Pavement), shall be full compensation for all work and materials specified in the various paving sections and this section, including but not limited to furnishing all labor, materials, tools, equipment, testing, incidentals and for doing all work involved in micro milling, milling (cold planing), grinding existing or new pavement, removing residue, cleaning the pavement, necessary disposal of residue, furnishing of any water or air used in cleaning the pavement and any other related ancillary work or material or services. Also, it includes any remedial work, e.g., re-paving, surface grinding, application of a coating, curing compound, and replacement of damaged pavement markings.

(2) The contract price in those sections may be adjusted for pavement smoothness by the Engineer. The pavement smoothness contract unit price adjustments and work acceptance will be made in accordance with the following schedules.

TABLE 401.03-3-SMOOTHNESS PAY INCENTIVES		
Category	MRI (in/mi)	Pay Adjustment \$ per 0.1 mi
Type A	< 30.0	\$580
	30.0- less than 35.0	\$480
	35.0- less than 40.0	\$380
	40.0- less than 45.0	\$280
	45.0- less than 50.0	\$180
	50.0- less than 55.0	\$80
	55.0- less than 60.0	\$0
Type B	< 35.0	\$420
	35.0- less than 40.0	\$360
	40.0- less than 45.0	\$300
	45.0- less than 50.0	\$240
	50.0- less than 55.0	\$180
	55.0- less than 60.0	\$120
	60.0- less than 65.0	\$60
	65.0- less than 70.0	\$0
Type C	< 40.0	\$280
	40.0- less than 45.0	\$240
	45.0- less than 50.0	\$200
	50.0- less than 55.0	\$160
	55.0- less than 60.0	\$120
	60.0- less than 65.0	\$80
	65.0- less than 70.0	\$40
	70.0- less than 75.0	\$0

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(3) Pay Pavement Smoothness Adjustment will be based on the initial measured MRI for both left and right wheel path, prior to any corrective work for the 0.10-mile section, except for sections that the Contractor has chosen to remove and replace. For sections that are replaced, assessments will be based on the MRI determined after replacement.

(a) The Pavement Smoothness Adjustment will be computed using the plan surface area of pavement shown in the Contract Documents. This Pavement Smoothness Adjustment will apply to the total area of the 0.10-mile section for the lane width represented by MRI for the same lane. It does not include any other price adjustments specified in the Contract Documents. Those price adjustments will be, for each adjustment, calculated separately using the original contract price to determine the amount of adjustment to be made to the contract price. Sections shorter than 0.1 mile and longer than 50 feet shall be prorated.

(b) For 0.1 mile intervals with an average MRI above the threshold shown in Table 401.03-3, the Engineer shall apply a disincentive payment adjustment up to the limit shown.

i. For Types A and B, payment adjustments shall be applied up to an MRI of 95.0 per Table 401.03-4.

ii. For Type C, the payment adjustment shall be dependent on the average MRI of the pavement prior to paving activities

1. If the MRI of the pavement prior to paving activities is 125.0 in/mi or less, the payment adjustment shall be per Table 401.03-4.

2. If the MRI of the pavement prior to paving activities is more than 125.0 in/mi, the disincentive payment adjustment shall be per Table 401.03-5, and based on the percent improvement using the following formula:

$$\% \text{ Improvement} = (\text{Initial segment MRI} - \text{Final segment MRI}) \times 100 / (\text{Initial Segment MRI})$$

TABLE 401.03-4-SMOOTHNESS PAY DISINCENTIVES WITH MRI		
Category	MRI (in/mi)	Pay Adjustment \$ per 0.1 mi
Type A	60.0- less than 70.0	-\$100
	70.0- less than 75.0	-\$250
	75.0- less than 80.0	-\$350
	80.0- less than 85.0	-\$450
	85.0- less than 95.0	-\$550
	> 95.0	Corrective Work
Type B	70.0- less than 75.0	-\$100
	75.0- less than 80.0	-\$200
	80.0- less than 85.0	-\$300
	85.0- less than 95.0	-\$400
	> 95.0	Corrective Work
Type C (pre-paving MRI < 125)	75.0- less than 80.0	-\$50
	80.0- less than 85.0	-\$100
	85.0- less than 90.0	-\$150
	90.0- less than 100.0	-\$200
	> 100.0	-\$250

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TABLE 401.03-5 -SMOOTHNESS PAY DISINCENTIVES FOR PERCENT IMPROVEMENT		
Category	Percent Improvement %	Pay Adjustment \$ per 0.1 mi
Type C (pre-paving MRI > 125)	≥ 40	\$0
	20.0- less than 40.0	-\$100
	< 20	-\$200

1369

1370 (c) Incentives will not apply to areas where payment
1371 deductions or remedial repairs has been made for non-
1372 compliant work, e.g., low compaction, thin pavement,
1373 thermal segregation, low compressive or flexural strength,
1374 non-compliant alignment. Incentives will also not apply to
1375 areas where corrective work was required to meet contract
1376 smoothness requirements, unless the pavement section was
1377 replaced. All areas where corrective work was performed
1378 shall be tested again to ensure the smoothness
1379 requirements are met.

1380
1381 (d) There will be no incentive price adjustments to the
1382 contract prices regardless of the pavement meeting the
1383 Contract Documents' requirements for incentive contract
1384 price adjustment, when 25% of the total area paved of that
1385 particular type of pavement on the project has failed to meet
1386 any of the Contract document requirements, e.g.,
1387 smoothness, thickness, unit weight, asphalt content,
1388 pavement defects, compaction, flexural or compressive
1389 strength. Areas exempt from the smoothness requirements
1390 may not be included in the total area calculation unless it is
1391 non-compliant.

1392
1393 (e) For contracts using lump sum the method described in
1394 Subsection 104.06 Methods of Price Adjustment paragraph
1395 (3), will be used to calculated proportionate unit price, i.e.,
1396 the Engineer's calculated theoretical unit price. This
1397 calculated proportionate unit price will be used to calculate
1398 the unit price adjustment.

1399
1400 **401.04 Measurement.**

1401
1402 (A) The Engineer will measure PMA pavement per ton in accordance
1403 with the Contract Documents.

1404
1405 (B) Engineer will measure additional State pavement profiling work
1406 when applicable on a cost-plus basis as specified in this section and as
1407 ordered by Engineer. The Engineer will issue a billing for the pavement
1408 profile work done for the time period with the invoices and receipts that the
1409 billing was based on attached to the Contractor for each contract item. The
1410 Contractor's pavement profile work required in this section will not be
1411 measured and will be considered incidental to the various paving items
1412 unless stated otherwise.

1413
1414 **401.05 Payment.** The Engineer will pay for the accepted PMA pavement at
1415 the contract price per pay unit, as shown in the proposal schedule. Payment will

1416 be full compensation for the work prescribed in this section and the contract
1417 documents.

1418
1419 **(A)** Price and payment in Section 401 - PMA Pavement will be full
1420 compensation for all work and materials specified in this Section including
1421 furnishing all labor, materials, tools, equipment, testing, pavement profiles
1422 and incidentals and for doing all work involved in grinding existing or new
1423 pavement, removing residue, and cleaning the pavement, including
1424 necessary disposal of residue and furnishing any water or air used in
1425 cleaning the pavement and remedial work needed to conform to the
1426 requirements of the Contract Documents.

1427
1428 **(B)** No payment for the Contractor's pavement profile work required in this
1429 section will be made. The Contractor's pavement profile work shall be
1430 considered incidental to the various paving items unless stated otherwise.

1431
1432 **(C)** Engineer will pay or deduct for the following pay items when included
1433 in proposal schedule:

1434
1435 **Pay Item** **Pay Unit**

1436
1437 **(A)** PMA Pavement, Mix No. _____ Ton

1438
1439 **(1)** 70% of the contract unit price or the theoretical calculated unit
1440 price upon completion of submitting a job-mix formula acceptable to
1441 the Engineer; preparing the surface, spreading, and finishing the
1442 mixture; and compacting the mixture.

1443
1444 **(2)** 20% of the contract unit price or the theoretical calculated
1445 unit price upon completion of cutting samples from the compacted
1446 pavement for testing; placing and compacting the sampled area
1447 with new material conforming to the surrounding area; protecting
1448 the pavement; and compaction acceptance. Maintain temporary
1449 pavement markings and other temporary work zone items,
1450 maintain a clean work site.

1451
1452 **(3)** 10% of the contract unit price or calculate the unit price
1453 when the final configuration of the pavement markings is in place.

1454
1455 The Engineer will pay for adjusting existing frames and covers and
1456 valve boxes in accordance with and under Section 604 - Manholes, Inlets
1457 and Catch Basins. Adjustments for existing street survey monument frames
1458 and covers will be paid for as if each were a valve box frame and cover.

1459
1460 The Engineer may, at his sole discretion, use the sliding scale factor
1461 as specified in Table 401.05-1 - Sliding Scale Pay Factor for Compaction to
1462 accept HMA pavements compacted between 90.0 percent and 98.0 percent. If

1463 the sliding scale factor is used, the Engineer will make payment for the
1464 material in that production day at a reduced price by multiplying the contract
1465 unit price by the pay factor. The Engineer is not obligated to allow non-
1466 compliant work to remain in place and may choose to require removal of the
1467 pavement that is less than 93.0 percent or greater than 97.0 percent.
1468

1469 Removal of non-compliant pavement shall be in accordance with
1470 Subsection 105.12 Removal of Non-Conforming and Unauthorized Work.
1471

Table 401.05-1 – Sliding Scale Pay Factor for Compaction	
Percent Compaction	Percent of Quantity Paid
> 98.0	Removal
97.1 - 98.0	95
92.0 - 97.0	100
90.0 - 91.9	80
< 90.0	Removal

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END OF SECTION 401”

1 **SECTION 411 - PORTLAND CEMENT CONCRETE PAVEMENT**

2
3 Make the following amendments to said Section:

4
5 **(I)** Amend **Subsection 411.03(I)(1) — General** by revising the first paragraph from
6 line 205 to 210 to read:

7
8 **"(1)** General. Make advance arrangements for preventing delay in
9 concrete delivery and placement. An interval of more than 30 minutes
10 between placement of two consecutive batches or loads shall constitute
11 cause for stopping paving operations and requiring construction joint to be
12 placed, at no increase in contract price or contract time, at location and of
13 the type ordered by the Engineer."
14

15 **(II)** Amend **411.04 — Measurement** by revising lines 955 to 961 to read as follows:

16
17 **"411.04 Measurement.** The Engineer will measure concrete pavement per square yard
18 in accordance with the contract documents."
19

20 **(III)** Amend **411.05 — Payment** by revising lines 971 to 983 to read as follows:

"Pay Item	Pay Unit
_____ -Inch Concrete Pavement	Square Yard

25
26 The Engineer will not pay for longitudinal joints, transverse expansion joints,
27 transverse contraction joints, or construction joints separately and will consider the cost
28 for those items as included in the contract price for the concrete pavement pay item. The
29 cost is for the work prescribed in this section, Section 411 — Portland Cement Concrete
30 Pavement, and the contract documents."
31
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34

35 **END OF SECTION 411**

1 Amend **Section 511 – DRILLED SHAFTS** to read as follows:
2

3 **“SECTION 511 - DRILLED SHAFTS**
4

5
6 **511.01 Description.** This section is for installing drilled shafts according to the
7 contract. Drilled shafts include reinforced or unreinforced concrete with or without
8 concrete bell footings.
9

10 **511.02 Materials.** Materials shall conform to the following:
11

12 **(A) Portland Cement Concrete.** Portland cement concrete shall conform to
13 Section 601 - Structural Concrete, except concrete shall have a minimum 28-day
14 compressive strength of 5,500 pounds per square inch.
15

16 The in-place concrete shall have minimum 28-day compressive strength f'_c
17 = 5500 pounds per square inch and maximum water to cement ratio of 0.40 based
18 on a maximum cementitious material content of 640 pounds per cubic yard. The
19 in-place concrete density shall not be less than 3 pounds per cubic foot below the
20 theoretical mix design density.
21

22 Proportion the concrete mix designs to get properties of high workability,
23 compaction under self-weight, resistance to segregation, and resistance to
24 excessive bleeding. The maximum nominal aggregate size shall be 0.75 inch. The
25 slump range shall be 7.0 inches \pm 1.0 inch for concrete poured into a water free
26 borehole and 8.0 inches \pm 1.0 inch for concrete placed under water or under drilling
27 slurry. Slump for the concrete shall be a minimum of four inches after four hours
28 from initial mixing.
29

30 The Engineer will permit superplasticizers.
31

32 **(B) Reinforcing Steel.** Reinforcing steel shall conform to Section
33 602 - Reinforcing Steel.
34

35 **(C) Casings.** Casings shall have inside diameters not less than the required
36 diameter of the shafts and wall thicknesses specified or adequate to withstand
37 construction loads and stresses.
38

39 **(D) Cement Grout.** Cement grout used for filling the cored holes, shall be
40 prepackaged, non-shrink, non-metallic, and non-gaseous grout.
41

42 **511.03 Construction**
43

44 **(A) Qualifications of Drilled Shaft Contractor.** Be capable of installing
45 drilled shafts and other related work as specified in the contract and shall have the
46 following minimum experience requirements below.
47

48 **(1) Drilled Shaft Experience.** Because of the expertise required to
49 successfully complete the drilled shafts according to the contract, a qualified
50 drilled shaft Contractor shall install the drilled shaft. The drilled shaft
51 Contractor shall have installed at least three projects completed in the last
52 three years on which the Contractor has installed a minimum of five drilled
53 shafts per project of a diameter and length similar to those shown in the
54 contract. Include in list of projects, names and phone numbers of owner's
55 representatives who can verify the drilled shaft contractor's participation on
56 those projects. Drilled shaft Contractor shall have on its payroll and on the
57 project for the entire duration, supervisory personnel who have participated
58 in drilled shaft construction, similar to the type proposed in the contract, for
59 duration of at least three years within the last 10 years.

60
61 **(B) Preconstruction Requirements.**

62
63 **(1) Experience Information.** Submit the following information to the
64 Engineer within 30 days after award of contract for acceptance by the
65 Engineer:

66
67 **(a)** List of drilled shaft projects completed in the past 10 years.
68 The list of projects shall contain the names and phone numbers of
69 owner's representatives who can verify participation on that project.

70
71 **(b)** Name and experience record of the drilled shaft
72 superintendent who will be in charge of drilled shaft operations for
73 this project. Drilled shaft superintendent shall have minimum three
74 years experience within the last 10 years in drilled shaft construction
75 similar to type proposed. Drilled shaft superintendent shall remain
76 on the project for the duration of the drilled shaft work. Drilled shaft
77 superintendent who leaves the project shall be replaced with
78 personnel with equal or better experience. Submit proposed
79 superintendent's name and experience record for acceptance.

80
81 **(C) Protection of Existing Structures.** Prevent damage to existing
82 structures and utilities. Preventive measures shall include:

83
84 **(1)** Selecting construction methods and procedures that will prevent
85 caving of the shaft excavation and

86
87 **(2)** Monitoring and controlling the vibrations from construction activities
88 such as the driving of casing or sheeting or drilling of the shaft

89
90 **(D) Installation Plan.** At least 30 days before constructing the drilled shafts,
91 submit an installation plan for acceptance by the Engineer. This plan shall at a
92 minimum provide information on the following:

93
94 **(1)** List of proposed equipment such as cranes, drills, augers, bailing
95 buckets, final cleaning equipment, concrete pumps, and casing,

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(2) Details of construction operation sequence and the sequence of shaft construction in bents or groups,

(3) Details of shaft excavation methods including how the excavated material from the drilled shaft will be controlled on site and removed; and method of setting and extracting casing,

(4) Details of methods to ensure shaft stability, including prevention of caving or bottom heave using casings or other means accepted by the Engineer. If casings are to be used, submit dimensions and detailed installation and dewatering procedures for temporary casings; and removal procedures for temporary casing.

(5) If the Contractor plans to use slurry, details of the methods to mix, circulate and desand slurry,

(6) Details of methods to clean the shaft excavation,

(7) Details of reinforcement placement including lifting, support, and centralization methods,

(8) Details of concrete placement including proposed operational procedures for pumping method,

(9) Proposed concrete mix design, including expected strengths at 3,7, and 28 days. Submit test results of both a trial mix and a slump loss test, conducted by State-accepted testing laboratory using methods specified in Section 601 - Structural Concrete. Tests shall demonstrate that concrete meets 4-hour plasticity requirement at expected ground ambient temperature and at highest expected ambient air temperature (two separate slump loss tests required), and

The Engineer will evaluate the drilled shaft installation plan for conformance with the contract documents. Within 30 days after receipt of the plan, the Engineer will notify the Contractor of additional information required including if applicable, changes necessary to meet the contract requirements. The Engineer will reject parts of the installation plan that are unacceptable. The Contractor shall resubmit changes for re-evaluation within 15 days. The Engineer will have another 30 days to review all resubmittals. Procedural acceptance given by the Engineer shall be subject to trial in the field. The acceptance shall not relieve the Contractor of the responsibility to complete the work according to the contract.

(E). Construction Requirements. This subsection shall be applicable to production drilled shafts unless otherwise directed by the Engineer.

(1) Construction Sequence. Drilling of shafts within a horizontal distance of 3.0 times the shaft diameter to the hole being drilled shall not

145 commence until a minimum of 24 hours after the drilled shaft has been
146 completed by placement of concrete to the top of shaft elevation in order to
147 avoid interaction effects between adjacent shafts.
148

149 **(2) Construction Methods.** Excavate for shafts to the dimensions
150 and elevations shown in the contract. Its methods and equipment shall be
151 suitable for the intended purpose and materials met. Use the permanent
152 casing method only when required by the contract or authorized by the
153 Engineer. Blasting shall not be permitted.
154

155 **(a) Dry Construction Method.** The dry method includes
156 drilling the shaft excavation, removing accumulated water and loose
157 material from the excavation, and placing the reinforcing cage and
158 shaft concrete in a dry excavation. Use this method only at sites
159 where the groundwater table and soil conditions are suitable to
160 permit construction of the shaft in a dry excavation. The Engineer
161 will inspect the sides and bottom of the shaft visually before placing
162 the concrete. Dry excavation is defined as an excavation where
163 maximum depth of water does not exceed 3 inches.
164

165 **(b) Wet Construction Method.** This method includes using
166 water, mineral, or polymer slurry to maintain stability of the hole
167 perimeter while advancing the excavation to final depth, placing the
168 reinforcing cage, and concreting the shaft. Use this method at sites
169 where a dry excavation for placement of the shaft concrete cannot
170 be maintained
171

172 Reuse drilling water only if permitted by the Engineer and
173 contingent upon control of unit weight to no more than 62.5 pounds
174 per cubic foot and Marsh funnel viscosity to not more than 27
175 seconds per quart, at the time drilling water is introduced into the
176 borehole.
177

178 When locating drilled shafts in open water areas, extend the
179 exterior casings from above the water elevation into the ground.
180 Install the exterior casing to produce a positive seal at the bottom of
181 the casing so that no intrusion or extrusion of water or other materials
182 occurs into or from the shaft excavation.
183

184 **(c) Casing Construction Method.** The temporary casing
185 method may be used at sites where the dry or wet construction
186 methods are inadequate. Use permanent casing method only when
187 required by the contract documents or authorized by Engineer. The
188 casing may be placed either in a predrilled hole or advanced through
189 the ground by twisting, driving, or vibration before cleaning the
190 casing.
191

192 **(F) Excavation.**

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(1) General. Make the shaft excavations at locations, and to shaft geometry and dimensions shown in the contract. After acceptance by the Engineer, adjust drilled shaft tip elevations when the material met during excavation is unsuitable and/or differs from that anticipated in the design of the drilled shaft.

Maintain a construction method log during shaft excavation. Submit method log within 24 hours of shaft drilling completion. The log shall contain information such as:

- (a)** Excavation diameters;
- (b)** Equipment used;
- (c)** Type of material excavated with the elevations of the material;
- (d)** Rate of excavation including time drilling started, when different material is encountered, tool changes, finish of shaft excavation, and difficulties encountered;
- (e)** The description of and approximate top and bottom elevation of each soil or rock material encountered.
- (f)** Elevation and approximate rate of any seepage or groundwater; and
- (g)** Remarks, including temporary stoppages

Any drilled shaft concrete over the theoretical amount required to fill any excavations for the shafts dimensioned on the plans shall be furnished at no additional cost.

On projects with cofferdams, provide a certified diver to inspect the cofferdam conditions when the contract requires a concrete seal for construction. Before placing the concrete seal, the diver shall inspect the cofferdam interior periphery. The cofferdam interior periphery inspection includes each sheeting indentation and around each drilled shaft.

Dispose the excavated material according to Section 203 - Excavation and Embankment.

Furnish drilled shaft concrete required to fill excavations for shafts dimensioned in the contract documents.

Do not permit workers to enter the shaft excavation unless:

- (a)** A suitable casing is in place.

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(b) The water level is lowered and stabilized below the level the workers will occupy, and

(c) Adequate safety equipment and procedures are provided, performed and in place.

(2) Excavation and Drilling Equipment. The excavation and drilling equipment shall have adequate capacity including power, torque, and down thrust to excavate a hole to the maximum diameter and to a depth of ten feet or 20% beyond the depths shown in the contract, whichever is greater.

The excavation and overreaming tools shall be of adequate design, size, and strength to do the work shown in the contract.

(a) Special Drilling Equipment. When conventional earth augers and/or underreaming tools cannot be used for drilling, provide special drilling equipment including rock core barrels, rock tools, air tools and other equipment as necessary to construct the shaft excavation to the size and depth required.

The use of special drilling equipment and/or procedures will be necessary to drill through the cobbles and boulders, and the basalt rock formation. The Contractor shall anticipate encountering an abundance of boulders of various sizes in deposits classified as “fill”, “alluvium”, and “residual soil” on the boring logs and shall make allowance for difficult drilling in his bid. In addition, the Contractor shall make allowance for difficult drilling in his bid within the basalt rock formation. The cost for the use of special drilling equipment and procedures necessary to drill through the cobbles and boulders, and basalt rock formation shall be incidental to unclassified shaft excavation. The Engineer will not permit blasting.

(b) Sidewall Overreaming. When the sidewall of the hole has softened, swelled, or degraded, sidewall overreaming will be required by the Engineer. Overreaming thickness shall be a minimum of 0.5 inch and a maximum of 3.0 inches. The Contractor may overream with a grooving tool or overreaming bucket. The thickness and elevation of sidewall overreaming shall be according to the contract or as directed by the Engineer. Overream sidewall and place additional shaft concrete at no cost to the State.

(3) Unclassified Excavation. When the contract designates drilled shaft excavation as unclassified, provide the necessary equipment to remove and dispose of materials met in forming the drilled shaft excavation, including installation of temporary casing and/or use of slurry, as necessary. The Engineer will not make separate payment for excavation of materials of different densities and character (hardness) or employment of special

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tools and procedures necessary to excavate the drilled shaft. The Engineer will pay for obstruction removal separately.

(4) Obstructions Removal. Remove obstructions at drilled shafts locations when authorized by the Engineer. Obstructions shall include man-made materials such as but not limited to old concrete foundations not shown on the Plans.

The Contractor shall employ special procedures and/or tools after the Contractor cannot advance the hole using conventional augers fitted with soil or rock teeth, drilling buckets and/or underreaming tools. Such special procedures/tools may include: chisels, boulder breakers, core barrels, air tools, hand excavation, temporary casing, and increasing the hole diameter.

Drilling tools and any other equipment, lost in excavation, are not considered obstructions. Remove the drilling tools and any other equipment promptly. The cost due to tools lost in the excavation shall be at no additional cost to the State including costs associated with hole degradation (requiring overreaming or other methods) due to removal operations or the time the hole remains open or any other remedial actions needed to be performed to correct the situation caused by the tool lost.

Natural materials used as fill materials or present within alluvial deposits and residual soils such as cobbles and boulders shall be anticipated at the site during excavation and shall not be considered an obstruction regardless of the size and hardness of the boulder. These natural materials used as fill materials shall not be considered an obstruction under this section.

(G) Casings.

(1) General. Casings shall be steel, smooth, watertight, and of ample strength to withstand both handling and driving stresses and the pressure of concrete and the surrounding earth materials. The inside diameter of the casing shall not be less than the specified size of the shaft. The Engineer will not allow extra compensation for concrete required to fill the oversized casing or oversized excavation. Remove casings from shaft excavations except when the casing is permanent.

(2) Temporary Casing. The Engineer will consider subsurface casing temporary unless shown in the contract as permanent casing. Remove the temporary casing before completing the placing of concrete in the drilled shaft. The Contractor may require telescoping, predrilling with slurry, and/or overreaming to beyond the outside diameter of the casing to install casing.

335 When choosing to remove a casing and substituting a longer or
336 larger diameter casing through caving soils, stabilize the excavation with
337 slurry or backfill before installing the new casing.
338

339 Before withdrawing the casing, the level of fresh concrete in the
340 casing shall be the higher of the following:

- 341 (a) Minimum of five feet above the hydrostatic water level, or
- 342 (b) Level of drilling fluid, outside the casing.

343
344
345 While withdrawing the casing, maintain an adequate level of concrete
346 within the casing to:
347

- 348 (a) Displace the fluid trapped behind the casing upward and
- 349 (b) Discharge the fluid at the ground surface without
350 contaminating or displacing the shaft concrete.

351
352
353 When temporary casings become bound or fouled during shaft
354 construction and cannot be removed, the Engineer will consider the drill
355 shaft defective. Improve such defective shafts according to the contract or
356 submit remedial repair for acceptance by the Engineer. Such
357 improvement may consist of removing the shaft concrete and extending the
358 shaft deeper, providing straddle shafts to compensate for capacity loss, or
359 providing a replacement shaft. Do corrective measures including redesign
360 of footings caused by defective shafts according to the contract at no cost
361 to the State or extension of the contract time. Any redesign of the footing
362 shall be submitted to the Engineer for acceptance. The redesign shall be
363 performed by a structural engineer and a civil engineer specializing in the
364 geotechnical practice both licensed in the State of Hawaii. All remedial
365 repairs shall have drawings and calculations signed and stamped by both
366 of the above licensed engineers. The Engineer will not pay for the casing
367 remaining in place as well as any redesign or remedial repair.
368

369
370 **(H) Slurry.** If required, use only polymer or mineral slurries in the drilling
371 process. The polymer slurry shall have sufficient viscosity and gel characteristics
372 to transport excavated material to suitable screening system. The mineral slurry
373 shall have a mineral grain size that will remain in suspension and sufficient
374 viscosity and gel characteristics to transport excavated material to suitable
375 screening system. The percentage and specific gravity shall be sufficient to
376 maintain the stability of the excavation and to allow proper concrete placement.
377

378 During construction, maintain the level of the slurry at a height sufficient to
379 prevent caving of the hole. When a sudden significant loss of slurry occurs, delay
380 the construction of that foundation until an alternate construction procedure is
381 submitted for acceptance by the Engineer.
382

383 Premix the polymer or mineral slurry thoroughly with clean fresh water in
384 slurry tanks and adequate time (as prescribed by the manufacturer) allotted for
385 dehydration before introducing the slurry into the shaft excavation by pumping.
386 The slurry tanks shall have capacity for adequate slurry circulation, storage, and
387 treatment. Excavated slurry pits in lieu of slurry tanks will not be allowed without
388 the written permission of the Engineer.

