

SECTION TABLE OF CONTENTS DIVISION 32 - EXTERIOR IMPROVEMENTS

SECTION 32 01 11.51

RUBBER AND PAINT REMOVAL FROM AIRFIELD PAVEMENTS

05/16

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**PART 1 GENERAL.**

1.1 UNIT PRICES.

1.1.1 Measurement

Rubber and paint removal is measured by the number of square feet of rubber and paint to be removed.

1.2 REFERENCES.

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1910

Occupational Safety and Health Standards

1.3 ADMINISTRATIVE REQUIREMENTS.

Submit a schedule of work to the Contracting Officer. Describe the work to be accomplished; noting the location of work, distances from the ends of runways, taxiways, buildings, and other structures; and indicating dates and hours during which the work will be accomplished. Schedule the work to conform to aircraft operating schedules. The Government will try to schedule aircraft operations so as to permit the maximum amount of time for the Contractor's work. However, in the event of any emergency, intense operational demands, adverse wind conditions, and other unforeseen difficulties, discontinue all work at locations in the aircraft operational area. Keep the approved schedule of work current and notify the Contracting Officer of any changes prior to beginning each day's work.

1.4 SUBMITTALS.

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the government officer that will review the submittal for the Government.

SD-01 Preconstruction Submittals

Schedule of work; G,COR

Rubber and Paint Removal Process Plan; G,COR

Waste Collection, Identification and Disposal Plan; G,COR

SD-03 Product Data

Mechanical rubber and paint removal equipment

Chemical rubber and paint removal equipment

Rubber and Paint Removal Detergents or Chemicals ; G,COR

SD-06 Test Reports

Test Section Results

#### 1.5 MECHANICAL REMOVAL EQUIPMENT.

Submit product data for mechanical rubber and paint removal equipment including area of coverage per pass, range of water pressures, and water tank capacity.

Mechanical removal equipment includes waterblasting, grinding or scarifying, or other approved non-chemical systems. Control the equipment used on asphalt or tar concrete to remove rubber and paint accumulations while minimizing disturbances to asphalt or tar mixtures. Control the equipment used on portland cement concretes to remove rubber and paint accumulations and prevent removal of hardened paste from the concrete. Basic hand tools and the following major types of mechanical equipment are considered acceptable for this project:

a. Waterblasting Equipment.

b. Grinding or Scarifying Equipment.

##### 1.5.1 Waterblasting Equipment

Provide mobile waterblasting equipment capable of producing a pressurized stream of water that effectively removes rubber and paint from the pavement surface without significantly damaging the pavement. Provide equipment, tools, and machinery which are safe and in good working order at all times. Provide equipment interlocks to prohibit high pressure water discharge when the vehicle or cleaning head is stationary (not moving forward or side to side).

##### 1.5.2 Grinding or Scarifying Equipment

Provide equipment capable of removing surface contaminates, paint build-up, or extraneous markings from the pavement surface without leaving any residue. If a weed torch is used to remove paint, the surface must be cleaned by hydro blast afterwards to remove surface contaminates and ash.

#### 1.6 CHEMICAL REMOVAL EQUIPMENT.

Submit product data for chemical rubber and paint removal equipment. Use chemical equipment capable of applying and removing chemicals from the pavement surface while leaving only non-toxic biodegradable residue.

#### 1.7 TEST SECTION.

Prior to the start of work, remove rubber and paint on designated test areas not less than 50 feet in length. Use procedures, water pressures, nozzle height, nozzle spacings, nozzle angle, and equipment movement rate to achieve the required degree of rubber and paint removal in accordance with Paragraph RUBBER AND PAINT REMOVAL. Methods included in paragraph COMPLIANCE TESTING will be used to determine if the rubber and paint was successfully removed from the test section. The test will examine seven random locations within the test section. Submit the test section results

before conducting any further removal work. Provide photos of seven random locations within the test area taken before and after the removal. Provide photos of four random locations at joint seals within the test area taken before and after removal.

