Section 10.4

COATINGS AND ASBESTOS REMOVAL, HANDLING AND DISPOSAL AND STRUCTURAL STEEL COATING ISSUES

10.4.1 Purpose

To ensure hazardous or potentially hazardous waste including toxic metal (lead, cadmium, zinc, chromium, etc.) based paint residue or other waste material removed from bridges during repair, painting, demolition or disposal projects is identified, handled, stored, transported and disposed of in accordance with applicable local, state and federal regulations.

To ensure that asbestos-containing materials (ACM) are removed, handled, stored, transported and disposed of in accordance with the applicable local, state and federal regulations and to ensure that the human and natural environment are protected from exposure to airborne asbestos fibers.

The purpose is to heighten the awareness of Construction Engineering and Inspection (CEI) personnel (in-house and consultant) with regard to critical responsibilities for managing steel structure coating projects.

10.4.2 Authority

29 CFR 1910

29 CFR 1926.62

29 CFR 1926.1101

40 CFR 61

40 CFR 261.24

40 CFR 763

Florida Department of Transportation Loss Prevention Manual (Topic No. 500-000-015)

10.4.3 Reference

Florida Department of Transportation Procedure Number 500-000-015, Loss Prevention Manual

Florida Department of Transportation**,** Standard Specifications for Road and Bridge Construction, Section 8-4, 110, 560 and 561

Florida Department of Transportation, Construction Training and Qualification Manual (CTQM), Chapter 8, Topic No. 700-000-001

10.4.4 Paint and Asbestos Removal, Handling and Disposal

10.4.4.1 General

Ensure that all painting, repainting, spot painting, removal or repairs that involve removal of materials that contain hazardous waste is done in conformance with this procedure and all local, state and federal regulations. The disposal of existing structures containing hazardous waste must also comply.

Ensure that the identification, abatement, handling and disposal of asbestos-containing materials are done in conformance with local, state and federal asbestos regulations and this procedure.

10.4.4.2 Construction Activities – Hazardous Coatings and Asbestos Removal

(A) Resident Level Responsibilities

(1) ~~At the pre-construction conference, t~~The Project Administrator must ensure that the Contractor's work plan and schedule ~~-- and for hazardous coatings removal, the Contractor's Lead in Construction Compliance Program --~~ complies with requirements of the ***Specifications***. For removal of coatings containing hazardous materials, the Contractor's Lead in Construction Compliance Program must also meet the requirements of the Specifications. ~~-~~Ensure that the Contractor doing the painting and/or removal holds a QP2 certification from the Society for Protective Coatings (SSPC), Painting Contractor's Certification Program and that the certification remains active for the duration of the project. The Contractor shall not

begin construction involving hazardous materials and coatings until the work plan has been reviewed and approved.

(2) CEI inspectors involved in the inspection of paint projects must have proof of successful completion of a bridge coating inspection course accredited by the Florida Department of Transportation prior to the start of work. For projects that have significant amounts of hazardous waste removal, CEI staff must have a certificate for successful completion of the following SSPC course: C-3, Lead Paint Removal. For a determination of what is significant hazardous waste removal versus incidental, contact the State Chemical Material Systems Engineer of the State Materials Office. The CEI staff must also ensure that the Contractor conforms to the site-specific specification.

Provide all inspection personnel with the safety and environmental considerations required in accordance with the ***AASHTO Guide for Painting Steel Structures, Section V, Safety and Environmental Considerations***, and ***29 CFR 1926.62***.

(3) All removal and disposal of existing structures and related debris containing hazardous waste shall be performed in accordance with the specifications and all local, state and federal regulations. CEI personnel overseeing any disposal of existing structures operation involving removal of significant quantities of hazardous waste or toxic metal-based paint shall be qualified as specified in ***Section 4.4.4.2 (A)(2)***.

