STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ADDENDUM NO. 5
for
INTERSTATE ROUTE H-1
SHOULDER WORK AND PORTLAND CEMENT
CONCRETE PAVEMENT REHABILITATION
VICINITY OF WAIMALU VIADUCT TO VICINITY OF HALAWA
F.A.P. NO. NH-H1-1(274)

The following amendments shall be made to the Request for Proposal:

A. REQUEST FOR PROPOSALS

Prospective proposers are hereby notified that the receiving of proposals from the top three proposers for INTERSTATE ROUTE H-1 SHOULDER WORK AND PORTLAND CEMENT CONCRETE PAVEMENT REHABILITATION, VICINITY OF WAIMALU VIADUCT TO VICNITY OF HALAWA scheduled for 2:00 P.M. Hawaii Standard Time (HST), November 3, 2017, is hereby POSTPONED until 2:00 P.M. Hawaii Standard Time (HST), December 4, 2017. The attached Request for Proposals, dated 10/11/17 shall be incorporated and made a part of the Request for Proposals."

B. SPECIFICATIONS

1. The due date for Price Proposal from Top 3 Proposers has been POSTPONED from November 3, 2017, 2:00 PM, to December 4, 2017, 2:00 PM.

2. The deadline for submission of Request for Information (RFI) has been POSTPONED from September 29, 2017, to October 20, 2017.

3. Remove DISADVANTAGED BUSINESS ENTERPRISE (DBE) SPECIAL PROVISIONS PERTAINING TO DESIGN-BUILD PROJECTS dated r7.19.17 in Addendum and replace with the attached DISADVANTAGED BUSINESS ENTERPRISE (DBE) SPECIAL PROVISIONS PERTAINING TO DESIGN-BUILD PROJECTS dated r10.3.17.

4. Remove TECHNICAL PROVISIONS pages TP-32 and TP-37 dated r9/9/17 and replace with the attached TECHNICAL PROVISIONS page TP-32 and TP-37 dated r10/6/17, respectively.

C. ADDITIONAL INFORMATION.

The following information supersedes previous comments and questions as related to soil condition.

1. The project area has showed historical settlements as noted in the geotechnical report and can be seen visually. We have no recent data. It is the responsibility of the Design-Build Team to address any settlement/consolidation issues in these areas.

2. Additional AC overlay was placed on the Middle lane near the Pearl City Exit in 2014. No other additional overlay was placed at any location for approximately 10 years.

CLARIFICATION QUESTIONS/REQUEST FOR INFORMATION AND HDOT RESPONSE

1. Question: "Please clarify the pavement rehabilitation limits for the following locations:

   In the Eastbound direction for all pavement rehab areas along the concrete median barrier, please clarify that a 1' offset from the bottom of the median barrier is acceptable to allow sawcut equipment access and prevent damage to the median barrier while removing exist pavement.

   In the westbound direction from station 102 + 40 (+/-) to 111 + 15 (+/-) along the concrete median barrier, please clarify pavement rehabilitation includes area between the zip barrier and median barrier. If area between the zip and median barrier is included then please clarify that a 1' offset from the bottom of the median barrier is acceptable to allow sawcut equipment access and prevent damage to the median barrier while removing exist pavement

   In the Westbound direction from station 102 + 40 (+/-) to 111 + 15 (+/-) along the outside right shoulder concrete barrier, please clarify that a 1' offset from the bottom of the concrete barrier wall is acceptable to allow sawcut equipment access and prevent damage to the median barrier while removing exist pavement."

Response: The pavement rehabilitation limits on the eastbound roadway along the median barrier is the bottom side of the concrete barriers. The pavement rehabilitation limits for the westbound roadway at Sta. 102 + 40 to 111 + 15 +/- are the bottom edges of the median and right shoulder concrete barriers.

A 1-foot offset sawcut from the bottom of the median and right shoulder concrete barriers is allowed. However, the remaining portion of the existing concrete pavement between the sawcut and the barrier bottoms shall also be removed prior to placing the new concrete pavements.

The median and right shoulder concrete barriers shall meet the minimum height requirement after installation of new roadway concrete pavements.

Question: "The Addendum #3 Geotechnical Report dated January 22, 2003 section 3.14 Pavement Design mentions a Pavement Justification Report. Please provide a copy of this report."

Response: The HDOT does not have a copy of the Pavement Justification Report at this time. .

2. Question: "Please consider extending the bid date by three weeks. The geotechnical scope took 3 weeks to get HDOT response (Addendum #3). We are looking at innovative technology for the pavement rehabilitation and few other design challenges with bridge abutment foundation support, BWS 36" waterline relocate and embankment fills. This is a large project with complex design challenges to figure out. Therefore, it will require time to get enough design completed to determine quantities & scope. Once we have design information the additional time will be used to coordinate scope with DBE sub & suppliers."

   Response: The bid date indicated in the project RFP will be postponed to December 4, 2017, at 2:00 PM.

3. Question: "Pending when last Addendum is issued please consider extending RFI deadline one week after last Addendum is issued to give us time to review and if needed send follow up to HDOT responses. The RFP Technical Proposal Part IV.A states that the RFI deadline date "is up to 40 calendar days prior to Design and Price Proposal" which is Sunday 9/24/17. We have not received HDOT responses to some of our questions. We are submitting this question on 9/18/17 and would greatly appreciate if you can reply by Thursday 9/21/17."

   Response: The deadline for the submission of Requests for Information (RFI) was extended to September 29, 2017 thru Addendum No. 4 and is further extended to October 20, 2017 in this addendum.

4. Question: "Paragraph 1.b of Addendum No. 2 states that "...temporary and permanent lighting should be positioned low to the ground, be motion-triggered, or be shielded and on/or full cut-off." Please clarify the maximum allowable height for the "low to the ground" requirement?".

   Response: The maximum allowable height for temporary and permanent lighting is 30 feet.

5. Question: "Please clarify if luminaires for the new highway lighting system need to conform to Johnson Controls specifications. If so, please clarify if luminaires will be provided by HDOT through its contract with Johnson controls, or are the luminaires to be provided by the contractor"

Response: *New highway lighting luminaires shall conform to Johnson Control specifications and match existing highway lighting luminaires in the project site. Contractor to provide the luminaires.*

6. Question: "Please clarify if the existing highway lighting system within the project limits are connected to Johnson Controls' light grid system. If so, please provide plans/details/specifications for this system."

   Response: *The project's existing highway lighting system is not currently connected to the Johnson Controls' light grid system. However, the highway lighting luminaires were installed by Johnson Controls.*

7. Question: "If reconnection to Johnson Controls lighting grid system is required, please provide requirements/procedures for acceptance by HDOT, as well as plans/details/specifications for equipment required for integration into Johnson Controls light grid system"

   Response: *Not applicable. Johnson Controls did not install new light grid system on Interstate Route H-1.*

8. Question: "Sheet 2 of V. Attachments indicates that drainage system or swale outside of the proposed 24' shoulder area. Please confirm if the drainage system can be located within the 24' shoulder area."

   Response: *Unless obstructions are encountered, the drainage system shall be located outside the 24' shoulder area.*

9. Question: "The RFP Geotechnical Report dated July 11, 2005 mentions pavement Area #5 from station 183 + 40 to 185 + 00. It is our understanding that HDOT has replaced this pavement area. Please provide HDOT as-built plans and specifications for this project."

   Response: *The pavement from Station 180+40 to 185+00 is replaced under PM Contractor Flow Lane Phase 2, which is still in construction. The construction plan and specifications for the JPCP Precast Panel are provided in the enclosed CD. Please note that these plans and specifications are for reference only, they do not reflect as-built condition.*

10. Question: "Given the limitation on asking questions up to 40 days prior to bid submission (Per TP-37 Item IV.A) which would be September 22, 2017. Also, given that many complex questions have yet to be answered, we need the RFI question period extended. Can this be extended to two weeks after the addendum is issued answering all already submitted questions?"

    Response: *The deadline for the submission of Requests for Information (RFI) was extended to September 29, 2017 thru Addendum No. 4 and is further extended to October 20, 2017 in this addendum.*

11. Question: "Several questions when answered will likely result in follow up questions which are very critical to design preparation. Following design, time is required for pricing. Given the pressure on resolving design related question as described in 1, we request the bid proposal date be extended at least one month?."

Response: The bid date indicated in the project RFP will be postponed to December 4, 2017 at 2:00 PM.

12. Question: "In evaluating Construction schedule, the PCC Rehabilitation 180-day requirement is unrealistic given the quantity of work and the limited work hours. Please increase the time of completion to rehabilitate the existing PCC to 270 days and increase the work hours for lane closures, including at least one lane closure for the entire workday Saturday and Sunday?"

Response: The 180-day requirement to rehabilitate the PCC pavements will not be revised at this time. The allowable lane closure requirements indicated in RFP pages TP-8 and TP-9 will not also be revised at this time.

13. Question: "Regarding clear zone requirements, should the clear zone be taken from the edge of the existing outside travel (outside edge of 5th lane counted from the median outward) or should the clear zone be from the outside of the shoulder lane since the shoulder lane is a travel lane during the AM hours?"

Response: The clear zone will be determined from the outside of the shoulder lane since it becomes a travel lane during the AM hours.

14. Question: "Waimalu Viaduct has existing corbels on the abutments that carry the approach slabs, and was built to standards that would not meet today's design requirements for such corbels. Have the corbels been inspected or is the condition of the corbels known? This is a concern especially on the West side since considerable settlements has occurred in that area. Does the State expect these corbels to be rehabilitated to current design code"?

Response: The current condition of the Waimalu Viaduct corbels in not known at this time. HDOT does not expect these corbels to be rehabilitated to current design code at this time.

15. Question: "Will the State require a highway lighting pullbox to be provided adjacent to each highway lighting standard or will they accept the use of the highway light standard transformer base as a pullbox? This question is applicable to both highway lighting standards mounted on grade and on the retaining walls. Please advise."

Response: The State requires the installation of pullboxes for highway lighting. The use of light standard base as a pullbox may be acceptable subject to review and approval of the Contractor's design drawings by the State.

