ITEM 11574.1010 M - CLASS B CONTAINMENT SYSTEM

DESCRIPTION: This work shall consist of furnishing and installing a containment enclosure around the immediate work area to contain and collect debris generated during paint removal operations using vacuum shrouded power tools, vacuum blasters, and hand tools. This containment system is not effective, nor can it be used to contain paint waste and dust generated by open abrasive blast cleaning operations.

The containment enclosure provided shall generally be constructed of tarpaulins, covers, and other flexible materials. All seams in containment materials and all joints between the containment enclosure and the bridge shall be sealed by overlapping. Entry into the work area may be made through an overlapped seam in the containment enclosure. Ventilation inside the enclosure may be by natural means. Air filtration of exit air is not required. However, it may be necessary to provide ventilation to meet OSHA requirements.

Reference information on containment enclosures can be obtained from the following:

1. SSPC - Guide 6I (CON), Guide for Containing Debris Generated During Paint Removal Operations, Steel Structures Painting Council, Pittsburgh, PA.

2. SSPC - Steel Structures Painting Manual, Volume 1, Steel Structures Painting Council, Pittsburgh, PA.

3. Industrial Lead Paint Removal Handbook, by Kenneth A. Trimber, SSPC Publication 91-18, Steel Structures Painting Council, Pittsburgh, PA.

MATERIALS: Materials and equipment as described in Construction Details shall be selected by the Contractor and approved by the Engineer prior to use.

CONSTRUCTION DETAILS: Rigid or flexible materials may be used to construct the containment enclosure. Rigid materials shall be impermeable and shall be comprised of plywood panels, or panels of steel, aluminum, or reinforced fiberglass.

Flexible materials shall be fire retardant. Flexible materials for walls and ceilings may be permeable. Permeable materials that are formed or woven of an open mesh construction to allow air flow shall be designed or rated to a minimum screen retention capacity of 85%. Screen retention capacity shall mean the amount of light transmittance through the screen (opacity) due to the mesh size of the opening.

Flexible covers for flooring shall be impermeable and will only be allowed if the ground and paved surfaces are smooth surfaces from which debris can be collected by vacuuming. If a smooth ground surface is not available, rigid materials shall be used for the floor of the enclosure.

A support structure providing little or no support beyond that necessary to affix containment materials may be used as a framework for the enclosure. All mating surfaces between the bridge structure and the containment enclosure, and all joints and seams formed in the fabrication of the enclosure, shall be sealed by overlapping materials. Entry into the work area shall be through an overlapped seam in the containment materials.

Light intensity by natural or artificial means inside the containment enclosure shall be maintained at a minimum of 535 lux on the steel surface. Auxiliary lighting shall be provided as necessary. The Contractor shall provide the Engineer with one portable light meter with a scale of 0 to 535 lux. This meter will be

returned to the Contractor at the completion of work.

All paint removal work shall be performed inside the containment enclosure. Care shall be taken to prevent emissions (releases) of waste materials when cleaning and paint removal work is being performed near joints that are formed between the enclosure and bridge structure and near seams in the enclosure materials.

The Contractor shall make every attempt to limit workers from entering or exiting the containment enclosure when cleaning and paint removal operations are being performed.

Following paint removal work, all steel surfaces inside containment shall be vacuumed of debris. All waste material that results from paint removal operations shall be cleaned up and collected from the floor, walls, and other surfaces inside of the containment enclosure by vacuuming. Sweeping, shoveling, or other mechanical means to remove the waste materials will not be allowed. Clean up operations shall be performed daily, before new paint is applied, or before a prolonged work stoppage, such as for weather interruptions.

Prior to disassembly or moving of the containment enclosure, the inside surfaces of the enclosure (walls, floors, ceiling, etc.) shall be cleaned of dust and other spent material by vacuuming. The Contractor shall take all measures necessary to prevent the release of waste material during moving or removal of the containment.

Any waste material that is released outside the containment enclosure shall be immediately cleaned up using vacuums. Care shall be taken on pavement or other surfaces to collect all waste material so as to prevent it from being redistributed into the air and environment by traffic.

All vacuum equipment that is used for collection and clean up work shall be equipped with high efficiency particulate air (HEPA) filters. A HEPA filter shall be defined as a filter that is at least 99.97% efficient against particles that are 0.3 µm in diameter, or larger.

The effectiveness of the containment enclosure shall be determined by the Engineer by visual inspection for dust plumes or other visible evidence of emissions (releases) of waste materials into the environment. Throughout the duration of work there shall be no visible discharges. If there is a visible discharge, the Contractor shall immediately stop work and perform necessary repairs to the containment enclosure or modifications to cleaning operations to the Engineer's satisfaction.

The Engineer may direct the Contractor to stop all work activities and require the Contractor to immediately clean up all waste materials within the enclosure when in the Engineer's opinion, threatening weather conditions exist. This measure may be exercised when an apparent threat exists that could cause the release of waste material to the surrounding environment, such as high winds or heavy rain.

If the wind velocity causes the containment enclosure to billow, or to emit dust, or to otherwise be a hazard in the opinion of the Engineer, the Contractor shall immediately cease work and clean up all the debris. Under severe conditions, the Contractor shall disassemble the containment enclosure.

Ventilation inside the enclosure is not specifically required, and may be by natural means. However, it may be necessary to provide mechanical ventilation to meet OSHA requirements for worker exposure to lead and other provisions. If mechanical ventilation is provided to address these requirements, filtration of exit air is not required.

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METHOD OF MEASUREMENT: The unit measurement for this work is the square meters of existing steel surface to be cleaned of existing paint. The cost for this cleaning shall be paid for under another item.

BASIS OF PAYMENT: The unit price bid shall include the cost for all labor, materials and equipment necessary to complete the work. The cost of dismantling and moving the enclosure to new locations on the same structure as paint removal operations progress, and of removing the enclosure when paint removal operations are completed shall be included.

Payment will be made under:

Item No.	Item	Pay Unit
11574.1010M	Class B Containment System	Square Meter