Make this Section a part of the Standard Specifications:

"SECTION 657 – LEAD PAINT CONTROL MEASURES

657.01 Description. This section describes: the removal of lead-based and lead-containing paints to accommodate the planned rehabilitation activities, and; the containment, collection and disposal of lead paint waste and associated lead-impacted waste.

(A) General. The General Provisions of the contract, including the General and Special Provisions and General Requirements of the Specifications, apply to the work specified herein.

(1) The work shall include the handling, treatment, removal, demolition, storage, transportation, characterization and disposal of lead-containing paints and debris with lead paint in conjunction with the rehabilitation of the Ele'ele Shopping Center Pedestrian Bridge. The Contractor may use chemical strippers, abrasive blasting, HEPA vacuum shrouded tools, or manual scraping, or other techniques to remove lead-containing paint. All work must be performed in accordance with all applicable requirements for worker protection and environmental protection.

(2) The Contractor acknowledges that they alone are responsible for the lead paint control work and for enforcing personal protective requirements for all personnel, and that this specification provides only a minimum acceptable standard. The Contractor shall comply with all requirements of this specification as well as all requirements of 29 CFR 1926.62, HIOSH 12-148.1, and all applicable United States Environmental Protection Agency (USEPA) regulations regarding the disturbance, removal, demolition, storage, transportation, characterization and disposal of lead-containing paints and painted materials. In the event that there is a conflict between requirements of the relevant documents and regulations, the most stringent requirements will apply.

(3) The Contractor shall coordinate all work with the Hawaii State Department of Transportation – Highways Division (HDOT-H) Kauai District Manager or their representatives.

(B) Applicable Standards and Guidelines. All work under this contract and any other trade work will be completed in strict accordance with all applicable federal, state, and local regulations, standards, and codes covering lead paint handling, treatment, removal, demolition, transportation and disposal of lead-containing paints and lead painted materials, as required. The most recent

edition of any relevant document shall be in effect. Other statutory and regulatory requirements include, but are not limited to the following:

(1) Title 29 Code of Federal Regulations (CFR) Section 1926.62 Lead in Construction.

(2) Department of Labor and Industrial Relations, Department of Occupational Safety and Health; State of Hawaii (HIOSH), Occupational Safety and Health Standards; Title 12, Subtitle 8, Chapter 148.1 (a.k.a. Chapter 12-148.1, Hawaii Administrative Rules (HAR), Lead Exposure in Construction).

(3) Title 29 CFR Part 1910.134 Respiratory Protection.

(4) Title 29 CFR Part 1910.1025 Toxic and Hazardous Substances: Lead.

(5) Title 29 CFR Part 1910.1200 Toxic and Hazardous Substances: Hazard Communication.

(6) Federal Register: Vol. 54, No. 131; Tuesday, July 11, 1989. Department of Labor, OSHA; 29 CFR Parts 1910, 1915, 1917 and 1918; Occupational Exposure to Lead; Statement of Reasons; Final Rule.

(7) Title 40 CFR Part 61 National Emissions Standards for Hazardous Air Pollutants (NESHAP).

(8) Title 40 CFR Parts 249-262: Resource Conservation and Recovery Act (RCRA).

(9) Title 40 CFR Parts 171-179: DOT Hazardous Materials Transportation.

(C) Definitions.

(1) Air Monitoring: Process of measuring the content of a specific, known volume of air collected within a specific period of time. For this project, NIOSH Method 7082 shall be used for lead air monitoring.

(2) Area Air Sample: An air sample collected by the Contractor to measure average lead concentrations over an 8 hour period during construction activities within the Lead Control Area or at the perimeter of the Lead Control Area.

(3) Certified Industrial Hygienist (CIH): A professional with the qualifications and experience necessary for certification by the American Board of Industrial Hygiene (ABIH) as an expert in the evaluation, control and management of the occupational environment. Current ABIH certification is required for CIH status. For this project, the Contractor's Project CIH must meet the qualification requirements as detailed in **Section 657.01 (D)(1)(a)**.

(4) Competent Person: A person who is qualified by education, training and experience to identify existing and predictable lead hazards in the surroundings or working conditions and who has the Contractor's authorization to take prompt corrective actions to eliminate any such hazards that they may identify.