389
390 Use desanding equipment to control slurry sand content to less than 4% by
391 volume in the borehole for mineral slurry and less than 0.5% by volume for polymer
392 slurry. The Engineer will not require desanding equipment for setting temporary
393 casing, sign post, or lighting mast foundations.

394
395 Prevent the slurry from "setting up" in the shaft, such as: agitation,
396 circulation and/or adjusting the properties of the slurry. Dispose of slurry in suitable
397 areas off from the project site.

398
399 The Contractor shall have the representative from the manufacturer of the
400 slurry product on site providing the technical support for the slurry preparation,
401 placement, testing and other quality control. Carry out the control tests using
402 suitable apparatus on the polymer or mineral slurry to resolve the density,
403 viscosity, pH, and sand content. An acceptable range of values for those physical
404 properties for mineral slurry is in Table 511-1 – Mineral Slurry in Fresh Water.
405 Acceptable range of values for those physical properties for two types of polymer
406 slurries is in Tables 511-2 – Shore Pac GVC (CETCO Drilling Products Group) in
407 Fresh Water and 511-3 – SlurryPro CDP (KB Technologies Ltd.) in Fresh Water.

408
409 Test the density, viscosity, and pH value during the shafts excavation to
410 establish a consistent working pattern. Make a minimum of four sets of tests during
411 the first 8 hours of slurry use. When the results show consistent behavior,
412 decrease the testing frequency to one set every four hours of slurry use.

413

TABLE 511-1 - MINERAL SLURRY IN FRESH WATER			
Property	Range of Values *		Test Method
	Time of Slurry Introduction	In Hole At Time Of Concreting	
Density (pcf)	64.3**- 69.1**	64.3**-75.0**	Density Balance
Viscosity (sec/qt)	28 - 45	28 – 45	Marsh Cone
PH	8.0 – 11.0	8.0 – 11.0	pH paper pH meter
<p>* At 20⁰ C ** Increase by two pounds per cubic foot in salt water</p> <p>Notes: a. When the Contractor does not need to control the bottom hole conditions or when tests show that other criteria are appropriate, the Engineer may modify the values.</p> <p>b. When the contract requires desanding, the sand content shall not exceed 4% percent (by volume) in the bore hole as resolved by the American Petroleum Institute sand content test.</p> <p>c. Submit changes for acceptance in writing by the Engineer.</p>			

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TABLE 511-2 - Shore Pac GCV (CETCO Drilling Products Group) IN FRESH WATER			
Property	Range of Values *		Test Method
	Time of Slurry Introduction	In Hole At Time Of Concreting	
Density (pcf)	Less than or equal to 64.0**	Less than or equal to 64.0**	Density Balance
Viscosity (sec/qt)	33 - 74	Less than or equal to 57	Marsh Cone
PH	8.0 – 11.0	8.0 – 11.0	pH paper pH meter
<p>* At 20⁰ C ** Increase by two pounds per cubic foot in salt water</p> <p>Notes: a. When the Contractor does not need to control the bottom hole conditions or when tests show that other criteria are appropriate, the Engineer may modify the values.</p> <p>b. When the contract requires desanding, the sand content</p>			

shall not exceed 0.5% percent (by volume) in the bore hole as resolved by the American Petroleum Institute sand content test.

c. Submit changes for acceptance in writing by the Engineer.

416
417

**TABLE 511-3 - SLURRYPRO CDP (KB Technologies Ltd.)
IN FRESH WATER**

Property	Range of Values *		Test Method
	Time of Slurry Introduction	In Hole At Time Of Concreting	
Density (pcf)	Less than or equal to 67.0**	Less than or equal to 64.0**	Density Balance
Viscosity (sec/qt)	50 - 120	Less than or equal to 70	Marsh Cone
PH	6.0 – 11.5	6.0 – 11.5	pH paper pH meter

* At 20⁰ C

** Increase by two pounds per cubic foot in salt water

Notes: a. When the Contractor does not need to control the bottom hole conditions or when tests show that other criteria are appropriate, the Engineer may modify the values.

b. When the contract requires desanding, the sand content shall not exceed 0.5% percent (by volume) in the bore hole as resolved by the American Petroleum Institute sand content test.

c. Submit changes for acceptance in writing by the Engineer.

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Before placing concrete in the shaft excavation, take slurry samples from the base of the shaft using a sampling tool. Extract slurry samples from the base of the shaft and at intervals not exceeding 10 feet up the shaft. Extract samples until two consecutive samples produce acceptable values for density, viscosity, pH, and sand content (within the values shown on Table 511-1 – Mineral Slurry in Fresh Water or 511-2 – Shore Pac GVC (CETCO Drilling Products Group) in Fresh Water or 511-3 – SlurryPro CDP (KB Technologies Ltd.) in Fresh Water).

Ensure that the bottom of the shaft does not accumulate heavily contaminated slurry suspension. The heavily contaminated slurry suspension could impair the free flow of concrete. When finding unacceptable slurry samples, take actions necessary to bring the slurry as specified in the contract. Do not pour the concrete until re-sampling and testing results produce acceptable values.

433 Furnish the reports of tests required above to the Engineer on completion
434 of each drilled shaft. An authorized person of the Contractor shall sign the
435 reports.
436

437 During construction, maintain at the level of slurry not less than five feet
438 above the highest piezometric water pressure along the depth of a shaft. When
439 the slurry construction method fails, stop this method and propose an alternate
440 method for acceptance by the Engineer
441

442 The Contractor shall use and dispose of slurry in accordance with applicable
443 Federal, State, and County requirements.
444

445 **(I) Excavation Inspection.** Provide equipment for checking the dimensions
446 and alignment of each permanent shaft excavation. Determine the dimensions
447 and alignment according to the contract. Measure the final shaft depths with a
448 suitable weighted tape after final cleaning.
449

450 A minimum of 50% of the base of each shaft shall have less than 0.5 inch
451 of sediment at the time the concrete is placed. The maximum depth of sediment
452 or debris on the base of the shaft shall not exceed 1.5 inches. The Contractor will
453 measure the shaft cleanliness in the presence of the Engineer by methods deemed
454 appropriate to the Engineer.
455

456 Also, for dry excavations the maximum depth of water shall not exceed 3
457 inches before pouring the concrete.
458

459 **(J) Reinforcing Steel Cage Construction and Placement.** Assemble and
460 place the reinforcing steel cage immediately after the Engineer inspects and
461 accepts the shaft excavation before pouring the concrete. The reinforcing steel
462 cage includes longitudinal bars, ties, cage stiffener bars, spacers, centralizers, and
463 other necessary appurtenances to acceptably complete and place the cage.
464

465 Tie and support the reinforcing steel in the shaft so that the reinforcing steel
466 will remain within allowable tolerances given in Subsection 511.03(N) –
467 Construction Tolerances. Use the concrete spacers or other approved non-
468 corrosive spacing devices at sufficient intervals (near the bottom and at intervals
469 not exceeding 10 feet up the shaft) to insure concentric spacing for the entire cage
470 length. Use minimum of four spacers, equally spaced around circumference, at
471 each vertical interval. The spacers shall be constructed of accepted material equal
472 in quality and durability to concrete specified for the shaft, and shall be of adequate
473 dimension to insure the minimum annular space shown on the drawings between
474 the outer portion of the reinforcing steel cage and the side of the excavated hole.
475 Provide accepted cylindrical concrete bottom supports to maintain the proper
476 distance between bottom of the cage and base of the shaft excavation.
477

478 Check the elevation of the top of the steel reinforcing cage before and after
479 pouring the concrete. When not maintaining the rebar within the specified
480 tolerances, make the corrections needed to bring to within tolerances of the

481 contract. Do not construct additional shafts until after modifying the reinforcing
482 steel cage support according to the contract.
483

484 When the bottom of the constructed shaft elevation is lower than shown in
485 the contract, extend at least half of the longitudinal bars required in the upper
486 portion of the shaft the additional length. Continue the tie bars for the extra depth,
487 spaced two-foot on center measured along the circumference of the reinforcing
488 steel cage. Extend the stiffener bars to the final depth. These bars may be lap
489 spliced or unspliced bars of the proper length. The Engineer will not permit welding
490 to the reinforcing steel. Unless the extra depth of the drilled shaft is required due
491 to modifications by the Engineer, the additional reinforcing bars shall be at no
492 additional cost to the State.
493

494 **(K) Concrete Placement.**

495
496 **(1) General.** Place the concrete through a concrete pump using
497 accepted methods as described below.
498

499 Concrete shall be placed in the shaft immediately after placing the
500 reinforcing steel.
501

502 Concrete placement shall be continuous from the bottom to the top
503 of shaft cutoff elevation and for the overpour volume. To ensure that the
504 drilled shaft concrete is sound below the top of shaft cutoff elevation, the
505 drilled shaft shall be overpoured for a volume of at least four feet above the
506 cutoff elevation after good quality concrete is evident at the top of shaft
507 cutoff elevation. The drilled shaft overpour concrete shall be properly
508 removed and disposed of offsite.
509

510 A minimum of four, 6-inch by 12-inch concrete cylinders shall be
511 made for the compressive strength testing. Production shafts with
512 compressive strength less than the minimum 28-day compression strength
513 will be considered defective. Contractor shall submit a corrective method
514 plan for the defective shaft to the Engineer for review and approval prior to
515 their use.
516

517 The elapsed time from the beginning of concrete placement in the
518 shaft to the completion of the placement shall not exceed two hours. Adjust
519 admixtures accepted by the Engineer so that concrete remains in a
520 workable plastic state throughout 2-hour placement limit. A longer
521 placement time may be requested, and requests shall be submitted to the
522 Engineer for review and acceptance 30 days prior to the time the concrete
523 pour (with a longer placement time) is needed. Should the Contractor
524 exceed the 2-hour limit without obtaining prior acceptance by the Engineer,
525 the Contractor may be required to core the drilled shaft. These drilled shaft
526 corings shall be at no additional cost to the State and no additional time will
527 be granted.
528

529 Before placing the concrete, provide results of 3-day, 7-day, 14-day
530 and 28-day compressive strength tests of a trial mix and a slump loss test
531 at least 30 days prior to placement of concrete. Supply a concrete mix that
532 will maintain a slump of four inches or greater after four hours from initial
533 mixing. Conduct the trial mix and slump loss tests using concrete and under
534 ambient temperatures appropriate for the site conditions. The ambient
535 temperature used shall be the temperature at the elevation of existing
536 ground before any excavation started.

537
538 The top surface of the drilled shafts shall be leveled, cleaned, and
539 roughened prior to concrete placement for the footing.

540
541 **(2) Monitoring Concrete Volume.** For each drilled shaft, prepare and
542 submit a monitoring record the next working day after concrete placement
543 has been completed. All monitoring shall be performed in the presence of
544 the Engineer or his representative. As a minimum, the monitoring record
545 shall consist of the following:

546
547 **(a)** A chart that is made up after drilled shaft excavation has been
548 completed and accepted by the Engineer and before concrete
549 placement has commenced. Indicated on the chart, depth of hole
550 plotted with theoretical volume of concrete to fill drilled shaft hole.
551 Plot concrete elevation (surface) along the vertical axis and concrete
552 volume along the horizontal axis.

553
554 **(b)** As concrete is being place, measure concrete surface at an
555 interval of approximately each cubic yard of concrete discharged.
556 Plot concrete volume actually placed at each elevation point. Use
557 this chart to determine if any necking down or enlargement of shaft
558 has occurred during concrete placement.

559
560 **(c)** Keep records of steel and concrete movement to document
561 the following conditions:

562
563 **(1)** When removing temporary or permanent casing, elevation
564 of the top of reinforcing cage shall not rise more than 2 inches
565 from its original elevation;

566
567 **(2)** As temporary casing is extracted, static level of fluid
568 concrete shall not rise.

569
570 **(3) Concreting by Pump.** Concrete pumps and discharge lines for
571 concrete placement in wet or dry excavations may be used. Pumps and
572 pump lines used to place concrete shall be of sufficient length, weight, and
573 diameter to discharge concrete at the shaft base elevation. The pump and
574 pump lines that will come in contact with concrete shall not contain
575 aluminum parts. Discharge line shall have a minimum diameter of 4 inches

576 and watertight joints. Concrete placement shall not begin until the pump line
577 discharge orifice is at the shaft base elevation.

578
579 For wet excavations, use a plug to separate the concrete from the
580 fluid in the hole until pumping begins. Remove the plug from the excavation
581 or use plugs, made from a material accepted by the Engineer that will not
582 cause a defect, if not removed.

583
584 The discharge orifice shall remain at least five feet below the surface
585 of the fluid concrete. When lifting the pump line during concreting, reduce
586 the line pressure temporarily until the orifice at a higher level in the
587 excavation has been repositioned.

588
589 When removing the pumpline orifice from the fluid concrete column
590 and discharging concrete above the rising concrete level during the
591 concrete pour, the Engineer will consider the shaft defective. In such case,
592 remove the reinforcing cage and concrete, the necessary sidewall removal
593 specified by the Engineer, and repour the shaft. Costs of replacement of
594 defective shafts shall be at no costs to the State and no additional time will
595 be granted.

596
597 **(L) Construction Tolerances.** The following construction tolerances apply
598 to drilled shafts:

599
600 **(1)** The drilled shaft shall be within 1/12 of the shaft diameter or 3 inches,
601 whichever is less, in the horizontal plane at the plan elevation for the top of
602 the shaft.

603
604 **(2)** The vertical alignment of the shaft excavation shall not vary from the
605 plan alignment by more than 0.25 inch per foot of depth. The alignment of
606 a battered shaft excavation shall not vary by more than 0.5 inch per foot of
607 depth from the prescribed batter.

608
609 **(3)** After placing the concrete, the top of the reinforcing steel cage shall
610 be no more than 6.0 inches above and no more than 3.0 inches below plan
611 position.

612
613 **(4)** The cutoff (top) elevation of the shaft shall have a tolerance of ± 0.5
614 inch from the plan top of shaft elevation.

615
616 **(5)** The dimensions of casing are subject to American Pipe Institute
617 tolerances applicable to regular steel pipe.

618
619 **(6)** Design the excavation equipment and methods so that the
620 completed shaft excavation will have a flat bottom. The cutting edges of
621 excavation equipment shall be normal to the vertical axis of the equipment
622 within a tolerance of $\pm 3/8$ inch per foot of diameter.

623

624 (7) Casing diameters shown in the contract documents to outside
625 diameter (OD) dimensions. When accepted by the Engineer, a casing
626 larger in diameter than shown in the contract documents may be provided
627 to facilitate meeting this requirement. When using a series of telescoping
628 casings, size casing to maintain shaft diameters.

629
630 Drilled shaft excavations that cannot be completed within the required
631 tolerances are unacceptable. When accepted by the Engineer, corrections may be
632 made to an unacceptable drilled shaft excavation by accepted combination of the
633 following methods:

- 634
- 635 (1) Overdrill the shaft excavation to a larger diameter to permit accurate
636 placement of the reinforcing steel cage with the required minimum concrete
637 cover.
 - 638
 - 639 (2) Increase the number, size, or length of the reinforcing steel.
 - 640
 - 641 (3) Redesign the foundation.
 - 642
 - 643 (4) Other methods accepted by the Engineer.
 - 644

645 The acceptance of correction procedures is dependent on analysis of the
646 effect of the degree of misalignment and improper positioning. The Contractor is
647 solely responsible to submit remedial repair procedures that shall make the
648 structure equal to or better than the original design. The Engineer will solely
649 determine if the remedial repair meets the requirements and is acceptable. A
650 Hawaii Licensed Professional Structural Engineer and a Hawaii Licensed
651 Professional Civil Engineer who specializes in Geotechnical Engineering shall
652 stamp and sign the redesign drawings and computations. Correct out of tolerance
653 drilled shaft excavations including engineering analysis and redesign at no cost to
654 the State. No time extension will be granted for any impact to the critical path due
655 to the Contractor's incorrect installation of the drilled shaft.

656
657 **(M) As-Built Drilled Shaft Location.** The Contractor shall provide survey
658 ties to all as-built location of all drilled shafts.

659
660 The Contractor shall notify the Engineer prior to performing the survey work
661 and the Contractor shall survey the drilled shafts under the supervision of the
662 Engineer or the Engineer's representative. A copy of the survey notes and the
663 scaled plan locating all the completed drilled shafts in a given footing shall be
664 submitted to the Engineer for review and approval. Submit accepted copy of the
665 survey notes and the scaled plan as an electronic file, the Engineer will determine
666 the acceptable format and media.

667
668 No form work for any footing shall proceed until the drilled shafts are found
669 acceptable by the Engineer.

670

671 **(N) Coring for Integrity Testing.** Integrity testing will be performed on drilled
672 shafts as determined by the Engineer. Integrity testing shall consist of partial or
673 full depth concrete coring at drilled shafts determined by the Engineer. Coring
674 shall be performed by the Contractor at the locations designated by the Engineer
675 in the presence of the Engineer. The Engineer will solely determine if the cored
676 shaft is acceptable or defective. Defective shafts shall be replaced or repair
677 drawings and computations by a Hawaii Licensed Professional Engineer in the
678 Structural Branch and Civil Branch (specializing in the Geotechnical field) stamped
679 and signed shall be submitted for acceptance by the Engineer. The Contractor
680 shall core vertical holes at locations and depths determined by the Engineer. The
681 number of core holes to be done shall be determined by the Engineer. The core
682 hole shall be accepted by the Engineer. The recovered core samples shall have
683 a minimum diameter of 3 inches or 3 times the nominal maximum aggregate size
684 of the concrete mix, use whichever is larger. The cored holes shall be filled with
685 prepackaged, non-shrink, non-metallic, non-gaseous grout of the same minimum
686 strength as the drilled shaft.
687

688 **511.04 Measurement.**

689 **(A)** Furnishing drilled shaft drilling equipment and furnishing instrumentation
690 and collecting data will be paid on a lump sum basis. Measurement for payment
691 will not apply.
692

693 **(B)** The Engineer will measure obstruction per hour in accordance with the
694 contract documents. Once the Engineer authorizes compensation for obstruction
695 removal, duration of obstruction removal, including time required for obstruction
696 disposal, will be measured for payment. Depth of obstruction removed will be
697 subtracted from total depth measured for payment under other applicable drilled
698 shaft excavation pay items.
699

700 **(C)** The Engineer will measure unclassified shaft excavation per linear foot,
701 along shaft centerline, including bells. The Engineer will compute length between
702 plan top of shaft elevation to plan estimated tip elevation.
703

704 **(D)** The Engineer will measure drilled shaft per linear foot. The Engineer will
705 compute length between plan top of shaft elevation and final bottom of shaft
706 elevation.
707

708 **(E)** The Engineer will measure coring for integrity testing per linear foot. The
709 Engineer will compute length between the bottom of coring elevation and the top
710 of the shaft concrete elevation.
711

712 **511.05 Payment.** The Engineer will pay for the accepted pay items listed below at
713 the contract price per pay unit, as shown in the proposal schedule.
714 Payment will be full compensation for the work prescribed in this section
715 and the contract documents.
716

717 The Engineer will pay for each of the following pay items when included in the
718 proposal schedule.
719

720		
721	Pay Item	Pay Unit
722		
723	Furnishing Drilled Shaft Drilling Equipment at _____	Lump Sum
724		
725	The Engineer will pay for:	
726		
727	(A) 60 percent of the contract bid price when drilling equipment is on job site,	
728	assembled, and ready to drill foundation shafts.	
729		
730	(B) 40 percent of the contract bid price upon completion of drilling shafts, and	
731	placing shaft concrete up to top of shafts.	
732		
733	Obstruction	Hour
734		
735	The Engineer will pay for:	
736		
737	(A) 80 percent of the contract bid price upon completion of removing the	
738	obstruction.	
739		
740	(B) 20 percent of the contract bid price upon removing and disposing of the	
741	obstruction.	
742		
743	The maximum payment per designated obstruction shall not exceed 20	
744	times the unit cost for unclassified excavation.	
745		
746	Unclassified Shaft Excavation (___-Inch Diameter Shafts)	Linear Foot
747		
748	The Engineer will pay for:	
749		
750	(A) 60 percent of the contract bid price upon completion of using drilling	
751	equipment, using special tools and drilling equipment to excavated shaft.	
752		
753	(B) 20 percent of the contract bid price upon completion of furnishing and	
754	installing temporary casing.	
755		
756	(C) 20 percent of the contract bid price upon completion of removing and	
757	disposing of excavated material.	
758		
759	Drilled Shaft (___-Inch Diameter Shafts)	Linear Foot
760		
761	The Engineer will pay for:	
762		
763	(A) 60 percent of the contract bid price upon completion of drilling.	
764		
765	(B) 15 percent of the contract bid price upon completion of furnishing,	
766	assembling, and placing steel cage.	
767		

768 (C) 15 percent of the contract bid price upon completion of furnishing and
769 placing concrete.

770
771 (D) 10 percent of the contract bid price upon completion of removing and
772 disposing of excavated material.

773
774 Coring for Integrity Testing for acceptable drilled shaft. Linear Foot

775
776 The Engineer will pay for:

777
778 (A) 70 percent of the contract bid price upon completion of concrete coring.

779
780 (B) 20 percent of the contract bid price upon completion of filling cored holes
781 with non-shrink grout of the same minimum strength as drilled shaft.

782
783 (C) 10 percent of the contract bid price upon completion of packaging the core
784 samples and delivering them to the Engineer.”

785
786
787

END OF SECTION 511

1 **DIVISION 600 - MISCELLANEOUS CONSTRUCTION**

2
3 Amend **Section 601 - STRUCTURAL CONCRETE** to read as follows:

4 **SECTION 601 - STRUCTURAL CONCRETE**

5
6
7
8 **601.01 Description.** This section describes structural concrete consisting of
9 Portland Cement, fine aggregate, coarse aggregate, and water. This will include
10 adding admixtures for the purpose of entraining air, retarding or accelerating set,
11 tinting, and other purposes as required or permitted. To reduce the embodied carbon
12 footprint of concrete, concrete design on the island of Oahu shall include the use of
13 carbon dioxide mineralization or equivalent technology. Other methods to reduce the
14 cement content such as use of supplementary cementitious materials (SCMs) or
15 admixtures such as C-S-H nanoparticle-based strength-enhancing admixture (CSH-
16 SEA) or equivalent may also be used to reduce the embodied carbon footprint
17 including the combination thereof the previously mentioned methods.

18
19 **601.02 Materials.**

20	21 Portland Cement	701.01
22	23 Fine Aggregate for Concrete	703.01
24	25 Coarse Aggregate for Portland Cement Concrete	703.02
26	27 Admixtures	711.03
28	29 Water	712.01

30
31 Use coarse aggregate for lightweight concrete conforming to ASTM C330
32 except Sections 5, 7 and 9.

33
34 **601.03 Construction.**

35
36 **(A) Quality Control.** Portland Cement concrete production requires
37 Contractor responsibility for quality control of materials during handling,
38 blending, mixing, curing, and placement operations.

39
40 Sample, test, and inspect concrete to ensure quality control of
41 component materials and concrete. Sampling and testing for quality control in
42 accordance with standard methods shall be performed by certified ACI
43 Concrete Field Technician Grade I. Perform quality control tests for slump, air
44 content, temperature, and unit weight during production of structural concrete
45 other than concrete for incidental construction. Submit quality control test
46 results.

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47 **(B) Design and Designation of Concrete.** Design concrete mixture for
48 concrete work specified. Submit mix design using State Highways Division
49 form DOT 4-151 or an Engineer accepted equivalent form. Do not start work
50 until the Engineer accepts mix design. The Engineer will accept concrete mix
51 design using information given in Table 601.03-1 - Design of Concrete, and
52 other pertinent requirements.

53

54 Whenever 28-day compressive strength, f'_c , is 4,000 psi or greater,
55 designate concrete by required minimum 28-day compressive strength.

56

57 The 28-day compressive strength, f'_c , less than 4,000 psi listed in Table
58 601.03-1 – Design of Concrete, is for design information and designation of
59 class only.

60

61 Proportion concrete designated by compressive strength such that
62 concrete conforms to required strength.

63

64 Design concrete placed in bridge decks and pavements exposed to
65 traffic wear, with air content of 3 percent, including entrapped and entrained
66 air. Maintain air content for plastic concrete within tolerance of 1 percent air
67 content, plus or minus, during the work.

68

69 Use Class BD concrete in bridge deck unless concrete is designated by
70 compressive strength. Incorporate anti-corrosion and shrinkage reduction,
71 water-reducing and set-retarding admixture into concrete mix design, with
72 capability of varying degree of retardation without adversely affecting other
73 characteristics of concrete. Submit design admixture dosage.

74

75 Class A concrete shall be used when type of concrete is not indicated in
76 the contract documents.

77

78 Design concrete as specified in Table 601.03-1 – Design of Concrete.

79

TABLE 601.03-1 - DESIGN OF CONCRETE (800 Maximum Cement Content lbs./c.y.)					
Class of Concrete	28-Day Strength f_c, psi.	Minimum Cement Content lbs./c.y.	Maximum Water-Cement Ratio, lb./lb.	Minimum Cement Content with Mineralized CO2 lbs./c.y.	Maximum Water-Cement Ratio with Mineralized CO2 lb./lb.
A	3000	532	0.59	504	0.62
B	2500	475	0.66	450	0.70
C	2000	418	0.75	396	0.79
D	1500	380	0.85	360	0.87
BD	3750	610	0.49	NA	NA
SEAL	3000	610	0.55	NA	NA
Designated by Strength f_c or f_r	As Specified	610	0.49	NA	NA
f_r = Specified Modulus of Rupture					

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99

Concrete Design – Projects on Oahu will utilize CO₂ Mineralization technology or equivalent. Supplementary cementitious materials (SCMs), CSH-SEA or equivalent or combination thereof the previously mentioned methods may also be used. Concrete design shall allow a reduction of portland cement content while maintaining the concrete design strength, durability and other requirements. See Table 601.03-1 Design of Concrete specified limits for adjusted minimum cement content and water cement ratio when using CO₂ mineralization. Material certifications for the above shall include a list of at least 3 projects that used the technology, SCMs, admixtures or combination thereof.

Use the absolute volume method to proportion concrete materials in accordance with requirements of concrete designated by class, cement content in pounds per cubic yards, or specified 28-day compressive strength. Use absolute volumetric proportioning methods as outlined in the American Concrete Institute (ACI) Standard 211.1, "Recommended Practices for Selecting Proportions for Normal and Heavyweight Concrete."