16. Question: "The widening of the makai side of the freeway near the Kaamilo Overpass

will require the realignment/replacement of existing underground HECO facilities that cross the freeway. HECO will not be able to provide a response to our information request until November 20, 2017. See attached documents. Please advise on how the bidders should address scope and cost associated with any HECO realignment/replacement work?"

Response: The scope and cost of work associated with any necessary HECO realignment and/or replacement work shall be determined by the design-build team and shall be included in their lump sum cost proposal. The bid date indicated in the project RFP will be postponed to December 4, 2017 at 2:00 PM.

17. Question: "H1 Westbound lanes have been restriped for widening the zipper lane from on lane to two lanes. The RFP as-built drawings and the as-builts drawings from our search show zipper lane in one lane configuration. Please provide as-built plans for zipper in two lane configuration."

Response: The AM Zipper Striping Modifications project is currently in construction. The construction plan for the AM Zipper striping Modifications project is provided in the enclosed CD. The construction plan is for reference only and does not reflect the as-built condition.

18. Question: "The H-1 Eastbound 24' shoulder work will require traffic control barrier. Will HDOT be able to provide concrete K-rail Barrier for the shoulder work from station 123 + 52 to station 179 + 00? If yes the how many linear feet and where is HDOT concrete barriers located."

Response: HDOT is not able to guarantee any potable concrete barriers at this time. Contractor shall assume furnish potable concrete barriers for this project.

19. Question: "Table 2 item C on proposal page P-8 states Lane Rental Cost (Lane Rental Days x $30,000). Lane Rental cost is defined on RFP page TP-42- The number of days proposed by the bidder that lane closures are required to complete the work "Lane Rental Days" x $30,000 per day. Lane closure note 2 on RFP page TP-9 Eastbound and westbound shoulder lane closures will be allowed within work area during hours when the AM & PM shoulder lanes are not in operation. It is not clear that closing the shoulder lane when it is not operational counts as a lane closure day. Therefore, please clarify whether or not shoulder lane closures is to be counted as a "Lane Rental Day" x $30,000 per day."

Response: Closing the Eastbound and Westbound shoulder lane when it is not in operation does not count as a lane closure day.

20. Question: "HDOT previously provided area under Waimalu Viaduct along Pono Street as office & staging area for the H3 Finish Waimalu I-H3-1(75) Unit VIII Federal-Aid Project No. BR-H1-1(241). Would this area and/or some other area be available for office & staging area for this project?"

Response: *The staging area under the Waimalu Viaduct along Pono Street is no longer available. The Contractor may use the staging area under the Pearl City Viaduct between span 28 to 30.*

21. Question: "Please provide project specifications for HDOT as-built project H3 Finish Waimalu I-H31(75) Unit VIII Federal-Aid Project No. BR-H1-1(241)."

Response: *The Specifications for Interstate Route H-3, H-3 Finish (Unit VIII) Federal-Aid Project No I-H3-1(75) Unit VIII and Interstate Route H-1 Seismic retrofit Austin-Bishop Separation and Waiau Interchange Federal-Aid Project No. BR-H1-1(241) is provided in the enclosed CD.*

22. Question: "The proposed widening improvements will trigger permanent BMP water quality control based on the /Storm Water Permanent Best Management Practices Manual. Please confirm if the project is eligible for exemption from water quality requirements.

If water quality requirements are not exempt, please confirm if HDOT will grant a variance from LID requirements due to physical constraints of the site and if non- LID methods such as GDI inserts or hydrodynamic type devices would be acceptable to treat the required water quality flow rate (WQFR)."

Response: *The project is not eligible for an exemption from water quality requirements. Non-LID methods will be acceptable for this project.*

23. Question: "If reconnection to Johnson Controls lighting grid system is required, please clarify if equipment needed for integration into Johnson controls light system is to be provided by HDOT or by the Contractor."

Response: *Not applicable. Johnson Controls did not install new light grid system on Interstate Route H-1.*

24. Question: "Please provide the most current 24-Hour Truck Composition Percentages for this project."

Response: *The most current (2017) 24—Hour Truck Composition Percentages for this project is listed below.*

2017	**24-HR TRUCK COMPOSITION**	
Interstate H-1	**(MP 10.57-12.60)**	**Sta C7L**
5.93%	**CLASS 4**	**Bus**
82.00%	**CLASS 5**	**2A-6T**

6.03%	**CLASS 6**	**3A-SU**
0.17%	**CLASS 7**	**4A-SU**
0.99%	**CLASS 8**	**4A-ST**
4.53%	**CLASS 9**	**5A-ST**
0.29%	**CLASS 10**	**6A-ST**
0.02%	**CLASS 11**	**5A-MT**
0.01%	**CLASS 12**	**6A-MT**
0.02%	**CLASS 13**	**7A-MT**
100.00%	**20,000**	

25. Question: "As a follow up question to HDOT's response to Question 16 in Addendum No. 3, are there any remedial measures required inside the CMP at Sta. 88 + 70? Special Provisions Section 553 and 719 was included in the RFP. Is construction of fiber reinforced concrete lining required?

Response: There are no remedial measures required inside the CMP at Sta. 88+70. The remedial work is only required for the outside of the CMP.

26. Question: "What is the TL level required for the guardrails?

Response: The required TL level for W-beam guardrails is TL-3.

27. Question: "HDOT's response to Question 16 in Addendum No. 3 requested that the Design-Build Team include cost for probing the area to determine if there are voids above the CMP at 88 + 70 and to include costs for remedial measures to fill the voids above the CMP. We respectfully request that the probing and remedial measures for this CMP be treated as a Force Account item in the contract as the extent of the fix (if any) is unknown in order to be fair and equitable to the Design-Build teams. Please also note that this CMP is also in the area where the pavement rehabilitation work needs to occur in the first 180 days from NTP. This is not a biddable item as the nature, extent, and probable solution are all unknown to the Design-Build teams at this time and should be treated as a Force Account item".

Response: All probing work and remedial measures necessary for the filling of voids above the CMP at Sta. 88 + 70 +/- shall be included in the Contractor's lump sum cost proposal. Inspection Summary for this culvert is attached in the Addendum No. 4.

28. Question: "The information contained in the geotechnical report (Geotechnical Engineering Exploration Report, Interstate Route H-1 Widening, Waimalu Viaduct Westbound, Pearl city Off-ramp to Kaonohi Street" dated January 22, 2003) provided by HDOT in Addendum No. 3 for this project indicated that the on-site soils have "slightly elevated chloride contents" and that some form of corrosion protection, such as fully encapsulated double corrosion protection

system, is required of the soil nails and tiebacks. Please confirm that the soil nails, tiebacks, and/or ground anchors used for the retaining walls on this project shall have fully encapsulated double corrosion protection system based on this information contained in Addendum No.3."

Response: *Yes. The soil nails, tiebacks, and/or ground anchors used for the retaining walls on this project shall have fully encapsulated double corrosion protection system.*

29. Question: The existing embankment fills in the areas from Sta. 144 + 80 to Sta. 149 + 70 and also from Sta. 162 + 50 to Sta. 168 + 90 are characterized by eight borings (B-3, B-4, B-5, B-6, B-7, B-8, B-9 & B-10) in the RFP Geotechnical Report (Geotechnical Engineering Exploration, Interstate Route H-1 Rehabilitation, East Lanes, Waiau Interchange to Kaimakani Street, Ewa, Oahu, Hawaii dated July 11, 2005. The Geotechnical Report did not contain much, if any, information on the drained strength characteristics of the existing embankment fills. The Design-Build team will need to excavate and shore up the excavation to construct the retaining walls required for the shoulder widening beyond the top of the fill embankment and to design the fill retaining walls. We respectfully request the HDOT provide a set of drained strength parameters (unit weight, cohesion, and friction angle of the existing embankment fill materials) to serve as a geotechnical baseline for the Design-Build teams to use in the Concept Development and proposal. This way, it is known what the baseline geotechnical parameters to be used in the Concept Development and price proposal due to the lack of factual information contained in the HDOT provided Geotechnical Reports.

Response: *The Design-Build teams should use the boring information provided in the RFP Geotechnical Report to develop their Concept Development and proposal. In addition, to avoid adding more fill load that would cause the underlying soft soil to consolidate and cause settlement, retaining walls supporting new fill shall be innovatively designed to create no additional vertical loading on the soils under and adjacent the widened road.*

30. Question: "HDOT's response to Question 12 indicated that permanent irrigation is not required. Yet, the scope of work for this project includes providing temporary and permanent Best Management Practices (BMPs). Slopes in the area without permanent irrigation has deteriorated by erosion gullies due to the denudation of ground cover. It is evident that permanent irrigation of the vegetation and ground cover on the highway slopes helps maintain the ground cover and the permanent BMP's. Is HDOT sure they do not want a permanent irrigation to help maintain the ground cover on the slopes in the long term?"

Response: Permanent irrigation is not required in this project.

31. Question: Will HDOT allow Weigh-In-Motion (W.I.M.) (eastbound only) to be temporarily out of service in order to install new W.I.M.?

Response: HDOT will allow Weight-In-Motion (eastbound only) to be temporarily out of service for the installation of New Weigh-In-Motion.

32. Question: Please confirm that HDOT has current NPDES MS4 Permit coverage for the highway drainage system and that HDOT will maintain and update NPDES MS4 Permit compliance for the duration of the project.

Response: HDOT has a current NPDES MS4 Permit coverage for the highway drainage system. For the duration of the project, the Contractor shall be responsible for the compliance of the NPDES MS4 Permit within the project limits. The Contractor shall clean and maintain MS4 structures within the project limits. In addition, the Contractor shall follow HDOT's Standard Specifications/ Special Provisions Section 209, Construction Notes, and Water Pollution and Erosion Control Notes to ensure NPDES MS4 compliance.