(5) Contractor: The construction firm engaged to remove and dispose of the lead-containing materials.

(6) High Efficiency Particulate Air (HEPA): A filter capable of trapping and retaining 99.97% of particulates greater than 0.3 microns in diameter.

(7) Industrial Hygiene Technician (IHT): A professional in the field of Industrial Hygiene with the experience and qualifications as defined herein in **Section 657.01 (D)(1)(b)**.

(8) Lead Based Paint: A paint or other surface coating containing lead equal to or in excess of 1.0 milligram per square centimeter of painted surface or 0.5 percent lead by weight. For this project, the distinction between "Lead Based Paint" and "Lead Containing Paint" is not relevant.

(9) Lead Containing Paint: A paint or other surface coating containing measurable quantities of lead.

(10) Lead Control Area: The area designated by the Contractor during disturbance or removal of lead containing materials as potentially susceptible to elevated and/or regulated levels of airborne lead dust. Access to the Lead Control Area must be controlled during construction activities involving the disturbance of lead containing paints or other lead containing materials.

(11) Negative Exposure Assessment: An exposure assessment conducted to evaluate the average exposure of employees performing work involving the disturbance or removal of lead containing paint. A negative exposure assessment would indicate that the average employee exposure, as a time weighted average

over an 8-hour period, does not exceed the OSHA Action Level of 30 micrograms per liter of air. For this project, a negative exposure assessment will require air sampling data from at least two (2) complete shifts. Only when the air sampling results have been reported by the analytical laboratory, certified by the CIH, and posted at the job site shall a negative exposure assessment be considered to have been successfully completed and applicable to future lead paint removal or disturbance activities.

(12) Perimeter Air Sample: An air sample collected by the Contractor to measure average lead concentrations over an 8 hour period during construction activities at the perimeter of the Lead Control Area. Results from this type of sample are presumed to represent the worst case scenario for impacts outside the Lead Control Area.

(13) Personal Air Sample: An air sample collected by the Contractor to measure average lead concentrations over the course of one work day (one shift) during construction activities within the breathing zone of an employee to determine the employee's exposure to airborne lead as an 8-hour time weighted average concentration.

(14) Toxicity Characteristic Leachate Procedure (TCLP): A type of laboratory analysis used to determine the mobility of specific contaminants in waste materials. This test is used to simulate leaching in a landfill and is used to identify characteristic hazardous wastes in accordance with Resource Conservation and Recovery Act (RCRA) testing for characteristic hazardous waste determinations.

(15) Visual Clearance Inspection: A visual inspection conducted by the project IHT (of CIH) to verify adequate cleanup of the work area and job site at the end of a work shift involving disturbance or removal of lead containing paints or other lead containing materials.

(D) Submittals.

(1) Qualifications and Certifications:

(a) CIH Qualifications. The Contractor shall submit the name, address, telephone number and qualifications of the CIH selected to perform responsibilities as detailed in **Subsection 657.03 (H)(1)** and elsewhere in this specification. Qualifications shall include documentation that the CIH has been certified by the American Board of industrial Hygiene (ABIH) in comprehensive practice including certification number, date of initial certification, and

date of most recent re-certification. Submittal shall summary of the CIH's professional and summary of relevant professional experience. The CIH shall have a minimum of 5 years' experience in oversight of lead abatement work and air monitoring for lead exposure during lead abatement work. The CIH shall be currently certified as a Lead Risk Assessor and Lead Project Designer.

(b) IHT Qualifications. The Contractor shall submit the name, address, telephone number and qualifications of the IHT selected to perform responsibilities in as detailed in **Subsection 657.03 (H)(2)** and elsewhere in this specification The IHT shall have a minimum of one (1) year of demonstrable experience in the industrial hygiene field working under the direction of a CIH, and shall have completed Lead Abatement Supervision and Monitoring training (i.e., Lead in Construction training) covering practices and procedures in lead abatement, lead air sampling, and lead abatement monitoring. The IHT shall be currently certified as a Lead Inspector or Lead Risk Assessor.