601.03

100 Use coarse aggregate size No. 57 (one inch to No. 4) or No. 67 (3/4 inch to
101 No. 4) for concrete. For concrete placed in bottom slabs and stems of box
102 girders, use No. 67 size aggregate. Smaller size aggregates may be permitted
103 when encountering limited space between forms and reinforcement or
104 between reinforcement when accepted by the Engineer in writing. Maximum
105 aggregate size shall not be greater than 1/3 of the space between reinforcing
106 steel bars or reinforcing steel and the form.
107

108 Use the following standard methods in Table 601.03-2 – Standard
109 Methods for determining compliance with requirements indicated in this
110 subsection:
111

TABLE 601.03-2 – STANDARD METHODS	
Sampling Fresh Mixed Concrete	AASHTO T 141
Mass Per Cubic Meter (Cubic Foot) Yield and Air Content (Gravimetric) of Concrete	AASHTO T 121
Slump of Hydraulic Cement Concrete	AASHTO T 119
Air Content of Freshly Mixed Concrete by the Pressure Method	AASHTO T 152
Specific Gravity and Absorption of Fine Aggregate	AASHTO T 84
Specific Gravity and Absorption of Coarse Aggregate	AASHTO T 85
Temperature of Freshly Mixed Portland Cement Concrete	ASTM C1064
Making and Curing Concrete Test Specimens in the Field	AASHTO T 23
Compressive Strength of Molded Concrete Cylindrical Specimens	AASHTO T 22 (4 inch by 8 inch or 6 inch by 12 inch cylinders)
Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)	AASHTO T 97

112
113

114 When concrete is designated by compressive strength, f'_c , or flexural
115 strength, f'_r , or includes CO₂ Mineralization technology, CSH-SEA or SCMs,
116 the Engineer will require prequalification of materials and mix proportions
117 proposed for use before placing such concrete. The Engineer will prequalify
118 concrete based on past performance records using statistical computations of
119 population sizes and (n-1) weighting, or trial batch test reports in compliance
120 with computed minimum average strength for material and mix proportions.
121 The Engineer will determine minimum average strength on probability of not
122 more than one in 20 tests falling below specified strength for the following
123 conditions:

124
125 **(1)** When past performance records are available, furnish the
126 following documented performance records:

127
128 **(a)** Minimum of 15 consecutive 28-day strength tests from
129 projects having same materials and mix proportions.

130
131 **(b)** Two groups totaling 30 or more test results representing
132 similar materials in which mix proportion strengths are within 20
133 percent of specified strength, from data obtained within one year
134 of proposed use.

135
136 The Engineer will analyze performance records to establish
137 standard deviation.

138
139 **(2)** When sufficient past performance records are not provided, the
140 Engineer will assume current standard deviation to be 500 psi for
141 compressive strength, f'_c , and 50 psi for flexural strength, f'_r .

142
143 Unless sufficient performance records are available from other projects
144 at DOT Materials Testing and Research Branch, submit test performance
145 records or trial test reports for prequalifications, based on data of most recent
146 tests made on concrete of proposed mix design, and data obtained within one
147 year of proposed use.

148
149 When shrinkage reducing admixtures are used, submit test results
150 showing compliance to the Contract Documents' requirements.

151
152 Include the following information in test data and trial batch test reports:
153 date of mixing; mixing equipment and procedures used; size of batch in cubic
154 yards and weight, type, and source of ingredients used; slump of concrete; air
155 content of concrete when using air entraining agent; age at time of testing; and
156 strength of concrete cylinders tested.

157

601.03

158 Show that concrete strength tests equal or exceed minimum average
159 strength in trial test reports. Test is average 28-day test results of five
160 consecutive concrete cylinders or concrete beams taken from single batch. No
161 cylinder or beam shall have strength less than 85 percent of minimum average
162 strength.

163
164 Submit test data and trial test reports signed by official of firm that
165 performed tests.

166
167 The Engineer reserves the right to stop work when a series of low
168 strength tests occur. Do not continue concrete work until cause is established
169 and the Engineer is informed of and accepts, necessary corrective action to be
170 taken.

171
172 **(C) Batching.** Measure and batch materials in accordance with the
173 following provisions:

174
175 **(1) Portland Cement.** Either sacked or bulk cement may be used.
176 Do not use fraction of sack of cement in concrete batch unless cement
177 is weighed.

178
179 Weigh bulk cement on weighing device accepted by the Engineer. Seal
180 and vent bulk cement-weighing hopper properly to preclude dusting
181 during operation. Do not suspend discharge chute from weighing
182 hopper. Arrange discharge chute so that cement will not lodge in
183 hopper or leak from hopper.

184
185 Batching accuracy shall be within 1 percent, plus or minus, of
186 required weight.

187
188 **(2) Water.** Measure water by volume or by weight. Use readily
189 adjustable device for measurement of water, with accuracy within 1
190 percent, plus or minus, of quantity of water required for batch. Arrange
191 device so that variable pressure in water supply line does not affect
192 measurements. Equip measuring tanks with outside taps and valves or
193 other accepted means to allow for checking calibration.

194
195 **(3) Aggregates.** When storing and stockpiling aggregates, avoid
196 separation of coarse and fine particles within each size, and do not
197 intermix various sizes before proportioning. Protect stored or stockpiled
198 aggregates from dust or other foreign matter. Do not stockpile together,
199 aggregates from different sources and of different gradations.

200 When transporting aggregates from stockpiles or other sources to
201 batching plant, ensure uniform grading of material is maintained. Do
202 not use aggregates that have become segregated or mixed with earth
203 or foreign matter. Stockpile or bin aggregates at least 12 hours before
204 batching. Produce or handle aggregates by hydraulic methods and
205 wash and drain aggregates. If aggregates exhibit high or non-uniform
206 moisture content, the Engineer will order storage or stockpiling for more
207 than 12 hours.

208
209 Proportion aggregates by weight, with the exception that
210 aggregates in concrete for minor structures, curbs, and sidewalks may
211 be proportioned by either volume or weight. For volumetric
212 proportioning, use measuring boxes of known capacity to measure
213 quantity of each aggregate size.

214
215 Use batch weight based on dry materials plus total weight of
216 moisture (both absorbed and surface) contained in aggregate.
217 Measure individual aggregates to within 2 percent, plus or minus, of
218 required weight, and total weight of aggregates to within 1 percent, plus
219 or minus, of required weight.

220
221 **(4) Admixtures.** Store, proportion, and dispense admixtures in
222 accordance with the following provisions:

223
224 **(a) Liquid Admixtures.** Dispense chemical admixtures, air
225 entraining admixtures, and corrosion inhibiting admixtures in
226 liquid form. Use mechanical dispensers for liquid admixtures
227 with sufficient capacity to measure prescribed quantity for each
228 batch of concrete. Include graduated measuring unit in each
229 dispenser to measure liquid admixtures to within 5 percent, plus
230 or minus, of prescribed quantity for each batch. Read
231 graduations accurately from point of measuring unit, and control
232 proportioning operations to permit visual check of batch
233 accuracy before discharging. Mark each measuring unit clearly
234 for type and quantity of admixture.

235
236 Arrange with supplier to provide sampling device
237 consisting of valve located in safe and accessible location for
238 sampling admixtures.

239
240 When using more than one liquid admixture for concrete
241 mix, use separate measuring unit for each liquid admixture and
242 dispense separately to avoid interaction that may interfere with
243 admixture efficiency and adversely affect concrete. Dispense
244 liquid admixture by injecting so as not to mix admixture at high
245 concentrations.

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246 When using liquid admixtures in concrete that is
247 completely mixed in paving or continuous mixers, operate
248 dispensers automatically with batching control equipment.
249 Equip such dispensers with automatic warning system that shall
250 provide visible or audible signals at points where proportioning
251 operations are controlled, when the following occurs:

- 252
- 253 a. Quantity of admixture measured for each batch of
254 concrete varies from pre-selected dosage by more
255 than 5 percent; or
- 256
- 257 b. Entire contents of measuring unit from dispenser is
258 not emptied into each batch of concrete.
- 259

260 Unless liquid admixtures are added to batch with
261 pre-measured water, discharge liquid admixtures into stream of
262 water that disperses admixtures uniformly throughout batch. An
263 exception is that air-entraining admixtures may be dispensed
264 directly into moist sand in batching bins, provided adequate
265 control of concrete air content can be maintained.

266

267 Measure and disperse special admixtures, as
268 recommended by admixture manufacturer, and as accepted by
269 the Engineer. Special admixtures include high-range water
270 reducers requiring dosages greater than capacity of
271 conventional dispensing equipment. For site-added, high-range
272 water reducers, use calibrated, portable dispenser supplied by
273 manufacturer.

274

275 **(b) Mineral Admixtures.** Protect mineral admixtures from
276 exposure to moisture until used. Pile sacked material of each
277 shipment to permit access for tally, inspection, and identification.

278

279 Provide adequate facilities to ensure that mineral
280 admixtures meeting specified requirements are kept separate
281 from other mineral admixtures and that only specified mineral
282 admixtures are allowed to enter into the work. Provide safe and
283 suitable facilities for sampling mineral admixtures at weigh
284 hopper or in feed line immediately in advance of hopper.

285

286 Incorporate mineral admixtures into concrete using
287 equipment conforming requirements for Portland Cement weigh
288 hoppers and charging and discharging mechanisms specified in
289 ASTM C94 and Subsection 601.03(C) - Batching.

290

291 When concrete is completely mixed in stationary paving
292 or continuous mixers, weigh mineral admixture in separate
293 weigh hopper. Introduce mineral admixture and cement
294 simultaneously into mixer, proportionately with aggregate.

295
296 When interlocks are required for cement-charging
297 mechanisms, and cement and mineral admixtures are weighed
298 cumulatively, interlock their charging mechanisms to prevent
299 introduction of mineral admixture until mass of cement in weigh
300 hopper is within tolerances specified in Subsection 601.03(C)(1)
301 - Portland Cement.

302
303 In determining maximum quantity of free water that may
304 be used in concrete, consider mineral admixture and
305 supplementary cementitious materials (SCMs) to be cement.

306
307 **(5) Bins and Scales.** At batching plant, use individual bins,
308 hoppers, and scale for each aggregate size. Include separate bin,
309 hopper, and scale for bulk cement and fly ash.

310
311 Except when proportioning bulk cement for pavement or
312 structures, cement weigh hopper may be attached to separate scale for
313 individual weighing or to aggregate scale for cumulative weighing. If
314 cement is weighed cumulatively, weigh cement before other
315 ingredients.

316
317 When proportioning for pavement or structures, keep bulk
318 cement scale and weigh hopper separate and distinct from aggregate
319 weighing equipment.

320
321 Use springless-dial or beam-type batching scales. When using
322 beam-type scales, make provisions to show operator that required load
323 in weighing hopper is approaching. Use devices that show condition
324 within last 200 pounds of load and within 50 pounds of overload.

325
326 Maintain scale accuracy to 0.5 percent throughout range of use.
327 Design poises to lock to prevent unauthorized change of position. Use
328 scales inspected by the State Measurement Standards Branch of the
329 Department of Agriculture to ensure their continued accuracy. Provide
330 not less than ten 50-pound weights for testing scales.

331
332 Batching plants may be equipped to proportion aggregates and
333 bulk cement by automatic weighing devices.

334

335 (6) **Batching and Hauling.** When mixing is to be performed at work
336 site, transport aggregates from batching plant to mixer in batch boxes,
337 vehicle bodies, or other containers of adequate capacity and
338 construction. Use partitions to separate batches and prevent spilling
339 from one compartment to another while in transit or during dumping.
340

341 Transport bulk cement to mixer in tight compartments carrying
342 full quantity of cement required for batch. Once cement is placed in
343 contact with aggregates, batches shall be mixed and placed within
344 1-1/2 hours of contact. Cement in original shipping packages may be
345 transported on top of aggregates. Ensure that each batch contains
346 number of sacks required by job mix.
347

348 Deliver batches to mixer intact. Charge each batch into mixer
349 without loss of cement. When carrying more than one batch on truck,
350 charge batch into mixer without spilling material from one batch
351 compartment into another.
352

353 (D) **Mixing.** Mix concrete in mechanically operated mixers.
354

355 Use stationary or truck mixers that distribute materials thoroughly and
356 produce concrete uniform in color and appearance. When there is variation in
357 mixed concrete attributable to worn pickup or throw-over blades, the Engineer
358 will inspect mixer. If inspection reveals that blades are worn more than one
359 inch below original height of manufacturer's design, repair or replace blades.
360 Upon request, make copy of manufacturer's design, showing dimensions and
361 arrangement of blades.
362

363 Charge batches into central or truck mixers so that portion of mixing
364 water enters ahead of cement and aggregates. Deliver uniform flow of water.
365 Place entire amount of batch water in mixer by end of first quarter of mixing
366 period. When mixers with multiple compartment drums are used, time
367 required to transfer material between compartments will be included as mixing
368 time. Use drum rotation speed as designated by manufacturer. If mixing does
369 not produce concrete of uniform and smooth texture, provide additional
370 revolutions at same speed until thorough mixing of each concrete batch is
371 attained. Begin measuring mixing time from time cement, aggregates, and 60
372 percent of water are in drum. Do not exceed manufacturer's rated capacity for
373 volume of concrete mixed in each batch.
374

375 Equip central or truck mixers with attachment for automatically timing
376 mixing of each concrete batch. Timing device shall include automatic feature
377 for locking discharge chute and device for warning operator when required
378 mixing duration has been met. If timing or locking device fails to operate,
379 immediately furnish clock or watch that indicates seconds, to mixer operator. If
380 timing device is not repaired within three days after becoming inoperative, shut
381 down batching operation until timing device is repaired.
382

383 For stationary mixers, use mixing time between 50 seconds and 5
384 minutes. Select mixing time, as necessary, to produce concrete that meets
385 uniformity criteria when tested in accordance with Section 11.3.3 of ASTM
386 C94. The Contractor may designate mixing time for which uniformity tests are
387 to be performed, provided mixing time is not less than 50 seconds or more
388 than 5 minutes. Before using concrete for pavements or structures, mix
389 concrete to meet specified uniformity requirements. The Contractor shall
390 furnish labor, sampling equipment, and materials required for conducting
391 uniformity tests of concrete mixture. The Engineer will furnish required testing
392 equipment, including scales, cubic measure, and air meter; and will perform
393 tests. The Engineer will not pay separately for labor, equipment, materials, or
394 testing, but will consider the costs incidental to concrete. After batching and
395 mixing operational procedures are established, the Engineer will not allow
396 changes in procedures without the Contractor re-establishing procedures by
397 conducting uniformity tests. Repeat mixer performance tests whenever
398 appearance of concrete or coarse aggregate content of samples is not
399 conforming to requirements of ASTM C94. For truck mixers, add four seconds
400 to specified mixing time if timing starts as soon as skip reaches its maximum
401 raised position.
402

403 Unless otherwise indicated in the contract documents or accepted by
404 the Engineer, concrete shall be mixed at proportioning plant. Operate mixer at
405 agitating speed while in transit. Concrete may be truck-mixed only when
406 cement or cement and mixing water are added at point of delivery. Begin
407 mixing truck-mixed concrete immediately after introduction of mixing water to
408 cement and aggregates, or introduction of cement to aggregates.
409

410 Inclined-axis, revolving drum truck mixers shall conform to Truck Mixer,
411 Agitator and Front Discharge Concrete Carrier Standards TMMB 100-01, 15th
412 Revision, published by Truck Mixer Manufacturers Bureau. Truck mixers shall
413 produce thoroughly mixed and uniform mass of concrete and shall discharge
414 concrete without segregation.
415

416 Manufacturer's standard metal rating plate shall be attached to each
417 truck mixer, stating maximum rating capacity in terms of volume of mixed
418 concrete for various uses and maximum and minimum mixing speeds. When
419 using truck mixers for mixing, adhere to maximum capacity shown on metal
420 rating plate for volume of concrete in each batch.

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421 Operate truck mixers at mixing speed designated by manufacturer, but
422 at not less than 6 or more than 18 revolutions per minute. Mix truck-mixed
423 concrete initially between 70 and 100 revolutions at manufacturer-designated
424 mixing speed, after ingredients, including water, are in mixer. Water may be
425 added to mixture not more than two times after initial mixing is completed.
426 Each time that water is added, turn drum an additional 30 revolutions or more
427 at mixing speed until concrete is mixed uniformly.
428

429 When furnishing shrink-mixed concrete, transfer partially mixed
430 concrete at central plant to truck mixer. Apply requirements for truck-mixed
431 concrete. The Engineer will not credit number of revolutions at mixing speed
432 for partial mixing in central plant.
433

434 When accepted by the Engineer, hand mixing may be allowed. The
435 entire concrete placement at one location shall not exceed 1/3 cubic yard.
436 It shall be hand mixed on a watertight, level platform. Use no aluminum to
437 construct platform. Measure proper amount of coarse aggregate in
438 measuring boxes and spread on platform. Spread fine aggregate on that
439 coarse aggregate layer. Limit coarse and fine aggregate layers to total
440 depth of one foot. Spread dry cement on this mixture. Turn whole mass
441 not less than two times dry. Add sufficient clean water, distributed evenly.
442 Turn whole mass again, not less than three times, not including placing in
443 carriers or forms.
444

445 **(E) Transporting Mixed Concrete.** Transport central-mixed concrete to
446 delivery point in truck agitators or truck mixers operating at speed designated
447 by equipment manufacturer as agitating speed; or in non-agitating hauling
448 equipment, provided consistency and workability of mixed concrete upon
449 discharge at delivery point is suitable for placement and consolidation in place;
450 and provided mixed concrete after hauling to delivery point conforms to
451 uniformity criteria when tested as specified in Section 12.5 of ASTM C94.
452

453 For revolving drum truck mixers transporting central-mixed concrete,
454 limit concrete volume to manufacturer's rated capacity for agitator operation.
455 Maintain agitating speed for both revolving drum mixers and revolving blade
456 type agitators as designated on manufacturer's data plate. Equip truck mixers
457 or truck agitators with electrically or mechanically actuated counters. Actuate
458 counters after introducing cement to aggregates.
459

460 Bodies of non-agitating hauling equipment shall be smooth, watertight,
461 metal containers equipped with gates to permit control of concrete discharge.
462 Protect open-topped haul vehicle against weather with cover accepted by the
463 Engineer.
464

465 When hauling concrete in non-agitating trucks, complete discharge
466 within 30 minutes after introducing mixing water to cement and aggregates.
467

468 When truck mixer or agitator is used for transporting central-mixed
469 concrete to delivery point, complete discharge within 1-1/2 hours, or before
470 250 revolutions of drum or blades, whichever comes first after introduction of
471 mixing water to cement and aggregates, or cement to aggregates. For truck-
472 mixed concrete, complete concrete discharge within 1-1/2 hours, or before 300
473 revolutions of drum or blades, whichever comes first. These limitations are
474 permitted to waived if concrete is of such slump after the 1-1/2 hour time or
475 300-revolution limit has been reached, that it can be placed, without addition of
476 water to the batch.

477

478

479

480

481

482

Submit delivery tickets from manufacturers of truck-mixed concrete and
central-mixed concrete with each truckload of concrete before unloading at
job site. Printed, stamped, or written delivery ticket shall include the following
information:

483

(1) Name of concrete plants.

484

485

(2) Serial number of ticket.

486

487

(3) Date and truck number.

488

489

(4) Name of Contractor.

490

491

(5) Specific project, route, or designation of job (name and location),
and truck overweight permit number when required.

492

493

494

(6) Specific class or designation of concrete in accordance with
contract documents.

495

496

497

(7) Quantity of concrete in cubic yards.

498

499

(8) Time of loading batch or mixing of cement and aggregates.

500

501

(9) Water added by receiver of concrete and receiver's initials.

502

503

(10) Information necessary to calculate total mixing water added by
producer. Total mixing water includes free water on aggregates, water,
and water added by truck operator from mixer tank.

504

505

506

507

(11) Readings of non-resettable revolution counters of truck mixers
after introduction of cement to aggregates, or introduction of mixing
water to cement aggregates.

508

509

510

(12) Supplier's mix number or code.

511

512

601.03

513 Furnish additional information designated by the Engineer and required
514 by job specifications upon request.

515
516 **(F) Consistency.** Regulate quantity of water used in concrete mixes so
517 that concrete consistency, as determined by AASHTO T 119 test method, is
518 within nominal slump range specified in Table 601.03-3 - Slump for Concrete
519 or as stated on the accepted concrete mix design. If concrete slump exceeds
520 nominal slump, adjust mixture of subsequent batches. If slump exceeds
521 maximum slump, the Engineer will reject concrete unless deemed satisfactory
522 for its use.

523
524 The Engineer will also reject harsh or unworkable concrete that cannot
525 be properly placed. Remove rejected concrete at no increase in contract price
526 or contract time.

527
528 Slump for concrete shall be as specified in Table 601.03-3 – Slump for
529 Concrete.

530

TABLE 601.03-3 - SLUMP FOR CONCRETE		
Type of Work	Nominal Slump Inches	Maximum Slump Inches
Concrete Pavements	0 – 3	3-1/2
Reinforced Concrete Structures: Sections Over 12 Inches	0 – 4	5
Sections 12 Inches Thick or Less	2 – 5	6
Non-Reinforced Concrete Facilities	1 – 3	4
Concrete Placed Underwater	6 – 8	9
Bridge Decks	0 – 3	3-1/2

531
532 In adverse or difficult conditions that may affect placement of concrete, the
533 above slump limitations may be exceeded for placement workability, with the
534 addition of admixture conforming to Subsection 711.03 - Admixtures, if
535 accepted by the Engineer in writing and provided water-cement ratio is
536 maintained. Provide additional cement and water, or admixture at no increase
537 in contract price or contract time.

538
539 **(G) Forms.** Construct forms in accordance with applicable sections.

540
541 **(H) Placing Concrete.** Place concrete in accordance with applicable
542 sections.

543
544 **(I) Finishing Concrete Surfaces.** Finish concrete surfaces in accordance
545 with applicable sections.

546 **(J) Curing Concrete.** Cure concrete in accordance with applicable
547 sections.

548
549 **601.04 Measurement.** The Engineer will measure concrete in accordance with the
550 applicable sections.

551
552 **601.05 Payment.** The Engineer will pay for the accepted concrete under the
553 applicable sections.

554

555

556

557

558

END OF SECTION 601

1 **SECTION 610 – REINFORCED CONCRETE DRIVEWAYS**

2
3 Make the following amendment to said Section:

4
5 **(I) Amend 610.04 - Measurement** by replacing lines 56 to 57 to read:

6
7 **“610.04 Measurement.** The Engineer will measure reinforced concrete
8 driveways per square yard as specified in the proposal.”

9
10 **(II) Amend 610.05 – Payment** by revising lines 59 to 76 to read as follows:

11
12 **“610.05 Payment.** The Engineer will pay for the accepted quantities of
13 reinforced concrete driveways at the contract unit price per square yard as
14 specified in the proposal.

15
16 Payment will be full compensation for the work prescribed in this section
17 and contract documents.

18
19 The Engineer will pay for following pay item when included in proposal
20 schedule:

21

Pay Item	Pay Unit
___ - Inch Reinforced Concrete Driveway	Square Yard

22
23
24
25
26 The Engineer will pay for precast concrete drop curb and driveway curb, or
27 cast-in-place integral curb and gutter under Section 638 - Portland Cement
28 Concrete Curb and Gutter.

29
30 The Engineer will pay for excavation of unsuitable material and backfill with
31 material acceptable to the Engineer under Section 203 – Excavation and
32 Embankment. If no pay item exists, refer to Subsection 104.02 – Changes.”

33
34
35 **END OF SECTION 610**

47 The Engineer will pay for the traffic signal standard at the contract unit price
48 per each complete in place. The price includes full compensation for submitting
49 the equipment list and drawing; furnishing and installing the traffic signal standard;
50 wiring; bonding and grounding; testing; providing turn-on service; submitting
51 warranty; and furnishing equipment, tools, labor, materials; and other incidentals
52 necessary to complete the work.

53

54 The Engineer will pay for the foundation for controller cabinet at the contract
55 unit price per each complete in place. The price includes full compensation for
56 excavating and backfilling; forming; furnishing and placing the reinforcing steel;
57 mixing, placing, and curing the concrete; furnishing and setting the anchor bolts;
58 restoring the pavement; and furnishing equipment, tools, materials and other
59 incidentals necessary to complete the work.

60

61 The Engineer will pay for traffic signal and pedestrian signal assembly at
62 the contract unit price per each complete in place. The price includes full
63 compensation for submitting the equipment list and drawing; assembling the signal
64 heads; wiring; bonding and grounding; painting the signal head mounting; testing;
65 providing turn-on service; submitting warranty; and furnishing equipment, tools,
66 labor, materials and other incidentals necessary to complete the work.

67

68 The Engineer will pay for the pedestrian pushbutton with instruction sign at
69 the contract unit price per each complete in place. The price includes full
70 compensation for submitting the equipment list and drawing; furnishing and
71 installing the pedestrian pushbutton with the instruction sign; wiring; bonding and
72 grounding; testing; providing turn-on service; submitting warranty; and furnishing
73 equipment, tools, labor, materials; and other incidentals necessary to complete the
74 work.

75

76 The Engineer will pay for the pull box at the contract unit price per each
77 complete in place. The price includes full compensation for submitting the
78 equipment list and drawing; furnishing and installing the pull box at the designated
79 locations; saw cutting; excavating and backfilling; restoration of concrete
80 sidewalks, asphalt concrete pavement and landscaping; coating the frames and
81 covers; and furnishing equipment, tools, labor, materials and other incidentals
82 necessary to complete the work.

83

84 The Engineer will pay for adjusting existing traffic signal pull box to finish
85 grade at the contract unit price per each complete in place. The price includes full
86 compensation for submitting the equipment list and drawing; furnishing and
87 installing the pull box top at the designated locations; saw cutting; excavating and
88 backfilling; restoration of concrete sidewalks, asphalt concrete pavement and
89 landscaping; coating the frames and covers; and furnishing equipment, tools,
90 labor, materials and other incidentals necessary to complete the work.

