GENERAL NOTES

- 1. This project consists of cleaning and painting of existing steel members of the Ninole Bridge, Maulua Bridge, Kuwaikahi Bridge and Kukaiau Bridge. Cleaning of the structural steel members shall include: Removal; containment; collection and disposal of all paint, including lead-based paint; baseline environmental monitoring and testing for lead; worker and environmental protection; debris disposal and traffic control.
- 2. All exposed super and substructure steel members are to have all paint removed, cleaned and repainted in accordance with these plans and specifications.
- 3. Removal of existing paint shall be done with recyclable steel abrasive, high pressure blasting. (Greater than 100 p.s.i.)
- 4. Appropriate hand tooling methods shall be utilized in areas not adequately prepared by blasting.
- 5. Level of steel member surface preparation, prior to painting shall be consistent with SSPC SP10 standards.
- 6. The bridge paint lead content analysis report, prepared for the State and dated May 27, 2007, indicates that paint samples taken from these bridges had lead content of:

Ninole Bridge 260,000 MG/KG, or 26% Maulua Bridge 450,000 MG/KG, or 45% Kuwaikahi Bridge 430,000 MG/KG, or 43% Kukaiau Bridge 330,000 MG/KG, or 33%

- 7. Contractor shall utilize all appropriate methods, procedures and precautions necessary when performing lead paint removal and when working with lead paint and lead paint debris. Paint removal activities shall be restricted to within a sealed containment system to capture fugitive chips, dust and particles released by high pressure blasting. All material and paint debris captured in the containment system will be treated and disposed of in compliance with an approved LBP Management Plan and Material Disposal Plan prepared according to Federal and State regulations. In addition, water and soil samples will be taken before, during, and after the cleaning work is performed to establish baseline conditions and monitor for changes. Refer to specification Section 694 for more information.
- 8. The Contractor shall dispose of the lead paint, spent abrasives and removal debris in an approved manner, meeting all applicable Federal, State and local regulations.
- 9. When performing work within the State ROW, nearby, adjacent to, or on the travel way, the Contractor shall refer to Section 645 Work Zone "Traffic Control" of these specifications.
- 10. The bridge plans in these plans are for illustration only and show the most general of information. Partial construction plans for the bridges are available for viewing during normal working hours at:

State of Hawai'i Department of Transportation Highways Division 50 Maka'ala Street Hilo, Hawaii 96720 Normal working hours are M-F. 7:45 am to 4:30 pm.

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11. The Contractor is reminded of the requirements of Subsection 105.16- Subcontracts which requires him to perform work amounting to but not less than 30 percent of the total contract cost less deductible items. Non-compliance with this Subsection may be grounds for rejection of bid.

- 12. The Contractors attention is directed to the following Sections of the Standard Specifications: Section 107 Legal Relations and Responsibility to Public; Subsection 104-11 Utilities and Services; and Section 645 - Work Zone Traffic Control.
- 13. The Contractor's attention is directed to Special Provisions Section 694 — 'Removal and Disposal of Lead—Based Paint" and Section 695 — "Clean and Paint Structural Bridge Steel", for a partial list of environmental, legal, and administrative requirements.
- 14. The Contractor's attention is directed to Section 102.05 of the Standard Specifications. Prior to bidding, the Contractor is responsible for visiting and inspecting each site in order to ascertain site conditions; to properly gage the extent of lead paint removal and structural steel repairs; to determine appropriate construction methods; to anticipate difficulties in the sequencing and lay out of construction operations; and to prepare accurate material, labor, and cost estimates. Any claims for additional payment, based upon work difficulties that arise from failure of the Contractor to fully inspect the site or to closely read the available plans, shall be denied by the Engineer.
- 15. Contractor shall obtain necessary permits and comply with State Law regarding, but not limited to, noise.
- 16. At the end of each day's work, the Contractor shall remove all equipment and other obstructions to permit free and safe passage of public traffic. Only one lane of traffic is allowed to be closed during working hours. All lanes shall be kept open and allow traffic to flow at the normal posted speed limit during the peak hours and non-working hours. Lane closure is allowed only from 8:30 am to 3:30 pm.
- 17. Structural Notes:
- A. Prior to the start of work, the contractor shall perform an inspection of the steel superstructure and substructure members and their connections. identifying all areas of deterioration. The contractor shall consider the deteriorated members in their design and placement of the containment curtain and all other equipment in order to avoid overstressing these, or any other steel members. The size of the containment curtain shall be designed to minimize the wind exposure surface area, thereby avoiding large member stresses due to high winds. If any steel member is identified as having significant section loss the contractor shall repair or replace that member prior to beginning the installation of the containment curtain. The cost of the inspection shall be made incidental to the other cost items.
- B. The contractor shall perform a structural analysis with calculation on all bridges submitted to the Engineer with statement that loads do not exceed capacities of the existing members prior to beginning the work. The analysis would provide the contractor with a means of determining the maximum equipment loads that can be applied to the bridges, and the optimum size of containment curtain system. The wind loads and the other design loads utilized in the analysis should be in accordance with AASHTO 17th edition with all applicable updates. All analysis calculations shall be prepared by a licensed Structural engineer registered in the State of Hawaii.
- C. No compensation to the contractor will be allowed after the bid for claims based upon changes to loading strategy or containment system design because of a lack of information that was available through inspection and analysis prior to the start of work.

The following restrictions shall apply: (a)Contractor loads are not permitted on the concrete sidewalks and railings.

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| HAWAII | HAW. | BR-019-2(59) | 2009 | 3 | 22 |

- (b) Contractor loads are not permitted on the existing wood scaffold planks which must be removed prior to commencement of lead-based paint removal. Removed planks shall be delivered to the State Highways Hilo Baseyard at 50 Makaala Street, Hilo prior to beginning any work. Upon completion of work, the contractor shall pick up and reinstall all planks in their proper locations. The contractor shall be responsible for any damage caused during the removal, transportation, re-installation and handling of the planks. Removal, transportation re-installation and handling of the planks shall not be paid for separately, but shall be considered incidental to Clean and Paint — Bridge Steel Members pay item(s), as specified under Section 695-Clean and Paint Structural Bridge Steel, and provided for in the proposal schedule.
- (c) Each bridge deck roadway lane can support a single AASHTO HS20—44 truck load.
- (d) Contractor loads will be permitted on the bridge deck only after submitting structural calculations and statement prepared by the structural engineer indicating that the loads per contractor's work plan will not overload the existing members. Reinforcement or upgrading of existing members to support higher loads would also be acceptable. Any damages noted from the before/after inspections that occur after imposing the contractor loads shall be repaired by the contrator.
- (e) Contractor loads are permitted only on bent joints and truss joints indicated on the bridge drawings that follow.
- (f) Cost for structural evaluation shall be incidental to the other contract items and not paid for separately.

NO. 4767-S THIS WORK WAS PREPARED BY ME OR

GENERAL NOTES & LEGEND

HAWAII BELT ROAD CLEAN AND PAINT STEEL MEMBERS NINOLE, MAULUA, KUWAIKAHI AND KUKAIAU

PROJECT NO. BR-019-2(59)

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION

Date: February 2009 Of 22 Sheets

Sheet No. 3

Signature EXP. Date of the License Scale: As Noted

UNDER MY SUPERVISION