(c) Competent Person Qualifications. The contractor shall submit documentation that the Competent Person is certified in accordance with OSHA 29 CFR 1926.62, 29 CFR 1910.1025 and HIOSH 12-60.

(d) Testing Laboratory Qualifications. The Contractor shall submit the name, address, telephone number and qualifications/certifications of the testing laboratory selected to perform the analysis of personal and ambient air sample for lead. The laboratory shall be accredited under the EPA National Lead Laboratory Accreditation Program (NLLAP) by either the American Association for Laboratory Accreditation (AALA) or the American Industrial Hygiene Association (AIHA) and shall be successfully participating in the Environmental Lead Proficiency Analytical Testing (ELPAT) program for air sample analysis.

(e) Training Certifications. The Contractor shall submit documentation for each employee involved in lead disturbance or abatement work that they have been trained and certified in accordance with OSHA 29 CFR 1926.62, 29 CFR 1910.1025 and HIOSH 12-60. The CIH shall certify and approve the training certifications.

(f) Medical Clearance Certificates. The Contractor shall submit current (i.e., dated within one year from date of submittal) completed and signed medical evaluation certificates for all employees or agents who may be exposed to airborne lead during construction activities. These forms shall not disclose personal medical information, but shall indicate that the individual has received OSHA medical monitoring or had such monitoring made available to them as required in 29 CFR 1910.1025 and HIOSH 11-148.1. In the event that any such certificates expire prior to the completion of the lead abatement work, an updated medical clearance certificate will be provided before the employee or agent continues any work on the project involving potential exposure to airborne lead. The CIH shall certify and approve all medical clearance certificates.

(2) Work Plan: The contractor shall submit, in accordance with Submittal Procedures prior to starting work a project work plan for lead paint disturbance activities, to include:

(a) Lead-Containing Paint Disturbance/Removal Plan. Include "Written Compliance Program" as required by 29 CFR 1926.62 as part of this plan. The plan should also include:

1. Sequence of work and performance schedule, in coordination with other trades.

2. A detailed description of work area preparation and setup, including the lead work control area, staging areas, entrances and exits to the work area, location of decontamination units, locations of ambient air sampling pumps, location of waste storage area, etc.

3. Lead paint handling, treatment, removal, transportation, and disposal procedures, as required.

4. List of materials, equipment, and tools, including personal protective equipment, respirators, cartridges, etc.

(b) Air Monitoring Plan. Include written procedures for collection and analysis of lead air samples, including OSHA personal samples, area samples, and ambient or perimeter samples. Include proposed locations for daily area and perimeter air samples. Include descriptions of sampling strategy, sampling methodology, sampling equipment to be used, as well as frequency and duration of air samples to be collected.

Include schedule and time frame for analysis, posting and reporting of air sampling results.

(c) Decontamination Plan. The contractor shall provide a detailed description of procedures for personal and equipment decontamination including proposed location(s) for decontamination facilities. Decontamination wastewater shall be sampled by the IHT and tested to determine whether the wastewater can be disposed of in the County sanitary sewage system. Under no circumstances shall decontamination wastewater be disposed of in storm drains or by being dumped on the ground to percolate and/or evaporate, regardless of waste characterization test results.

(d) Cleanup and Clearance Procedures. Provide a detailed description of procedures and documentation for daily cleanup procedures and visual clearance inspections to be completed at the end of each shift, as well as upon completion of all lead paint disturbance activities.

(e) Waste Management Plan. Provide a detailed description of waste management procedures, to include:

1. Work plan and schedule for waste containment, removal and disposal. Wastes shall be cleaned up and containerized daily.

2. Procedures for waste handling, storage, characterization, transportation, and disposal.

3. List of Waste Handling Equipment. Provide a list of all equipment to be used in performing the work, including lead paint removal, cleaning, volume reduction, containment, storage and transport equipment.

(f) Hazardous Waste Management Plan. Include procedures for storage, labeling, transportation and disposal of any characteristic hazardous wastes that may be generated during the work. This plan shall include:

1. EPA Generator Identification Number for the site.

2. Estimated quantities of wastes to be generated for disposal.

3. EPA Transporter Identification Numbers, names, and qualifications of each contractor that will be transporting, storing, treating, and disposing of the wastes.