#### 1.8 DELIVERY, STORAGE, AND HANDLING.

Deliver required materials in original manufacturer's containers labeled with appropriate EPA, OSHA, or other agency warnings, if applicable, and Safety Data Sheets. Protect materials from degrading until their use is required during execution of the work.

#### 1.9 PROJECT/SITE CONDITIONS.

##### 1.9.1 Environmental Requirements

Ensure pavement surface is free of snow, ice or slush. Ensure surface temperature is at least 40 degrees F and rising at the beginning of operations. Cease operation during thunder and lightning storms. Cease operation during rainfall except for waterblasting and removal of previously applied chemicals. Cease waterblasting where surface water accumulation alters the effectiveness of material removal.

##### 1.9.2 Airfield Traffic Control

Coordinate performance of all work in the controlled zones of the airfield with the Contracting Officer and with the Flight Operations Officer or Airfield Manager and control tower. Neither equipment nor personnel can use any portion of the airfield without permission of these officers unless the runway is closed.

##### 1.9.3 Radio Communication

No personnel or equipment will be allowed in the controlled zones of the airfield until radio contact has been made with the control tower and permission is granted by the control tower. Maintain contact with the control tower at all times during work in vicinity of the airfield. Notify the control tower when work is completed and all personnel, equipment and materials have been removed from all aircraft operating surfaces.

##### 1.9.4 Emergency Landing and Takeoff

Emergencies take precedence over all operations. Upon notification from the Control Tower of an emergency landing or imminent takeoff, stop all operations immediately and evacuate all personnel and equipment to an area not utilized for aircraft traffic which is at least 76 m 250 feet measured perpendicular to and away from the near edge of the runway unless otherwise authorized by the Contracting Officer or the Contracting Officer's Representative. Equipment and chemicals or detergents as well as excess water must be able to clear the work area within 3 minutes.

##### 1.9.5 Airfield Lighting

When night operations are necessary, provide all necessary lighting and equipment. Direct or shade lighting to prevent interference with aircraft, the air traffic control tower, and other base operations. Provide lighting and related equipment capable of being removed from the runway within 15 minutes of notification of an emergency. Night work must be coordinated with the Flight Operations Manager or Airfield Manager and approved in advance by the Contracting Officer or authorized

representative.

#### 1.9.6 Water

Water to be used for high-pressure water equipment will be made available from Government hydrants. Furnish equipment and labor for delivery of water from the hydrant to the job site. Notify the Contracting Officer on location of fire hydrant[s] to be used and the respective times of use. The Contracting Officer will notify the Fire Department of fire hydrants to be used and designated times of use. Connections to a fire hydrant will be subject to the Contracting Officer's inspection and approval. The Contractor must provide and use a backflow prevention device for filling water tanks. The Contractor is responsible for testing, treating, and filtering the water to ensure it will not interfere with the rubber removal or damage or clog the rubber removal equipment.

#### 1.10 SAFETY.

Comply with OSHA 29 CFR 1910.

### **PART 2 PRODUCTS.**

#### 2.1 RUBBER AND PAINT REMOVAL DETERGENTS OR CHEMICALS.

The use of environmentally acceptable detergents or chemical agents must be considered on a case-by-case basis. Submit the Safety Data Sheet (SDS) for detergents or chemicals in the rubber and paint removal process. Use of any detergents or chemicals in the rubber and paint removal process must be approved in advance by the Contracting Officer. The Government specifically reserves the right to reject the use of any process which the Contracting Officer determines may pose unnecessary risks to human health, the environment, the pavement, aircraft or NAVAIDS due to corrosion or foreign object damage (FOD) potential as a result of its use, storage, or disposal.

### **PART 3 EXECUTION.**

#### 3.1 RUBBER AND PAINT REMOVAL.

Prior to any work being completed, submit a Rubber and Paint Removal Process Plan for approval by the Contracting Officer.

