

SECTION 32 17 23.13
PAINTED PAVEMENT MARKINGS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Pavement markings, including parking bays, crosswalks, "no parking" zone, arrows, handicapped symbols, numbers and curb markings as well as basketball courts, spray shower areas and painted surface games.

1.02 RELATED REQUIREMENTS

- A. Section 32 12 16 - Asphalt Paving.
- B. Section 32 13 13 - Concrete Paving.

1.03 REFERENCE STANDARDS

- A. FHWA MUTCD - Manual on Uniform Traffic Control Devices for Streets and Highways; U.S. Department of Transportation, Federal Highway Administration; <http://mutcd.fhwa.dot.gov>; current edition.

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver paint in containers accompanied by batch certificate.
- B. Store products in manufacturer's unopened packaging until ready for installation.
- C. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.06 FIELD CONDITIONS

- A. Do not install products under environmental conditions outside manufacturer's absolute limits.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Line and Zone Marking Paint: All paint shall be Benjamin Moore M58 Safety and Zone Marking Latex, as manufactured by Benjamin Moore and Company, 51 Chestnut Ridge Road, Montvale, NJ 07645 tel. 201.573.9600 or equal. Glass (drop in reflectorized) traffic beads of the appropriate size shall be applied to the second coat of paint as per Manufacturer's instructions.
 - 1. Parking Lots: Yellow.
 - 2. Handicapped Symbols: Blue.
 - 3. Painted lines, letters and numerals shall be given two coats of yellow or white paint, as called for on Drawings. For Accessible parking spaces: painted lines, numerals and the international Accessible Symbol shall be given two coats of blue paint, as called for on Drawings.
 - 4. Prior to painting, entire parking areas shall be sealed with an asphalt sealer (see Asphalt Sealer Spec) to completely conceal all existing painted lines. Asphalt sealer shall cure for 48 hours before paint is applied. **If individual existing lines and pavement markings are to be painted over**, they may be obliterated by coating with Benjamin Moore M58-80 (Black) Safety and Zone Marking Latex.
 - 5. Basketball Courts, Spray Shower Areas and Painted Surface Games Colored Wearing Surface:
 - a. Colored wearing surface shall be acrylic wearing surface Plexipave Color Finish System (Standard) as manufactured by California Products Corp., Andover, Mass.,

Tel. 800.225.1141 or equal. Colors shall be as shown on the Drawings. Manufacturer's specifications and instructions shall be adhered to. Product shall be installed by a Manufacturer-certified Installer.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.02 PREPARATION

- A. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- B. Clean surfaces thoroughly prior to installation.
 - 1. Remove dust, dirt, and other granular surface deposits by sweeping, blowing with compressed air, rinsing with water, or a combination of these methods.
- C. Where oil or grease are present, scrub affected areas with several applications of trisodium phosphate solution or other approved detergent or degreaser, and rinse thoroughly after each application; after cleaning, seal oil-soaked areas with cut shellac to prevent bleeding through the new paint.
- D. Establish survey control points to determine locations and dimensions of markings; provide templates to control paint application by type and color at necessary intervals.
- E. Temporary Pavement Markings: When required or directed by Architect, apply temporary markings of the color(s), width(s) and length(s) as indicated or directed.
 - 1. After temporary marking has served its purpose, remove temporary marking by carefully controlled sandblasting, approved grinding equipment, or other approved method so that surface to which the marking was applied will not be damaged.
 - 2. At the Installer's option, temporary marking tape may be used in lieu of temporary painted marking; remove unsatisfactory tape and replace with painted markings at no additional cost to NYCHA.

3.03 INSTALLATION

- A. Begin pavement marking as soon as practicable after pavement has cured sufficiently, been cleaned and dried.
- B. Do not apply paint if temperature of surface to be painted or the atmosphere is less than 50 degrees F (10 degrees C) or more than 95 degrees F (35 degrees C).
- C. Apply in accordance with manufacturer's instructions using an experienced technician that is thoroughly familiar with equipment, materials, and marking layouts.
- D. Comply with FHWA MUTCD manual (<http://mutcd.fhwa.dot.gov>) for details not shown.
- E. Apply markings in locations determined by measurement from survey control points; preserve control points until after markings have been accepted.
- F. Apply uniformly painted markings of color(s), lengths, and widths as indicated on the drawings true, sharp edges and ends.
- G. Parking Lots: Apply parking space lines, entrance and exit arrows, painted curbs, and other markings indicated on drawings.
 - 1. Mark the International Handicapped Symbol at indicated parking spaces.
 - a. Hand application by pneumatic spray is acceptable.
- H. Symbols: Use a suitable template that will provide a pavement marking with true, sharp edges and ends, of the design and size indicated.
- I. All pavements to receive colored wearing surfaces shall be sound, clean and free from sand, clay, grease, dust and other foreign matter. Pavements shall be prepared for installation as per the manufacturer's instructions.

- J. Preparation of surfaces, mixing and diluting of coating materials, methods of application and minimum temperature requirements shall be in accordance with the manufacturer's instruction. Colored wearing surface shall be applied **only** when ambient air temperature is 50o F and rising. The colored wearing surface **shall not** be applied when rain is imminent or if surface temperature is in excess of 140 degrees F.
- K. All change of color lines and all painted lines shall be carefully laid and defined on the surface by chalk markings before being painted. All surfaces shall be thoroughly cleaned before lines are painted. All lines shall be clear and distinct with sharply defined edges. The Authority Inspector must be present to verify and approve the chalk design before painting, and must be present again during each installation of preparation courses, color coating courses and sealer to verify the application of all required coats.
- L. The colored wearing surface shall consist of three (3) coats of acrylic filler ("Fortified Plexipave" or equal). When colored wearing surface is in a spray shower area, all three (3) coats shall have 60-80 mesh Silica Sand mixed into the acrylic filler by the manufacturer. Painted lines where and as shown on the Drawings shall consist of acrylic line paint ("Plexicolor" or approved equal). After all coats and line paint have all dried a minimum of twenty four (24) hours, the Installer shall apply two (2) coats of acrylic sealer ("Clear-Glo" or approved equal) to entire colored surface. **"Clear-Glo" shall not be applied to spray shower areas.**

3.04 DRYING, PROTECTION, AND REPLACEMENT

- A. Protect newly painted markings so that paint is not picked up by tires, smeared, or tracked.
- B. Provide barricades, warning signs, and flags as necessary to prevent traffic and/or pedestrians crossing newly painted markings.
- C. Allow paint to dry at least the minimum time specified by the applicable paint standard and not less than that recommended by the manufacturer.
- D. Remove and replace markings that are applied at less than minimum material rates; deviate from true alignment; exceed length and width tolerances; or show light spots, smears, or other deficiencies or irregularities.
- E. Remove markings in manner to avoid damage to the surface to which the marking was applied, using carefully controlled sand blasting, approved grinding equipment, or other approved method.
- F. Replace removed markings at no additional cost to NYCHA.

END OF SECTION