(g) Certification of Work Plan by Project CIH. The Contractor's CIH shall certify in writing that the Contractor's Work Plan meets all applicable regulatory and professional industry standards, and conforms to all aspects of this specification.

(3) Other Documentation:

(a) Certification of NESHAP Compliance: Compliance with the requirements of USEPA's NESHAP regulation is required for this project. The Contractor shall certify in writing that all aspects of the work will be conducted in compliance with NESHAP requirements.

(b) Insurance: Proof of Workman's Compensation Insurance, and General Liability Insurance including coverage for pollution including lead pollution.

(c) Respiratory Protection Plan (RPP): Written respiratory protection program meeting requirements of 29 CFR 1910.134 and including current documentation of annual training, medical clearance and fit testing for all personnel who will enter the work area wearing negative-pressure respirators. In the event that any included certifications expire prior to the completion of the lead abatement work, an updated certification will be provided before the employee or agent continues any work on the project that involves wearing a respirator. The CIH shall certify and approve the RPP any subsequent certifications.

(d) Hazard Communication Program (HCP): Written hazard communication program meeting requirements of 29 CFR 1910.1200. The CIH shall certify and approve the HCP.

(e) Emergency Response and Evacuation Plan: To include consideration of: fire; explosion; toxic atmospheres; electrical hazards; slips, trips and falls; confined spaces; and heat-related injuries.

(f) Spill Prevention, Containment, and Cleanup Plan: Written plan detailing contingencies for spill prevention, and for containment and clean-up procedures in the event that a

spill occurs. Include contingencies for storm water run-on and run-off, and for protection of storm drains.

(g) Rental Equipment Notification: If rental equipment is to be used during lead paint removal work or handling of lead-containing waste or debris, notify the rental agency of its intended use in writing and furnish a copy of this written notification to the Contracting Officer.

(h) Manufacturer's Catalog Data. The contractor shall submit manufacturer's catalog data for the following:

1. Vacuum equipment;

2. Respirators and associated cartridges/filters;

3. Paint removal materials and applicable Material Safety Data Sheets (MSDS).

(4) Final Clearance Report: The Contractor shall submit after completing work in accordance with Submittal Procedures a project final clearance report for the lead paint disturbance work, to include:

(a) Statement from the Contractor: The Contractor shall provide a signed statement that all lead abatement work and waste disposal was completed in compliance with all applicable federal, state, and local regulations, this specification, and the Contractor's Work Plan.

(b) Lead Paint Control Measures Report: The Contractor shall provide a narrative report documenting successful implementation of lead paint control measures during the work, to include:

1. A detailed description of lead paint control measures employed, including respiratory protection and decontamination procedures employed.

2. A daily log of all lead paint disturbance and/or removal work and lead waste management work.

3. Documentation of all air monitoring results, including personal air samples and ambient air samples.

(c) Daily Visitor / Worker Entry Logs signed by the IHT and/or CIH.

(d) Daily and Final visual clearance certifications signed by the IHT and/or CIH.

(e) Documentation of waste characterization, including chain of custody documentation and laboratory results, for all wastes generated during lead paint disturbance and removal work.

(f) Waste transportation manifests for any transportation or shipping of all wastes generated during lead paint disturbance and removal work.

(g) Documentation of proper waste disposal for all wastes generated during lead paint disturbance and removal work.

(h) Certification of Final Clearance Report by Project CIH. The Contractor's CIH shall certify in writing that the work documented in the Contractor's Final Clearance Report has been conducted and completed in conformance with all applicable regulatory and professional industry standards, as well all aspects of this specification. Any deviations from these requirements, and the anticipated consequences thereof, shall be clearly described in the CIH's written certification of the Final Clearance Report.

657.02 Materials.

(A) Respirators and Cartridges/Filters: Use appropriate respirators and cartridges/filters, which meet all requirements of OSHA 29 CFR 1926.62 and HIOSH 12-148.1.

(B) Personal Protective Clothing: Use appropriate personal protective clothing (disposable coveralls, boot, gloves, eye protection, etc.) as required by OSHA 29 CFR 1926.62 and HIOSH 12-148.1.