91

92

93 The Engineer will pay for the loop detector sensing unit at the contract unit
94 price per each complete in place. The price includes full compensation for saw
95 cutting; cleaning and blowing the saw cut areas; furnishing and inserting the loop
96 cable; splicing in the pull box; filling the saw cut groove with epoxy sealer or hot
97 applied rubberized sealant; and furnishing equipment, tools, labor, materials and
98 other incidentals necessary to complete the work.
99

100 The Engineer will pay for the video/radar detector sensing unit at the
101 contract unit price per each complete in place. The price includes full
102 compensation for furnishing equipment, cables, tools, labor, materials and other
103 incidentals necessary to complete the work.
104

105 The Engineer will pay for the emergency vehicle preemption (EVP) optical
106 receiver at the contract unit price per each complete in place. The price includes
107 full compensation for submitting the equipment list and drawing; furnishing and
108 installing the EVP; wiring; bonding and grounding; testing; providing turn-on
109 service; submitting warranty; and furnishing equipment, tools, labor, materials; and
110 other incidentals necessary to complete the work.
111

112 The Engineer will pay for the traffic signal duct lines at the contract unit price
113 per linear foot complete in place. The price includes full compensation for saw
114 cutting; trenching; excavating and backfilling, including asphalt concrete
115 pavement, hot mix asphalt base course, aggregate base course and aggregate
116 subbase course for trench repair; concrete curb and/or gutter and concrete
117 sidewalk repair; furnishing and placing the reinforcing steel for concrete
118 encasement; mixing, placing, and curing the concrete for encasement; furnishing,
119 installing, bonding, and grounding the conduits and interconnect subducts; and
120 furnishing equipment, tools, labor, materials and other incidentals necessary to
121 complete the work.
122

123 The Engineer will pay for the traffic signal cables at the contract unit price
124 per linear foot complete in place. The price includes full compensation for
125 furnishing, installing, splicing, and taping the cable; furnishing and installing
126 interconnect fabric subducts; making the connections; providing turn-on service;
127 and furnishing equipment, tools, labor, materials and other incidentals necessary
128 to complete the work.
129

130 The Engineer will not pay for the inter-connect risers. The work includes
131 furnishing and installing the riser; and furnishing equipment, tools, labor, materials,
132 and other incidentals necessary to complete the work. The Engineer will consider
133 the cost for risers as included in the contract price for the various contract items.
134

135 The Engineer will consider full compensation for additional materials and
136 labor not shown in the contract that are necessary to complete the installation of
137 the various systems incidental to the various contract items. The Engineer will not
138 allow additional compensation.
139

140 The Engineer will pay for the following pay items when included in the
141 proposal schedule:

142	Pay Item	Pay Unit
143		
144		
145	Verify Location of Existing Underground Utilities	Force Account
146		
147	Hawaiian Electric Company service connection fees	Force Account
148		
149	Controller Assembly with Software	Each
150		
151	Type _____ Traffic Signal Standard _____	Each
152		
153	Foundation for _____	Each
154		
155	_____ Signal Assembly _____	Each
156		
157	Pedestrian Pushbutton with Instruction Sign	Each
158		
159	_____ Type _____ Pull Box	Each
160		
161	Adjust Pull Box to Finish Grade	Each
162		
163	Loop Detector Sensing Unit (6 Ft. x 6 Ft.) _____ Loops	Each
164		
165	Video/Radar Vehicle Detector Unit	Each
166		
167	EVP Optical Receiver with _____	Each
168		
169	Traffic Signal Ductline _____	Lin. Ft.
170		
171	EVP Cable	Lin. Ft.
172		
173	No. _____, _____ Cable	Lin. Ft.”
174		
175		
176		

END OF SECTION 623

1 Make the following section part of the Standard Specifications:

2
3 **"SECTION 627 – TRAFFIC MONITORING AND SIGNAL CONTROL SYSTEM**

4
5 **627.01 Description.** This section describes furnishing, installing, modifying, or
6 replacing traffic monitoring and signal control systems.

7
8 The work shall involve integrating traffic signal systems into the following
9 two traffic operations/management centers, using Internet Protocol (IP) based
10 communications:

11
12 H-3 Traffic Operations Center (TOC)
13 Department of Transportation
14 State of Hawaii

15
16 Joint Traffic Management Center (JTMC)
17 Department of Transportation Services
18 City & County of Honolulu
19

20 The traffic monitoring and signal control system shall consist of remotely
21 controlled closed-circuit television (CCTV) cameras, remote video switching, IP
22 based communications, cellular modem, and a fiber optic inter-connect system.
23 The local traffic signal control system will transmit data over two (2) single-mode
24 fiber strands through a 100/1000/10000 base T/FX Internet Protocol switch.

25
26 The work shall include:

27
28 **(A)** Performing investigation work to determine the set-up and layout of
29 the existing traffic monitoring system, including fiber optic cable route within
30 conduits and pull boxes, whether the fiber optic cable connects to or
31 provides service to existing equipment beyond the project limits, and how
32 the fiber optic cable connects to the JTMC.

33
34 **(B)** Furnishing and installing a fully operational traffic monitoring and
35 signal control system.

36
37 **(C)** Furnishing and installing equipment into traffic signal controller
38 cabinets to facilitate traffic signal control from the JTMC.

39
40 **627.02 Materials.**

41
42 **(A) Traffic Monitoring and Signal Control Assembly.** The assembly
43 shall include all necessary equipment/licenses to receive/transmit video and
44 data to the TOC and JTMC; including Fiber Housing / Patch Panel with
45 Bulkhead SC Connectors, Network Switch, IP Encoder, cabinet, and
46 foundation.

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The assembly shall be supplied with Model 332A cabinet listed on CALTRANS Qualified Products List.

(B) Network Switch. EtherWan EX78900X Series hardened managed 12-port gigabit PoE and 4-port 10G SFP+ ethernet switch or approved equal. The switch shall meet the following requirements:

(1) Environmentally hardened switch including operating without a ventilation fan; resistant to impacts and electrical noise; and operating temperature range shall meet or exceed -40°F to +167°F (-40 °C to +75°C).

(2) For use with either conventional CAT 6 copper or optical transmission media.

(C) IP Encoder. Marshall Electronics VS-103E-3GSDI 1080p60 Full HD Video encoder with Embedded Audio or approved equal. The encoder shall meet the following requirements:

(1) Environmentally hardened switch including operating without a ventilation fan; resistant to impacts and electrical noise; and operating temperature range shall meet or exceed -40°F to +167°F (-40 °C to +75°C).

(2) For use with either conventional CAT 6 copper or optical transmission media.

(D) Fiber Optic Cable. Corning ALTOS ® Loose Tube, Gel-Free, All-Dielectric, Cables with Binderless FastAccess ® Technology 72 F, SMF-28® Ultra Fiber, Single-Mode (OS2) or approved equal.

Fiber optic cable shall meet the following requirements: suitable for outdoor use, polyethylene jacketed, gel-free, loose buffer tubes, all-dielectric, single-mode (OS2), 72 strand; and meet specifications ANSI/ICEA S-87-640, Telecordia GR-20, and RDUP PE-90.

Polyethylene jacket shall be marked with the manufacturer's name, year of manufacture, the words "optical fiber cable", fiber count, type of fiber, and sequential linear foot markings. Repeat the markings every 3 feet. The marking shall be in a contrasting color to the cable jacket. The marking shall be 2.5 mm in height and must be permanent weatherproof and shall not wear off during the installation in the underground conduits.

The shipping, storage, installation, and operating temperature range of the cable shall meet or exceed -20 °F to +155 °F (-29 °C to +60°C).

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Fiber optic cable shall contain color coded buffer tubes with 12 single mode color-coded fibers per buffer tube. 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. Buffer tubes shall be color-coded with the following colors: blue, orange, green, brown, slate, and white.

The fiber strands shall be Corning SMF-28 ® Ultra Fiber or approved equal with maximum allowable attenuation of 0.35 dB/km for 1310 nm and 0.25 dB/km for 1550 nm. Fiber strands shall be color-coded with the following colors: blue, orange, green, brown, slate, white, red, black, yellow, violet, rose, and aqua.

(E) Fabric Subduct. Maxcell MXC2003 (2-inch, 3-Cell) or approved equal.

(F) Category 6 Cable. Category 6 Ethernet cable shall be for outdoor use.

(G) CCTV Camera Assembly. The assembly shall include all necessary equipment (camera, mount, cables, etc.) and materials for operation.

Camera assembly shall be furnished with components assembled, complete, and a ready-to-install system.

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.

The CCTV Camera and mount shall meet the following requirements:

- (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)

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- (e) Sensitivity: Scene Illumination; F1.4 @ 50% Video
0.4 Lux (0.04 fc) @ 1/30 shutter, color mode 498
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: 1920x1080 @ 30fps, 1280x720
@ 30 fps, 720x480 @ 15 fps
 2. MJPEG Streams: 1920x1080 @ 10 fps,
1280x720 @ 20 fps
 3. Analog Video Output: (1).

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(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.

- 231
- 232 (f) Tilt Speed; Variable from 0.05 to 45 degrees/second.
- 233
- 234 (g) Tilt Repeatability; +/- 0.05 degree precision.
- 235
- 236 (h) Tilt Preset Speed; 180 degree movement < 2.5
- 237 Seconds.
- 238
- 239 (i) Proportional Zoom Control; Positioning control shall
- 240 allow variable pan/tilt. speeds based on zoom position.
- 241
- 242 (j) Home Position: Shall be a user defined point.
- 243
- 244 (k) The Inter Process Communication System (IPCS) shall
- 245 not have any exposed wiring from the positioning drive to the
- 246 camera head enclosure.
- 247
- 248 (4) **Electrical.** Operating Voltage; The camera system shall
- 249 provide flexible power input as required by the installation to include:
- 250
- 251 (a) Power over Ethernet, LTPoE++.
- 252
- 253 (b) Power injector
- 254
- 255 (5) **Certifications/Ratings**
- 256
- 257 (a) FCC Class A.
- 258
- 259 (b) International Electrotechnical Commission (IEC) /
- 260 European Conformity (CE) cover product emission and
- 261 immunity requirements (CISPR) 22 24.
- 262
- 263 (c) Restriction of Certain Hazardous Substances (RoHs)
- 264
- 265 (6) **Enclosure**
- 266
- 267 (a) Aluminum
- 268
- 269 (b) Dust-tight
- 270
- 271 (c) Waterproof & Pressurized
- 272
- 273 (7) **Controls.** Shall be controllable or interoperable by a Pelco
- 274 analog switcher and control System using Pelco P protocol IP
- 275 protocol shall be controllable by either Pelco P or Onvif protocol.
- 276

277 (8) **Warranty.** Manufacturer's warranty period shall be three (3)
278 years minimum.

279
280 (9) **Mount**

- 281
282 1. Outdoor type
283
284 2. Aluminum or stainless-steel components
285
286 3. Mount cantilever style on pole shafts using straps, or
287 on horizontal mast arm shaft
288
289 4. Constructed of marine grade stainless steel
290
291 5. Has cable feed-through
292
293 6. Supports up to 100 lbs
294
295 7. Painted White
296
297 8. Wall to pole mount adapter, as required
298
299 9. Provide ability to level and adjust camera to plumb
300

301 **627.03 Construction.** Perform work in accordance with the requirements of
302 the contract documents

303
304 (A) **Equipment List.** Submit within seven days following the contract
305 award ten (10) copies of materials and equipment purchase requisition,
306 including copies of equipment list, manufacturer's brochures, catalog cuts,
307 and shop drawings.

308
309 Order materials and equipment immediately upon acceptance by the
310 Engineer. If the Contract award is rescinded by the Department after
311 ordering of materials and equipment, the Department will purchase ordered
312 materials and equipment at cost based on invoices. Purchase price will
313 include transportation cost and applicable State excise taxes. Purchase
314 price will not include profit.

315
316 (B) **Fiber Optic Cable Pulling Plan.** The Contractor shall submit a fiber
317 optic cable pulling plan for review and approval by the Engineer prior to
318 beginning fiber optic cable installation. The fiber optic cable pulling plan
319 shall include:

- 320
321 (1) Location of start and end of pulls,
322

- 323 (2) Location of cable reel trailers during installation, Location of
324 cable reel trailers during installation,
325
326 (3) Location of any “figure-eight” of fiber optic cable, and
327
328 (4) Location of staged equipment.
329
- 330 (C) **As-Built Plan.** Upon completion of the work, submit an “As Built” or
331 corrected plan showing in detail the following:
332
333 (1) Construction changes,
334
335 (2) Location and attenuation of every event along the installed
336 fiber optic cable,
337
338 (3) Index of refraction of installed fiber,
339
340 (4) Fiber optic cable index of refraction, and
341
342 (5) Sequential fiber optic cable markings at each pull box,
343 cabinet, and splice closure.
344
- 345 (D) **Excavation and Backfill.** Excavate and backfill in accordance with
346 Section 204 – Excavation and Backfill for Miscellaneous Facilities.
347
- 348 (E) **Installation.**
349
- 350 (1) **Foundations.** Construct TMSCS cabinet foundations as
351 indicated in the contract documents.
352
- 353 Set forms to correct line and grade. Use rigid forms, securely
354 braced in place. Place conduit ends and anchor bolts in proper
355 position and height and hold in place with rigid top template. In
356 addition to rigid top template, hold anchor bolts in place by means of
357 rigid bottom template made of steel. Bottom template shall provide
358 proper spacing and alignment of anchor bolts near their bottom
359 embedded end. Install bottom template before placing foundation
360 concrete. Anchor bolts installed more than 1:40 from vertical will be
361 rejected. Hold conduit ends and anchor bolts in place by template
362 until concrete sets. Cure concrete for not less than 72 hours.
363
- 364 Mix, place, and cure concrete for foundations in accordance
365 with Section 601 – Structural Concrete and Section 503 – Concrete
366 Structures.
367

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(2) TMSCS Equipment and Cabinet. Mount TMSCS cabinet on foundation. Assemble, wire, and house TMSCS equipment in cabinet.

(3) Pull Boxes. Pull boxes to facilitate underground installation of fiber optic cables shall be provided under Section 623 – Traffic Signal System.

(4) Conduits. Conduits to facilitate underground installation of fiber optic cables shall be provided under Section 623 – Traffic Signal System.

(5) Conductors and Cables. Conductors and cables to provide electrical power to the TMSCS equipment shall be provided under Section 623 – Traffic Signal System.

(D) Fabric Subduct. Fabric subduct shall be installed in all new conduits containing 72-strand fiber optic cables.

The contractor shall:

(1) Protect the interconnect fabric subduct from the effects of moisture, UV exposure, corrosion and physical damage during installation.

(2) Install the interconnect fabric subduct prior to installing the new interconnect and fiber optic cables.

(3) Provide interconnect fabric subduct in conduits using continuous un-spliced lengths of interconnect fabric subduct between pull boxes, and/or termination points as indicated on the drawings.

(4) 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 inter-connect 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 inter-connect fabric subduct.

414 (5) Using a Bow Line knot, attach the pull rope located in the
415 rigid conduit to the other end of the swivel. Install interconnect fabric
416 subduct ensuring that no twist is introduced to the interconnect fabric
417 subduct.

418
419 (6) Provide suitable interconnect fabric subduct slack in the pull
420 boxes, and at turns to ensure there is no kinking or binding of the
421 product.

422
423 (7) At locations where interconnect fabric subduct will be
424 continuous through a pull box, allow sufficient slack so that the
425 interconnect fabric subduct may be secured to the side of the pull
426 box maintaining the minimum bending radius.

427
428 (8) At pull boxes serving as the junction location, pull the
429 exposed end of the interconnect fabric subduct to the far end of the
430 pull box, install termination bag, and secure to the pull box.

431
432 (9) Seal all conduit and interconnect fabric subduct entering the
433 pull boxes to prevent entrance into the pull boxes of gases, liquids or
434 rodents.

435
436 **(E) Fiber Optic Cable Installation.** The Contractor shall be fully
437 responsible for the quality, integrity, and operability of the installed fiber
438 optic cable.

439
440 All necessary equipment and plug-in, fiber optic pigtails, fittings,
441 splice tags, enclosures, and work to complete an operational system shall
442 be furnished and installed by the Contractor, unless otherwise indicated,
443 at no additional cost, and will be considered included in the cost of the
444 contract items in this Section.

445
446 The Contractor shall:

447
448 (1) Install new fiber optic cable underground in PVC and metal
449 conduits, as shown on the plans.

450
451 (2) Leave a minimum of 20 feet of cable service loops at every
452 cabinet and 10 feet at every pull box.

453
454 (3) Pull new fiber optic cable through conduits using a
455 breakaway swivel to prevent exceeding the manufacturer's
456 recommended maximum tensile load on cable during installation.

457
458 (4) Provide documented historical cable pulling data indicating
459 tensile forces exerted on the cable during the installation. Any

- 460 tension measurements, which exceed the manufacturer's
461 recommendation, will be considered means for the cable rejection.
462
463 (5) Splice fiber optic strands with fusion splices. Mechanical
464 splices shall not be used.
465
466 (6) Provide pigtails on all fiber optic strands which attach to fiber
467 optic hardware and components with SC-connectors. Six strands of
468 the same buffer tube shall be jumpered color for color using a SC-
469 connectors fiber optic patch panel.
470
471 (7) Provide patch cords for the six strands connected to the patch
472 panel. All remaining fiber optic strands shall be fusion spliced color
473 for color.
474
475 (8) Splice fiber optic strands at camera cabinets, hubs, and splice
476 cabinets; with no more than 0.07 dB loss per splice based on the
477 appropriate system operating wavelength.
478
479 (9) Complete all required fiber optic splices prior to final testing.
480
481 (10) Test all fiber optic strands and provide a documented optical
482 budget loss analysis report showing the acceptable budget losses
483 from one end to the other end of all fiber optic strands.
484
485 (11) Test all fiberoptic hardware and cables to provide a
486 documented optical budget loss analysis for each link to and from a
487 hub station.
488
489 (12) As part of the final testing and acceptance, submit optical time
490 domain reflectometer (OTDR) readings in both hardcopy and
491 electronic formats (such that it can be examined using the
492 manufacturer's OTDR software) to the Engineer for review. Testing
493 shall be conducted on all single mode fibers at 1310 nm and 1550
494 nm from the beginning and end of entire run; which includes patch
495 panels and splicing. Power meter attenuation testing should be
496 performed at dual wavelength, bi-directionally.
497

498 **627.06 Measurement.** The Engineer will measure Traffic Monitoring and
499 Signal Control System Assembly, Network Switch and Equipment, and CCTV
500 Traffic Camera Assembly per each, in accordance with the contract documents,
501 complete in place.
502

503 The Engineer will measure fiber optic cable and fabric subduct per linear
504 foot, in accordance with the contract documents, complete in place.
505

506 **627.05 Payment.** The Engineer will pay for the accepted Traffic Monitoring and
507 Signal Control System Assembly at the contract unit price per each complete in
508 place. The price shall include furnishing and installing all necessary
509 equipment/licenses to receive/transmit video and data to the TOC and JTMC;
510 including Fiber Housing / Patch Panel with Bulkhead SC Connectors, Network
511 Switch, IP Encoder, cabinet; fiber optic cables and splice trays; cables; splicing;
512 OTDR testing and furnishing results; furnishing and installing any additional items
513 and all tools, labor, equipment, and incidentals necessary to complete the work.
514

515 The Engineer will pay for the accepted Network Switch and Equipment for
516 traffic signal controller fiber interface at the contract unit price per each complete
517 in place. The price shall include furnishing and installing the items, and all tools,
518 labor, equipment, and incidentals necessary to complete the work.
519

520 The Engineer will pay for accepted CCTV Traffic Camera Assembly at the
521 contract unit price per each complete in place. The price shall include CCTV
522 cameras; modems; cables; splicing; making the connections; testing; providing
523 turn-on service; furnishing and installing any additional items, and all tools, labor,
524 equipment, and incidentals necessary to complete the work.
525

526 The Engineer will pay for accepted fiber optic cable at the contract unit price
527 per linear foot complete in place. The price shall include cables; splicing; making
528 the connections; testing; providing turn-on service; furnishing and installing any
529 additional items, and all tools, labor, equipment, and incidentals necessary to
530 complete the work.
531

532 The Engineer will pay for accepted fabric subduct at the contract unit price
533 per linear foot complete in place. The price shall include fabric subduct; furnishing
534 and installing any additional items, and all tools, labor, equipment, and incidentals
535 necessary to complete the work.
536

537 The Engineer will consider full compensation for additional materials and
538 labor not specifically shown or called for that are necessary to complete the work
539 incidental to the various contract items in the proposal.
540

541 Payment will be full compensation for work prescribed in this section, by the
542 Engineer, and in the contract documents.
543

544 The Engineer will pay for the following pay items when included in the
545 proposal schedule:
546

547 Pay Item	Pay Unit
548 Traffic Monitoring and Signal Control System Assembly	Each
549 Network Switch and Equipment	Each

552		
553	CCTV Traffic Camera Assembly	Each
554		
555	Fiber Optic Cable, 72-Strand, Single-Mode	Linear Foot
556		
557	Fabric Subduct	Linear Foot
558		

559 The Engineer will pay for foundation for Traffic Monitoring and Signal
560 Control System Assembly under Section 623 – Traffic Signal System.

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562
563

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.”	

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(III) Amend **629.04 – Measurement** by revising lines 292 to 294 to read as follows:

“629.04 Measurement.

(A) The Engineer will measure:

- (1) Removal of pavement markings per linear foot; including single stripes, double stripes, and stripes of all widths. The Engineer will include the longitudinal gaps for skip striping, up to thirty (30) feet long, in the measurement.
- (2) Removal of pavement markers per each; including various types.
- (3) Removal of pavement words per each.
- (4) Removal of pavement arrows per each.

(B) 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 crosswalk markings per lane in accordance with the contract documents.

The Engineer will not measure 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.

The Engineer will measure the temporary pavement markings and temporary signs installed as ordered by the Engineer for special temporary traffic patterns on a force account basis, if the contract specifies payment in the proposal.

(C) The Engineer will measure the pavement markers per each for the types shown in the proposal.

The Engineer will measure pavement words and pavement arrows per each.”

61 (IV) Amend **629.05 – Payment** by revising lines 296 to 330 to read as follows:

62
63 **“629.05 Payment.**

64
65 (A) The Engineer will pay for removal of pavement markings, markers,
66 words, and arrows to facilitate installation of detour lanes at the contract unit
67 prices bid. The prices shall be full compensation for removing such items
68 according to the contract.

69
70 (B) The Engineer will pay for thermoplastic and preformed pavement
71 marking tape at the contract price per linear foot according to the contract,
72 complete in place, including primers.

73
74 The Engineer will pay for double four (4) inch striping with a four (4)
75 inch space between stripes at the contract price per linear foot according
76 to the contract.

77
78 The Engineer will pay for crosswalk markings at the contract price
79 per lane of traffic marked, per each according to the contract.

80
81 The Engineer will pay for pavement arrows (single and multiple
82 heads), symbols, and words at the contract price per each according to the
83 contract.

84
85 The contract unit price paid shall be full compensation for furnishing
86 labors, materials, tools, equipment and incidentals and for doing the work
87 involved in furnishing and installing pavement markings complete in place
88 according to the contract.

89
90 The Engineer will not pay for the temporary pavement markings
91 including flexible delineator posts with reflector markers or Type I
92 Barricades and temporary signs installed for the longitudinal guidance of
93 public traffic over reconstructed areas, cold planed surfaces, newly paved
94 surfaces or other unmarked or scarified areas for payment if not shown in
95 the proposal separately. The Engineer will consider them incidental to the
96 various contract items.

97
98 If the contract specifies payment for temporary pavement markings
99 installed as ordered by the Engineer for special temporary traffic patterns,
100 the Engineer will pay from an allowance for “Temporary Construction Zone
101 Markings”.

102
103 The Engineer will compute the actual amount paid to the Contractor
104 for force account work according to Subsection 109.06 – Force Account
105 Provisions and Compensation.

106

107 (C) The Engineer will pay for the various types of pavement markers at
108 the contract price per each according to the contract, complete in place,
109 including adhesives.

110
111 The Engineer will pay for pavement words and pavement arrows at
112 the contract price per each according to the contract, complete in place.

113
114 The Engineer will pay for the following pay items when included in
115 the proposal schedule:

116	117 Pay Item	118	119 Pay Unit
119	Removal of Pavement Markings		Linear Foot
121	Removal of Pavement Markers		Each
123	Removal of Crosswalk Markings		Lane
125	Removal of Pavement Words		Each
127	Removal of Pavement Arrows		Each
129	_____ - Inch Pavement Striping		
130	(Tape, Type ____ Thermoplastic Extrusion) _____		Linear Foot
132	_____ - Inch Pavement Striping with Black Border		
133	(Preformed Thermoplastic) _____		Linear Foot
135	Crosswalk Marking (Tape, Type III or Thermoplastic Extrusion)		Lane
137	Crosswalk Marking with Black Border (Preformed Thermoplastic)		Lane
139	Pavement Arrow (Tape, Type _____ or Thermoplastic Extrusion)		Each
141	Pavement Arrow with Black Border (Preformed Thermoplastic)		Each
143	Pavement Word (Tape, Type _____ or Thermoplastic Extrusion)		Each
145	Type _____ Pavement Marker		Each"

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END OF SECTION 629

1 **SECTION 634 – PORTLAND CEMENT CONCRETE SIDEWALKS**

2
3 Make the following amendment to said Section:

4
5 **(I) Amend Section 634.04 - Measurement** by replacing lines 60 to 61 to read:

6
7 **“634.04 Measurement.** The Engineer will measure Portland cement
8 concrete sidewalks by the square yard of finished surface.”

9
10 **(II) Amend Section 634.05 – Payment** by replacing lines 62 to 72 to read:

11
12 **“634.05 Payment.** The Engineer will pay for the accepted quantities of
13 Portland cement concrete sidewalk at the contract unit price per square yard
14 complete in place as shown in the proposal.

15
16 Payment will be full compensation for work prescribed in this section and
17 contract documents.

18
19 The Engineer will pay for following pay item when included in proposal
20 schedule:

Pay Item	Pay Unit
Portland Cement Concrete Sidewalk	Square Yard

21
22
23
24
25
26 The Engineer will pay for excavation of unsuitable material and backfill with
27 material acceptable to the Engineer under Section 203 – Excavation and
28 Embankment. If no pay item exists, refer to Subsection 104.02 – Changes.”

29
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31
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33 **END OF SECTION 634**

1 **SECTION 638 – PORTLAND CEMENT CONCRETE CURB AND GUTTER**

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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 not measure curb and/or gutter both new and reset when contracted on a lump sum basis.

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
Cast-in-place Curb and Gutter Type _____	Cast-in-place Curb and Gutter Type _____	Cast-in-place Curb and Gutter 1/2 of Transition to each type
Cast-in-place Curb Type _____	Cast-in-place Curb Type _____	Cast-in-place Curb 1/2 of Transition to each type

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.”

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29 (II) Amend **638.05 – Payment** by revising lines 133 to 148 to read as follows:

30

31 **“638.05 Payment.** The Engineer will pay for the accepted quantities of curb
32 and/or gutter at the contract unit price per linear foot for each type of curb and/or
33 gutter specified.

