




Illinois Department of Transportation

Memorandum

To: Regional Engineers
From: Jack A. Elston, P.E. 
Subject: Special Provision for Green Preformed Thermoplastic Pavement Markings
Date: October 1, 2021

This special provision was developed by the Bureau of Operations and the Bureau of Design and Environment to create a statewide specification for green preformed thermoplastic pavement markings used to delineate a path for bicyclists through a right turn lane conflict and to mark the location of bicycle boxes at an intersection. It has been revised to work with the 2022 Standard Specifications.

This special provision should be inserted in contracts using green thermoplastic pavement markings as part of an intersection with specific bicycle accommodation design.

Designer Note: Green pavement markings for right turn lane conflicts and bicycle boxes shall be detailed in the plans and paid for per square foot as PREFORMED THERMOPLASTIC PAVEMENT MARKINGS – LETTERS AND SYMBOLS. See BDE Manual 17-2.02(e) for more guidance.

The districts should include the BDE Check Sheet marked with the applicable special provisions for the January 21, 2022 and subsequent lettings. The Project Coordination and Implementation Section will include a copy in the contract.

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GREEN PREFORMED THERMOPLASTIC PAVEMENT MARKINGS (BDE)

Effective: January 1, 2021

Revised: January 1, 2022

Revise the following in Table 1 of Article 780.15 of the Standard Specifications to read:

"SYMBOLS ^{1/}		
Symbol	Large Size sq ft (sq m)	Small Size sq ft (sq m)
Through Arrow	11.5 (1.07)	6.5 (0.60)
Left or Right Arrow	15.6 (1.47)	8.8 (0.82)
2 Arrow Combination Left (or Right) and Through	26.0 (2.42)	14.7 (1.37)
3 Arrow Combination Left, Right, and Through	38.4 (3.56)	20.9 (1.94)
Lane Drop Arrow	41.5 (3.86)	--
Wrong Way Arrow	24.3 (2.26)	--
Railroad "R" 6 ft (1.8 m)	3.6 (0.33)	--
Railroad "X" 20 ft (6.1 m)	54.0 (5.02)	--
International Symbol of Accessibility	3.1 (0.29)	--
Bike Symbol	4.7 (0.44)	--
Shared Lane Symbol	8.0 (0.74)	
Intersection Bicycle Box ^{2/}	variable sizes	
Two-Stage Bicycle Turn Box ^{2/}	variable sizes	

1/ Table applies to all types of pavement marking materials, except intersection bicycle box and two-stage bicycle turn box which are limited to preformed thermoplastic.

2/ The cost of symbols appearing in the box are included in the overall square area of the box."

Add the following paragraph to the end of Article 1095.01(a)(2) of the Standard Specifications:

"The pigments used for the green thermoplastic compound shall not contain any hazardous materials listed in the Environmental Protection Agency Code of Federal Regulations (CFR) 40, Section 261.24, Table 1. The combined total of RCRA listed heavy metals shall not exceed 100 ppm when tested by X-ray fluorescence spectroscopy. The pigments shall also be heat resistant, UV stable, and color-fast greens. The pigment shall be uniformly distributed throughout the thermoplastic compound."

Add the following to Article 1095.01(b)(1)e. of the Standard Specifications:

"Green **	Daylight Reflectance	15 % min.
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** Shall meet the coordinates of the following color tolerance chart.

x	0.230	0.266	0.367	0.444
y	0.754	0.460	0.480	0.583"

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