

## 1.3 Intelligent Mail Barcodes

### 1.3.1 Definition

**[3-5-18]** An Intelligent Mail barcode is the USPS-developed barcode that mailers use to encode routing and tracking information on mail that can be read by automated mail processing equipment to sort mail and to provide tracking information to the mailers. An Intelligent Mail barcode consists of 65 vertical bars, each representing one of four possible states: full bar, ascender, tracker, and descender. These 65 bars encode a string of 31 digits, divided into two parts: a 20-digit tracking code and an 11-digit routing code (when required). The 11-digit routing code may contain a ZIP Code, a ZIP+4 code, or a delivery point code, unless required to contain a certain level of code in specific applications; no correction digit is needed within an Intelligent Mail barcode. Mailers may use Intelligent Mail barcodes as follows:

- a. When used on letters for automation-price eligibility purposes, the routing code must contain a delivery point code that accurately matches the delivery address.
- b. When used on flat-size pieces for automation-price eligibility purposes, the barcode must contain a delivery point routing code that accurately matches the delivery address. When flat-size pieces bear an Intelligent Mail barcode for automation price eligibility, the barcode on a piece that contains an optional endorsement line (OEL) must contain OEL coding that includes information in [Exhibit 203.7.1.1](#) corresponding to the correct sortation level of each bundle. When automation-priced flat-size pieces bear an Intelligent Mail barcode that contains OEL coding information corresponding to the correct sortation, an OEL is also required on the piece. See the Intelligent Mail Barcode Resource Guide available on PostalPro at <http://postalpro.usps.com/> for more information on incorporating OELs in Intelligent Mail barcodes.
- c. Reply mail pieces using origin Informed Visibility do not require a Mailer ID (MID) to be encoded into the Mailer Identifier field. All other mailpieces, including QBRM letters and PRM pieces, bearing Intelligent Mail barcodes must include the MID in the Mailer Identifier field. Additional information on Informed Visibility is available under [507.10.0](#). Mailers printing the Intelligent Mail barcode solely for automation price eligibility can contact the PostalOne! Help Desk at 1-800-522-9085 to obtain a MID.

### 1.3.2 Specifications

Complete specifications for Intelligent Mail barcodes are defined in USPS publication USPS-B-3200. This publication also provides details on how to encode the routing code and tracking code into an Intelligent Mail barcode, barcode dimensions and spacing, clear zone, skew and rotation tolerance, and print characteristics. The assignment of a Barcode Identifier, Service Type Identifier, and Mailer ID are described by the respective publications for each extra service. These publications are available at <http://ribbs.usps.gov/>.

### 1.4.1 Background Reflectance

A background reflectance of at least 50% in the red portion and 45% in the green portion of the optical spectrum must be produced in the following locations when measured with a USPS or USPS-licensed envelope reflectance meter:

- a. The barcode clear zone of a card-size or a letter-size piece barcoded in the lower right corner.
- b. The area surrounding the barcode (within 1/8 inch of the leftmost and rightmost bars and 1/25 inch above and below the barcode) of a card-size, letter-size, or flat-size piece barcoded in the address block and of a flat-size, or First-Class Package Service — Retail parcel barcoded elsewhere.

### **1.4.2 Print Reflectance Difference**

A print reflectance difference (PRD) of at least 30% in the red and green portions of the optical spectrum is required between the background material of the mailpiece and the barcode, when measured with a USPS or USPS-licensed envelope reflectance meter. (PRD equals the reflectance of the background minus the reflectance of the ink.)

### **1.4.3 Opacity**

The material on which the barcode appears must have enough opacity to prevent printing from “showing through” to the extent that it interferes with postal equipment that reads the barcode. The print contrast ratio (PCR) of print (other than the barcode) that shows through the barcode clear zone or the barcode area in the address block must not exceed 15% when measured in the red and green portions of the optical spectrum.

### **1.4.4 Dark Fibers and Background Patterns**

Dark fibers or background patterns that produce a print contrast ratio of more than 15% when measured in the red and green portions of the optical spectrum are prohibited in these locations:

- a. The area of the address block or the barcode clear zone where the barcode appears on a card-size or a letter-size piece mailed at automation prices or at Enhanced Carrier Route saturation or high density prices.
- b. The area of the address block or the area of the mailpiece where the barcode appears on a flat-size piece in an automation mailing or on a First-Class Package Service — Retail parcel.

## **1.5 Skew and Baseline Shift**

### **1.5.1 Card-Size and Letter-Size Pieces**

For a barcode on a card-size or a letter-size piece, the combined effects of positional skew (slant or tilt of the entire barcode baseline) and rotational skew (slant or tilt of the individual barcode bars) must be limited to a maximum rotation of the bars of  $\pm 5$  degrees from a perpendicular to the bottom edge of the piece. The individual bars of a barcode must not shift (be vertically offset) more than 0.015 inch from the average baseline of the barcode. For information on barcode placement for card-size and letter-size pieces, see [202.5.0](#).

### **1.5.2 Flat-Size Pieces and USPS Marketing Mail Parcels**

The maximum rotational skew (slant or tilt of the individual barcode bars) for barcodes is  $\pm 10$  degrees from a perpendicular to the baseline of the barcode. There is no positional skew requirement. The individual bars of a barcode must not shift (be vertically offset) more than 0.015 inch from the average baseline of the barcode. For information on barcode placement for flat-size pieces, see [202.5.0](#). For information on barcode placement on parcels, see [202.6.0](#).