34

35 Payment will be full compensation for work prescribed in this section and
36 contract documents.

37

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

40

Pay Item	Pay Unit
Curb, Type _____	Linear Foot
Gutter, Type _____	Linear Foot
Curb and Gutter, Type _____	Linear Foot”

48

49

50

51

END OF SECTION 638

1 Make the following section a part of the Standard Specifications:
2

3 **“SECTION 671 – PROTECTION OF ENDANGERED SPECIES**
4

5 **671.01 Description.** The Endangered Species Act (ESA) listed species
6 Hawaiian Hoary Bat (*Lasiurus cinereus semotus*), Band-rumped Storm-petrel
7 (*Hydrobates castro*), Hawaiian Common Gallinule (*Gallinula galeata*
8 *sandvicensis*), Hawaiian Coot (*Fulica alai*), Hawaiian Duck (*Anas wyvilliana*),
9 Hawaiian petrel (*Pterodroma sandwichensis*), Hawaiian Stilt Birds (*Himantopus*
10 *mexicanus knudseni*), and the threatened Newell’s shearwater (*Puffinus newelli*)
11 are in the general vicinity of the proposed project that may transit or visit the
12 proposed project. The contractor shall protect these endangered species
13 throughout the construction duration.
14

15 **671.02 Materials.** None
16

17 **671.03 Construction.**
18

19 **(A) Pre-Construction and Construction Requirements.** Comply with
20 the following conditions:
21

22 **(1)** Hawaiian Hoary Bats nest in both exotic and native woody
23 vegetation. To minimize impacts to the Hawaiian Hoary Bat, there
24 will be no disturbance, removal, or trimming of woody plants greater
25 than 15 feet (4.6 meters) tall during the birthing and pup rearing
26 season (June 1 through September 14).
27

28 Additionally, barbed wire will not be used for fencing and for
29 any construction.
30

31 **(2)** Hawaiian seabirds, Newell’s shearwater, and band-rumped
32 storm-petrel may traverse the project area at night. If night time
33 construction work is required for the proposed project, all lights will
34 be fully shielded so the bulb can only be seen from below bulb height
35 to reduce the potential for interactions of nocturnally flying seabirds
36 with external lights and man-made structures. All outdoor lights will
37 be turned off when human activity is not occurring in the lighted area.
38

39 No night time construction will occur during the peak seabird
40 fledging period (September 15 through December 15).
41

42 **(3)** Hawaiian Stilt Birds – A biological monitor familiar with the
43 species’ biology and approved by the FHWA will conduct Hawaiian
44 Stilt Bird nest surveys where appropriate habitat occurs within the
45 proposed maintenance site prior to cleaning culverts and drainage

46 structures. Survey will take place within three days of project
47 initiation and after any subsequent delay of work of three or more
48 days (during which the birds may attempt to nest). If a nest or active
49 brood is found, cease work and contact the USFWS.

50
51 **(B) Compliance Requirements.** The Contractor shall protect, Hawaiian
52 Hoary Bats, Hawaiian seabirds, Newell’s shearwater, band-rumped storm-
53 petrel, and Hawaiian Stilt birds for the duration of construction. Failure to
54 comply with the construction requirements, harm or a taking of an individual
55 during the construction duration shall be enforceable by the USFWS as set
56 forth by the ESA and DOFAW. Resultant penalties and/or fines shall be at
57 the Contractors expense without cost or liability to the State.

58
59 **671.04 Measurement.** The Engineer will measure the work by a biological
60 monitor required for the protection of endangered species on a force account basis
61 in accordance with Subsection 109.06 – Force Account Provisions and
62 Compensation and as ordered by the Engineer.

63
64 **671.05 Payment.** The Engineer will pay for the accepted work by a biological
65 monitor required for the protection of endangered species on a force account basis
66 in accordance with Subsection 109.06 – Force Account Provisions and
67 Compensation. Payment will be full compensation for the work prescribed in this
68 section, by the Engineer, and in the contract documents.

69
70 The Engineer will pay for the following pay item when included in the
71 proposal schedule:

72

Pay Item	Pay Unit
Protection of Endangered Species	Force Account

76
77 An estimated amount may be allocated in the proposal schedule under
78 “Protection of Endangered Species”, but the actual amount to be paid will be the
79 sum shown on the accepted force account records, whether this sum be more or
80 less than the estimated amount allocated in the proposal schedule.

81
82 The Engineer will not pay for outdoor lighting for night-time work separately,
83 this work shall be incidental to the various contract items.”

84
85
86 **END OF SECTION 671**

1 This Section shall be made a part of the Standard Specifications:
2

3 **"SECTION 680 - ELECTRIC AND COMMUNICATION SYSTEMS**
4

5 **680.01 Description.** This work shall consist of furnishing all labor, materials and
6 equipment to install in place and in operating condition underground structures required
7 for the facilities of Hawaiian Electric Company, herein referred to as HECO, the facilities
8 of Hawaiian Telcom herein referred to as HECO, and the facilities of Oceanic Time
9 Warner Cable herein referred to as OTWC. Such works shall be performed and tested
10 at the indicated locations in accordance with the requirements herein specified and the
11 indicated details, or as ordered by the Engineer, and includes but is not limited to the
12 following.
13

14 (A) Complete installation of a new HECO handhole including excavation,
15 trenching, backfilling, and concrete work. Work shall also include securing the
16 approval of the HECO Inspector.
17

18 (B) Coordinate work and arrange for periodic inspections by HECO and
19 Engineer.
20

21 (C) Immediately report and pay for damages to existing equipment.
22

23 (D) Obtain and pay for electrical permits, arrange for periodic inspection by local
24 authorities and deliver certificate of final inspection to Engineer.
25

26 (E) Contractor shall check and test the installation for completeness and
27 functional operation as described by the drawings and specified herein. Final test
28 shall be in the presence of Engineer and representatives of utility companies.
29 Contractor shall arrange and pay for all testing costs.
30

31 (1) Incidental parts which are not shown on the plans or specified herein
32 and which are necessary to complete the underground electrical duct
33 system shall be furnished and installed by the Contractor as though such
34 parts were shown on the plans, or specified herein or in the special
35 provisions.
36

37 (2) All electrical equipment shall conform to the NEMA Standards, and
38 all electrical work shall conform to ordinances of City and County of
39 Honolulu; latest edition of National Electrical Code; General Order No. 10,
40 Public Utilities Commission, State of Hawaii; and Regulations and Standard
41 Practices of HECO.
42

43 (F) Applicable rules, standards and specifications of following associations
44 shall apply to materials and workmanship:
45

46 (1) American National Standards Institute (ANSI)
47

95 applicable provisions of Section 713 - Structural Steel and Related Materials.
96 Fabrication of steel frames shall conform to the applicable provisions of Section
97 501 - Steel Structures. Steel frames shall be hot-dipped galvanized after
98 fabrication. Concrete for covers shall be Class A and shall conform to Section
99 601 - Structural Concrete. Cast iron frame and cover shall conform to Subsection
100 712.07 (A) - Frame and Covers.

101
102 **(G) Reinforcing Steel.** Reinforcing Steel for manholes, handholes and
103 pullboxes, and concrete jackets shall conform to the requirements of Section
104 602 - Reinforcing Steel.

105
106 **(H)** Materials will be subject to inspection at any time. Failure of the Engineer
107 to note faulty material or workmanship during construction will not relieve the
108 Contractor of his responsibility for removing or replacing such materials and
109 dredging the work at his expense.

110
111 **(I) Conductors.** Conductors shall be copper, No. 12 AWG minimum; No. 10
112 AWG and smaller, solid and round; No. 8 AWG and larger, 7 or 19 strands
113 concentric. All conductors No. 6 and smaller shall be types THW for interior use
114 or RHW for exterior use. All conductors No. 4 AWG and larger shall be type
115 THWN-2 for interior use; or RHW-2 or USE-2 for exterior use. Conductors used
116 for fire alarm, sound system, and control wiring may be sized according to the
117 system manufacturer based on their load and voltage drop calculations and code
118 requirements. Conductors used to serve critical operations power systems (power
119 systems for facilities or parts of facilities that require continuous operations for
120 reasons of public safety, emergency management, national security, or business
121 continuity) including but not limited to emergency power, HVAC, fire alarm,
122 security, telecommunications, and signaling shall be a listed 2-hour electrical
123 circuit protective system. Conductors installed on roof tops and exposed to
124 sunlight shall be derated per NEC Table 310.15(B)(2)(b) or shall be type XHHW-
125 2. Conduit sizes shall be increased as necessary to accommodate derated and
126 type XHHW-2 conductors. Reduce conductor sizes at equipment terminations as
127 required to accommodate maximum allowable conductor size accepted at
128 equipment terminals per manufacturer's recommendations. Provide UL listed in-
129 line reducer splice kit or UL listed cable reducing adapter plugs as required to
130 reduce conductor sizes.

131
132 **680.03 Construction.**

133
134 **(A) General.**

135
136 **(1)** The Contractor shall in performing required excavation and backfill,
137 exercise due care to avoid disturbing existing facilities. He shall remove
138 and dispose of all demolished or excess material from the job site.

139
140 **(2)** Upon completion of the work, the Contractor shall submit an 'As Built'
141 or corrected plan showing in detail thereon all construction changes.

142 (3) Before bidding, the Contractor shall visit project site, carefully review
143 each section of the Specification and all Drawings of this Contract, and
144 obtain and review the standards, specifications and drawings of the local
145 utility companies.

146
147 (a) The Contractor shall report any error, conflicts or omissions to
148 the Engineer at least one week before submission of bids for
149 interpretation or clarification. If errors or omissions are not reported,
150 the Contractor shall provide necessary work at no cost to the State
151 of Hawaii to properly complete intent of Specification and Plans.

152
153 (4) The Contractor shall make detailed arrangements for work by utility
154 companies pertaining to this contract. Payment to utility companies for their
155 work shall be by the State.

156
157 (5) Electric utility cables and equipment shall be by electric utility
158 companies.

159
160 **(B) Existing Utilities.** Existing utilities are shown on the drawings in
161 approximate locations for the convenience of the Contractor. It is not the intention
162 of plans to imply that all existing utilities are drawn and located, and the fact that
163 any utility is not shown on the drawings shall not relieve the Contractor of his
164 responsibility under this Section. It shall be the Contractor's responsibility to
165 ascertain the location of all existing utilities which may be subject to damages by
166 construction under this Contract. The Contractor shall:

167
168 (1) Support and protect all HECO, HTCO, and OTWC utilities during
169 construction,

170
171 (2) Notify HECO, HTCO, and OTWC immediately of any damage to its
172 system caused by construction under this Contract, and

173
174 (3) Reconstruct, at his expense, damaged portions of the utility system
175 in accordance with the requirements and specifications of HECO, HTCO,
176 and OTWC.

177
178 (4) The Contractor shall be responsible for and shall pay for all damages
179 to existing utilities of all types.

180
181 **(C) HECO Facilities.** The Contractor shall provide HECO with 24-hour access
182 to all existing HECO facilities that are to remain, or, for facilities that are to be
183 removed, until they are removed and to all new HECO facilities after they are
184 installed. The Contractor shall be responsible for any delays in utility company
185 work due to his failure to provide access to utility company facilities. All existing
186 HECO facilities shall remain in place until proposed permanent facilities are
187 completed and energized. Any cost for temporary relocations arising during
188 construction shall be borne by the Contractor.

189 (1) Electrical equipment or conductors, whether electrically energized or
190 not, shall remain in place at all time during construction. Handling and
191 moving of electrical equipment or conductors, when required by the
192 Engineer, shall be done by HECO. Work by the Contractor in areas with
193 energized electrical equipment or conductors shall be performed with
194 extreme caution to prevent accidents and to avoid disturbing or damaging
195 this equipment or conductors or any temporary supports or protective
196 guards that are constructed. Unless otherwise permitted by HECO, all work
197 by the Contractor in areas with energized equipment of conductors shall be
198 performed in the presence of a HECO inspector and/or standby man. The
199 Contractor shall have the sole responsibility for maintaining safe and
200 efficient working conditions and procedures in these areas.

201
202 (2) Any existing or new HECO facilities including equipment or
203 conductors damaged by the Contractor during construction shall be
204 replaced by HECO at the Contractor's expense.

205
206 (3) The Contractor shall give HECO two weeks advance notice for any
207 work to be done by HECO on its facilities. Unless otherwise indicated on
208 the drawings or otherwise directed by the Engineer, HECO will:

209
210 (a) Remove the concrete envelope from existing underground
211 HECO ducts containing electrical cables.

212
213 (b) Construct temporary supports and protective barriers for bare
214 duct and electrical cables immediately after removal of the concrete
215 envelope is completed. Material for such supports and barriers shall
216 be furnished by the Contractor as an incidental cost.

217
218 (c) Remove temporary supports and protective barriers
219 constructed under item (2) above.

220
221 (D) **Excavation and Backfill.** All excavation and backfill for electric, telephone
222 and cable television underground structures and trenches shall conform to the
223 requirements of Section 204 - Excavation and Backfill for Miscellaneous Facilities,
224 modified as follows:

225
226 (1) Excavation.

227
228 (a) The width of trenches for concrete encased ducts shall be not
229 less than the width of the encasement nor more than that required to
230 properly and safely execute the work.

231
232 (b) Ducts encased in concrete jackets which are bedded in
233 disturbed (fill) ground shall be installed in the following manner:
234 Embankments shall be built up and thoroughly compacted to the
235 elevation which is three feet above the top-of-jacket elevation, or to

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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.

(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.

283 (b) Material for use as trench backfill for direct buried cable above
284 select backfill shall be non-expansive and shall conform to
285 Subsection 680.03 (D) (2) (c) below. Backfilling and compaction
286 shall be as specified in Section 206. Backfill material shall be beach
287 sand, earth or earth and gravel mixture. If earth and gravel, mixture
288 must pass 1/2 inch mesh screen and contain not more than 20
289 percent of rock particles by volume.

291 (c) Material for use as select backfill for direct buried cables shall
292 be non-expansive and shall conform to the requirements of
293 Subsection 703.04 (B) - Filler.

295 (d) Backfilling shall be to finished grades indicated on
296 accompanying drawings, and/or matching existing conditions.
297 Backfill material shall be placed in maximum of 8" layers in loose
298 thickness before compacting. Backfill shall be thoroughly compacted
299 with hand or mechanical tampers to 95% of the ASTM D1557
300 maximum dry density. In no case shall tamping be accomplished by
301 using the wheels or tracks of a vehicle.

304 **(E) Installation of Conduits, Conductors and Duct Banks.** All joints shall be
305 water tight and all ducts shall be installed to drain towards pull points unless
306 otherwise shown on the plans.

307 (1) Plastic Duct Joints.

310 (a) Field cutting of plastic ducts shall be performed by the
311 Contractor and only with the use of a miter box. Burrs shall be
312 removed by filing before the joint is made. All foreign matter shall be
313 wiped off the sockets of the fittings and the edges of the duct with a
314 clean cloth.

316 (b) Cement for plastic duct joints shall be obtained from the duct
317 manufacturer. Thinning of the cement will not be permitted. A liberal
318 and uniform coat of cement shall be applied with a natural bristle
319 brush to the inside of the coupling and to the outside of the duct end.
320 Immediately thereafter, the duct shall be slipped into the socket of
321 the fitting with a half-twist, and the excess cement shall be wiped off.

323 (c) Allow the joined members to cure for at least five minutes
324 before disturbing or applying stress to the joint. After this initial cure,
325 care must be exercised in handling to prevent twisting or pulling the
326 joint. In damp weather, this interval shall be increased to allow for
327 slower evaporation of the solvent.

328
329

330 (d) Another fitting or section of conduit may be added to the
331 opposite end within 2 or 3 minutes if care is exercised in handling so
332 that strain is not placed on the previous assembly.
333

334 (e) Any joint included in a section of conduit to be bent in the
335 trench shall be assembled above ground and allowed to lie
336 undisturbed for at least two hours before installation. In cases where
337 a plastic connection is made with the union under stress due to
338 misalignment or other factors, the union shall be staked out to relieve
339 stress on the joint until the conduit is backfilled or encased.
340

341 (2) Plastic Duct Installation.
342

343 (a) The Contractor shall provide spacers to maintain proper
344 separation between ducts. The bottom duct spacers shall be placed
345 on the prepared trench bottom, the first tier of ducts placed in the
346 grooves of the spacers, and couplings attached to the duct ends.
347 Spacers shall be 15 inches or more away from any coupling or joint.
348 Successive lengths of ducts shall then be placed and connected to
349 the preceding lengths as specified above. The second tier of duct
350 spacers shall then be placed over the ducts previously placed and
351 followed by installation of couplings. The operation shall be repeated
352 for each successive tier until the top tier is set in place after which
353 the top spacers are placed.
354

355 (b) When conduit is assembled above the ground, the spacer
356 shall be supported in a vertical position by use of a No. 4 rebar and
357 smooth black steel wire, No. 14 gage.
358

359 (c) Duct alignment shall be as straight as feasible. Such
360 directional changes as are required shall be made by using field
361 made bends or with segments using angle couplings or deflection
362 couplings, except where otherwise indicated. The deflection angle
363 between two adjacent lengths of duct shall not exceed five degrees,
364 unless otherwise indicated.
365

366 (d) Spacers shall not be located at the centers of a long radius
367 bend. On pre-fabricated bends, the spacer shall be located in the
368 tangent, free of the coupling. On trench formed bend, the spacer
369 shall be located midway between the tangent and center of the bend.
370

371 (e) Precaution shall be taken to prevent damage in plastic duct
372 lines from thermal expansion and contraction. All ducts shall be cool
373 when placed in trenches and when the concrete jacket is being
374 poured.
375
376

377 (f) The terminated ends of the conduit in an underground
378 structure shall be free of support for a distance of at least 10 feet
379 from the structure. The conduit shall be aligned and supported inside
380 the structure with proper spacing and shall be cut to length after the
381 concrete envelope has cured.

382
383 (g) The ends of the conduit shall be sealed with a plastic cap,
384 plug, or approved substitute at the end of each day's work, when
385 work on duct installation has to be interrupted, where ducts may be
386 submerged in water, and in stub outs.

387
388 (3) **Plastic marking tape.** Provide plastic marking tape that is acid and
389 alkali resistant polyethylene film 6 inches wide with minimum thickness of
390 0.004 inch. Provide tape with minimum strength of 1,750 PSI lengthwise
391 and 1,500 PSI crosswise. Manufacture tape with integral wires, foil backing
392 or other means to enable detection by a metal detector when tape is buried
393 up to 3 feet deep. Manufacture tape specifically for marking and locating
394 underground utilities. Provide the metallic core of the tape encased in a
395 protective jacket or provided with other means to protect it from corrosion.
396 Conform to the following tape color and bear a continuous printed inscription
397 describing the specific utility.

398 Red: Electric
399 Orange: Telephone

400
401 (4) **Conductors.**

402 (a) Mechanical means for pulling shall be torque-limiting type and
403 not used for #2 AWG and smaller wires.

404
405 (b) Pulling tension shall not exceed wire manufacturer's
406 recommendations.

407
408 (c) Where necessary, powdered soapstone may be used as a
409 lubricant for drawing wires through conduit. No other means of
410 lubricating will be allowed.

411
412 (d) Form neatly in enclosures for minimum of crossovers. Tag all
413 feeders and label all branch circuits in all enclosures and devices.
414 Identify panel name and branch circuit number.

415
416 (e) Color code feeder, branch circuit, and grounding conductors.
417 Color for grounding conductors shall be green. Color for neutral
418 conductors shall be white except for where neutrals of more than one
419 branch circuit grouping are installed in the same raceway or
420 enclosure, the other neutral shall be white with a colored stripe (other
421 than green). The color coding for three-phase and single-phase
422 circuits shall be as follows:

423

424	208Y/120V, 3-phase, 4-wire:	Black (Phase-A)
425		Red (Phase-B)
426		Blue (Phase-C)
427		
428	480Y/277V, 3-phase, 4-wire:	Brown (Phase-A)
429		Orange (Phase-B)
430		Yellow (Phase-C)
431		

432 (5) The Contractor shall apply a thin coat of sealing compound on ducts
 433 and conduits at couplings and bells.

434 (6) Conduits stubbed for future connections shall be plugged and
 435 marked.
 436

437 (7) The Contractor shall securely anchor duct banks prior to pouring
 438 concrete encasement to prevent ducts from floating.
 439

440 (F) **Installation of Split Ducts Encased in Concrete Jacket.** Split ducts with
 441 concrete jacket shall be installed around existing cables to remain in service,
 442 where shown on the plans.
 443

444 (1) Field cutting of plastic ducts longitudinally into two equal halves shall
 445 be performed by the Contractor with the use of accepted tools and
 446 equipment.
 447

448 (2) The two equal halves of plastic ducts shall be placed carefully around
 449 existing cables and sturdily bound together with wire or tape in order not to
 450 dislodge during pouring of concrete. The Contractor shall take necessary
 451 precautions not to damage the cables and shall work in an expeditious
 452 manner in order to keep uncovered cable exposed for as short a period of
 453 time as possible.
 454

455 (3) Subsequent to binding of the plastic ducts, concrete shall be poured
 456 to fully encase the ducts. The dimensions of the concrete encasement shall
 457 be similar to standard duct formation encasement dimensions.
 458

459 (G) The Contractor shall test the completed ducts by passing a test mandrel
 460 through the length of each duct of each duct run. For HECO conduits, the mandrel
 461 shall be a bullet shaped, blunt tipped type, unless indicated otherwise, about 14
 462 inches long with a diameter 1/2 inch less than the inside diameter of the ducts
 463 through the length of each duct run. Scars in the mandrel deeper than 1/32 inch,
 464 other than that caused by normal abrasion between the duct line and bottom of
 465 mandrel shall be considered an indication of the presence of burrs and/or
 466 obstructions in the duct run. The Contractor shall remove such burrs and/or
 467 obstructions, after which the test mandrel will be passed through again. All tests
 468 shall be conducted in the presence of the Engineer and respective utility company
 469 inspectors, and shall be repeated until the results obtained are satisfactory to the
 470

471 Engineer and to the utility company inspectors.

472

473 **(H)** Unless indicated otherwise, the Contractor shall furnish and install a 1/8
474 inch Polyolefin pull line between pull points in all ducts after testing.

475

476 **(1)** For HECO ducts, provide duct measuring/cable pulling tape
477 (NEPTCO WP1800P Muletape or approved equal) in each new duct.

478

479 **(I) Concrete.** The Contractor shall notify the utility companies inspector a
480 minimum of 72 hours prior to placement of any concrete.

481

482 **(1)** Securely anchor duct banks prior to pouring concrete encasement to
483 prevent ducts from floating.

484

485 **(2)** When pouring concrete, prevent heavy masses of concrete from
486 falling directly on ducts. If unavoidable, protect ducts with plank.

487

488 **(3)** Direct flow of concrete down sides of duct bank to bottom, allowing
489 concrete to rise between ducts, filling all open spaces uniformly.

490

491 **(4)** To insure against voids in concrete, work a long, flat splicing bar or
492 spatula liberally and carefully up and down the vertical rows of ducts.
493 Mechanical vibrators shall be used for stacked duct banks of three ducts or
494 higher.

495

496 **(5)** Cure concrete for a minimum of 72 hours before permitting traffic
497 and/or backfilling.

498

499 **(6)** Convey concrete from mixer to forms rapidly to prevent segregation.
500 Free drop shall be limited to five feet, unless authorized by inspector.

501

502 **(7)** Placing.

503

504 **(a)** Clean and remove all debris from inside forms and trenches
505 before placing concrete.

506

507 **(b)** Place concrete only on clean damp surfaces, free from water.

508

509 **(c)** Place concrete in forms, in horizontal layers not exceeding 18"
510 thickness.

511

512 **(d)** Place concrete to avoid segregation of materials and
513 displacement of ducts, inserts and reinforcing.

514

515 **(e)** Vibrate structural concrete thoroughly during and immediately
516 after placing to insure dense watertight concrete.

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- (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) Reinforcing Steel.

- (1)** Clean reinforcing of mill or rust scale and form to dimensions indicated.
- (2)** Install reinforcing in proper locations and secure in place to prevent movement during concrete placing or vibrating.

(K) Concrete Brick.

- (1)** Concrete brick shall be laid in full bed of mortar, both horizontally and vertically.
- (2)** Mortar shall be one part cement and three parts sand, thoroughly mixed and used when fresh. Re-tampering will not be allowed.
- (3)** Setting bed shall be of depth required to bring top of blocks flush with finish line.

(L) 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. Materials and workmanship shall conform to the applicable sections in these specifications. Payment for all materials and labor required shall be considered as incidental to the various contract items.

- (1)** Repairing of City streets and other improvements not maintained by the State and where such work is called for on the plans shall conform to the requirements of the City and County of Honolulu.

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(2) 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. This work shall be incidental to and included in the appropriate contract item under which the rearranged facility is provided.

680.04 Measurement. The Engineer will measure the meter pedestals, coordination with HECO to drop down and extend the existing overhead service to underground to the new HECO meter locations in accordance with Hawaiian Electric Company (HECO) standards and contract documents.

The Engineer will measure the secondary electrical ductline up to stub-outs, trenching for HECO secondary electrical ductline, HECO riser conduit per HECO standards, HECO secondary conductors, electrical system trenching for ductline, and concrete encasement for electrical ductlines per linear foot in accordance to contract documents.

680.05 Payment. The Engineer will pay for the drop down and extension of the overhead service to underground to the new HECO meter locations. The work includes coordination with HECO and furnishing equipment, tools, labor, materials, and other incidentals necessary to complete the work.

The Engineer will pay for the HECO pullbox/handhole, splice can, and the combination meter/main meter socket at the contract unit price per each complete in place. The price includes full compensation for submitting the equipment list and drawings; furnishing and installing the HECO handhole, splice can, and combination mete/main at the designated location; furnishing equipment, tools, labor, materials, HECO standards and other incidentals necessary to complete the work.

The Engineer will pay for the meter pedestal at the contract unit price per each complete in place. The price includes full compensation for submitting the equipment list and drawings; assembling the meter pedestal; furnishing and installation of meter pedestal; saw cutting; excavating and backfilling; concrete base foundation; restoration and furnishing equipment, tools, labor, materials, HECO standards and other incidentals necessary to complete the work.

The Engineer will pay for the conduits and conductors at the contract unit price linear foot complete in place. The price includes full compensation for submitting the equipment list and drawings; trenching and backfilling; installation of conduits, conductors, and concrete jacket; and furnishing equipment, tools, labor, materials and other incidentals necessary to complete the work.

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

614	Pay Item	Pay Unit
617	Coordinate with HECO To Extend The	
618	Overhead Services To Underground To The	
619	New Meter Locations, Complete	Each
620		
621	Provide New HECO 2-Feet x 4-Feet Handhole,	
622	Complete	Each
623		
624	Provide New 10"W X 12"H X 6"D Splice Can,	
625	Complete	Each
626		
627	Provide New Combination Meter/Main Meter	
628	Socket, Complete	Each
629		
630	Provide New Meter Pedestal, Complete	Each
631		
632	Provide Conduit, Conductors, Trench	
633	Excavation, Trench Backfill, and Concrete	
634	Encasement, Complete	Linear Foot
635		
636		

637 The Engineer will pay for the accepted hauling and stockpiling of salvaged
638 materials and equipment off the right-of-way, as ordered by the Engineer in accordance
639 with Subsection 104.02 – Changes.”