33. Question: Technical proposal qualifications section III.A.3. states "Capacity to accomplish the work in the required time for PCC Pavement rehabilitation in 180 calendar days from Design NTP". Please consider the time needed to finalize design which could take up to 91 calendar days which includes 50% HDOT review period 28 calendar days (TP-14) + 50% comment resolution period 14 calendar days (based on HDOT design-build projects) + 100% HDOT review period 28 calendar days + 100% comment resolution period 14 calendar days + Release for construction 7 calendar days (based on HDOT design-build projects). Please consider the time needed to obtain Noise Variance Permit 60 calendar days per DOH noise variance permit application includes 30 calendar day public notice. The design review process and permit application is dependent on others beyond the control of the Contractor. Also material procurement lead time, HDOT preconstruction meeting, mobilization, etc... that HDOT requires. Therefore, please consider revising the start of the 180 calendar days of the pavement rehabilitation based on Construction NTP and not Design NTP as HDOT typically does for design-build projects.

Response: This is a design-build project. Only one NTP (design NTP) will be given to the selected Contractor after the contract execution. The Contractor shall accomplish the work in the required time for PCC Pavement Rehabilitation in 180 calendar days from the Design

NTP.

34. Question: Does HDOT want the Contractor to salvage the existing lights being removed? If so, where should Contractor deliver salvaged lights?

    Response: The Contract is not required to salvage the existing lights being removed. Contract shall dispose the existing light appropriately.

35. Question: Addendum 1 included the "Disadvantaged Business Enterprise (DBE) Provisions Pertaining to Design-Build Projects". In Section VI. SUBMITTAL OF DOCUMENTATION WITH DESIGN AND PRICE PROPOSAL, B. Documentation of Good Faith Efforts, it states that "Additionally, the Design-Build Contractor shall submit signed agreements with each DBE utilized ....". Agreements with DBE and non-DBE are finalized after award of the contract. Please revise the requirement for submitting signed agreements until after contract award.

    Response: Section VI, SUBMITTAL OF DOCUMENTATION WITH DESIGN AND PRICE PROPOSAL, B. Documentation of Good Faith Efforts – replace paragraph 1 with "The Design-Build Contractor's DBE Performance Plan shall be consistent with the type of good faith efforts recommended below. A Design-Build Contractor, Subcontractor, Consultant, Subconsultant, Supplier and Service Provider must provide justification if it rejects bids, quotes or proposals from properly certified, qualified DBE firms."
    Section VII, SUBMITTAL OF DOCUMENTATION AFTER CONTRACT AWARD is amended by adding the following paragraph: "Additionally, the Design-Build Contractor shall submit signed agreements with each DBE to be utilized by the Design-Build Contractor, Subcontractor, Consultant, Subconsultant, Supplier, and Service Provider. "

36. Question: Also in the "Disadvantaged Business Enterprise (DBE) Provisions Pertaining to Design-Build Projects" included in Addendum 1; section VI. SUBMITTAL OF DOCUMENTATION WITH DESIGN AND PRICE PROPOSAL, C. Design-Build Contractor's Bidders List, states that "The complete Design-Build Contractor's Bidders List should include information on 1) all DBE and non-DBE firms that submitted a bid/proposal for the project; 2) the proposed firms to be used as Contractors, Subcontractors, Consultants, Suppliers, or Service Providers; 3) description of work; 4) estimated bid dollar amount; 5) years the firm has been in business; and 6) the firm's annual average gross receipts over the last three years.". Subcontractor quotes are received up to the day of the proposal due date, so please consider revising the submittal date for requirements 4), 5), and 6) to within five (5) calendar days after the proposal due date; similar to the requirement on previous HDOT bids. This will enable the proposers to properly complete the Bidders List, provide 10 copies, and create an electronic pdf; and allow the proposers to concentrate time and effort on the price proposal to provide the best value on the due date.

    Response: SECTION VI, SUBMITTAL OF DOCUMENTATION WITH DESIGN AND PRICE PROPOSAL, C. DESIGN-BUILD CONTRACTOR'S BIDDER'S LIST - Replace paragraph 1 with the following: "The complete Design-Build Contractor's Bidders List should include

information on 1) all DBE and non-DBE firms that submitted a bid/proposal for the project; 2) the proposed firms to be used as Contractors, Subcontractors, Consultants, Subconsultants, Suppliers, or Service Providers; 3) description of the work; 4) estimated bid dollar amount; 5) years the firm has been in business; and 6) the firm's annual average gross receipts over the last three years. For items 4, 5 and 6 above, the Design-Build Contractor shall submit these items five (5) days after the Design and Price Proposal due date. The Design-Build Contractor must submit a Bidders List irrespective of whether or not it has indicated sufficient participation to meet the goal."

37. Question: Technical Provision Section I.1 Public Meetings on TP-30 states the contractor shall conduct four (4) public information meetings (PIM). Please clarify how HDOT wants to notify public.

    Response: The Contractor shall provide adequate public notifications to fulfill the meeting's intent. For example, DOH has its own requirements for Noise Variance Consultation, it is the responsibility of the Contractor to fulfill the requirements. For general PIM meetings, the Contractor is required as a minimum to publish newspaper ad on Star Advertiser two weeks before the PIM, and prepare News Release for media and area legislators.

38. Question: The Response to Addendum No. 3 question 17 regarding rehabilitation of CMPs, was "Only 96-inch CMP between Sta 86+00 and Sta 89+00 shall be included in this project". In Addendum No. 4, inspection reports for the drain line crossings four feet diameter and higher located within the project limits were included. The inspection reports at Milepost 10.8 and 12.10 recommended repairs to the culvert. Please confirm whether rehabilitation to the CMPs at these Milepost are included in this project. If these CMPs do need to be rehabilitated, please provided Stations and scope of work.

    Response: Rehabilitation to the CMPs is not required.

39. Question: As a follow-up to response 8 in Addendum No.4, what extent length of barrier should be assumed for the adjustment necessary to the concrete median barriers affected by the new pavement grades?

    Response: Design-built team to determine the appropriate length of the barrier to be adjusted.

Please acknowledge receipt of this Addendum No. 5 by recording the date of its receipt in the space provided on page P-4 of the Proposal.

FORD N. FUCHIGAMI
Director of Transportation

REQUEST FOR PROPOSALS
(Chapter 103D, HRS)

The receiving of PROPOSALS (design concept documents and price) for INTERSTATE ROUTE H-1 SHOULDER WORK AND PORTLAND CEMENT CONCRETE PAVEMENT REHABILITATION, PROJECT NO. NH-H1-1(274), scheduled for 2:00 P.M., November 3, 2017, at the Contracts Office, Department of Transportation, 869 Punchbowl Street, Honolulu, Hawaii 96813, is HEREBY POSTPONED until 2:00 P.M., December 4, 2017, at which time and place they will be received.

FORD N. FUCHIGAMI
Director of Transportation

DISADVANTAGED BUSINESS ENTERPRISE (DBE) SPECIAL PROVISIONS PERTAINING TO DESIGN-BUILD PROJECTS

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, shall have the maximum feasible opportunity to receive and participate on contracts financed in whole or in part with public funds from the USDOT. The Department will not allow any person or business to be excluded from participation in, denied the benefits of, or otherwise discriminated against in connection with the award and performance of any USDOT-assisted contract because of sex, race, or national origin.

III. CONTRACT ASSURANCE

Each contract signed with a Design-Build Contractor (and each subcontract the Design-Build Contractor signs with a Subcontractor) shall include the following assurance:

"The Design-Build 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 Design-Build Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of USDOT assisted contracts. Failure by the Design-Build 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 Design-Build Contractor from future bidding as non-responsible."

The Design-Build Contractor agrees to include the above statements in any subsequent contracts that it enters into with Subcontractors, Consultants, Subconsultants, Suppliers, and Service Providers shall require those Design-Build entities to include similar statements in further agreements.

IV. DEFINITIONS

A. **Disadvantaged Business Enterprise Firm** – A firm that has met the eligibility requirements to be certified by Department as a Disadvantaged Business Enterprise. A DBE firm certified by Department is eligible to earn credit for its performance on this contract.

B. **Department Unified Certification Program (UCP)** – The Department UCP certifies firms as DBEs in the State of Hawaii. Access the DBE Directory through https://Department.dbesystem.com/.

C. **Office of Civil Rights (OCR)** – The Department's OCR is responsible for administering the DBE program for this project. Information regarding the DBE program can be found at http://hidot.hawaii.gov/administration/ocr/dbe/ or by calling 808-831-7912.

D. **Subcontractor** – Individual Subcontractors, Consultants and Subconsultants, Vendors, and Service Providers that provide a service within the scope of this contract.

V. DOCUMENTATION REQUIRED BY QUALIFICATION PROPOSAL DUE DATE

A. Bidder Registration Form

All Design-Build Contractors are required to register with OCR DBE Section by the Qualification Proposal due date. Failure to comply with this requirement will automatically deem the Proposer as non-responsive to this solicitation. The Bidder Registration Form 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 Proposers/Design-Build Contractors 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 OCR DBE Section at 200 Rodgers Boulevard, Honolulu, Hawaii 96819. Registered Design-Build Contractors, Subcontractors, Consultants, Subconsultants, Suppliers and Service Providers are posted on the website listed above.

B. DBE Performance Plan

All Proposers must submit a DBE Performance Plan with their Qualification Proposal. Failure to submit the DBE Performance Plan which complies with the requirements as specified in paragraph B below, will automatically deem the Proposer as non-responsive to this solicitation. Proposers shall be notified if they have met this requirement at the time of HDOT evaluation, rank and invitation. Design-Build Contractor shall prepare a DBE Performance Plan that complies with all applicable state and federal laws, is consistent with this contract document including the good faith efforts requirement, and contains the following elements:

1. A policy statement signed by Design-Build Contractor's Authorized Representative, which express Design-Build Contractor's commitment to utilize DBEs in all aspects of the work, outlines the various levels of responsibilities, and states the objectives of the DBE Performance Plan. Design-Build Contractor shall obtain the written commitment of all Design-Build Contractor entities to comply with and advance the intent of the policy statement.

