

M-494.6

**CHANGE**

**AC NO:** 150/5370-10 CHG 3

**DATE:** October 12, 1978



# ADVISORY CIRCULAR

## DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

**SUBJECT:** CHANGE 3 TO AC 150/5370-10, STANDARDS FOR SPECIFYING  
CONSTRUCTION OF AIRPORTS

1. **PURPOSE.** This change transmits revised pages incorporating the changes cited in paragraph 2.
2. **EXPLANATION OF CHANGES.** Item P-620, Runway and Taxiway Painting, has been rewritten in guide specification format. Where brackets occur within a sentence a choice must be made; where blank spaces occur in sentences the appropriate data must be inserted. In addition, an acrylic emulsion paint has been included as an alternate type of paint.
3. **HOW TO OBTAIN ADDITIONAL COPIES OF THIS PUBLICATION.** Additional copies of this change 3 may be obtained from the Department of Transportation, Publications Section, M-443.1, Washington, D. C. 20590. FAA field personnel may obtain copies from their regional Distribution Officers.

### PAGE CONTROL CHART

Remove Pages	Dated	Insert Pages	Dated
415 thru 418	10/24/74	415 thru 418	10/12/78

A handwritten signature in cursive script, reading "Robert J. Aaronson".

ROBERT J. AARONSON  
Assistant Administrator  
Office of Airports Programs

Initiated by: AAP-580

ITEM P-620 RUNWAY AND TAXIWAY PAINTING

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1. DESCRIPTION

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1.1 This item shall consist of the painting of numbers,  
markings, and stripes on the surface of runways and taxiways  
applied in accordance with these specifications and at the  
locations shown on the plans, or as directed by the Engineer.

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2. MATERIALS

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2.1 PAINT. Paint shall meet the requirements of Federal  
Specification [\*\*\_\_\_\_\_] [and TT-P-110.]

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The Engineer shall designate either TT-P-001952 or TT-P-85.  
TT-P-001952 is an acrylic emulsion paint; TT-P-85 is an oil  
based paint. TT-P-110 is a black, oil based paint and can  
be used to outline a border at least 6 inches (15 cm) wide  
around markings on concrete pavements.  
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2.2 [REFLECTIVE MEDIA. Glass spheres shall meet the  
requirements of Federal Specification TT-B-1325, Type III.]

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The addition of glass spheres to a painted area may cause a  
reduction in the friction characteristics of a wet pavement  
surface. Use of glass spheres is at the option of the  
Engineer and/or sponsor.  
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3. CONSTRUCTION METHODS

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3.1 WEATHER LIMITATIONS. The painting shall be performed only  
upon a dry surface, when the atmospheric temperature is above 45  
degrees F (7 degrees C), and when the weather is not foggy or  
windy.

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3.2 EQUIPMENT. All equipment for the work shall be approved by  
the Engineer and shall include the apparatus necessary to  
properly clean the existing surface, a mechanical marking  
machine, and such auxiliary hand painting equipment as may be  
necessary to satisfactorily complete the job.

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The mechanical marker shall be an atomizing spray-type marking  
machine suitable for application of traffic paint. It shall  
produce an even and uniform film thickness at the required

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coverage and shall be designed so as to apply markings of uniform cross sections and clear-cut edges without running or spattering.

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3.3 PREPARATION OF SURFACE. Immediately before application of the paint, the surface shall be dry and free from dirt, grease, oil, laitance, or other foreign material which would reduce the bond between the paint and the pavement. The area to be painted shall be cleaned by sweeping and blowing or by other methods as required to remove all dirt, laitance, and loose materials.

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[Paint shall not be applied to portland cement concrete pavement until the concrete in the areas to be painted is clean of curing material.] [Sand blasting or high pressure water shall be used to remove curing material from concrete surfaces.]

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3.4 LAYOUT OF MARKINGS. On those sections of pavement where no previously applied markings are available to serve as a guide, the proposed markings shall be laid out in advance of the paint application.

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3.5 APPLICATION. Markings shall be applied at the locations and to the dimensions and spacing shown on the plans. Paint shall not be applied until the layout and condition of the surface have been approved by the Engineer.

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The paint shall be mixed in accordance with the manufacturer's instructions and applied to the pavement with a marking machine at the rate of [\*\* \_\_\_\_\_] square feet per gallon (square meters per liter). The addition of thinner will not be permitted.

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The Engineer shall specify the application rate. TT-P-001952 shall be applied at the rate of 110 to 140 square feet (10-13 square meters) per gallon (liter); TT-P-85 and TT-P-110 at the rate of 100-110 square feet (9-10 square meters) per gallon (liter).

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A period of [\*\* \_\_\_\_\_] shall elapse between placement of a bituminous surface course or seal coat and application of the paint.

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The Engineer shall specify the time period. TT-P-001952 may be applied 24 hours after placement of the pavement. In order to allow adequate curing of the pavement surface and to prevent peeling and blistering of the paint, a 30-day period is recommended for TT-P-85. Lesser periods may be specified if necessary to open the pavement to traffic. In this instance the Engineer may wish to specify temporary markings at 50 percent of the specified coverage and to repaint the markings after the asphalt has cured.

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The edges of the markings shall not vary from a straight line more than 1/2 inch (12 mm) in 50 feet (15 m), and the dimensions shall be within a tolerance of plus or minus 5 percent. [Glass spheres shall be distributed to the surface of the marked areas immediately after application of the paint. A dispenser shall be furnished which is properly designed for attachment to the marking machine and suitable for dispensing glass spheres. The spheres shall be applied at the rate of 10 pounds per gallon of paint.]

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The Contractor shall furnish certified test reports for the materials shipped to the project. The reports shall not be interpreted as a basis for final acceptance. The Contractor shall notify the Engineer upon arrival of a shipment of paint to the job site. All emptied containers shall be returned to the paint storage area for checking by the Engineer. The containers shall not be removed from the airport or destroyed until authorized by the Engineer.

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3.6 PROTECTION. After application of the paint, all markings shall be protected from damage until the paint is dry. All surfaces shall be protected from disfiguration by spatter, splashes, spillage, or drippings of paint.

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4. METHOD OF MEASUREMENT

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4.1 The quantity of runway and taxiway markings to be paid for shall be [the number of square feet (square meters) of paint] [one complete item in place] performed in accordance with the specifications and accepted by the Engineer.

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5. BASIS OF PAYMENT 175

5.1 Payment shall be made at the [contract unit price per square 178  
foot (square meter)] [contract lump sum] for runway and taxiway 180  
painting. This price shall be full compensation for furnishing 181  
all materials and for all labor, equipment, tools, and 185  
incidentals necessary to complete the item. 185

Payment will be made under: 187

Item P-620-5.1 Runway and Taxiway Painting - {Per Square 191  
Foot (Square Meter)} [Lump Sum] 192

6. MATERIAL REQUIREMENTS 194

Federal Paint, Traffic: Reflectorized for Airfield 199  
Specification Runway Marking (Drop-On-Type) 202  
TT-P-85 204

Federal Paint, Traffic and Airfield Marking, Acrylic 209  
Specification Emulsion, For Use Reflectorized or 213  
TT-P-001952 Non-Reflectorized 216

Federal Paint, Traffic Black, (Nonreflectorized) 221  
Specification 223  
TT-P-110 225

Federal Beads, (Glass Spheres); Retro-Reflective 230  
Specification 232  
TT-B-1325 234

+ + END OF ITEM P-620 + + 235.3