

SECTION 32 17 23 PAVEMENT MARKINGS

(Parking Lot Striping Only)

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

1. Parking Lot / Cross Walks
2. Legends.
3. Paint.

B. Related Requirements:

1. Section 32 12 16 - Asphalt Paving.
2. Section 32 13 13 - Concrete Paving.

1.2 REFERENCE STANDARDS

A. MUTCD Section 3B.16 Stop and Yield Signs

B. MUTCD Section 3B.18 Crosswalk

C. Articles 783, 780.06, and 1095.02 IDOT Standard Specifications for Road and Bridge Construction, current manual

D. American Association of State Highway and Transportation Officials:

1. AASHTO M248 – Type N Traffic Paint

1.3 QUALITY ASSURANCE

A. Perform Work in accordance with IDOT SSRBC Section 1095 and Illinois Accessibility Code (current addition) Section 502.3.3.

1.4 QUALIFICATIONS

A. Applicator: Company specializing in performing work of this section with a minimum of 3 years documented experience.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Section 01 60 00 Product Requirements: Requirements for transporting, handling, storing, and protecting products.

B. Invert containers several days prior to use when paint has been stored for more than 2 months. Minimize exposure to air when transferring paint. Seal drums and tanks when not in use.

1.6 AMBIENT CONDITIONS

A. Section 01 50 00 Temporary Facilities and Controls: Ambient conditions control facilities for product storage and installation.

B. Do not apply materials when surface and ambient temperatures are outside temperature ranges required by the paint product manufacturer.

C. Do not apply exterior coatings during rain or snow when relative humidity is outside humidity ranges, or moisture content of surfaces exceeds those required by the paint product manufacturer.

D. Do not apply paint when temperatures are expected to fall below 50 degrees F for 24 hours after application.

E. Volatile Organic Content (VOC). Do not exceed State or Environmental Protection Agency maximum VOC on traffic paint.

PART 2 PRODUCTS

2.1 PAINTED PAVEMENT MARKINGS

A. Furnish materials in accordance with Article 1095.02 IDOT Standard Specification for Road and Bridge Construction current manual.

B. Handicap Symbol Use: MPI No 97 Latex Traffic Marking Paint Color as indicated.

C. Detectable Warning (Concrete) use: RAE Traffic Zone Marking Paint: Pour Paint Dispensing, Red. Mfr. 4909.05

D. Performance / Design Criteria:

1. Paint Drying: Tack-free by touch 30 minutes after application.

2.2 EQUIPMENT

A. Continuous Longitudinal Line Application Machine: Use application equipment with the following capabilities.

1. Portable Shot Blast
2. Grinders
3. Water Blaster w/ Vacuum Recovery

B. Machine Calibration:

1. Paint Guns: Calibrate to simultaneously apply paint binder at uniform rates as specified with an allowable tolerance of plus or minus 1 mil.

C. Other Equipment:

1. For application of crosswalks, intersections, stop lines, legends and other miscellaneous items by “walk behind” stripers, hand spray or stencil trucks, apply with equipment meeting requirements of this section. Do not use hand brushes or rollers.

2.3 SOURCE QUALITY CONTROL

A. Section 01 40 00 Quality Requirements: Testing, inspection, and analysis requirements.

PART 3 EXECUTION

3.1 EXAMINATION

A. Section 01 70 00 Execution and Closeout Requirements: Requirements for installation examination.

B. Do not apply paint to concrete surfaces until concrete has cured for 28 days.

3.2 PREPARATION

A. Section 01 70 00 Execution and Closeout Requirements: Requirements for installation preparation.

B. Allow new pavement surfaces to cure for a period of not less than 14 days before application of marking materials.

C. Maintenance and Protection of Traffic:

1. Provide short-term traffic control in accordance with Section 01 50 00 - Temporary Facilities and Controls.
2. Prevent interference with marking operations and prevent traffic on newly applied markings before markings dry.

D. Surface Preparation.

1. Clean and dry paved surface prior to painting.
2. Blow or sweep surface free of dirt, debris, oil, grease, or gasoline.
3. Spot location of final pavement markings as specified and as indicated on Drawings by applying pavement spots 25 feet (8.0 m) on center.
4. Notify Architect/Engineer after placing pavement spots and a minimum of 3 days prior to applying traffic lines.

E. 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.

3.3 DEMOLITION

A. Remove existing markings in an acceptable manner. Do not remove existing pavement markings by painting over with blank paint. Remove by methods that will cause the least damage to pavement structure or pavement surface. Satisfactorily repair any pavement or surface damage caused by removal methods.

3.4 APPLICATION

A. Agitate paint for 15 minutes prior to application to ensure even distribution of paint pigment.

B. Apply markings to indicated dimensions at indicated locations.

C. Prevent splattering and overspray when applying markings.

D. Collect and legally dispose of residues from painting operations.

3.5 TOLERANCES

A. Section 01 40 00 Quality Requirements: Tolerances.

B. Maximum Variation from Wet Film Thickness: 1 mil.

C. Maximum Variation from Wet Paint Line Width: Plus or minus 1/8 inch.

D. Maximum Variation from Specified Application Temperature: Plus, or minus 5 degrees F (2.8 degrees C)

3.6 FIELD QUALITY CONTROL

A. Inspect for incorrect location, insufficient thickness, line width, coverage, retention, uncured or discolored material, and insufficient bonding.

B. Repair lines and markings, which after application and curing do not meet the following criteria:

1. Incorrect Location: Remove and replace patterns that were incorrectly placed.
2. Insufficient Thickness, Line Width, Paint Coverage, Glass Bead Coverage or Retention: Prepare defective material by acceptably grinding or blast cleaning to remove substantial amount of beads and to roughen marking surface. Remove loose particles and debris. Apply new markings on cleaned surface in accordance with this Section.
3. Uncured or Discolored Material, Insufficient Bonding: Remove defective markings in accordance with this Section and clean pavement surface one foot beyond affected area. Apply new markings on cleaned surface in accordance with this Section.

C. Prepare a list of defective areas and areas requiring additional inspection and evaluation to decide where material may need to be replaced. Provide traffic control as necessary if markings require more detailed evaluation.

D. When eradication of existing paint lines is necessary, eradicate by shot blast or water blast method. Do not gouge or groove pavement more than 1/16 inch during removal. Limit area of removal to area of marking plus 1 inch on all sides. Prevent damage to transverse and longitudinal joint sealers and repair any damage according to requirements in Section 32 13 13 or Section 32 12 16.

E. Maintain daily log showing work completed, results of above inspections or tests, pavement and air temperatures, relative humidity, presence of any moisture on pavement, and any material or equipment problems. Make legible entries in log in ink, sign and submit by end of each workday. Enter environmental data into log prior to starting work each day and at two additional times during the day.

3.7 PROTECTION

A. Section 01 70 00 Execution and Closeout Requirements: Requirements for protecting finished Work.

B. Protect painted pavement markings from vehicular and pedestrian traffic until paint is dry and track free. Follow the manufacturer's recommendations or use for at least 30 minutes. Consider barrier cones as satisfactory protection for materials requiring more than 2 minutes dry time.

3.8 MAINTENANCE

A. Section 01 70 00 Execution and Closeout Requirements: Requirements for maintenance service.

B. Furnish service and maintenance of traffic paints for three years from Date of Substantial Completion.

3.9 ATTACHMENTS

A. Pavement Markings:

Items	Location
4 inch White Conventional	Parking Space
24 inch White Fast Dry	Stop Line
6 inch White Conventional	Crosswalk
Handicap Symbol	Blue

END OF SECTION 32 17 23