2. A description of proposed activities to facilitate DBE engagement in work as Subcontractors and Subconsultants shall include, at a minimum, the following:

    a. Participate in a Department sponsored networking event with prospective DBEs that may be ready, willing and able to perform work on this project;
    b. Conduct bid item specific outreach meetings in coordination with the Department for DBE firms to highlight appropriate subcontracting opportunities;
    c. Solicit statements of qualification, proposals, and/or price quotations from qualified DBE firms and arrange a time for the review of the qualifications, plans, quantities, specifications, and delivery schedules and for the preparation and presentation of proposals and/or price quotations;
    d. Encourage eligible DBEs to apply for certification with the Department by the Design and Price Proposal due date;
    e. Contact minority and women business organizations, contractor associations, and city agencies with programs for disadvantaged individuals for assistance in recruiting and encouraging eligible DBE contractors to apply for certification with the Department; and
    f. Develop an action plan to monitor on-going DBE participation on the project to ensure the Design-Build Contractor is on track to meet the DBE contract goal. The action plan shall include, but is not limited to, regularly scheduled meetings with the Department to address issues that may affect committed DBEs, such as a reduction in the scope of work, and when good faith efforts are necessary to replace a DBE for good cause as specified in these Special Provisions.

3. The Performance Plan must include planned DBE participation, which may not identify specific DBEs, but generally describes work that may be done by DBEs and an estimated amount that will be performed.

4. The DBE Performance Plan shall be in effect from the submittal of the Qualification Proposal and throughout this project. Failure to adhere to the DBE Performance Plan may result in the Design-Build Contractor demonstrating inadequate good faith efforts to facilitate DBE participation.

VI. SUBMITTAL OF DOCUMENTATION WITH DESIGN AND PRICE PROPOSAL

The Design-Build Contractor must submit the following information with the Design and Price Proposal:

1. DBE Participation Goal;
2. Documentation of Good Faith Efforts (Activities conducted in compliance with the DBE Performance Plan);
3. Design-Build Contractor's Bidders List; and
4. Confirmation by DBE Form.

A. DBE Goal

Submittal of the DBE goal shall be due on the Design and Price Proposal due date. In the evaluation and ranking of Design and Price Proposals, Proposers shall be awarded five (5) points for meeting the DBE Goal, or demonstrating adequate good faith efforts. If the Proposer fails to meet the goal, and does not demonstrate good faith efforts to meet the goal, the Design and Price Proposal shall be deemed non-responsive to this solicitation.

Calculation of the overall DBE contract goal for this project is the proportionate contract dollar value of work performed, materials, and goods to be supplied by DBE. This DBE contract goal is applicable to all the contract work performed for this project and is calculated as follows:

DBE contract goal percentage = Contract Dollar Value of the work to be performed by DBE Consultants, Subconsultants, 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).

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

DBE participation will be counted towards the Department's overall statewide goal.

B. Documentation of Good Faith Efforts

The Design-Build Contractor's DBE Performance Plan shall be consistent with the type of good faith efforts recommended below. A Design-Build Contractor, Subcontractor, Consultant, Subconsultant, Supplier and Service Provider must provide justification if it rejects bids, quotes or proposals from properly certified, qualified DBE firms.

The Design-Build Contractor shall submit any and all documents, logs, correspondence, and any other records or information to the Department that will demonstrate that the Design-Build Contractor made good faith efforts to meet the DBE goal. In its good faith evaluation, the Department may, but shall not be required, to perform the following as part of its evaluation: a) request additional information and documents from the Design-Build Contractor; b) compare the Design-Build Contractor's price against the price of other Proposers, and compare the DBE and DBE work areas utilized by the Design-Build Contractor with the DBEs listed in other Proposals submitted for this contract; c) verify

contacts by Proposers/Design-Build Contractors with DBE; and d) compare the DBE and the categories of DBE work targeted by the Design-Build Contractor 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 Design-Build Contractor. Actions on the part of the Design-Build Contractor that will be considered demonstrative of good faith efforts include, but are not limited to, the following:

1. Whether the Design-Build Contractor solicited through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBE 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 Design-Build Contractor solicited the participation of potential DBE as early in the procurement process as practicable, and allowed sufficient time for the DBE to properly inquire about the project and respond to the solicitation. The Department will also review whether the Design-Build Contractor took appropriate steps to follow up with interested DBE in a timely manner to facilitate participation by DBE in this project;

2. Whether the Design-Build Contractor identified and broke up portions of work that can be performed by DBE 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 the Design-Build Contractor might otherwise prefer to self-perform these work items;

3. Whether the Design-Build Contractor made available or provided interested DBE with adequate information about the plans, specifications, and requirements of the project in a timely manner, and assisted them in responding to the Design-Build Contractor's solicitation;

4. Whether the Design-Build Contractor negotiated in good faith with interested DBE. Evidence of such negotiations includes documenting: a) the names, addresses and telephone numbers of DBE that were contacted; b) a description of the information that was provided to DBE regarding the plans and specifications; and c) detailed explanation for not utilizing individual DBE on the project;

5. Whether the Design-Build Contractor solely relied on price in determining whether to use a DBE. The fact that there may be additional or higher costs associated with finding and utilizing DBE are not, by themselves, sufficient reasons for a bidder's/offeror's refusal to utilize a DBE, or the failure to meet the DBE goal, provided that such additional costs are not unreasonable. Also, the ability or desire of a Design-Build Contractor to perform a portion of the work with its own forces, that could have been undertaken by an available DBE, does not relieve the Design-Build Contractor 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;

6. Whether the Design-Build Contractor rejected DBE as being unqualified without sound reasons based on a thorough investigation of their capabilities. The DBE 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 DBE;

7. Whether the Design-Build Contractor made efforts to assist interested DBE in obtaining bonding, lines of credit, or insurance;

8. Whether the Design-Build Contractor made efforts to assist interested DBE in obtaining necessary equipment, supplies, materials or related assistance or services;

9. Whether the Design-Build Contractor effectively used the services of available minority/women community organizations, minority/women business groups, Design-Build Contractors' groups, and local, state and federal minority/women business assistance offices or other organizations to provide assistance in recruitment and placement of DBE; and

10. Whether other Proposers/Design-Build Contractors met the goal and whether the apparent successful Design-Build Contractor could have met the goal with additional efforts. The Department may determine that an apparent successful Design-Build Contractor who fell short of meeting the goal, made good faith efforts when it met or exceeded the average DBE participation obtained by other Proposers/Design-Build Contractors.

Design-Build 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 Design-Build Contractor has the ability and/or desire to perform the contract work with its own forces does not relieve the Design-Build 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 Design-Build Contractor, Subcontractors, Consultants, Subconsultants, Suppliers, and Service Providers, including DBE and non-DBE firms, that subcontract part of their work must also demonstrate that they made good faith efforts to provide opportunities to DBE firms to participate on this project.

Administrative Reconsideration

1. If under the provisions of 49 CFR, Part 26.53(d), it is determined by the Department that the Design-Build Contractor has failed to meet adequate good faith efforts, the Design-Build Contractor may submit a protest to request an administrative reconsideration. The Design-Build Contractor must file this request with the Department's OCR within five (5) calendar days of notification by the Department that the Design-Build Contractor failed to meet the requirements of this subsection. As part of this reconsideration request, it is the Design-Build Contractor's responsibility to provide to the OCR, any and

all written documentation, correspondence, logs, and any other documents or evidence the Design-Build Contractor believes relates to the issue of whether it met the DBE project goal or made good faith effort to do so.

2. The OCR DBE Liaison Officer will be responsible for resolving the reconsideration dispute.

3. Upon request by the Design-Build Contractor, the Design-Build Contractor will be allowed an opportunity to meet in person with the Liaison Officer to discuss the issue of whether it met the DBE project goal, or made good faith effort to do so. If a meeting is requested, the Design-Build Contractor must be ready, willing, and able to meet with the Liaison Officer within five (5) calendar days of the bidder's/offeror's receipt of written notification that the Design-Build Contractor failed to meet the requirements of this subsection.

4. The Liaison Officer will render a decision on the reconsideration, and notify the Design-Build Contractor in writing of the decision. The decision will explain the basis for the Liaison Officer's findings and the reasons for the decision.

5. The decision is not appealable to the USDOT, but is appealable in accordance with Section 103D-709, Hawaii Revised Statutes.

C. Design-Build Contractor's Bidders List

The complete Design-Build Contractor's Bidders List should include information on 1) all DBE and non-DBE firms that submitted a bid/proposal for the project; 2) the proposed firms to be used as Contractors, Subcontractors, Consultants, Subconsultants, Suppliers, or Service Providers; 3) description of the work; 4) estimated bid dollar amount; 5) years the firm has been in business; and 6) the firm's annual average gross receipts over the last three years. **For items 4, 5 and 6 above, the Design-Build Contractor shall submit these items five (5) days after the Design and Price Proposal due date.** The Design-Build Contractor must submit a Bidders List irrespective of whether or not it has indicated sufficient participation to meet the goal.

D. Confirmation by DBE Form

Copies or faxes of all "Confirmation by DBE" forms signed by each DBE listed in the Design and Price Proposal shall be submitted to the Project Manager listed in the Request for Proposal by the Design and Price Proposal due date. Information to be provided on the form shall include the name of the DBE, address, project name and number, Design-Build Contractor name, appropriate NAICS code and description of the type of work the DBE is certified to perform under this contract. Failure to provide this completed form may be cause for Design and Price Proposal rejection.

VII. SUMBITTAL OF DOCUMENTATION AFTER CONTRACT AWARD

The dollar amount of each subcontract (both DBE and non-DBE firms) for all subcontractors, manufacturers and suppliers listed in the Design and Price Proposal shall be submitted within ninety (90) days from Notice to Proceed (NTP) for the design phase and thirty (30) days prior to the DBE Subcontractor, Supplier or Service Provider undertaking work for the first construction phase, and all subsequent construction phases. If the time duration between the NTP for the design phase and NTP for the first segment of the construction phase is less than 30 days, then the Department will reduce the requirement to 15 days from the design NTP.

Additionally, the Design-Build Contractor shall submit signed agreements with each DBE to be utilized by the Design-Build Contractor, Subcontractor, Consultant, Subconsultant, Supplier, and Service Provider.

VIII. DESIGN-BUILD CONTRACTOR RESPONSIBILITIES

Design-Build Contractors, Subcontractors, Subconsultants, Suppliers and Service Providers shall fully inform themselves with respect to the requirements of the DBE Regulations. Particular attention is directed to the following matters:

Design-Build Contractors shall take all necessary steps to ensure that DBEs have an opportunity to participate in this contract.