640
641

END OF SECTION 680

1 **SECTION 717 – CULLET AND CULLET-MADE MATERIALS**

2
3 Make the following amendments to said Section:

4
5 **(I) Amend Subsection 717.01 – Cullet and Cullet-Aggregate Mixtures as**
6 **Construction Materials** by revising the third paragraph from line 16 to 20 to read:

7
8 “Debris shall not exceed values specified in Tables 717.02-1 - Cullet in
9 Roadway Applications, 717.03-1 - Cullet in Utility Applications, and 717.04-1 -
10 Cullet in Drainage Applications. Debris is defined as deleterious material that
11 includes plastics, papers, and non-ceramic constituents of cullet. Hazardous
12 material will not be allowed in cullet such as but not limited to, TV or other cathode
13 ray tubes, fluorescent light bulbs, and any toxic or hazardous materials. Test cullet
14 stockpile for toxic or hazardous materials every 90 days and submit the results to
15 the Engineer.”

16
17 **(II) Amend Subsection 717.01 – Cullet and Cullet-Aggregate Mixtures as**
18 **Construction Materials** by adding the following paragraph after line 21:

19
20 “Cullet shall not be used in concrete.”

21
22 **(III) Amend Table 717.03-1 – Cullet in Utility Applications** from line 37 to line
23 39 to read:

24

TABLE 717.03-1 - CULLET IN UTILITY APPLICATIONS		
Utility Trench Bedding and Backfill Applications	Maximum Cullet Content (Percent By Weight)	Maximum Debris Level (Percent By Weight Of Cullet)
Sewer Pipes	25	0.3
Electrical Conduits	25	0.3
Fiber Optic Lines	25	0.3

25
26

27 (IV) Amend **Table 717.04-1 – Cullet in Drainage Applications** from line 47 to
28 line 49 to read:
29

TABLE 717.04-1 - CULLET IN DRAINAGE APPLICATIONS		
Drainage Fill Applications	Maximum Cullet Content (Percent By Weight)	Maximum Debris Level (Percent By Weight Of Cullet)
Retaining Walls	25	0.2
Foundation Drains	25	0.2
Drainage Blankets	25	0.2
French Drains	25	0.2

30
31
32
33
34

END OF SECTION 717

1 **SECTION 750 – TRAFFIC CONTROL SIGN AND MARKER MATERIALS**

2
3 Make the following amendments to said Section:

4
5 **(I)** Amend **Subsection 750.01(A)(1) Retroreflectorization** by replacing lines
6 8 through 31 to read:

7
8 **“(1) Retroreflectorization.** The following shall be retroreflectorized:

9
10 **(a)** Background for illuminated guide signs and exit number panels (“E”
11 designation) with ASTM D 4956 Type XI retroreflective sheeting.

12
13 **(b)** Background for non-illuminated guide signs and exit number panels
14 (“D” designation) with ASTM D 4956 Type XI retroreflective sheeting.

15
16 **(c)** Messages, arrows, and borders of guide signs and exit number
17 panels (“D” and “E” designations) with ASTM D 4956 Type XI retroreflective
18 sheeting.

19
20 **(d)** Regulatory and warning signs, directional signs (“DIR” designation),
21 route and auxiliary markers, shield symbols, yellow “EXIT ONLY” panels,
22 construction warning signs, and barricade rails, completely, with Type III,
23 IV, or IX retroreflective sheeting.

24
25 **(e)** Pedestrian, school, bicycle crossing series, completely with Type IX
26 fluorescent yellow green retroreflective sheeting.”

27
28 **(II)** Amend **Subsection 750.01(B) Backing** by replacing lines 72 through 73 to
29 read:

30
31 “Aluminum sheet shall conform to ASTM B 209, alloy 5052-H38 or 6061-T6
32 flat sheet.”

33
34 **(III)** Amend **Subsection 750.01(E) Retroreflective Sheeting Materials** by
35 replacing lines 1126 through 1137 to read:

36
37 **“(E) Retroreflective Sheeting Materials.** Retroreflective sheeting includes
38 white or colored sheeting having smooth outer surface.

39
40 Retroreflective sheeting shall be classified in accordance with ASTM D
41 4956.

42
43 The coefficient of retroreflection shall meet the minimum requirements of
44 ASTM D 4956 for the type of reflective sheeting specified.

45
46 The color shall conform to the latest appropriate standard color tolerance
47 chart issued by the U.S. Department of Transportation, Federal Highway

48 Administration and to the daytime and nighttime color requirements of ASTM D
49 4956.

50
51 Test methods and procedures shall be in accordance with ASTM.

52
53 **(IV)** Amend **Subsection 750.02 Sign Posts** by replacing lines 1168 through
54 1172 to read:

55
56 **“(C) Square Tube Posts.** Square and other tube posts shall conform to ASTM
57 A 653 for cold-rolled, carbon steel sheet, commercial quality; or ASTM A 787 for
58 electric-resistance-welded, metallic-coated carbon steel mechanical tubing.”

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END OF SECTION 750

1 **SECTION 755 – PAVEMENT MARKING MATERIALS**
2

3 Make the following amendments to said Section:
4

5 **(I)** Amend **Subsection 755.02 (C) Retroreflective Pavement Markers** by
6 revising lines 223 to 236 to read:

7
8 “Exterior surface of shell shall be smooth and contain one or two
9 retroreflective faces of specified color.”

10
11 **(II)** Amend **Subsection 755.05 (C)(1) Glass Beads** by adding the following
12 after line 869:

13
14 **(f)** The glass spheres shall not contain more than 200 ppm (total)
15 arsenic, 200 ppm (total) antimony nor more than 200 ppm (total)
16 lead, when tested according to EPA Methods 3052 and 6010C.
17 Other suitable x-ray fluorescence spectrometry analysis methods
18 may be used to screen samples of glass spheres for arsenic and lead
19 content.”
20
21
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END OF SECTION 755

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

"General Decision Number: HI20240001 09/06/2024

Superseded General Decision Number: HI20230001

State: Hawaii

Construction Types: Building, Heavy (Heavy and Dredging), Highway and Residential

Counties: Hawaii Statewide.

BUILDING CONSTRUCTION PROJECTS; RESIDENTIAL CONSTRUCTION PROJECTS (consisting of single family homes and apartments up to and including 4 stories); HEAVY AND HIGHWAY CONSTRUCTION PROJECTS AND DREDGING

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022: 	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least \$17.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2024.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022: 	. Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least \$12.90 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2024.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <http://www.dol.gov/whd/govcontracts>.

Modification Number	Publication Date
0	01/05/2024
1	01/12/2024
2	01/19/2024
3	04/19/2024
4	05/17/2024
5	06/07/2024
6	07/19/2024
7	08/30/2024
8	09/06/2024

* ASBE0132-001 09/01/2024

	Rates	Fringes
Asbestos Workers/Insulator Includes application of all insulating materials, protective coverings, coatings and finishes to all types of mechanical systems. Also the application of firestopping material for wall openings and penetrations in walls, floors, ceilings and curtain walls.....	\$ 45.80	30.35

BOIL0627-005 01/01/2021

	Rates	Fringes
BOILERMAKER.....	\$ 37.25	31.25

BRHI0001-001 09/05/2023

	Rates	Fringes
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BRICKLAYER

Bricklayers and Stonemasons.....	\$ 48.03	32.23
Pointers, Caulkers and Weatherproofers.....	\$ 48.28	32.23

BRHI0001-002 09/05/2023

	Rates	Fringes
Tile, Marble & Terrazzo Worker		
Terrazzo Base Grinders.....	\$ 44.69	33.00
Terrazzo Floor Grinders and Tenders.....	\$ 43.14	33.00
Tile, Marble and Terrazzo Workers.....	\$ 46.50	33.00

CARP0745-001 10/01/2021

	Rates	Fringes
Carpenters:		
Carpenters; Hardwood Floor Layers; Patent Scaffold Erectors (14 ft. and over); Piledrivers; Pneumatic Nailers; Wood Shinglers and Transit and/or Layout Man.....	\$ 51.25	24.84
Millwrights and Machine Erectors.....	\$ 51.50	24.84
Power Saw Operators (2 h.p. and over).....	\$ 51.40	24.84

CARP0745-002 09/04/2023

	Rates	Fringes
Drywall and Acoustical Workers and Lathers.....	\$ 53.00	27.74

ELEC1186-001 08/25/2024

	Rates	Fringes
Electricians:		
Cable Splicers.....	\$ 62.77	32.46
Electricians.....	\$ 55.55	32.25
Telecommunication worker....	\$ 40.00	15.50

ELEC1186-002 08/25/2024

	Rates	Fringes
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Line Construction:

Cable Splicers.....	\$ 62.77	32.46
Groundmen/Truck Drivers.....	\$ 41.66	26.50
Heavy Equipment Operators...	\$ 50.00	29.90
Linemen.....	\$ 55.55	32.25
Telecommunication worker....	\$ 40.00	15.50

 ELEV0126-001 01/01/2024

	Rates	Fringes
ELEVATOR MECHANIC.....	\$ 70.90	37.885+a+b

a. VACATION: Employer contributes 8% of basic hourly rate for 5 years service and 6% of basic hourly rate for 6 months to 5 years service as vacation pay credit.

b. PAID HOLIDAYS: New Year's Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, the Friday after Thanksgiving Day and Christmas Day.

 ENGI0003-002 09/03/2018

	Rates	Fringes
Diver (Aqua Lung) (Scuba))		
Diver (Aqua Lung) (Scuba)		
(over a depth of 30 feet)...	\$ 66.00	31.26
Diver (Aqua Lung) (Scuba)		
(up to a depth of 30 feet)...	\$ 56.63	31.26
Stand-by Diver (Aqua Lung)		
(Scuba).....	\$ 47.25	31.26
Diver (Other than Aqua Lung)		
Diver (Other than Aqua		
Lung).....	\$ 66.00	31.26
Diver Tender (Other than		
Aqua Lung).....	\$ 44.22	31.26
Stand-by Diver (Other than		
Aqua Lung).....	\$ 47.25	31.26
Helicopter Work		
Airborne Hoist Operator		
for Helicopter.....	\$ 45.80	31.26
Co-Pilot of Helicopter.....	\$ 45.98	31.26
Pilot of Helicopter.....	\$ 46.11	31.26
Power equipment operator -		
tunnel work		
GROUP 1.....	\$ 42.24	31.26
GROUP 2.....	\$ 42.35	31.26
GROUP 3.....	\$ 42.52	31.26
GROUP 4.....	\$ 42.79	31.26

GROUP 5.....	\$ 43.10	31.26
GROUP 6.....	\$ 43.75	31.26
GROUP 7.....	\$ 44.07	31.26
GROUP 8.....	\$ 44.18	31.26
GROUP 9.....	\$ 44.29	31.26
GROUP 9A.....	\$ 44.52	31.26
GROUP 10.....	\$ 44.58	31.26
GROUP 10A.....	\$ 44.73	31.26
GROUP 11.....	\$ 44.88	31.26
GROUP 12.....	\$ 45.24	31.26
GROUP 12A.....	\$ 45.60	31.26
Power equipment operators:		
GROUP 1.....	\$ 41.94	31.26
GROUP 2.....	\$ 42.05	31.26
GROUP 3.....	\$ 42.22	31.26
GROUP 4.....	\$ 42.49	31.26
GROUP 5.....	\$ 42.80	31.26
GROUP 6.....	\$ 43.45	31.26
GROUP 7.....	\$ 43.77	31.26
GROUP 8.....	\$ 43.88	31.26
GROUP 9.....	\$ 43.99	31.26
GROUP 9A.....	\$ 44.22	31.26
GROUP 10.....	\$ 44.28	31.26
GROUP 10A.....	\$ 44.43	31.26
GROUP 11.....	\$ 44.58	31.26
GROUP 12.....	\$ 44.94	31.26
GROUP 12A.....	\$ 45.30	31.26
GROUP 13.....	\$ 42.22	31.26
GROUP 13A.....	\$ 42.49	31.26
GROUP 13B.....	\$ 42.80	31.26
GROUP 13C.....	\$ 43.45	31.26
GROUP 13D.....	\$ 43.77	31.26
GROUP 13E.....	\$ 43.88	31.26

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Fork Lift (up to and including 10 tons); Partsman (heavy duty repair shop parts room when needed).

GROUP 2: Conveyor Operator (Handling building material); Hydraulic Monitor; Mixer Box Operator (Concrete Plant).

GROUP 3: Brakeman; Deckhand; Fireman; Oiler; Oiler/Gradechecker; Signalmán; Switchman; Highline Cableway Signalmán; Bargeman; Bunkerman; Concrete Curing Machine (self-propelled, automatically applied unit on streets, highways, airports and canals); Leveeman; Roller (5 tons and under); Tugger Hoist.

GROUP 4: Boom Truck or dual purpose "A" Frame Truck (5 tons or less); Concrete Placing Boom (Building Construction); Dinky Operator; Elevator Operator; Hoist and/or Winch (one

drum); Straddle Truck (Ross Carrier, Hyster and similar).

GROUP 5: Asphalt Plant Fireman; Compressors, Pumps, Generators and Welding Machines ("Bank" of 9 or more, individually or collectively); Concrete Pumps or Pumpcrete Guns; Lubrication and Service Engineer (Grease Rack); Screedman.

GROUP 6: Boom Truck or Dual Purpose "A" Frame Truck (over 5 tons); Combination Loader/Backhoe (up to and including 3/4 cu. yd.); Concrete Batch Plants (wet or dry); Concrete Cutter, Groover and/or Grinder (self-propelled unit on streets, highways, airports, and canals); Conveyor or Concrete Pump (Truck or Equipment Mounted); Drilling Machinery (not to apply to waterliners, wagon drills or jack hammers); Fork Lift (over 10 tons); Loader (up to and including 3 and 1/2 cu. yds); Lull High Lift (under 40 feet); Lubrication and Service Engineer (Mobile); Maginnis Internal Full Slab Vibrator (on airports, highways, canals and warehouses); Man or Material Hoist; Mechanical Concrete Finisher (Large Clary, Johnson Bidwell, Bridge Deck and similar); Mobile Truck Crane Driver; Portable Shotblast Concrete Cleaning Machine; Portable Boring Machine (under streets, highways, etc.); Portable Crusher; Power Jumbo Operator (setting slip forms, etc., in tunnels); Rollers (over 5 tons); Self-propelled Compactor (single engine); Self-propelled Pavement Breaker; Skidsteer Loader with attachments; Slip Form Pumps (Power driven by hydraulic, electric, air, gas, etc., lifting device for concrete forms); Small Rubber Tired Tractors; Trencher (up to and including 6 feet); Underbridge Personnel Aerial Platform (50 feet of platform or less).

GROUP 7: Crusher Plant Engineer, Dozer (D-4, Case 450, John Deere 450, and similar); Dual Drum Mixer, Extend Lift; Hoist and/or Winch (2 drums); Loader (over 3 and 1/2 cu. yds. up to and including 6 yards.); Mechanical Finisher or Spreader Machine (asphalt), (Barber Greene and similar) (Screedman required); Mine or Shaft Hoist; Mobile Concrete Mixer (over 5 tons); Pipe Bending Machine (pipelines only); Pipe Cleaning Machine (tractor propelled and supported); Pipe Wrapping Machine (tractor propelled and supported); Roller Operator (Asphalt); Self-Propelled Elevating Grade Plane; Slusher Operator; Tractor (with boom) (D-6, or similar); Trencher (over 6 feet and less than 200 h.p.); Water Tanker (pulled by Euclids, T-Pulls, DW-10, 20 or 21, or similar); Winchman (Stern Winch on Dredge).

GROUP 8: Asphalt Plant Operator; Barge Mate (Seagoing); Cast-in-Place Pipe Laying Machine; Concrete Batch Plant (multiple units); Conveyor Operator (tunnel); Deckmate; Dozer (D-6 and similar); Finishing Machine Operator

(airports and highways); Gradesetter; Kolman Loader (and similar); Mucking Machine (Crawler-type); Mucking Machine (Conveyor-type); No-Joint Pipe Laying Machine; Portable Crushing and Screening Plant; Power Blade Operator (under 12); Saurman Type Dragline (up to and including 5 yds.); Stationary Pipe Wrapping, Cleaning and Bending Machine; Surface Heater and Planer Operator, Tractor (D-6 and similar); Tri-Batch Paver; Tunnel Badger; Tunnel Mole and/or Boring Machine Operator Underbridge Personnel Aerial Platform (over 50 feet of platform).

GROUP 9: Combination Mixer and Compressor (gunite); Do-Mor Loader and Adams Elegrader; Dozer (D-7 or equal); Wheel and/or Ladder Trencher (over 6 feet and 200 to 749 h.p.).

GROUP 9A: Dozer (D-8 and similar); Gradesetter (when required by the Contractor to work from drawings, plans or specifications without the direct supervision of a foreman or superintendent); Push Cat; Scrapers (up to and including 20 cu. yds); Self-propelled Compactor with Dozer; Self-Propelled, Rubber-Tired Earthmoving Equipment (up to and including 20 cu. yds) (621 Band and similar); Sheep's Foot; Tractor (D-8 and similar); Tractors with boom (larger than D-6, and similar).

GROUP 10: Chicago Boom; Cold Planers; Heavy Duty Repairman or Welder; Hoist and/or Winch (3 drums); Hydraulic Skooper (Koehring and similar); Loader (over 6 cu. yds. up to and including 12 cu. yds.); Saurman type Dragline (over 5 cu. yds.); Self-propelled, rubber-tired Earthmoving Equipment (over 20 cu. yds. up to and including 31 cu. yds.) (637D and similar); Soil Stabilizer (P & H or equal); Sub-Grader (Gurries or other automatic type); Tractors (D-9 or equivalent, all attachments); Tractor (Tandem Scraper); Watch Engineer.

GROUP 10A: Boat Operator; Cable-operated Crawler Crane (up to and including 25 tons); Cable-operated Power Shovel, Clamshell, Dragline and Backhoe (up to and including 1 cu. yd.); Dozer D9-L; Dozer (D-10, HD41 and similar) (all attachments); Gradall (up to and including 1 cu. yd.); Hydraulic Backhoe (over 3/4 cu. yds. up to and including 2 cu. yds.); Mobile Truck Crane Operator (up to and including 25 tons) (Mobile Truck Crane Driver Required); Self-propelled Boom Type Lifting Device (Center Mount) (up to and including 25 tons) (Grove, Drott, P&H, Pettibone and similar); Trencher (over 6 feet and 750 h.p. or more); Watch Engineer (steam or electric).

GROUP 11: Automatic Slip Form Paver (concrete or asphalt); Band Wagon (in conjunction with Wheel Excavator); Cable-operated Crawler Cranes (over 25 tons but less than

50 tons); Cable-operated Power Shovel, Clamshell, Dragline and Backhoe (over 1 cu. yd. up to 7 cu. yds.); Gradall (over 1 cu. yds. up to 7 cu. yds.); DW-10, 20, etc. (Tandem); Earthmoving Machines (multiple propulsion power units and 2 or more Scrapers) (up to and including 35 cu. yds., "" struck"" m.r.c.); Highline Cableway; Hydraulic Backhoe (over 2 cu. yds. up to and including 4 cu. yds.); Leverman; Lift Slab Machine; Loader (over 12 cu. yds); Master Boat Operator; Mobile Truck Crane Operator (over 25 tons but less than 50 tons); (Mobile Truck Crane Driver required); Pre-stress Wire Wrapping Machine; Self-propelled Boom-type Lifting Device (Center Mount) (over 25 tons m.r.c); Self-propelled Compactor (with multiple-propulsion power units); Single Engine Rubber Tired Earthmoving Machine (with Tandem Scraper); Tandem Cats; Trencher (pulling attached shield).

GROUP 12: Clamshell or Dipper Operator; Derricks; Drill Rigs; Multi-Propulsion Earthmoving Machines (2 or more Scrapers) (over 35 cu. yds ""struck""m.r.c.); Operators (Derricks, Piledrivers and Cranes); Power Shovels and Draglines (7 cu. yds. m.r.c. and over); Self-propelled rubber-tired Earthmoving equipment (over 31 cu. yds.) (657B and similar); Wheel Excavator (up to and including 750 cu. yds. per hour); Wheel Excavator (over 750 cu. yds. per hour).

GROUP 12A: Dozer (D-11 or similar or larger); Hydraulic Excavators (over 4 cu. yds.); Lifting cranes (50 tons and over); Pioneering Dozer/Backhoe (initial clearing and excavation for the purpose of providing access for other equipment where the terrain worked involves 1-to-1 slopes that are 50 feet in height or depth, the scope of this work does not include normal clearing and grubbing on usual hilly terrain nor the excavation work once the access is provided); Power Blade Operator (Cat 12 or equivalent or over); Straddle Lifts (over 50 tons); Tower Crane, Mobile; Traveling Truss Cranes; Universal, Liebherr, Linden, and similar types of Tower Cranes (in the erection, dismantling, and moving of equipment there shall be an additional Operating Engineer or Heavy Duty Repairman); Yo-Yo Cat or Dozer.

GROUP 13: Truck Driver (Utility, Flatbed, etc.)

GROUP 13A: Dump Truck, 8 cu.yds. and under (water level); Water Truck (up to and including 2,000 gallons).

GROUP 13B: Water Truck (over 2,000 gallons); Tandem Dump Truck, over 8 cu. yds. (water level).

GROUP 13C: Truck Driver (Semi-trailer. Rock Cans, Semi-Dump or Roll-Offs).

GROUP 13D: Truck Driver (Slip-In or Pup).

GROUP 13E: End Dumps, Unlicensed (Euclid, Mack, Caterpillar or similar); Tractor Trailer (Hauling Equipment); Tandem Trucks hooked up to Trailer (Hauling Equipment)

BOOMS AND/OR LEADS (HOURLY PREMIUMS):

The Operator of a crane (under 50 tons) with a boom of 80 feet or more (including jib), or of a crane (under 50 tons) with leads of 100 feet or more, shall receive a per hour premium for each hour worked on said crane (under 50 tons) in accordance with the following schedule:

Booms of 80 feet up to but not including 130 feet or Leads of 100 feet up to but not including 130 feet	0.50
Booms and/or Leads of 130 feet up to but not including 180 feet	0.75
Booms and/or Leads of 180 feet up to and including 250 feet	1.15
Booms and/or Leads over 250 feet	1.50

The Operator of a crane (50 tons and over) with a boom of 180 feet or more (including jib) shall receive a per hour premium for each hour worked on said crane (50 tons and over) in accordance with the following schedule:

Booms of 180 feet up to and including 250 feet	1.25
Booms over 250 feet	1.75

ENGI0003-004 09/04/2017

	Rates	Fringes
Dredging: (Boat Operators)		
Boat Deckhand.....	\$ 41.22	30.93
Boat Operator.....	\$ 43.43	30.93
Master Boat Operator.....	\$ 43.58	30.93
Dredging: (Clamshell or Dipper Dredging)		
GROUP 1.....	\$ 43.94	30.93
GROUP 2.....	\$ 43.28	30.93
GROUP 3.....	\$ 42.88	30.93
GROUP 4.....	\$ 41.22	30.93
Dredging: (Derricks)		
GROUP 1.....	\$ 43.94	30.93

GROUP 2.....	\$ 43.28	30.93
GROUP 3.....	\$ 42.88	30.93
GROUP 4.....	\$ 41.22	30.93
Dredging: (Hydraulic Suction Dredges)		
GROUP 1.....	\$ 43.58	30.93
GROUP 2.....	\$ 43.43	30.93
GROUP 3.....	\$ 43.28	30.93
GROUP 4.....	\$ 43.22	30.93
GROUP 5.....	\$ 37.88	26.76
Group 5.....	\$ 42.88	30.93
GROUP 6.....	\$ 37.77	26.76
Group 6.....	\$ 42.77	30.93
GROUP 7.....	\$ 36.22	26.76
Group 7.....	\$ 41.22	30.93

CLAMSHELL OR DIPPER DREDGING CLASSIFICATIONS

- GROUP 1: Clamshell or Dipper Operator.
- GROUP 2: Mechanic or Welder; Watch Engineer.
- GROUP 3: Barge Mate; Deckmate.
- GROUP 4: Bargeman; Deckhand; Fireman; Oiler.

HYDRAULIC SUCTION DREDGING CLASSIFICATIONS

- GROUP 1: Leverman.
- GROUP 2: Watch Engineer (steam or electric).
- GROUP 3: Mechanic or Welder.
- GROUP 4: Dozer Operator.
- GROUP 5: Deckmate.
- GROUP 6: Winchman (Stern Winch on Dredge)
- GROUP 7: Deckhand (can operate anchor scow under direction of Deckmate); Fireman; Leveeman; Oiler.

DERRICK CLASSIFICATIONS

- GROUP 1: Operators (Derricks, Piledrivers and Cranes).
- GROUP 2: Saurman Type Dragline (over 5 cubic yards).
- GROUP 3: Deckmate; Saurman Type Dragline (up to and including 5 yards).
- GROUP 4: Deckhand, Fireman, Oiler.

ENGI0003-044 09/03/2018

	Rates	Fringes
Power Equipment Operators (PAVING)		
Asphalt Concrete Material		
Transfer.....	\$ 42.92	32.08
Asphalt Plant Operator.....	\$ 43.35	32.08

Asphalt Raker.....	\$ 41.96	32.08
Asphalt Spreader Operator....	\$ 43.44	32.08
Cold Planer.....	\$ 43.75	32.08
Combination Loader/Backhoe (over 3/4 cu.yd.).....	\$ 41.96	32.08
Combination Loader/Backhoe (up to 3/4 cu.yd.).....	\$ 40.98	32.08
Concrete Saws and/or Grinder (self-propelled unit on streets, highways, airports and canals).....	\$ 42.92	32.08
Grader.....	\$ 43.75	32.08
Laborer, Hand Roller.....	\$ 41.46	32.08
Loader (2 1/2 cu. yds. and under).....	\$ 42.92	32.08
Loader (over 2 1/2 cu. yds. to and including 5 cu. yds.).....	\$ 43.24	32.08
Roller Operator (five tons and under).....	\$ 41.69	32.08
Roller Operator (over five tons).....	\$ 43.12	32.08
Screed Person.....	\$ 42.92	32.08
Soil Stabilizer.....	\$ 43.75	32.08

IRON0625-001 09/01/2023

	Rates	Fringes
Ironworkers:.....	\$ 46.50	39.00
a. Employees will be paid \$.50 per hour more while working in tunnels and coffer dams; \$1.00 per hour more when required to work under or are covered with water (submerged) and when they are required to work on the summit of Mauna Kea, Mauna Loa or Haleakala.		