- a. The pavement surface type is as indicated.
- b. Remove 90 percent of all visible rubber on portland cement concrete pavements and 85 percent of all visible rubber on asphaltic concrete pavements. Remove all paint that is loose, flaking, chalky, or not to be re-marked or does not comply with size or pattern standards.
- c. Chemical methods used must be compatible with pavement materials, the environment and working personnel.
- d. Exercise close control of water pressure and blasting time/duration to prevent damage to joints, existing markings that are not intended for removal, or the wearing surface. Neither hydroblasting or abrasive blasting may be used for rubber removal on porous friction courses.
- e. Demonstrate the ability to remove rubber at a touchdown area of the runway selected by the Contracting Officer; at least one site per runway will be chosen. Rubber removal must not damage the pavement

surface. The surface texture of the cleaned demonstration area will be compared to that of non-rubber traffic areas to determine satisfactory completion of the removal operation.

- f. After approval of the Contractor's operations by the Contracting Officer, the cleaned sample area will become the standard for rubber removal and final surface texture for the remainder of work.
- g. Compliance testing for the amount of rubber and paint to be removed must conform to the requirements in paragraph COMPLIANCE TESTING.

### 3.2 RATE OF REMOVAL.

Remove rubber at a minimum rate of 10,000 square feet per hour. Remove paint at a minimum rate of 1,000 square feet per hour. Do not permit high-pressure water application to remove the existing pavement surface, joint seals or crack seals.

### 3.3 WATER PRESSURE.

Provide water pressure impact upon the indicated pavement areas sufficient to remove the designated rubber and paint to the required degree of removal without damaging the existing pavement, joint sealant, or other airfield appurtenances. The Contractor is responsible for repairing any damage caused by the removal work.

### 3.4 CLEANUP AND WASTE DISPOSAL.

Keep the worksite clean of by-products, debris and waste from rubber and paint removal operations. Perform cleanup operations continuously. Submit a Waste Collection, Identification and Disposal Plan describing proposed actions regarding waste collection, control, identification, and disposal to the Contracting Officer's Representative for approval prior to the start of work. The plan will address disposal methods and requirements for hazardous and non-hazardous wastes.

### 3.5 COMPLIANCE TESTING.

- a. Compliance with the rubber and paint removal requirements must be determined by direct testing within the designated work area.
- b. Use a one square foot section of transparent material inscribed with a grid of 100 equal squares as a tool for quantitative measure of the percent removal. Place the grid pattern on the pavement surface at random locations. Then count the squares which contain rubber and/or paint deposits. The number of squares containing rubber and/or paint deposits must not exceed the allowed percentage in each of the randomly selected locations.
- c. Divide each work area designated for rubber and paint removal into at least four equal zones for the purpose of compliance testing. The layout of each zone must be approved by the Contracting Officer. Within each zone, a minimum of seven random locations must be evaluated. The amount of rubber and paint removed at each of the randomly selected test locations within each zone must meet the requirement described in paragraph rubber and paint REMOVAL. Evaluate each zone independently. A zone not meeting the required percentage must be recleaned by the Contractor at the Contractor's expense.

- d. Deposits of rubber or rubber buildup and paint are defined as any surface deposit that can be removed by scratching the deposit with a flat sharp object (such as a pocket knife) without damaging the pavement surface. Stains are defined as materials in the pavement surface microtexture that cannot be removed without damaging the pavement surface. Stain is generally embedded in the surface of the pavement below the horizontal plane of the surface texture. The Contractor is not responsible for stain removal.

### 3.6 DAMAGE REPAIR.

Repair any damage to the pavement surface, joint, joint and crack seals, or other Government property caused during the performance of the work at the Contractor's expense. Submit a repair plan to include methods and material to the Contracting Officer's Representative for approval prior to performance of the repairs. Complete the repairs within the performance period of the Contract.

-- End of Section --