A. DBEs may participate as a Contractor, Consultant, Subconsultant, Subcontractor, Suppler, or Service Provider. DBEs may also team with other DBE or non-DBE firms as part of a joint venture or partnership.

B. Agreements between a Design-Build Contractor and a DBE in which a DBE promises not to provide subcontracting quotations to other Design-Build Contractors are strictly prohibited.

C. 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.

D. Information regarding the current certification status of DBEs is available on the Internet at https://hdot.dbesystem.com/.

E. The Department and Design-Build Contractor recognize that the actual quantities of work may vary substantially from what is now anticipated because the design has not been completed. It is the Design-Build Contractor's responsibility to assure that the DBE goal will be met. The only exception to this provision is if the Design-Build Contractor can demonstrate effective good faith efforts to meet the goal but cannot because the number of DBE firms ready, willing, and able to work on the project is inadequate to achieve the goal.

F. Commercially Useful Function ("CUF"). A DBE must perform a CUF. This means that a 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 a 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 Design-Build Contractor is responsible to ensure that the DBE performs a CUF.

IX. 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 Design-Build Contractor or its affiliate).

B. Count the entire amount of fees or commissions charged by a 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 a 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 a DBE. Work that a DBE subcontracts to a non-DBE firm does not count toward DBE goals.

D. When a 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 a DBE Design-Build 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 a DBE Subcontractor. Count expenditures with DBE for materials or supplies toward DBE goals as provided in the following:

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

1. If the materials or supplies are obtained from a 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 a 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 a 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 a 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 a DBE Subcontractor toward a Design-Build 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 a 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 Design-Build Contractor may be a joint venture or partnership that has a certified DBE as a partner. A "Joint Venture" means an association between a 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 a DBE. When a 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 a DBE. Should a 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 Design-Build 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 Design-Build 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 a 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 DBE in an amount to meet the DBE goal either by; 1) increasing the participation of other DBE on the project; 2) documenting good faith efforts; or 3) by a combination of the above.

X. 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 Design-Build 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 Design-Build 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. Design-Build 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 Design-Build 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 Design-Build 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 Design-Build Contractor that the DBE is to use a specific supplier nor the prime "Design-4Builders" negotiated unit price.

XI. TERMINATION OF DBE SUBCONTRACTOR

The Department requires that the Design-Build Contractor and its Subcontractors, Consultants, Subconsultants, Suppliers and Service Providers not terminate for convenience a DBE Subcontractor, Consultant, Subconsultant, Supplier or Service Provider listed on the Design-Contractor's Bidders List or an appropriate substitute DBE and then perform the work of the terminated contract with its own forces or those of an affiliate, without prior written consent of the Department. The request for removal must be for good cause and must be approved by the Department.

Under this contract, the Design-Build Contractor shall utilize the specific DBE listed to perform the work and supply the materials for which each is listed unless the Design-Build Contractor obtains written consent from the Department to replace a DBE. If the Department's consent is not provided, the Design-Build 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 Design-Build Contractor to make good faith efforts as specified in these Special Provisions to replace a 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. The Department will require the Design-Build 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 Design-Build Contractor must include the following:

1. The date the Design-Build Contractor determined the certified DBE to be unwilling, unable or ineligible to perform work on the contract;
2. The projected date that the Design-Build 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 Design-Build 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 Design-Build Contractor;
5. Documentation of Design-Build 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 Design-Build 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 Design-Build Contractor and DBE have a dispute.

The Design-Build 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 Design-Build 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 Design-Build Contractor.

There shall be no substitution or termination of a DBE Subcontractors, Subconsultants, Suppliers, or Service Providers at any time without the prior written consent of the Department. The Department will provide written consent only if the Design-Build 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 fails or refuses to execute a written contract;

2. The listed DBE fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards;
3. The listed DBE fails or refuses to meet the prime Design-Build Contractor's reasonable, nondiscriminatory bond requirements;
4. The listed DBE becomes bankrupt, insolvent, or exhibits credit unworthiness;
5. The listed DBE 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 is not a responsible Design-Build Contractor;
7. The listed DBE 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. A DBE owner dies or becomes disabled with the result that the listed DBE Design-Build Contractor is unable to complete its work on the contract.

Upon approval from the Department to replace a DBE, the Design-Build 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 Design-Build Contractor.

If a DBE is unable to perform work under the contract, and is to be replaced, the Design-Build Contractor's failure to obtain a substitute certified DBE or to make good faith effort to obtain such a substitute DBE 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. PROMPT 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 Design-Build Contractor, including retainage.

B. The Design-Build Contractor shall pay all Subcontractors within ten (10) calendar days after receipt of any progress payments from the Department. This clause applies to both DBEs and non-DBEs and all tiers of subcontracts.

C. The Design-Build Contractor shall sign and submit the "DBE Participation Report and Prompt Payment Certification" form concurrently with its invoice to the Project Manager. The Department will not process any invoices without this completed form. The form shall certify all Subcontractors have been paid for the work performed and at the completion of work any retainage held on the subcontracts has been returned.

D. When any Subcontractor satisfactorily completed its work as specified in the subcontract, and there are no bona fide disputes, the Design-Build 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 Design-Build 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 Subcontractor and all tiers of subcontracts.

XIII. RECORDS

The Design-Build Contractor shall maintain and keep all records necessary for the Department to determine compliance with the Design-Build 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 Design-Build Contractor shall include:

1. The names, race/ethnicity, gender, address, phone number, and contact person of all DBE and non-DBE Consultants, Subconsultants, Subcontractors, Manufacturers, Suppliers, and Service Providers identified as DBEs (for vendor to identify whether it is a supplier or manufacturer);
2. The nature of work of each DBE and non-DBE Consultant, Subconsultant, Subcontractor, Manufacturer, Supplier, and Service Provider;
3. The dollar amount contracted with each DBE and non-DBE Consultant, Subconsultant, Subcontractor, Manufacturer, Supplier, and Service Provider; and
4. Cumulative dollar amount of all change orders to the subcontract.

XIV. REPORTS

The Design-Build Contractor shall submit the DBE Participation Report and Prompt Payment Certification form to the Department with its pay request. The Department will not prepare the monthly progress payment unless it receives a completed report.

XV. FAILURE TO COMPLY WITH DBE REQUIREMENTS

All Design-Build Contractors, Consultants, Subconsultants, Subcontractors, Manufacturers, Suppliers and Service Providers, 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, be assessed sanctions as allowed under 49 CFR, Part 26, §26.107, or such other remedy as deemed appropriate by the Department.

XVI. LIQUIDATED DAMAGES

As defined in 49 CFR, Part 26, if it is determined that the Design-Build Contractor's failure to meet all or part of the DBE goal is due to the Design-Build Contractor's

inadequate good faith efforts, the Design-Build Contractor may be required to pay DBE Liquidated Damages equal to the amount of the unmet goal.

	approved by DOT prior to posting.
Work progress narrative with sketches	every week
Scheduled Road/Lane Closures	14 calendar days prior to closure changes. DOT shall be provided 14 calendar days notice for any road/lane closures or changes to road/lane closures.

J. CONTRACT TIME

The Contract Time to complete design and construction of the Project shall be either a maximum of 780 calendar days from date of Design Notice to Proceed to completion of all construction work items, or the duration shown in the Project Schedule submitted as part of the Design Documentation Requirements in Section IV.B.2 plus 30 calendar days, whichever is less. However, the contract time to complete the construction of PCC pavement rehabilitation shall be 180 calendar days or less from date of Design Notice to Proceed. For any work beyond the established Contract Time, the Contractor will be subject to Liquidated Damages in accordance with Subsection 108.08-Liquidated Damages for Contractor's Delays of the Special Provisions.

K. ANTICIPATED REQUEST FOR PROPOSAL SCHEDULE

The Department anticipates the following estimated timeframe for the Request for Qualifications, Design and Price Proposal, and Evaluation:

Release of Request for Proposals (RFP)	July 7, 2017
Pre-Proposal Conference	July 17, 2017, 1:00 PM
Deadline of submission of written questions	July 17, 2017, 4:30 PM
HDOT's response to written questions	July 21, 2017
Submission of Qualification Proposal due date/time at Department of Transportation Contracts Office 869 Punchbowl Street, Room 105 Honolulu, HI 96813 There are no exceptions to this proposal due date unless the date is amended in writing by the Department of Transportation	August 1, 2017, 2:00 PM (HST)
DOT Evaluation, Rank and Invitation	August 11, 2017
Price Proposal from Top 3 Proposers	December 4, 2017, 2:00 PM
Discussions with Top 3 Proposers (if necessary)	December 18, 2017
Evaluation and Award	January 26, 2018

When the Department's determination of the top three qualified Contractors is made, the Department will notify the selected and non-selected firms in writing within the time frame outlined in the Notice to Proposers. The Department will invite the top three qualified Contractors to submit a Design and Price Proposal as described in Section IV below.

IV. DESIGN AND PRICE PROPOSAL

The Design and Price Proposal shall consist of design documentation and price, to be received no later than the date and time specified in the Request for Proposals at the Department's Contracts Office, 869 Punchbowl Street, Room 105, Honolulu, Hawaii, 96813.

By submitting a Design and Price Proposal, the Contractor acknowledges the Contractor's team is fully qualified to complete the Project and that the allocated time was sufficient to collect the necessary information and to prepare designs to base its price proposal. There will be no claims due to "insufficient time to collect information and prepare studies and designs."

Once the Design and Price Proposal is submitted to the State, the Department becomes the owner of the Design Documentations. After the Contractor is selected and the project is awarded, the Department may disclose desirable elements from the second ranked and third ranked designs to the selected Contractor.

Any variations from the Scope of Improvements or any other section of this RFP shall be identified by the Contractor. Any variations, either perceived or noted by the Contractor or the Department shall not cause a proposal to be considered non-responsive. The Department will assess the variations during the evaluation process and score the proposal accordingly.

A. REQUESTS FOR INFORMATION

The Department will accept Requests for Information (RFI) related to preparing the Design Documents up to October 20, 2017. All RFI's will be received by the Department in writing by email by 4:00 pm of this date. RFI's shall be sent in writing by email to h1ebrehab@hawaii.gov. No verbal inquiries will be accepted by the Department.