* LABO0368-001 09/02/2024

	Rates	Fringes
Laborers:		
Driller.....	\$ 44.75	25.96
Final Clean Up.....	\$ 31.40	21.37
Guniting/Shotcrete Operator and High Scaler.....	\$ 42.25	25.96
Laborer I.....	\$ 41.75	25.96
Laborer II.....	\$ 39.15	25.96
Mason Tender/Hod Carrier....	\$ 42.25	25.96
Powderman.....	\$ 42.75	25.96
Window Washer (bosun chair).\$	41.25	25.96

LABORERS CLASSIFICATIONS

Laborer I: Air Blasting run by electric or pneumatic compressor; Asphalt Laborer, Ironer, Raker, Luteman, and Handroller, and all types of Asphalt Spreader Boxes; Asphalt Shoveler; Assembly and Installation of Multiplates, Liner Plates, Rings, Mesh, Mats; Batching Plant (portable and temporary); Boring Machine Operator (under streets and sidewalks); Buggymobile; Burning and Welding; Chainsaw, Faller, Logloader, and Bucker; Compactors (Jackson Jumping Jack and similar); Concrete Bucket Dumpman; Concrete Chipping; Concrete Chuteman/Hoseman (pouring concrete) (the handling of the chute from ready-mix trucks for such jobs as walls, slabs, decks, floors, foundations, footings, curbs, gutters, and sidewalks); Concrete Core Cutter (Walls, Floors, and Ceiling); Concrete Grinding or Sanding; Concrete: Hooking on, signaling, dumping of concrete for treme work over water on caissons, pilings, abutments, etc.; Concrete: Mixing, handling, conveying, pouring, vibrating, otherwise placing of concrete or aggregates or by any other process; Concrete: Operation of motorized wheelbarrows or buggies or machines of similar character, whether run by gas, diesel, or electric power; Concrete Placement Machine Operator: operation of Somero Hammerhead, Copperheads, or similar machines; Concrete Pump Machine (laying, coupling, uncoupling of all connections and cleaning of equipment); Concrete and/or Asphalt Saw (Walking or Handtype) (cutting walls or flatwork) (scoring old or new concrete and/or asphalt) (cutting for expansion joints) (streets and ways for laying of pipe, cable or conduit for all purposes); Concrete Shovelers/Laborers (Wet or Dry); Concrete Screeding for Rough Strike-Off: Rodding or striking-off, by hand or mechanical means prior to finishing; Concrete Vibrator Operator; Coring Holes: Walls, footings, piers or other obstructions for passage of pipes or conduits for any purpose and the pouring of concrete to secure the hole; Cribbers, Shorer, Lagging, Sheeting, and Trench Jacking and Bracing, Hand-Guided Lagging Hammer Whaling Bracing; Curbing (Concrete and Asphalt); Curing of Concrete (impervious membrane and form oiler) mortar and other materials by any mode or method; Cut Granite Curb Setter (setting, leveling and grouting of all precast concrete or stone curbs); Cutting and Burning Torch (demolition); Dri Pak-It Machine; Environmental Abatement: removal of asbestos, lead, and bio hazardous materials (EPA and/or OSHA certified); Falling, bucking, yarding, loading or burning of all trees or timber on construction site; Forklift (9 ft. and under); Gas, Pneumatic, and Electric tools; Grating and Grill work for drains or other purposes; Green Cutter of concrete or aggregate in any form, by hand, mechanical means, grindstone or air and/or water; Grout: Spreading for any purpose; Guinea Chaser (Grade Checker) for general utility trenches, sitework, and excavation;

Headerboard Man (Asphalt or Concrete); Heat Welder of Plastic (Laborers' AGC certified workers) (when work involves waterproofing for waterpools, artificial lakes and reservoir) heat welding for sewer pipes and fusion of HDPE pipes; Heavy Highway Laborer (Rigging, signaling, handling, and installation of pre-cast catch basins, manholes, curbs and gutters); High Pressure Nozzleman - Hydraulic Monitor (over 100# pressure); Jackhammer Operator; Jacking of slip forms: All semi and unskilled work connected therewithin; Laying of all multi-cell conduit or multi-purpose pipe; Magnesite and Mastic Workers (Wet or Dry) (including mixer operator); Mortar Man; Mortar Mixer (Block, Brick, Masonry, and Plastering); Nozzleman (Sandblasting and/or Water Blasting): handling, placing and operation of nozzle; Operation, Manual or Hydraulic jacking of shields and the use of such other mechanical equipment as may be necessary; Pavement Breakers; Paving, curbing and surfacing of streets, ways, courts, under and overpasses, bridges, approaches, slope walls, and all other labor connected therewith; Pilecutters; Pipe Accessment in place, bolting and lining up of sectional metal or other pipe including corrugated pipe; Pipelayer performing all services in the laying and installation of pipe from the point of receiving pipe in the ditch until completion of operation, including any and all forms of tubular material, whether pipe, HDPE, metallic or non-metallic, conduit, and any other stationary-type of tubular device used for conveying of any substance or element, whether water, sewage, solid, gas, air, or other product whatsoever and without regard to the nature of material from which tubular material is fabricated; No-joint pipe and stripping of same, Pipewrapper, Caulker, Bander, Kettlemen, and men applying asphalt, Laykold, treating Creosote and similar-type materials (6-inch) pipe and over); Piping: resurfacing and paving of all ditches in preparation for laying of all pipes; Pipe laying of lateral sewer pipe from main or side sewer to buildings or structure (except Contactor may direct work be done under proper supervision); Pipe laying, leveling and marking of the joint used for main or side sewers and storm sewers; Laying of all clay, terra cotta, ironstone, vitrified concrete, HDPE or other pipe for drainage; Placing and setting of water mains, gas mains and all pipe including removal of skids; Plaster Mortar Mixer/Pump; Pneumatic Impact Wrench; Portable Sawmill Operation: Choker setters, off bearers, and lumber handlers connected with clearing; Posthole Digger (Hand Held, Gas, Air and Electric); Powderman's Tender; Power Broom Sweepers (Small); Preparation and Compaction of roadbeds for railroad track laying, highway construction, and the preparation of trenches, footings, etc., for cross-country transmission by pipelines, electrical transmission or underground lines or cables (by mechanical means); Raising

of structure by manual or hydraulic jacks or other methods and resetting of structure in new locations, including all concrete work; Ramming or compaction; Rigging in connection with Laborers' work (except demolition), Signaling (including the use of walkie talkie) Choke Setting, tag line usage; Tagging and Signaling of building materials into high rise units; Riprap, Stonepaver, and Rock Slinger (includes placement of stacked concrete, wet or dry and loading, unloading, signaling, slinging and setting of other similar materials); Rotary Scarifier (including multiple head concrete chipping Scarifier); Salamander Heater, Drying of plaster, concrete mortar or other aggregate; Scaffold Erector Leadman; Scaffolds: (Swing and hanging) including maintenance thereof; Scaler; Septic Tank/Cesspool and Drain Fields Digger and Installer; Shredder/Chipper (tree branches, brush, etc.); Stripping and Setting Forms; Stripping of Forms: Other than panel forms which are to be re-used in their original form, and stripping of forms on all flat arch work; Tampers (Barko, Wacker, and similar type); Tank Scaler and Cleaners; Tarman; Tree Climbers and Trimmers; Trencher (includes hand-held, Davis T-66 and similar type); Trucks (flatbed up to and including 2 1/2 tons when used in connection with on-site Laborers' work; Trucks (Refuse and Garbage Disposal) (from job site to dump); Vibra-Screed (Bull Float in connection with Laborers' work); Well Points, Installation of or any other dewatering system.

Laborer II: Asphalt Plant Laborer; Boring Machine Tender; Bridge Laborer; Burning of all debris (crates, boxes, packaging waste materials); Chainman, Rodmen, and Grade Markers; Cleaning, clearing, grading and/or removal for streets, highways, roadways, aprons, runways, sidewalks, parking areas, airports, approaches, and other similar installations; Cleaning or reconditioning of streets, ways, sewers and waterlines, all maintenance work and work of an unskilled and semi-skilled nature; Concrete Bucket Tender (Groundman) hooking and unhooking of bucket; Concrete Forms; moving, cleaning, oiling and carrying to the next point of erection of all forms; Concrete Products Plant Laborers; Conveyor Tender (conveying of building materials); Crushed Stone Yards and Gravel and Sand Pit Laborers and all other similar plants; Demolition, Wrecking and Salvage Laborers: Wrecking and dismantling of buildings and all structures, with use of cutting or wrecking tools, breaking away, cleaning and removal of all fixtures, All hooking, unhooking, signaling of materials for salvage or scrap removed by crane or derrick; Digging under streets, roadways, aprons or other paved surfaces; Driller's Tender; Chuck Tender, Outside Nipper; Dry-packing of concrete (plugging and filling of she-bolt holes); Fence and/or Guardrail Erector: Dismantling and/or re-installation of

all fence; Finegrader; Firewatcher; Flagman (Coning, preparing, stablishing and removing portable roadway barricade devices); Signal Men on all construction work defined herein, including Traffic Control Signal Men at construction site; General Excavation; Backfilling, Grading and all other labor connected therewith; Digging of trenches, ditches and manholes and the leveling, grading and other preparation prior to laying pipe or conduit for any purpose; Excavations and foundations for buildings, piers, foundations and holes, and all other construction. Preparation of street ways and bridges; General Laborer: Cleaning and Clearing of all debris and surplus material. Clean-up of right-of-way. Clearing and slashing of brush or trees by hand or mechanical cutting. General Clean up: sweeping, cleaning, wash-down, wiping of construction facility and equipment (other than "Light Clean up (Janitorial) Laborer. Garbage and Debris Handlers and Cleaners. Appliance Handling (job site) (after delivery unloading in storage area); Ground and Soil Treatment Work (Pest Control); Gunitite/Shotcrete Operator Tender; Junk Yard Laborers (same as Salvage Yard); Laser Beam "Target Man" in connection with Laborers' work; Layout Person for Plastic (when work involves waterproofing for waterponds, artificial lakes and reservoirs); Limbers, Brush Loaders, and Pilers; Loading, Unloading, carrying, distributing and handling of all rods and material for use in reinforcing concrete construction (except when a derrick or outrigger operated by other than hand power is used); Loading, unloading, sorting, stockpiling, handling and distribution of water mains, gas mains and all pipes; Loading and unloading of all materials, fixtures, furnishings and appliances from point of delivery to stockpile to point of installation; hooking and signaling from truck, conveyance or stockpile; Material Yard Laborers; Pipelayer Tender; Pipewrapper, Caulker, Bander, Kettlemen, and men applying asphalt, Laykold, Creosote, and similar-type materials (pipe under 6 inches); Plasterer Laborer; Preparation, construction and maintenance of roadbeds and sub-grade for all paving, including excavation, dumping, and spreading of sub-grade material; Prestressed or precast concrete slabs, walls, or sections: all loading, unloading, stockpiling, hooking on of such slabs, walls or sections; Quarry Laborers; Railroad, Streetcar, and Rail Transit Maintenance and Repair; Roustabout; Rubbish Trucks in connection with Building Construction Projects (excluding clearing, grubbing, and excavating); Salvage Yard: All work connected with cutting, cleaning, storing, stockpiling or handling of materials, all cleanup, removal of debris, burning, back-filling and landscaping of the site; Sandblasting Tender (Pot Tender): Hoses and pots or markers; Scaffolds: Erection, planking and removal of all scaffolds used for support for lathers, plasters, brick layers, masons, and

other construction trades crafts; Scaffolds: (Specially designed by carpenters) laborers shall tend said carpenter on erection and dismantling thereof, preparation for foundation or mudsills, maintenance; Scraping of floors; Screeds: Handling of all screeds to be reused; handling, dismantling and conveyance of screeds; Setting, leveling and securing or bracing of metal or other road forms and expansion joints; Sheet Piling/trench shoring (handling and placing of skip sheet or wood plank trench shoring); Ship Scalers; Shipwright Tender; Sign Erector (subdivision traffic, regulatory, and street-name signs); Sloper; Slurry Seal Crews (Mixer Operator, Applicator, Squeegee Man, Shuttle Man, Top Man); Snapping of wall ties and removal of tie rods; Soil Test operations of semi and unskilled labor such as filling sand bags; Stripper (Asphalt, Concrete or other Paved Surfaces); Tool Room Attendant (Job Site); Traffic Delineating Device Applicator; Underpinning, lagging, bracing, propping and shoring, loading, signaling, right-of-way clearance along the route of movement, The clearance of new site, excavation of foundation when moving a house or structure from old site to new site; Utilities employees; Water Man; Waterscape/Hardscape Laborers; Wire Mesh Pulling (all concrete pouring operations); Wrecking, stripping, dismantling and handling concrete forms an false work.

 * LABO0368-002 09/03/2024

	Rates	Fringes
Landscape & Irrigation Laborers		
GROUP 1.....	\$ 28.40	17.15
GROUP 2.....	\$ 29.40	17.15
GROUP 3.....	\$ 23.00	17.15

LABORERS CLASSIFICATIONS

GROUP 1: Installation of non-potable permanent or temporary irrigation water systems performed for the purposes of Landscaping and Irrigation architectural horticultural work; the installation of drinking fountains and permanent or temporary irrigation systems using potable water for Landscaping and Irrigation architectural horticultural purposes only. This work includes (a) the installation of all heads, risers, valves, valve boxes, vacuum breakers (pressure and non-pressure), low voltage electrical lines and, provided such work involves electrical wiring that will carry 24 volts or less, the installation of sensors, master control panels, display boards, junction boxes, conductors, including all other components for controllers,

(b) and metallic (copper, brass, galvanized, or similar) pipe, as well as PVC or other plastic pipe including all work incidental thereto, i.e., unloading, handling and distribution of all pipes fittings, tools, materials and equipment, (c) all soldering work in connection with the above whether done by torch, soldering iron, or other means; (d) tie-in to main lines, thrust blocks (both precast and poured in place), pipe hangers and supports incidental to installation of the entire irrigation system, (e) making of pressure tests, start-up testing, flushing, purging, water balancing, placing into operation all irrigation equipment, fixtures and appurtenances installed under this agreement, and (f) the fabrication, replacement, repair and servicing of landscaping and irrigation systems. Operation of hand-held gas, air, electric, or self-powered tools and equipment used in the performance of Landscape and Irrigation work in connection with architectural horticulture; Choke-setting, signaling, and rigging for equipment operators on job-site in the performance of such Landscaping and Irrigation work; Concrete work (wet or dry) performed in connection with such Landscaping and Irrigation work. This work shall also include the setting of rock, stone, or riprap in connection with such Landscape, Waterscape, Rockscape, and Irrigation work; Grubbing, pick and shovel excavation, and hand rolling or tamping in connection with the performance of such Landscaping and Irrigation work; Sprigging, handseeding, and planting of trees, shrubs, ground covers, and other plantings and the performance of all types of gardening and horticultural work relating to said planting; Operation of flat bed trucks (up to and including 2 1/2 tons):

GROUP 2. Layout of irrigation and other non-potable irrigation water systems and the layout of drinking fountains and other potable irrigation water systems in connection with such Landscaping and Irrigation work. This includes the layout of all heads, risers, valves, valve boxes, vacuum breakers, low voltage electrical lines, hydraulic and electrical controllers, and metallic (coppers, brass, galvanized, or similar) pipe, as well as PVC or other plastic pipe. This work also includes the reading and interpretation of plans and specifications in connection with the layout of Landscaping, Rockscape, Waterscape, and Irrigation work; Operation of Hydro-Mulching machines (sprayman and driver), Drillers, Trenchers (riding type, Davis T-66, and similar) and fork lifts used in connection with the performance of such Landscaping and Irrigation work; Tree climbers and chain saw tree trimmers, Sporadic operation (when used in connection with Landscaping, Rockscape, Waterscape, and Irrigation work) of Skid-Steer Loaders (Bobcat and similar), Cranes (Bantam, Grove, and similar), Hoptos,

Backhoes, Loaders, Rollers, and Dozers (Case, John Deere, and similar), Water Trucks, Trucks requiring a State of Hawaii Public Utilities Commission Type 5 and/or type 7 license, sit-down type and "gang" mowers, and other self-propelled, sit-down operated machines not listed under Landscape & Irrigation Maintenance Laborer; Chemical spraying using self-propelled power spraying equipment (200 gallon capacity or more).

GROUP 3: Maintenance of trees, shrubs, ground covers, lawns and other planted areas, including the replanting of trees, shrubs, ground covers, and other plantings that did not "take" or which are damaged; provided, however, that re-planting that requires the use of equipment, machinery, or power tools shall be paid for at the rate of pay specified under Landscape and Irrigation Laborer, Group 1; Raking, mowing, trimming, and runing, including the use of "weed eaters", hedge trimmers, vacuums, blowers, and other hand-held gas, air, electric, or self-powered tools, and the operation of lawn mowers (Note: The operation of sit-down type and "gang" mowers shall be paid for at the rate of pay specified under Landscape & Irrigation Laborer, Group 2); Guywiring, staking, propping, and supporting trees; Fertilizing, Chemical spraying using spray equipment with less than 200 gallon capacity, Maintaining irrigation and sprinkler systems, including the staking, clamping, and adjustment of risers, and the adjustment and/or replacement of sprinkler heads, (Note: the cleaning and gluing of pipe and fittings shall be paid for at the rate of pay specified under Landscape & Irrigation Laborer(Group 1); Watering by hand or sprinkler system and the performance of other types of gardening, yardman, and horticultural-related work.

LABO0368-003 09/05/2023

	Rates	Fringes
Underground Laborer		
GROUP 1.....	\$ 41.25	24.96
GROUP 2.....	\$ 42.75	24.96
GROUP 3.....	\$ 43.25	24.96
GROUP 4.....	\$ 44.25	24.96
GROUP 5.....	\$ 44.50	24.96
GROUP 6.....	\$ 44.60	24.96
GROUP 7.....	\$ 44.85	24.96

GROUP 1: Watchmen; Change House Attendant.

GROUP 2: Swamper; Brakeman; Bull Gang-Muckers, Trackmen; Dumpmen (any method); Concrete Crew (includes rodding and spreading); Grout Crew; Reboundmen

GROUP 3: Chucktenders and Cabletenders; Powderman (Prime House); Vibratorman, Pavement Breakers

GROUP 4: Miners - Tunnel (including top and bottom man on shaft and raise work); Timberman, Retimberman (wood or steel or substitute materials thereof); Blasters, Drillers, Powderman (in heading); Microtunnel Laborer; Headman; Cherry Pickerman (where car is lifted); Nipper; Grout Gunmen; Grout Pumpman & Potman; Gunite, Shotcrete Gunmen & Potmen; Concrete Finisher (in tunnel); Concrete Screed Man; Bit Grinder; Steel Form Raisers & Setters; High Pressure Nozzleman; Nozzleman (on slick line); Sandblaster-Potman (combination work assignment interchangeable); Tugger

GROUP 5: Shaft Work & Raise (below actual or excavated ground level); Diamond Driller; Gunite or Shotcrete Nozzleman; Rodman; Groundman

GROUP 6: Shifter

GROUP 7: Shifter (Shaft Work & Raiser)

PAIN1791-001 01/01/2024

	Rates	Fringes
Painters:		
Brush.....	\$ 41.65	30.05
Sandblaster; Spray.....	\$ 41.65	30.05

PAIN1889-001 07/01/2024

	Rates	Fringes
Glaziers.....	\$ 46.00	37.15

PAIN1926-001 03/05/2023

	Rates	Fringes
Soft Floor Layers.....	\$ 39.77	33.80

PAIN1944-001 01/07/2024

	Rates	Fringes
Taper.....	\$ 45.20	31.40

PLAS0630-001 09/04/2023

	Rates	Fringes
PLASTERER.....	\$ 46.12	34.53

PLAS0630-002 09/04/2023

	Rates	Fringes
Cement Masons:		
Cement Masons.....	\$ 44.12	33.63
Trowel Machine Operators....	\$ 44.27	33.63

PLUM0675-001 01/07/2024

	Rates	Fringes
Plumber, Pipefitter, Steamfitter & Sprinkler Fitter...	\$ 52.83	31.02

ROOF0221-001 11/06/2022

	Rates	Fringes
Roofers (Including Built Up, Composition and Single Ply).....	\$ 43.15	21.21

SHEE0293-001 03/05/2023

	Rates	Fringes
Sheet metal worker.....	\$ 47.37	31.71

* SUHI1997-002 09/15/1997

	Rates	Fringes
Drapery Installer.....	\$ 13.60 **	1.20
FENCE ERECTOR (Chain Link Fence).....	\$ 9.33 **	1.65

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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** Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 (\$17.20) or 13658 (\$12.90). Please see the Note at the top of the wage determination for more information. Please also note that the minimum wage requirements of Executive Order 14026 are not

currently being enforced as to any contract or subcontract to which the states of Texas, Louisiana, or Mississippi, including their agencies, are a party.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number,

005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

State Adopted Rate Identifiers

Classifications listed under the ""SA"" identifier indicate that the prevailing wage rate set by a state (or local) government was adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME

refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 01/03/2024 reflects the date on which the classifications and rates under the ?SA? identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION"

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: **TRAFFIC SIGNAL MODERNIZATION, OAHU - PHASE 2**
 District of Honolulu
 Island of Oahu

PROJECT NO.: **STP-0300(213)**

COMPLETION TIME: **206 Working days from the**
 Start Work Date from the Department.

DBE PROJECT GOAL: **4.0%**

DESIGN PROJECT MANAGER:

NAME	Steven Yoshida
ADDRESS	601 Kamokila Boulevard, Room 601
PHONE NO.	(808) 692-7679
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. See SPECIAL PROVISIONS Subsection 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.
4. It will not maintain for its employees any segregated facilities at any of its establishments.
5. Does not and will not permit its employees to perform their services at any location under its control, where segregated facilities are maintained.

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 1032D-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. Unless amended by Special Provision, 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, and/or the General Provisions for Construction Projects for AIR and WATER Transportation Facilities Division dated 2016, as applicable, the Notice to Bidders, Special Provisions, Proposal, Contract, Bond Forms, and 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 Subcontractor or Joint Contractor and the nature of work to be done by each on the following page. The Bidder must adequately and unambiguously disclose the unique nature and scope of the work to be performed by each Subcontractor or Joint Contractor. For each listed firm, the Bidder declares the respective firm is a Subcontractor or Joint Contractor and is subject to evaluation as a Subcontractor or Joint Contractor. It is understood that failure to comply with the aforementioned requirements may be cause for rejection of the bid submitted.

The undersigned Bidder asserts that affirmative action has been taken to seek out and consider Disadvantaged Business Enterprises (DBEs) for portions of the work which can be subcontracted, and the affirmative actions of the Bidder are fully documented in its records and are available upon request by the Department. It is also understood that it must meet or exceed the DBE contract goal listed on page P-1 or demonstrate that it made good faith efforts to meet the DBE project goal. The undersigned as Bidder, agrees to utilize each participating DBE that it submitted to meet the contract goal of _____% (percentage to be completed by Bidder) DBE participation if the contract is awarded to it, and shall maintain such DBE participation during the construction of this project.

SUBCONTRACTOR LISTING
(Attach additional sheets if necessary.)

	NAME OF FIRM	NATURE OF WORK
SUBCONTRACTOR:		
1.	_____	_____
	1a ¹ . _____	_____
2.	_____	_____
	2a. _____	_____
3.	_____	_____
	3a. _____	_____
4.	_____	_____
	4a. _____	_____
5.	_____	_____
	5a. _____	_____
6.	_____	_____
	6a. _____	_____
7.	_____	_____
	7a. _____	_____

NOTES:

The Name of Firm and Nature of Work shall be indicated for all listed firms. The Bidder must adequately and unambiguously disclose the unique nature and scope of the work to be performed by each Sub- or Joint Contractor.

For each listed firm, the Bidder declares the respective firm is a Sub- or Joint Contractor and subject to evaluation as a Sub- or Joint Contractor.

¹ Second tier subcontractors

JOINT CONTRACTOR LISTING
 (Attach additional sheets if necessary.)

	NAME OF FIRM	NATURE OF WORK
JOINT CONTRACTOR:		
1.	_____	_____
	1a ¹ . _____	_____
2.	_____	_____
	2a. _____	_____
3.	_____	_____
	3a. _____	_____
4.	_____	_____
	4a. _____	_____
5.	_____	_____
	5a. _____	_____
6.	_____	_____
	6a. _____	_____
7.	_____	_____
	7a. _____	_____

NOTES:

The Name of Firm and Nature of Work shall be indicated for all listed firms. The Bidder must adequately and unambiguously disclose the unique nature and scope of the work to be performed by each Sub- or Joint Contractor.

For each listed firm, the Bidder declares the respective firm is a Sub- or Joint Contractor and subject to evaluation as a Sub- or Joint Contractor.

¹ Second tier joint contractors

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 (Company Name)

Authorized Signature

Title

Business Address

Business Telephone

Email

Date

Contact Person (If different from above.)

Phone: _____ Email: _____

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.