(C) Paint Removal Materials: Use appropriate tools, containment systems, chemical agents, vacuum systems, and environmental protection materials to fully collect and contain all lead-containing residues from the area during handling, disturbance and/or removal of painted coatings.

657.03 Execution.

(A) Commencement of Work: Under no circumstances shall lead-containing paint be disturbed without the authorization of the Contracting Officer and

the Project CIH. Liquidated damaged shall be incurred for each day that lead paint was disturbed without the authorization of the Contracting Officer.

Provide at least 10 working days of notice when work is scheduled to start to the Contracting Officer and Project CIH. Confirm that CIH or IHT will be on site for monitoring of any work that requires disturbance or removal of painted coatings containing lead.

(B) Potential Lead Hazards: The disturbance of lead-containing materials may cause lead-containing dust to be released into the atmosphere, thereby creating a potential health hazard to the workers and the general public. Apprise all workers, supervisory personnel, subcontractors, consultants, and authorized visitors who will be at the job site of the seriousness of the hazard and of proper work procedures that must be followed.

Where in the performance of the work, workers, supervisory personnel, subcontractors or consultants who may encounter, disturb, or otherwise function in the immediate vicinity of any identified lead-containing materials, take appropriate continuous measures as necessary to protect all workers and the general public from the potential hazard of exposure to respirable airborne lead dust. Such measures shall include the procedures and methods described in the regulations of applicable federal, state, and local agencies. All possible safeguards, precautions, and protective measures shall be utilized to prevent exposure of any individual to lead particulates.

(C) Description of Work: Furnish all labor, materials, and equipment necessary to complete the safe and proper handling, treatment, removal, cleanup, transportation and disposal of lead-containing paints and painted materials and associated debris in compliance with all applicable laws and regulations concerning lead, including all incidental and pertinent operations.

(D) Work Area Preparation: During lead disturbance work, acceptable industry standard dust control methods shall be used to control dust, such as: providing dust screens; using negative pressure enclosures; remove paint using manual methods, chemical strippers, or abrasive blasting; and using HEPA vacuum shrouded tools, as applicable. Completely contain and control all paint debris from leaving the work area.

(E) Cleanup and Clearance: HEPA vacuum and wet clean all surfaces and surrounding ground within the work area on a daily basis, at minimum. Do not allow lead-painted-coated debris, paint chips, and/or dust to accumulate. Restrict the spread of dust and debris. Keep waste from

being distributed over the work area or beyond. Do not dry sweep or use compressed air to clean the area.

All waste and debris shall be cleaned up and containerized on a daily basis, at minimum. Visual clearance will be performed and documented by the IHT or CIH on a daily basis at the end of each shift during lead paint disturbance or removal activities. Final clearance will be conducted and documented by the IHT or CIH upon the completion of lead paint disturbance activities.

(F) Air Monitoring:

(1) Personal Air Monitoring: The Contractor shall be responsible for his employees' personal protection, personal air monitoring, and required certifications, and for the personal protection, personal air monitoring, and required certifications of all subcontractor employees that are allowed access to the Lead Work Control Area during construction activities that involve disturbance of painted coatings containing lead. All air monitoring for this project will be conducted by the Project CIH, or by the IHT under supervision of the Project CIH. Contractor shall collect daily personal air samples on at least 25% of the personnel performing removal work (or that are allowed access to the Lead Work Control Area), with samples to be collected from the breathing areas of employees likely to have the highest level of exposure to lead dust, based on their daily work assignments. For each task, air samples will be collected for a minimum of three days prior to completion of a Negative Exposure Assessment.

(2) Perimeter Air Monitoring: The CIH will develop a plan for sampling locations and frequencies of perimeter air monitoring. At a minimum, three perimeter samples (one upwind sample and two downwind samples) will be collected on a daily basis during work that involves the disturbance or removal of painted coatings containing lead. All samples will be collected for a minimum of 8 hours during the actual disturbance of lead containing materials.

(3) Air Monitoring Results: The Contractor shall submit air monitoring results to the Engineer / Contracting Officer within five (5) working days from collection of air samples. Air monitoring results shall include: air sampling logs; relevant data regarding sample locations, workers being monitored, tasks being performed, etc.; laboratory results; signature of air monitor; and certification of Project CIH. Air monitoring results shall be posted at the Contractor Base Yard in a location accessible for employee review

within 24 hours of receipt from the analytical laboratory by the CIH or IHT.