The Department's responses to the RFI's related to the preparation of the design documents will be issued by Addendum no later than 30 calendar days prior to the Proposal submittal date. After the Addendum is received, the Contractors shall finish their design documentation according to their best understanding of the project given all information received in this Request for Proposal Documents, in the mandatory pre-qualifications proposal meeting, and any addenda documents received to that point.

B. DESIGN DOCUMENTATION

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
H-E-H	HI	NH-HI-N260	--		

STRUCTURAL GENERAL NOTES

1. General Specifications: Hawaii State Department of Transportation (HDOT), Hawaii Standard Specifications for Road and Bridge Construction, 2005, together with Special Provisions prepared for this contract.

2. Design Specifications:

   (A) AASHTO 2010 LRFD Bridge Design Specifications (Fifth Edition) and its subsequent interim specifications with interim supplements and modifications by the HDOT Highways Division.

   (B) HDOT Document dated August 6, 2014 with subject title "Design Criteria for Bridges and Structures"

3. Loads:

   (A) Live Load: AASHTO HL-93 Truck Loading

4. Materials:

   (A) All concrete strengths shall be as noted below:

Item No.	Structural Parts	Minimum Compressive Strength f'c (28 Days)	Maximum Water/Cement (W/C)
(1)	Jointed Precast Panels See Note 4.(C)	6000 psi	0.40
(2)	Except as noted otherwise, all others	4500 psi	0.45

   (B) The use of any calcium chloride in any concrete is prohibited.

   (C) The concrete mix for Item No. (1) under Note 4.(A) shall contain a minimum of 128 oz. of shrinkage reducing admixture such as Eclipse or Masterlife SRA 20 or approved equal.

   (D) All reinforcing steel shall be deformed epoxy-coated bars ASTM A775 Grade 60 unless otherwise noted. The Contractor has the option of replacing the epoxy-coated bars with plain deformed reinforcing steel that conform to the requirements of ASTM A615, Grade 60, provided a migrating corrosion inhibitor amine carboxylate water-based admixture is added to the concrete mix. The minimum dosage shall be 24 ounces per cubic yard of concrete.

   (E) All concrete shall be cured for a minimum of seven consecutive days immediately after pouring by the use of wet Burlap, Fog Spraying, Curing Compound, or other approved methods.

5. Reinforcement:

   (A) The covering measured from the surface of the concrete to the face of any reinforcing bars shall be as follows, except as otherwise shown:

      (1) Concrete cast against and permanently exposed to earth = 3"

      (2) All others unless otherwise noted = 2".

   (B) Reinforcing bars shall be detailed in accordance with the latest edition of the A.C.I. Detailing Manual unless otherwise noted.

   (C) Minimum clear spacing between parallel bars shall be 1-1/2 times the diameter of bars (for non-bundled bars). In no case shall the clear distance between the bars be less than 1-1/2 times the maximum size of the coarse aggregate or 1 1/2" whichever is greater.

   (D) All dimensions relating to reinforcing bars are to centers of bars unless otherwise noted.

   (E) Reinforcing bars shall be securely tied at all intersections and lap splices except where the spacing of intersections is less than one foot in each direction, in which case alternate intersections shall be tied.

6. Construction Notes:

   (A) Except as otherwise noted, all vertical dimensions are measured plumb.

   (B) Unless otherwise noted, all exposed concrete edges shall be chamfered 3/4" x 3/4".

7. Jointed Precast Concrete Pavement (JPCP) Notes:

   A. For other requirements, see Section 415 - Jointed Precast Concrete Pavement (JPCP).

   B. Provide shop drawings for all joint layouts a minimum of 2-weeks prior to work for approval by the Engineer.

   C. The Contractor shall not damage the epoxy coating on the dowels and deformed bars in any way during shipment, handling, or placement. Damaged epoxy coated dowels and deformed bars shall be replaced at no cost to the State. Repair of epoxy coating as approved by the Engineer shall meet ASTM A775.

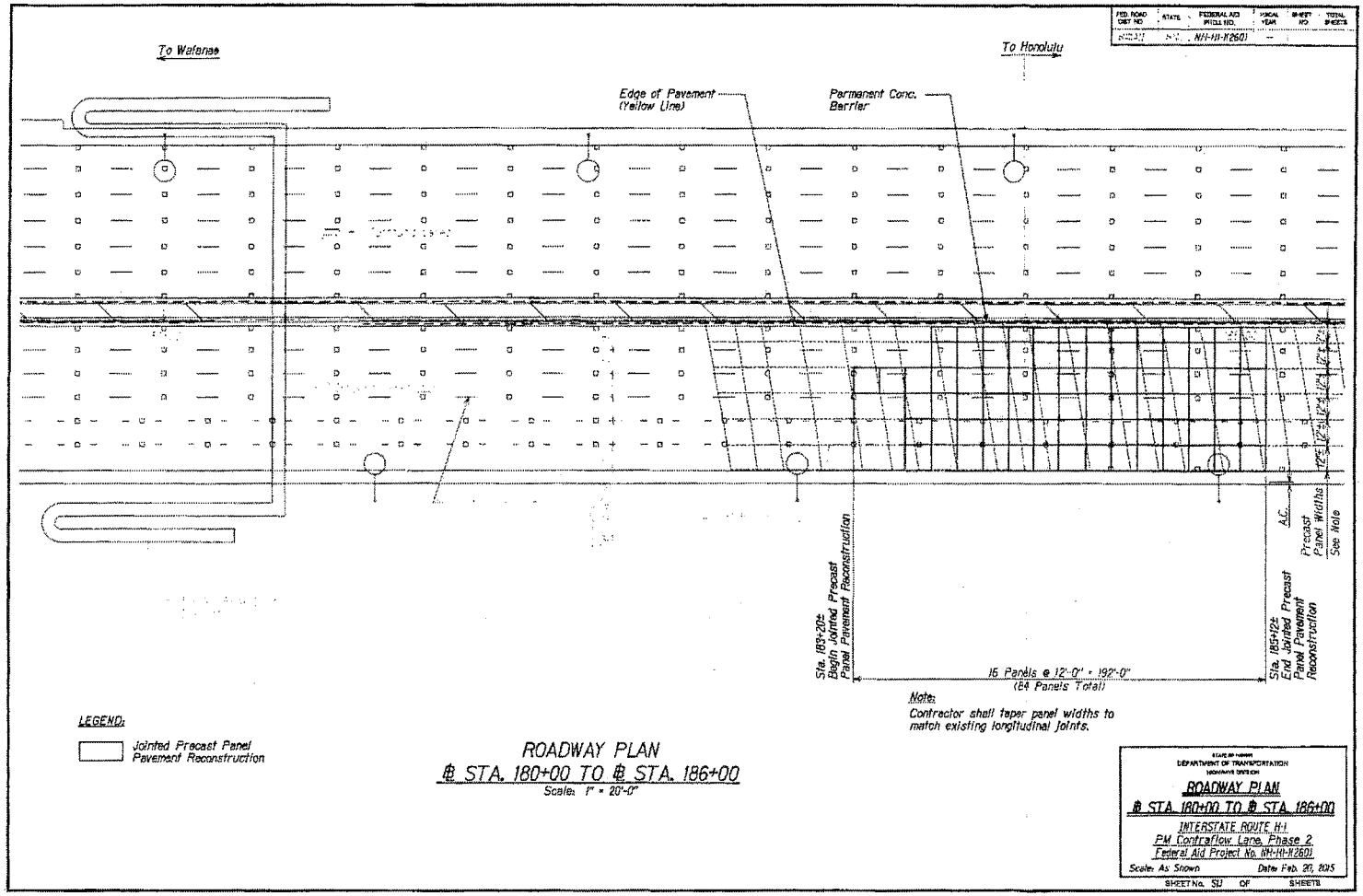
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

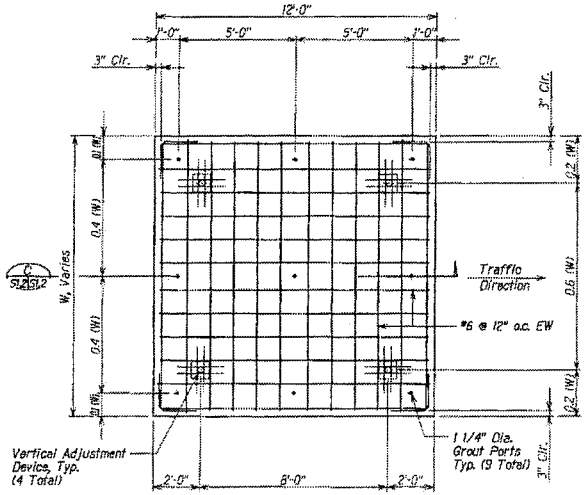
STRUCTURAL GENERAL NOTES

INTERSTATE ROUTE H-1
PM Contraflow Lane, Phase 2
Federal Aid Project No. NH-HI-N260

Scale: As Shown Date: Feb. 20, 2015

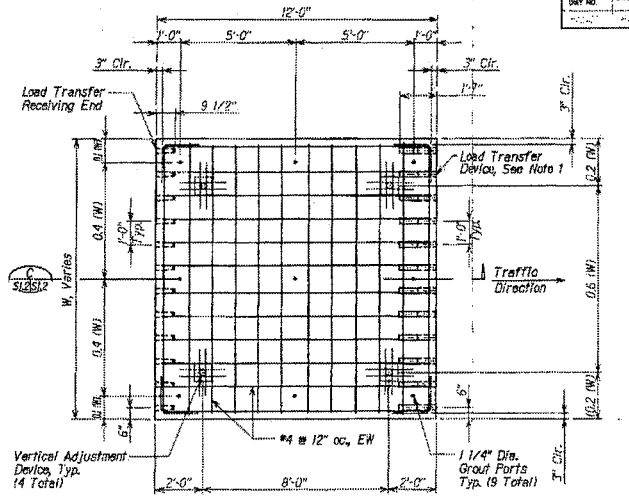
SHEET No. 501 OF SHEETS


To Waianae
To Honolulu
Edge of Pavement (Yellow Line)
Permanent Conc. Barrier
Sta. 183+20± Begin Jointed Precast Panel Pavement Reconstruction
16 Panels @ 12'-0" = 192'-0" (64 Panels Total)
Sta. 185+12± End Jointed Precast Panel Pavement Reconstruction
A.C.
Precast Panel Widths See Note
LEGEND:
Jointed Precast Panel Pavement Reconstruction
Note:
Contractor shall taper panel widths to match existing longitudinal joints.
ROADWAY PLAN
℄ STA. 180+00 TO ℄ STA. 186+00
Scale: 1" = 20'-0"
NH-H1-H2601
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
ROADWAY PLAN
℄ STA. 180+00 TO ℄ STA. 186+00
INTERSTATE ROUTE H1
PM Contraflow Lane, Phase 2
Federal Aid Project No. NH-H1-H2601
Scale: As Shown
Date: Feb. 20, 2015
SHEET No. 51 OF SHEETS