PROPOSAL SCHEDULE					
ITEM NO.	ITEM	APPROX. QUANTITY	UNIT	UNIT PRICE	AMOUNT
201.0100	Clearing and Grubbing	150	S.Y.	\$ _____	\$ _____
201.0200	ISA Certified Arborist	F.A.	F.A.	F.A.	\$10,000.00
202.0101	Removal of Sign and Post	3	Each	\$ _____	\$ _____
202.0102	Removal of Sign	5	Each	\$ _____	\$ _____
202.0201	Removal of Asphalt Concrete Pavement	560	S.Y.	\$ _____	\$ _____
202.0202	Removal of P.C.C. Pavement	5	S.Y.	\$ _____	\$ _____
202.0301	Removal of Concrete Curb	165	S.Y.	\$ _____	\$ _____
202.0302	Removal of Concrete Curb and Gutter	225	L.F.	\$ _____	\$ _____
202.0401	Removal of Concrete Sidewalk, Driveway, and Curb Ramp	225	S.Y.	\$ _____	\$ _____
202.0500	Removal of Traffic Signal System	L.S.	L.S.	L.S.	\$ _____
202.0600	Removal of Traffic Monitoring System	L.S.	L.S.	L.S.	\$ _____
203.0100	Roadway Excavation	20	C.Y.	\$ _____	\$ _____
209.0100	Installation, Maintenance, Monitoring, & Removal of BMP	L.S.	L.S.	L.S.	\$ _____

PROPOSAL SCHEDULE					
ITEM NO.	ITEM	APPROX. QUANTITY	UNIT	UNIT PRICE	AMOUNT
209.0200	Additional Water Pollution, Dust, and Erosion Control	F.A.	F.A.	F.A.	\$ <u>50,000.00</u>
219.0100	Determination and Characterization of Fill Material	L.S.	L.S.	L.S.	\$ _____
219.0200	Testing for Lead Based Paint	F.A.	F.A.	F.A.	\$ <u>10,000.00</u>
301.0100	Hot Mix Asphalt Base Course	95	Ton	\$ _____	\$ _____
304.0100	Aggregate Base Course	20	C.Y.	\$ _____	\$ _____
314.0100	Controlled Low-Strength Material	10	C.Y.	\$ _____	\$ _____
401.0100	PMA Pavement, Mix No. IV (with PG 64E-22)	135	Ton	\$ _____	\$ _____
411.0100	14-inch Concrete Pavement	5	S.Y.	\$ _____	\$ _____
511.0100	Furnishing Drilled Shaft Equipment	L.S.	L.S.	L.S.	\$ _____
511.0200	Obstruction	40	Hour	\$ _____	\$ _____
511.0301	Drilled Shaft (24-inch Diameter Shaft)	72	L.F.	\$ _____	\$ _____
511.0302	Drilled Shaft (42-inch Diameter Shaft)	26	L.F.	\$ _____	\$ _____
511.0401	Unclassified Shaft Excavation (24-inch Diameter)	72	L.F.	\$ _____	\$ _____

PROPOSAL SCHEDULE					
ITEM NO.	ITEM	APPROX. QUANTITY	UNIT	UNIT PRICE	AMOUNT
511.0402	Unclassified Shaft Excavation (42-inch Diameter)	26	L.F.	\$ _____	\$ _____
511.0500	Coring for Integrity Testing for Acceptable Drilled Shaft	40	L.F.	\$ _____	\$ _____
610.0100	6-inch Reinforced Concrete Driveway	15	S.Y.	\$ _____	\$ _____
617.0100	Imported Planting Soil	15	C.Y.	\$ _____	\$ _____
623.0100	Verify Location of Existing Underground Utilities	F.A.	F.A.	F.A.	\$100,000.00
623.0200	Hawaiian Electric Company Service Connection Fees	F.A.	F.A.	F.A.	\$20,000.00
623.0300	Controller Assembly with Software	2	Each	\$ _____	\$ _____
623.0401	Type I Traffic Signal Standard, H = 10 Feet	8	Each	\$ _____	\$ _____
623.0402	Type II Traffic Signal Standard with 27-Foot Mast Arm	1	Each	\$ _____	\$ _____
623.0403	Type II Traffic Signal Standard with 38-Foot Mast Arm	1	Each	\$ _____	\$ _____
623.0500	Foundation for Cabinet	3	Each	\$ _____	\$ _____
623.0601	Traffic Signal Assembly (1-Way, 12-inch, 1-3 Section Vertical, Type VI Mounting with Retroreflective Backplate)	4	Each	\$ _____	\$ _____

PROPOSAL SCHEDULE					
ITEM NO.	ITEM	APPROX. QUANTITY	UNIT	UNIT PRICE	AMOUNT
623.0602	Traffic Signal Assembly (1-Way, 12-inch, 1-3 Section Vertical, Type IV Mounting)	1	Each	\$ _____	\$ _____
623.0603	Traffic Signal Assembly (1-Way, 12-inch, 1-4 Section Vertical, Type IV Mounting)	1	Each	\$ _____	\$ _____
623.0604	Traffic Signal Assembly (1-Way, 12-inch, 1-3 Section Vertical, Type I Mounting)	4	Each	\$ _____	\$ _____
623.0605	Traffic Signal Assembly (1-Way, 12-inch, 1-4 Section Vertical, Type IA Mounting)	1	Each	\$ _____	\$ _____
623.0606	Traffic Signal Assembly (1-Way, 12-inch, 1-3 Section Vertical, Type II Mounting)	2	Each	\$ _____	\$ _____
623.0607	Traffic Signal Assembly (1-Way, 12-inch, 1-4 Section Vertical, Type II Mounting)	2	Each	\$ _____	\$ _____
623.0608	Pedestrian Signal Assembly (1-Way, 12-inch, One Vertical with Type IV Mounting)	6	Each	\$ _____	\$ _____
623.0700	Pedestrian Push Button with Instruction Sign	7	Each	\$ _____	\$ _____
623.0801	Type A Pull Box	4	Each	\$ _____	\$ _____

PROPOSAL SCHEDULE					
ITEM NO.	ITEM	APPROX. QUANTITY	UNIT	UNIT PRICE	AMOUNT
623.0802	Type B Pull Box	4	Each	\$ _____	\$ _____
623.0803	Special Type C Pull Box	16	Each	\$ _____	\$ _____
623.0804	Adjust Pull Box to Finish Grade	3	Each	\$ _____	\$ _____
623.0901	Loop Detector Sensing Unit (6 FT x 6 FT) Two Loops	10	Each	\$ _____	\$ _____
623.0902	Loop Detector Sensing Unit (6 FT x 6 FT) Six Loops	1	Each	\$ _____	\$ _____
623.0903	Video/Radar Vehicle Detection Unit	1	Each	\$ _____	\$ _____
623.1001	EVP Optical Receiver with Mast Arm Mounting	4	Each	\$ _____	\$ _____
623.1002	EVP Optical Receiver with Top Pole Mounting	3	Each	\$ _____	\$ _____
623.1101	Traffic Signal Ductline, One 2-inch Conduit, Schedule 40 PVC, Concrete Encased	130	L.F.	\$ _____	\$ _____
623.1102	Traffic Signal Ductline, Two 2-inch Conduit, Schedule 40 PVC, Concrete Encased	50	L.F.	\$ _____	\$ _____
623.1103	Traffic Signal Ductline, Three 2-inch Conduit, Schedule 40 PVC, Concrete Encased	20	L.F.	\$ _____	\$ _____

PROPOSAL SCHEDULE					
ITEM NO.	ITEM	APPROX. QUANTITY	UNIT	UNIT PRICE	AMOUNT
623.1104	Traffic Signal Ductline, Four 2-inch Conduit, Schedule 40 PVC, Concrete Encased	640	L.F.	\$ _____	\$ _____
623.1105	Traffic Signal Ductline, Four 2-inch Conduit, Schedule 40 PVC, Reinforced Concrete Encased	50	L.F.	\$ _____	\$ _____
623.1106	Traffic Signal Ductline, Five 2-inch Conduit, Schedule 40 PVC, Concrete Encased	80	L.F.	\$ _____	\$ _____
623.1107	Traffic Signal Ductline, Five 2-inch Conduit, Schedule 40 PVC, Reinforced Concrete Encased	10	L.F.	\$ _____	\$ _____
623.1108	Traffic Signal Ductline, Six 2-inch Conduit, Schedule 40 PVC, Concrete Encased	110	L.F.	\$ _____	\$ _____
623.1109	Traffic Signal Ductline, Six 2-inch Conduit, Schedule 40 PVC, Reinforced Concrete Encased	15	L.F.	\$ _____	\$ _____
623.1110	Traffic Signal Ductline, Eight 2-inch Conduit, Schedule 40 PVC, Concrete Encased	10	Each	\$ _____	\$ _____
623.1111	Traffic Signal Ductline, Ten 2-inch Conduit, Schedule 40 PVC, Concrete Encased	10	Each	\$ _____	\$ _____
623.1206	EVP Cable	1,330	L.F.	\$ _____	\$ _____

PROPOSAL SCHEDULE					
ITEM NO.	ITEM	APPROX. QUANTITY	UNIT	UNIT PRICE	AMOUNT
623.1301	No. 14, 2-Conductor Loop Detector Lead-in Cable	2,400	L.F.	\$ _____	\$ _____
623.1302	No. 14, 26-Conductor Traffic Control Cable	1,400	L.F.	\$ _____	\$ _____
623.1303	No. 6, 3-Conductor Power Cable	100	L.F.	\$ _____	\$ _____
623.1304	No. 14, 4-Conductor Signal Drop Cable	970	L.F.	\$ _____	\$ _____
623.1305	No. 19, 24-Conductor Interconnect Cable	900	L.F.	\$ _____	\$ _____
626.0100	Adjusting Water Manhole Frame and Cover	1	Each	\$ _____	\$ _____
626.0200	Adjusting Water Standard Valve Box	1	Each	\$ _____	\$ _____
627.0100	Traffic Monitoring and Signal Control System Assembly	1	Each	\$ _____	\$ _____
627.0200	Network Switch and Equipment	3	Each	\$ _____	\$ _____
627.0300	CCTV Traffic Camera Assembly	1	Each	\$ _____	\$ _____
627.0400	Fiber Optic Cable, 72-Strand, Single-Mode	1,700	L.F.	\$ _____	\$ _____
627.0500	Fabric Subduct	400	L.F.	\$ _____	\$ _____
629.0101	Removal of Pavement Markings	4,100	L.F.	\$ _____	\$ _____

PROPOSAL SCHEDULE					
ITEM NO.	ITEM	APPROX. QUANTITY	UNIT	UNIT PRICE	AMOUNT
629.0102	Removal of Pavement Markers	190	Each	\$ _____	\$ _____
629.0103	Removal of Crosswalk Markings	11	Lane	\$ _____	\$ _____
629.0104	Removal of Pavement Words	3	Each	\$ _____	\$ _____
629.0105	Removal of Pavement Arrows	18	Each	\$ _____	\$ _____
629.1011	4-Inch Pavement Striping (Thermoplastic Extrusion), White	1,250	L.F.	\$ _____	\$ _____
629.1012	4-Inch Pavement Striping (Thermoplastic Extrusion), Yellow	50	L.F.	\$ _____	\$ _____
629.1013	4-Inch Pavement Striping (Thermoplastic Extrusion), Double Yellow	760	L.F.	\$ _____	\$ _____
629.1014	6-Inch Pavement Striping (Thermoplastic Extrusion), White	1,100	L.F.	\$ _____	\$ _____
629.1015	8-Inch Pavement Striping (Thermoplastic Extrusion), White	360	L.F.	\$ _____	\$ _____
629.1016	12-Inch Pavement Striping (Thermoplastic Extrusion) White	210	L.F.	\$ _____	\$ _____

PROPOSAL SCHEDULE					
ITEM NO.	ITEM	APPROX. QUANTITY	UNIT	UNIT PRICE	AMOUNT
629.1021	6-Inch Pavement Striping with Black Border (Thermoplastic Extrusion), White	260	L.F.	\$ _____	\$ _____
629.1022	8-Inch Pavement Striping with Black Border (Preformed Thermoplastic), White	130	L.F.	\$ _____	\$ _____
629.1023	12-Inch Pavement Striping with Black Border (Preformed Thermoplastic), White	210	L.F.	\$ _____	\$ _____
629.1031	Crosswalk Marking (Thermoplastic Extrusion)	9	Lane	\$ _____	\$ _____
629.1032	Crosswalk Marking with Black Border (Thermoplastic Extrusion)	2	Lane	\$ _____	\$ _____
629.1041	Pavement Arrow (Thermoplastic Extrusion)	15	Each	\$ _____	\$ _____
629.1042	Pavement Arrow with Black Border (Thermoplastic Extrusion)	6	Each	\$ _____	\$ _____
629.1024	Pavement Word (Thermoplastic Extrusion)	4	Each	\$ _____	\$ _____
629.2030	Type C Pavement Marker	80	Each	\$ _____	\$ _____
629.2040	Type D Pavement Marker	50	Each	\$ _____	\$ _____

PROPOSAL SCHEDULE					
ITEM NO.	ITEM	APPROX. QUANTITY	UNIT	UNIT PRICE	AMOUNT
629.2070	Type H Pavement Marker	20	Each	\$ _____	\$ _____
629.2080	Type F Pavement Marker	2	Each	\$ _____	\$ _____
630.0100	Street Name Sign	2	Each	\$ _____	\$ _____
631.0100	Regulatory Sign (10 Square Feet or Less)	5	Each	\$ _____	\$ _____
631.0200	Warning Sign (10 Square Feet or Less)	3	Each	\$ _____	\$ _____
632.0100	Reflector Marker-2 mounted on Flexstake HD	19	Each	\$ _____	\$ _____
632.0200	Type II Object Marker	10	Each	\$ _____	\$ _____
634.0100	Portland Cement Concrete Sidewalk	180	S.Y.	\$ _____	\$ _____
638.0100	Curb, Type 2D	420	L.F.	\$ _____	\$ _____
638.0200	Gutter, Type "G"	7	L.F.	\$ _____	\$ _____
638.0300	Curb and Gutter, Type 2DG	235	L.F.	\$ _____	\$ _____
638.0400	Curb and Gutter, Type "DBG"	40	L.F.	\$ _____	\$ _____
638.0500	Curb and Gutter, Type 2-A	10	L.F.	\$ _____	\$ _____

PROPOSAL SCHEDULE					
ITEM NO.	ITEM	APPROX. QUANTITY	UNIT	UNIT PRICE	AMOUNT
641.0100	Hydro-Mulch Seeding (150 S.Y.)	L.S.	L.S.	L.S.	\$ _____
643.0100	Maintenance of Existing Landscape Areas	F.A.	F.A.	F.A.	\$ <u>50,000.00</u>
645.0100	Traffic Control	L.S.	L.S.	L.S.	\$ _____
645.0200	Additional Police Officers, Additional Control Devices, and Advertisement	F.A.	F.A.	F.A.	\$ <u>50,000.00</u>
648.0100	Field-Posted Drawings	L.S.	L.S.	L.S.	\$ _____
650.0100	Curb Ramps	5	Each	\$ _____	\$ _____
650.0200	Detectable Warning Mat	5	Each	\$ _____	\$ _____
671.0100	Protection of Endangered Species	F.A.	F.A.	F.A.	\$ <u>10,000.00</u>
680.0100	Coordinate with HECO to extend the Overhead Services to Underground to the New Meter Locations, Complete	1	Each	\$ _____	\$ _____
680.0200	Provide New HECO 2-foot x 4-foot Handhole, Complete	1	Each	\$ _____	\$ _____
680.0300	Provide New 10"W x 12"H x 6"D Splice Can, Complete	2	Each	\$ _____	\$ _____

PROPOSAL SCHEDULE						
ITEM NO.	ITEM	APPROX. QUANTITY	UNIT	UNIT PRICE	AMOUNT	
680.0400	Provide New Combination Meter/Main Meter Socket, Complete	2	Each	\$ _____	\$ _____	
680.0500	Provide New Meter Pedestal, Complete	2	Each	\$ _____	\$ _____	
680.0600	Provide Conduit, Conductors, Trench Excavation, Trench Backfill, and Concrete Encasement, Complete	200	L.F.	\$ _____	\$ _____	
699.0100	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
	Total Amount for Comparison of Bids				\$ _____
<p>NOTES:</p> <ol style="list-style-type: none"> 1. Bids shall include all Federal, State, County and other applicable taxes and fees. 2. The TOTAL AMOUNT FOR COMPARISON OF BIDS shall be used to determine the lowest responsible bidder. 3. Bidders shall complete all unit prices and amounts. Failure to do so shall be grounds for rejection of bid. 4. If a discrepancy occurs between unit bid price and the bid price, the unit bid price shall govern. 5. Bidders shall submit and upload the complete proposal to HlePRO 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 <u>confidential and/or proprietary</u> shall be uploaded as a <u>separate file</u> to HlePRO. Bidders shall not include confidential and/or proprietary documents with the proposal. The record of each bidder and respective bid shall be open to public inspection. 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 HlePRO. <u>FAILURE TO UPLOAD THE COMPLETE PROPOSAL TO HlePRO SHALL BE GROUNDS FOR REJECTION OF THE BID.</u> If there is a conflict between the specification document and the HlePRO solicitation, the specifications shall govern and control, unless otherwise specified. 					

1 **PROPOSAL SCHEDULE**

2
3 The bidder is directed to Subsection 105.16 – Subcontracts.

4
5 The bidder's attention is directed to Sections 696 - Field Office and Project
6 Site Laboratory and 699 - Mobilization for the limitation of the amount bidders are
7 allowed to bid.

8
9 If the bid price for any proposal item having a maximum allowable bid
10 indicated therefore in any of the contract documents is in excess of such a
11 maximum amount, the bid price for such proposal item shall be adjusted to reflect
12 the limitation thereon. The comparison of bids to determine the successful bidder
13 and the amount of contract to be awarded shall be determined after such
14 adjustments are made, and such adjustments shall be binding upon the bidder.

15
16 The bidder is directed to Section 717 – Cullet and Cullet-Made Materials
17 regarding recycling of waste glass.

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

SAMPLE FORMS

Contract

Performance Bond (Surety)

Performance Bond

Labor and Material Payment Bond (Surety)

Labor and Material Payment Bond

Disclosure of Lobbying Activities (Standard Form - LLL and LLL-A)

Statement of Compliance (Form WH-348)

Chapter 104, HRS Compliance Certificate

C O N T R A C T

THIS AGREEMENT, made this day _____, 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, materials 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 shall be provided from the following funds:

Federal Funds.....
State Funds.....
TOTAL AMOUNT.....

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 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 and shall be provided from the following funds:

Federal Funds.....
State Funds.....
Total.....

Where Federal funds are involved, it is covenanted and agreed by and between the parties hereto that the sum of ----«FEDERAL_BASIC»----DOLLARS (\$«FEDERAL_BASIC_NUMERIC») and ----«FEDERAL_EXTRAS»----DOLLARS (\$«FEDERAL_EXTRAS_NUMERIC»), a portion of the contract price and extras, respectively, shall be paid out of the applicable Federal funds, and that this contract shall be construed to be an agreement to pay said sums to the Contractor only out of the aforesaid Federal funds if and when such Federal funds shall be received from the Federal Government, and that this contract shall not be construed to be a general agreement to pay said portions at all events out of any funds other than those which may be so received from the Federal Government; provided, that if the Federal share of the cost of the project is not immediately forthcoming from the Federal Government, the STATE may advance the CONTRACTOR the anticipated Federal reimbursement of the cost of the completed portions of the work from funds which have been appropriated by the STATE for its pro rata share.

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»

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 Oblige 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 Oblige 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 Oblige, 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 Oblige 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

DISCLOSURE OF LOBBYING ACTIVITIES
 Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352
 (See reverse for public burden disclosure.)

Approved by
 0348-0046

1. Type of Federal Action: <input type="checkbox"/> a. contract <input type="checkbox"/> b. grant <input type="checkbox"/> c. cooperative agreement <input type="checkbox"/> d. loan <input type="checkbox"/> e. loan guarantee <input type="checkbox"/> f. loan insurance	2. Status of Federal Action: <input type="checkbox"/> a. bid/offer/application <input type="checkbox"/> b. initial award <input type="checkbox"/> c. post-award	3. Report Type: <input type="checkbox"/> a. initial filing <input type="checkbox"/> b. material change For Material Change Only: year _____ quarter _____ date of last report _____
4. Name and Address of Reporting Entity: <input type="checkbox"/> Prime <input type="checkbox"/> Subawardee Tier _____, <i>if known</i> : Congressional District, <i>if known</i> :		5. If Reporting Entity in No. 4 is Subawardee, Enter Name and Address of Prime Congressional District, <i>if known</i> :
6. Federal Department/Agency:	7. Federal Program Name/Destination: CFDA Number, <i>if applicable</i> :	
8. Federal Action Number, <i>if known</i> :	9. Award Amount, <i>if known</i> : \$	
10. a. Name and address of Lobbying Entity (if individual, last name, first name, MI):		b. Individuals Performing Services (including address if different from No. 10a) (last name, first name, MI):
(attach Continuation Sheet(s) SF-LLL-A, if necessary)		
11. Amount of Payment (<i>check all that apply</i>): \$ _____ <input type="checkbox"/> actual <input type="checkbox"/> planned	13. Type of Payment (<i>check all that apply</i>): <input type="checkbox"/> a. retainer <input type="checkbox"/> b. one-time fee <input type="checkbox"/> c. commission <input type="checkbox"/> d. contingent fee <input type="checkbox"/> e. deferred <input type="checkbox"/> f. other; specify: _____	
12. Form of Payment (<i>check all that apply</i>): <input type="checkbox"/> a. cash <input type="checkbox"/> b. in-kind; specify: nature _____ value _____		
14. Brief Description of Services Performed or to be Performed and Date(s) of Service, including officer(s), employees(s) or Member(s) contacted, for Payment Indicated in Item 11: (attach Continuation Sheet(s) SF-LLL-A, if necessary)		
15. Continuation Sheet(s) SF-LLL-A attached: <input type="checkbox"/> Yes <input type="checkbox"/> No		
16. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi- annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.	Signature: _____ Print Name: _____ Title: _____ Telephone No.: _____ Date: _____	
Federal Use Only:		Authorized for Local Reproduction Standard Form - LLL

INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Use the SF-LLL-A Continuation Sheet for additional information if the space on the form is inadequate. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.
2. Identify the status of the covered Federal action.
3. Identify the appropriate classification of this report. If this is a followup report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.
4. Enter the full name, address, city, state and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.
5. If the organization filing the report in item 4 checks "Subawardee", then enter the full name, address, city, state and zip code of the prime Federal recipient. Include Congressional District, if known.
6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.
8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitation for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal Agency). Include prefixes, e.g., "RFP-DE-90-001."
9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.
10.
 - (a) Enter the full name, address, city, state and zip code of the lobbying entity engaged by the reporting entity identified in item 4 to influence the covered Federal action.
 - (b) Enter the full names of the individual(s) performing services, and include full address if different from 10(a). Enter Last Name, First Name, and Middle Initial (MI).
11. Enter the amount of compensation paid or reasonably expected to be paid by the reporting entity (item 4) to the lobbying entity (item 10). Indicate whether the payment has been made (actual) or will be made (planned). Check all boxes that apply. If this is a material change report, enter the cumulative amount of payment made or planned to be made.
12. Check the appropriate box(es). Check all boxes that apply. If payment is made through an in-kind contribution, specify the nature and value of the in-kind payment.
13. Check the appropriate box(es). Check all boxes that apply. If other, specify nature.
14. Provide a specific and detailed description of the services that the lobbyist has performed, or will be expected to perform, and the date(s) of any services rendered. Include all preparatory and related activity, not just time spent in actual contact with Federal officials. Identify the federal official(s) or employee(s) contacted or the officer(s), employee(s), or Member(s) or Congress that were contacted.
15. Check whether or not a SF-LLL-A Continuation Sheet(s) is attached.
16. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction (0348-0046), Washington, D.C. 20503.

DISCLOSURE OF LOBBYING ACTIVITIES
CONTINUATION SHEET

Approved by
0348-0046

Reporting Entity: _____ Page _____ of _____

STATEMENT OF COMPLIANCE

Date _____

I, _____ do hereby state:

(Name of signatory party) (Title)
(1) That I pay or supervise the payment of the persons employed by _____ on
(Contractor or subcontractor)
the _____; that during the payroll period commencing on the _____ day of _____,
(Building or work)
_____ and ending the _____ day of _____, all persons employed on said project have been paid the
full weekly wages earned, that no rebates have been or will be made either directly or indirectly to or on behalf of said
_____ from the full weekly wages earned by any person and that no deductions have
(Contractor or subcontractor)
been made either directly or indirectly from the full wages earned by any person, other than permissible deductions as defined in
Regulations, Part 3 (29 CFR Subtitle A), issued by the Secretary of Labor under the Copeland Act, as amended (48 Stat. 948.63
Stat. 108, 72 Stat. 967; 76 Stat. 357; 40 U.S.C. 2760), and described below:

(2) That any payrolls otherwise under this contract required to be submitted for the above period are correct and complete; that the wage rates for laborers or mechanics contained therein are not less than the applicable wage rates contained in any wage determination incorporated into the contract; that the classifications set forth therein for each laborers or mechanic conform with the work he performed.

(3) That any apprentices employed in the above period are duly registered in a bona fide apprenticeship program registered with a State apprenticeship agency recognized by the Bureau of Apprenticeship and Training, United States Department of Labor, or if no such recognized agency exists in a State, are registered with the Bureau of Apprenticeship and Training, United States Department of Labor.

(4) That:

(a) WHERE FRINGE BENEFITS ARE PAID TO APPROVED PLANS, FUNDS, OR PROGRAMS

In addition to the basic hourly wage rates paid to each laborer or mechanic listed in the above-Referenced payroll, payments of fringe benefits as listed in the contract have been or will be made to appropriate program for the benefit of such employees, except as noted in Section 4(c) below.

(b) WHERE FRINGE BENEFITS ARE PAID IN CASH

Each Laborer or mechanic listed in the above referenced payroll has been paid as indicated on the payroll, an amount not less than the sum of the applicable basic hourly wage rate plus the amount of the required fringe benefits as listed in the contract, except as noted in Section 4(c) below.

(c) EXCEPTIONS

EXCEPTION (CRAFT)	EXPLANATION
REMARK	

NAME AND TITLE	SIGNATURE
THE WILFUL FALSIFICATION OF ANY OF THE ABOVE STATEMENTS MAY SUBJECT THE CONTRACTOR OR SUBCONTRACTOR TO CIVIL OR CRIMINAL PROSECUTION. SEE SECTION 1001 OF TITLE 18 AND SECTION 231 OF TITLE 31 OF THE UNITED STATES CODE.	

INSTRUCTIONS FOR PREPARATION OF STATEMENT OF COMPLIANCE

This statement of compliance meets needs resulting from the amendment of the Davis-Bacon Act to include fringe benefits provisions. Under this amended law, the contractor is required to pay fringe benefits as predetermined by the Department of Labor, in addition to payment of the minimum rates. The contractor's obligation to pay fringe benefits may be met by payment of the fringes to the various plans, funds, or programs or by making these payments to the employees as cash in lieu of fringes.

The contractor should show on the face of his payroll all monies paid to the employees whether as basic or as cash in lieu of fringes. The contractor shall represent in the statement of compliance that he is paying to others fringes required by the contract and not paid as cash in lieu of fringes. Detailed instructions follow:

Contractors who pay all required fringe benefits:

A contractor who pays fringe benefits to approved plans, funds, or programs in amounts not less than were determined in the applicable wage decision of the Secretary of Labor shall continue to show on the face of his payroll the basic cash hourly rate and overtime rate paid to his employees, just as he has always done. Such a contractor shall check paragraph 4(a) of the statement to indicate that he is also paying to approved plans, funds, or programs not less than the amount predetermined as fringe benefits for each craft. Any exception shall be noted in Section 4(c).

Contractors who pay no fringe benefits:

A contractor who pays no fringe benefits shall pay to the employee and insert in the straight time hourly rate column of his payroll an amount not less than the predetermined rate for each classification plus the amount of fringe benefits determined for each classification in the applicable wage decision. Inasmuch as it is not necessary to pay time and a half on cash paid in lieu of fringes, the overtime rate shall be not less than the sum of the basic predetermined rate, plus the half time premium on the basic or regular rate plus the required cash in lieu of fringes at the straight time rate. To simplify computation of overtime, it is suggested that the straight time basic rate and cash in lieu of fringes be separately stated in the hourly rate column, thus \$3.25/.40. In addition, the contractor shall check paragraph 4(b) of the statement to indicate that he is paying fringe benefits in cash directly to his employees. Any exceptions shall be noted in Section 4(c).

Use of Section 4(c), Exceptions

Any contractor who is making payment to approved plans, funds, or programs in amounts less than the wage determination requires is obliged to pay the deficiency directly to the employees as cash in lieu of fringes. Any exceptions to Section 4(a) or 4(b), whichever the contractor may check, shall be entered in Section 4(c). Enter in the Exception column the craft, and enter in the Explanation column the hourly amount paid the employees as cash in lieu of fringes, and the hourly amount paid to plans, funds, or programs as fringes.

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 _____