(4) Negative Exposure Assessments: Personal air monitoring may be discontinued if the Project CIH certifies that a negative exposure assessment (as defined in **Subsection 657.01 (C)(11)**) has been completed for lead paint disturbance or removal work, and the CIH or IHT certifies in writing that the procedures, personnel and materials involved in lead paint disturbance activities are the same as those involved during the negative exposure assessment.

(G) Waste Characterization and Disposal: The CIH shall develop a plan for waste characterization, storage and disposal that shall include characterization of all lead-containing wastes for hazardous waste characteristics; and appropriate storage, handling, management, transportation and disposal of characteristic hazardous wastes. All lead-containing wastes will be containerized, labeled and stored as potential hazardous wastes until waste characterization results have been reported to the Project CIH. Lead paint removal waste will be segregated from other debris with paint containing lead. The date on the label of each container shall be date upon which lead paint removal waste or debris was placed into that container. Waste characterization samples will be collected by the IHT or CIH, and results shall be certified by the CIH. In the event that waste characterization results indicate the presence of characteristic hazardous waste, any such waste will be removed from the site for disposal with 90 days from the date of its collection.

(H) Quality Assurance and Quality Control. The CIH and IHT shall be responsible for certifying and documenting the Contractor's adherence to environmental regulations and specification requirements as follows:

(1) CIH Responsibilities: Project CIH shall be responsible for developing, implementing, certifying, and monitoring the environmental and worker health and safety compliance procedures required under this specification. CIH responsibilities shall include the following:

(a) Certification of Contractor's Work Plan.

(b) Certification of Contractor's Respiratory Protection Plan and Hazard Communication Plan.

(c) Certification of Employee Training Certifications and Employee Medical Clearance Certificates.

(d) Construction Monitoring / Oversight of IHT: Direct monitoring of all lead paint disturbance or removal activities, waste characterization, and waste disposal activities. CIH may perform IHT duties if IHT is unavailable.

(e) Review and certify daily air monitoring results.

(f) Certify Negative Exposure Assessments.

(g) Certify waste characterization results.

(h) Certification of Contractor's Final Clearance Report.

(i) Provide guidance and support for IHT.

(2) IHT Responsibilities: The IHT shall be responsible for the following:

(a) Verify and document Contractor's compliance with all provisions of Contractor's Lead-Containing Paint Disturbance/Removal Plan.

(b) Conduct exposure monitoring as required under Contractor's Air Monitoring Plan.

(c) Ensure that potential lead exposures to workers and the environment are adequately controlled at all times.

(d) Ensure that workers are conducting work in accordance with applicable state and federal regulations, the contractor's work plan, and this specification.

(e) Collect all waste characterization samples and submit to qualified laboratory for waste characterization analysis.

(f) Compile a daily log of all lead paint disturbance and/or removal work and lead waste management work.

(g) Maintain a daily Entry Log for workers and authorized visitors entering the Lead Control Area.

(h) Coordinate work with and follow instructions from the CIH.

657.04 Measurement And Payment.

(A) Measurement.

(1) Approval of Final Clearance Report. Final payment to the contractor for lead paint abatement work will not be made until the Contractor's Final Clearance Report has been submitted to and approved by the Contracting Officer.

(2) Payment for Disposal of Hazardous Waste. Payment for disposal of hazardous waste will not be made until a signed copy of the manifest from the treatment or disposal facility certifying the amount of lead-containing material delivered is returned and a copy is furnished to the contracting officer.

(B) Payment. The Engineer will pay for the accepted Lead Paint Control Measures complete at the contract lump sum price for the pay items listed below and contained in the proposal.

The contract lump sum amount paid shall be full compensation for the proper hazardous materials abatement, CIH and IHT oversight, air monitoring, and hazardous waste disposal; and for equipment, tools, labor, materials and incidentals necessary to complete the work.

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

Pay Item	Pay Unit
Lead Paint Control Measures	Lump Sum"

END OF SECTION 657