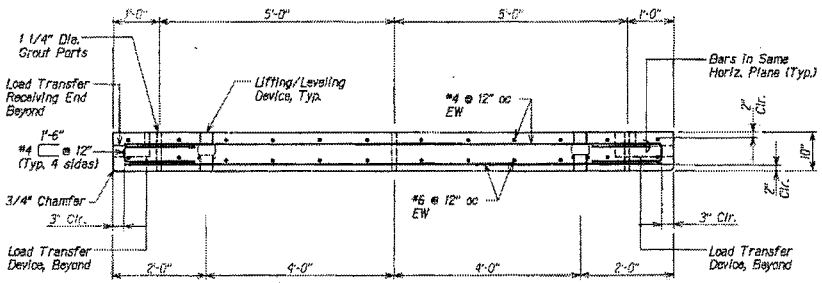
REBAR MAT (BOTTOM LAYER) A S1.2 S1.2

Scale: 1/2" = 1'-0"



REBAR MAT (TOP LAYER) B S1.2 S1.2

Scale: 1/2" = 1'-0"



PRECAST CONCRETE PANEL (JPCP) C S1.2 S1.2

Scale: 1" = 1'-0"

Notes:

1. 1 1/2" Diameter x 1'-2" Long, Epoxy Coated Smooth dowel bars shall be used.
2. Adjust reinforcement bars to accommodate dowel bars and dowel bar slots.

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
		NH-HI-H(260)			

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL JPCP PRECAST PANEL DETAILS

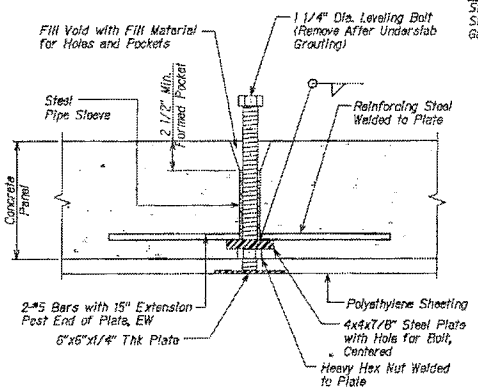
INTERSTATE ROUTE H-1
PM Contraflow Lane, Phase 2
Federal Aid Project No. NH-HI-H(260)

Scale: As Shown Date: Feb. 20, 2015

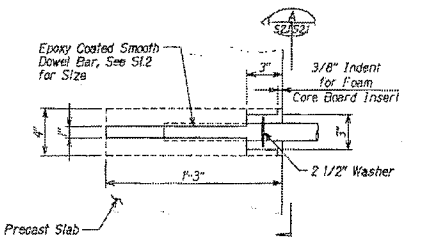
SHEET No. S1.2 OF SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
R 1-1	-E-	NH-III-I(260)		—	

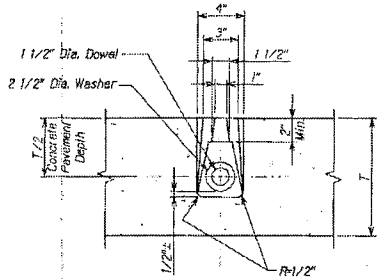
Note:
Structural Steel ASTM A36 and Reinforcing Steel ASTM A 615 Grade 60 to be Hot-Dip Galvanized ASTM A123.



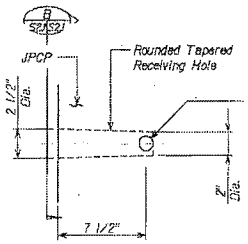
LIFTING/LEVELING DEVICE DETAIL (1 S2J S2J)
Scale: 3" = 1'-0"



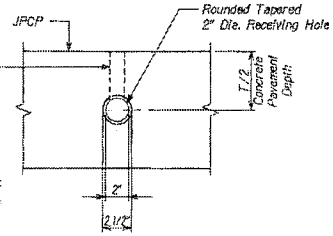
PARTIAL PLAN LOAD TRANSFER DEVICE (2 S2J S2J)
Scale: 3" = 1'-0"



SECTION (A S2J S2J)
Scale: 3" = 1'-0"

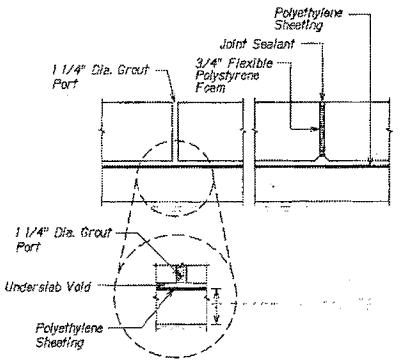


PARTIAL PLAN

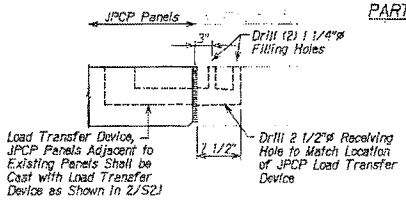


PARITAL END VIEW (B S2J S2J)

RECEIVING END LOAD TRANSFER DEVICE (4 S2J S2J)
Scale: 3" = 1'-0"



GROUT PORT UNDERSLAB VOID, AND POLYETHYLENE SHEETING (3 S3.3 S2J)
Not to Scale



LOAD TRANSFER DEVICE AT EXISTING PCCP (5 S2J S2J)
Scale: 1 1/2" = 1'-0"

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AUGUSTA, MAINE

TYPICAL LIFTING/LEVELING DEVICE DETAILS

INTERSTATE ROUTE N-1
PM Contraflow Lane, Phase 2
Federal Aid Project No. NH-III-I(260)

Scale: As Shown Date: Feb. 20, 2015

SHEET No. S2J OF SHEETS

Make this section a part of the Standard Specifications:

SECTION 416 – JOINTED PRECAST CONCRETE PAVEMENT

416.01 Description. This section describes constructing Jointed Precast Concrete (JPCP) Pavement, with reinforcement, on a prepared surface.

416.02 Materials.

Structural Concrete (f'_c = 6000 psi)	601
Joint Filler	705.01
Joint Sealer	705.04
Reinforcing Steel	602
Curing Materials	711.01

Bond Breaker Polyethylene Sheeting. Polyethylene sheeting shall be 6 mils minimum thickness. Sheeting shall comply with ASTM C 171.

Rapid Setting Lean Concrete. Concrete shall use a hydraulic cement that can achieve the minimum compressive strength of 500 psi to place panels so as not to impede the completion of the pavement replacement. Maximum aggregate size shall not exceed 3/8". The mix shall retain workability until the contractor levels the concrete to meet the requirements of Section 416.03 (E).

Under Slab Grout. Grout shall be cement-based, non-metallic, non-shrink, and meet the performance requirements of ASTM C1107, Grades A, B, and C. The grout shall also meet the requirements of the table below in regard to hardened height change, expansion, fluidity, and bleed. Compressive strength at time of opening to traffic shall exceed 500 psi.

Properties of Under Slab Grout

Property	Test Value	Test Method
Hardened Height Change @ 24 hours and 28 days	0.0% to +0.2%	ASTM C 1090*
Expansion	2.0% for up to 3 hours	ASTM C 940
Fluidity Test**		

Efflux Time from Flow Cone		
(a) Immediately after mixing	Min. 20 Sec. Max. 30 Sec.	ASTM C 939
	Or Min. 9 Sec. Max. 20 Sec.	ASTM C 939***
(b) 30 minutes after mixing with remixing for 30 sec.	Max. 30 Sec.	ASTM C 939
	or Max. 30 Sec.	ASTM C 939***
Bleeding @ 3 hours	Max. 0.0 percent	ASTM C 940****

*Modify ASTM C 1090 to include verification at both 24 hours and 28 days.
**Adjustments to flow rates will be achieved by strict compliance with the manufacturer's recommendations.
***Grout fluidity shall meet with the standard ASTM C 939 flow cone test or the modified test described herein. Modify the ASTM C 939 test by filling the cone to the top instead of to the standard level. The efflux time is the time to fill a one liter container placed directly under the flow cone.
****Modify ASTM C 940 to conform with the wick induced bleed test as follows:

(a) Use a wick made of a 20 inches length of ASTM A 416 seven wire 0.5 inch diameter strand. Wrap the strand with 2 inches wide duct or electrical tape at each end prior to cutting to avoid splaying of the wires when it is cut. Degrease (with acetone or hexane solvent) and wire brush to remove any surface rust on the strand before temperature conditioning.

(b) Condition the dry ingredients, mixing water, prestressing strand and test apparatus overnight at 65 to 75 _F.

(c) Mix the conditioned dry ingredients with the conditioned mixing water and place 800 ml of the resulting grout into the 1,000 ml graduate cylinder. Measure and record the level of the top of the grout.

(d) Completely insert strand into the graduate cylinder Center and fasten the strand so it remains essentially parallel the vertical axis of the cylinder. Measure and record the level of the top of the grout.

(e) Store the mixed grout at the temperature range listed above in (b).

(f) Measure the level of the bleed water every 15 minutes for the first hour and hourly for two successive readings thereafter.

(g) Calculate the bleed water, if any, at the end of the three hour test period and the resulting expansion per the procedures outlined in ASTM C 940, with the quantity of bleed water expressed as a percent of the initial grout volume. Note if the bleed water remains above or below the top of the original grout height. Note if any bleed water is absorbed into the specimen during the test.