(4) Consultant Design Project Managers have the responsibility to assure that National Emissions Standards for Hazardous Air Pollutants (NESHAP) inspection and notification regulations are complied with during the Design and/or PD&E phases of a Construction project. If asbestos containing materials (ACM) are identified on a bridge, an Asbestos Abatement Plan to remove the ACM must be developed by a Licensed Asbestos Consultant (LAC). The Asbestos Abatement Plan must be included in the scope of work for bridge demolition/renovation. Any asbestos abatement activities must be completed prior to bridge demolition and prior to conducting renovations that may disturb ACM.

If an Asbestos SurveyCM wasere not performed identified prior to the construction phase, the Project Administrator shall notify the District Contamination Assessment Coordinator who will obtain the services of the Department's Asbestos Contractor or Contamination Assessment/Remediation Environmental CAR Contractor (CAR) or a LAC, as appropriate, to determine the existence, nature and quantities of any suspect ACM and if needed, develop an Asbestos Abatement Plan. All removal, handling, storage, staging,

transportation and disposal of existing structures containing ACM shall be performed in accordance with the site-specific asbestos abatement plans and specifications. The Project Administrator shall submit a notification to the Department of Environmental Protection (DEP) or the appropriate delegated local government agency prior to any bridge demolition, even if ACM is not identified. This form - Florida Department of Environmental RegulationProtection, ***Notice of Demolitions or Asbestos Renovation (DEP Form 62-257.900(1))*** is available from DEP. The Contractor shall coordinate the work with the Engineer and the Department's CAR cContractor or LAC for the safe removal, handling, transportation and disposal of ACM prior to the commencement of any renovation or demolition activities. A staging area for the handling of asbestos-containing materials may be required.

10.4.5 Structural Steel Coating Issues

10.4.5.1 General

(A) Resident Level Responsibilities

10.4.5.2 Monitoring for Compliance with Non-Department Documents

Obtain copies of all documents referenced in the ***Specification 560 and 561*** that are published by Non-Department sources and keep them on file in the project office for the duration of the work. Verify Contractor compliance with these documents in the ***Daily Work Report*** or other appropriate project record. If the Contractor is not in compliance then the Project Administrator shall take appropriate action to correct the noncompliance.

10.4.5.3 Coating Inspection

The following issues shall be given special attention and their importance shall be emphasized in meetings and discussions with the Contractor.

1) **Coating of bolts:** Verify that bolts are prepared properly before painting and that they meet the specification cleanliness requirements before any paint is applied. Surfaces and edges of bolt heads and nuts must have the specified coating thickness and coverage, gaps between nuts and washers and between washers and plates must be sealed. When the Contract Documents call for bolts to be stripe coated by brush,

verify that no other application method except a brush is used. See ***Specification 560-9.7, 560-10 and 561-9*** for requirements related to coating of bolts.

2) Surfaces that are visually difficult to inspect and access: Pay particular attention to surfaces that are difficult to view and access and reinspect them as often as necessary to confirm that proper cleaning and coating has been performed. Particular attention should be given to areas where stripe coats are used.

3) Caulking gaps and seams: Verify that caulking of gaps or seams, is performed in accordance with ***Section 560-9.3 and 561-8.3***. Verify that all seams and gaps are properly caulked before coatings are applied. When gaps are too wide to be sealed with caulk, inspectors shall immediately report this to the Project Administrator. The Project Administrator shall consult with the appropriate individuals within the Department or with the Engineer of Record to determine how best to seal these gaps.

4) Testing for chloride, sulfate and nitrate concentrations: Testing for the presences of chlorides, sulfates and nitrates on surfaces to be painted is the responsibility of the Contractor. The concentration of these contaminants is determined by using a Soluble Salts Test Kit. Inspectors must be knowledgeable about this testing process in order to perform Contractor verification. See ***Section 560-7.5 and 561-6.5***, for this testing.

~~**5) Rigging materials quality:** Verify that rigging components and hardware comply with the Contractor rigging plan.~~

~~6~~5) Stripe Coating: ***Specification 560-9.7 and 561-8.7*** requires the stripe coating of welds, corners, crevices, sharp edges, bolts, nuts, rivets, and rough or pitted surfaces. Verify that two stripe coats are applied or that the correct number of coats are applied as specified by the Contract Documents.