Fill Materials for Holes and Pockets. Fill material shall be a cementitious, rapid-setting, non-shrink, zero bleed grout that will flow easily into the annular spaces of the dowel bars and holes and pockets, completely filling them without agitation. The material shall contain a latex as described below and meet the requirements of the Table of Latex Modified Grout Properties.

Joint Filler/Gasket Material. Joint Filler/Gasket Material shall be a flexible polystyrene foam or accepted equal. Secure the gasket material to the sides of the panels as indicated on the plans. The gasket material shall fill the joint, preventing leakage of the grout into the joint.

Latex. Latex admixture shall meet the requirements of FHWA Research Report RD-78-35, except for curing or be an accepted equal that modifies the concrete properties as listed in Table below.

Latex Modified Grout Properties

Characteristics	Requirements	Test Methods
Minimum Compressive Strength: At 1 hours At 28 days	 3000 psi 6000 psi	ASTM C109
Setting Time	Initial Set 20 minutes Final Set 30 minutes	ASTM C191
Crack Resistance	Time to Cracking > 28 days Potential for Cracking - Low	ASTM C1581
Bond Strength, 28 day	300 psi	ASTM C 1583

Panel Lifting and Leveling Device. Panel leveling device shall be capable of leveling the panels to meet grade and smoothness requirements for acceptance as defined in Section 416.04, Acceptance. The panel shall not be loaded when supported by the leveling device. The leveling device shall not bear any load upon completion of the under slab grouting process. All steel components in the leveling device that will remain permanently embedded in the concrete shall be either hot-dip galvanized per ASTM F2329 or mechanical galvanized per ASTM B695. Threaded leveling bolt shall conform to ASTM C1045. Nuts shall be heavy B-25 matching coil thread nut. Steel plate shall conform to ASTM A36. Steel tube shall conform to ASTM A500, Grade B.

416.03 Construction.

(A) Paving Plan. Submit paving plan for review and acceptance by the Engineer before holding the prepaving conference. The Engineer will review the paving plan in accordance with Subsection 105.04 – Review and Acceptance Process. The plan includes the following:

(1) Mix designs.

(2) Panel Fabrication, Construction, and Installation plan and sequence.

(3) On-site safety and emergency management plan.

(4) All materials, including panel lifting and leveling device and dowel locating hardware.

(5) If applicable, early usage of concrete pavement.

(6) Location, sequence, and construction leave-outs indicated in the contract documents or required by the Contractor's operation.

(7) Panel layout and jointing plan. The jointing plan shall show all irregular shapes. Provide inner and outer radii and panel dimensions for panels to be used in curve installation.

(8) Contingency plan for reopening to traffic should replacement work not be completed during the scheduled closure period.

(9) Procedure and materials for repair or replacement of damaged or spalled panels, including disposal.

(10) Quality Control Plan.

Just-In-Time Training (JITT): Activity analysis by QC/QA will serve as the Just-In-Time Training.

Prepaving Conference: Supervisory personnel of the Contractor, subcontractors, suppliers, and ready mix producers who are to be involved in the concrete paving work shall meet the Engineer at a mandatory prepaving conference, at a mutually agreed time, to discuss methods of accomplishing the paving work. The Contractor shall coordinate the meeting, as well as the attendance of the required personnel described above, and shall provide the Engineer with a minimum 14 day notice of the proposed conference date. Attendance of the design team, State, and inspection personnel will be coordinated by the Engineer.

The Contractor shall provide a facility for the prepaving conference within 3 miles of the construction site or at a nearby location agreed to by the Engineer. Attendance at the prepaving conference is mandatory for the Contractor's project superintendent, paving construction foreman, subcontractor's workers, including foremen, and personnel performing saw cutting, consolidating, finishing, curing, etc., concrete plant manager, and

concrete plant operator. Conference attendees shall sign an attendance sheet provided by the Engineer. Production and placement shall not begin not proceed unless the above-mentioned personnel have attended the mandatory prepaving conference.

(B) Equipment.

(1) Grouting Operation. Equipment for grouting shall comply with section 5.5, Equipment, of the Post-Tensioning Institute (PTI) M55.1-12, Specification of Grouting of Post-Tensioned Structures.

(C) Casting of Panels. Submit shop drawings for acceptance before casting of panels. Tolerances for panel dimensions are shown in the following table:

Dimension	Tolerance
Length	±1/4"
Width	±1/4"
Thickness	±1/8"
Difference in Diagonal	±1/4"
Edge Squareness	±1/8" in 12 inches
Blockout Dimensions	±1/4"
Local smoothness of any surface	±1/4" over 10 ft. in any direction
Location of lifting inserts	±1/2"

Construct panels in accordance with Section 503.03 with regard to forming, vibrating, and curing as designated on the plans. Finish the panels to match the Cast-in-Place Concrete paving. Concrete compressive strength shall be at least 2500 psi before stripping panels. Tensile stresses in the panels shall not exceed $3\sqrt{f_c'}$ or 200 psi, whichever is less, during the handling and storage of the panels and until the panels have been under slab grouted. Submit calculations for lifting and storing of panels. Panels shall be stored for at least 14 days before shipping. Store and ship panels on dunnage so as not to affect the geometry of the panels during storage and shipping.

Panels shall be inspected for defects and marked with the following information on the longitudinal edge face:

(1) Fabrication Date;
(2) Manufacturer Information;
(3) Panel number and type;
(4) Panel weight; and
(5) Panel Dimensions (Thickness, Length, and Width)

Defective panels shall be repaired using procedures and materials accepted by the Engineer or rejected.

(D) Removal of Existing Pavement. Not more than 3 days prior to removal, saw cut existing pavement prior to removal within 1" of planned joint location as shown in the approved Paving Plan in Section 416.03(A)(7). Remove pavement to depth of replacement designated in the plans without damage to pavement or base to remain during the same scheduled lane closure as panel replacement. Damaged pavement or base shall be repaired prior to placement of JPCP as directed by Engineer. Disposal of removed material shall be as accepted in Paving Plan.

(E) Preparing the Proper Grade. Remove all debris from demolition process. Inspect subgrade and repair damaged areas. Fill existing area with rapid setting lean concrete. Base shall be levelled to ½" below bottom soffit of planned panel location within a tolerance of -3/4". Finish concrete with a float finish to minimize tearing of the polyethylene sheeting. Place bond breaker polyethylene sheeting immediately after finishing concrete. Lean concrete shall achieve a compressive strength of 500 psi before placement of JPCP panels.

(F) Setting Panels. Systems which require special guidance from the system's designer shall have a designer's representative present during the installation at least the first 10 panels. Tensile stresses in the panels shall not exceed $3\sqrt{f_c'}$ or 200 psi, whichever is less, during the handling of the panels and until the panels have been under slab grouted. Panels shall be set on the bond breaker without damage to the surrounding pavement or to the panels. Damaged panels shall be repaired and accepted by the Engineer before use. Fit and align panels to the grade and line shown on the plans. Panels shall fit so that joint filler between panels seals the grout from leaking between panels and joint shall not exceed 0.5 inch. Align panels to provide proper alignment of dowel slots and no more than 0.125 inch difference in elevation at the transverse joint using the panel levelling device. Panels shall not be loaded while supported by the levelling devices.

(G) Load Transfer Dowels. Set load transfer dowels as designated on the plans. Dowels shall be aligned to within 0.125 inch of the proper location horizontally and vertically. Dowels shall be secure after placement so as not to move during filling of the pocket with the accepted material. Dowels shall be precoated with a bond breaker that will not transfer to the dowel pocket as to affect the bonding of the fill material.

(H) Under Slab Grouting. Prepare grout as recommended by manufacturer. Before grouting, flush pump and hose with a minimum of 2 sacks of grout. Begin grouting from grout port at lowest elevation of base filling the space under the slab progressively to the grout port at the highest elevation of base until the grout fills the space under the slab completely. Visually monitor the progress of the filling of the grout from the open grout holes. Thickness of the under slab grout shall not exceed 2 inches.

Grouting pressure shall not exceed 5 pounds per square inch (psi) while filling the space under the slab. Monitor the joints to ensure the grout does not fill the joints. Grout shall achieve 75 psi compressive strength before removal of leveling devices. The finished panel shall be supported only by the under slab grout.

(I) **Filling of Holes and Pockets.** Fill under slab grouting holes, holes for panel levelling devices, and pockets for load transfer dowels with the Latex Modified Grout. Substrate shall be free of dust, contamination, and debris before filling. Fill hole or pocket level with the top of the panel, tamping material to ensure consolidation and release of trapped air. Texture and tine material to match finish of the panels. Fill material shall achieve 2500 psi compressive strength before opening the JPCP to traffic.

(J) **Sealing of Joints.** Clean the joints of any loose debris. Fill the joint with the accepted material in accordance with the manufacturer's recommendations for the joint width and depth as designated by the contract documents. Open JPCP for traffic in accordance with the recommendation of the manufacturer.

(K) **Opening to Traffic.** Restripe pavement prior to opening to traffic. Pavement opened before completion shall present no hazards to traffic or result in damage to the incomplete pavement. Damaged pavement shall be removed and replaced at no additional cost to the State.

416.04 Acceptance. Concrete pavement will be accepted based on the following criteria:

(A) **Elevation Difference at Joints.** Panel elevation difference across any edge of the panel shall not exceed 0.125 inch.

(B) **Damaged or Defective Panels.** Contractor shall replace all damaged or defective panels before final acceptance. Damaged or defective panels include panels whose manufacture, material or installation does not conform to the contract documents at the time for acceptance. The Engineer may allow repair of minor defects by accepted methods.

(C) **Cracked Panels.** Cracked panels shall not be accepted except as determined by the Engineer that the cracks pose no loss of quality or durability of the panel. Cracks shall be sealed as directed by the Engineer.

416.05 Measurement. JPCP pavement will be not be measured for payment.

416.06 Payment. The Engineer will pay for the accepted work on a Lump Sum basis. Payment will be full compensation for the work prescribed in this section and

the contract documents.

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

Pay Item	Pay Unit
Jointed Precast Concrete Pavement (9" JPCP)	Lump Sum
Jointed Precast Concrete Pavement (10" JPCP)	Lump Sum

END OF SECTION 416