

Parcel Labeling Guide

For USPS® Domestic Shipping Labels



Parcel Labeling Guide

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Table of Contents

1.	li	ntroduction	
	1.1.	Purpose	5
	1.2.	. Scope	5
	1.3.	. Audience	5
	1.4.	. The Domestic Mail Manual and Publications	5
2.	L	_abel Design Elements	
	2.1.	· · · · · · · · · · · · · · · · · · ·	
	2.2.		
	2.3.	,	
	2.4.		
	2.5.		
3		Recommended Label Formats	
Ο.	3.1.		
	3.1.		
	3.3.		
	3.4.		
4.	-		
4.	т 4.1.	Returns and Program-Specific Labels	
	4.2.	J - 1	
	4.3.		
	4.4.		
	4.5.		
	4.6.		
	4.7.		
5.		Appendix A: IMpb Specifications	
	5.1.		
	5.2.		
	5.3.		
	5.4.	. IMpb Identification and Layout Requirements 3	38
	5.5.	Physical IMpb Requirements 3	39
	5.6.	Print Quality Requirements4	łO
6.	A	Appendix B: IMmb Specifications4	12
	6.1.	The Intelligent Mail Matrix Barcode Data4	12
	6.2.	. IMmb Identification and Layout Requirements4	12
	6.3.		
	6.4.		
7.	Α	Appendix C: Addressing Considerations4	
		Address Elements	
	7.2.		
	7.3.		
8	_	Appendix D: Font Considerations	
٥.		Point Size	
	8.2.		
	8.3.		
9.		Appendix E: Label Placement	
ອ. 10		Appendix F: Sample Labels	
11		Appendix G: Reference Documents	
		Appendix H: Revision History	
12		TUP GININ II. INGVISIUII I IISIUI Y	J

Table of Figures

Figure 1: USPS Label	6
Figure 2: Payment and Branding Segment	
Figure 3: Service Icon Blocks	
Figure 4: Service Banner	8
Figure 5: Permit Imprint	9
Figure 6: Company Permit Imprint	9
Figure 7: Postage Guaranteed Permit Imprint	9
Figure 8: Address and Delivery Information Segment	10
Figure 9: Intelligent Mail Package Barcode Segment	12
Figure 10: 4x6 Label	16
Figure 11: 4x4 Label	17
Figure 12: 6x3 Label	18
Figure 13: USPS Returns Services Label	21
Figure 14: PMOD Address and Label (not drawn to scale)	23
Figure 15: Hold For Pickup Address Segment	23
Figure 16: ePostage Label	
Figure 17: Hazardous Materials Surface Transportation Label	27
Figure 18: USPS Smart Locker Label	29
Figure 19: BPRS Label	31
Figure 20: BPRS Outbound 4x6 Label	
Figure 21: Intelligent Mail Package Barcode	34
Figure 22: Barcode Construct	
Figure 23: Illustrative Matrix for Positions/Values in a PIC – Step 1	
Figure 24: Illustrative Matrix for Positions/Values in a PIC – Step 2	
Figure 25: Illustrative Matrix for Positions/Values in a PIC – Step 4	37
Figure 26: Delivery Addresses	
Figure 27: Font Size Basics	
Figure 28: Font Comparison	47
Figure 29: USPS Ground Advantage USPS Ship	
Figure 30: USPS Ground Advantage ePostage	
Figure 31: Priority Mail Express eVS	
Figure 32: Priority Mail Cubic	49
Figure 33: Signature Confirmation eVS	50
Figure 34: Hold For Pickup	
Figure 35: Hazardous Materials	
Figure 36: Cubic Soft Pack	
Figure 37: USPS Ground Advantage Return	51

1. Introduction

1.1. Purpose

This document has been developed to facilitate the design and creation of domestic shipping labels for parcels shipped via the United States Postal Service (USPS).

While some flexibility exists in design of shipping labels, adherence to these standards will expedite label certification and ensure efficient parcel processing.

1.2. Scope

This document will focus primarily on the layout of domestic shipping labels and will cover the following topics:

- a. Specifications for label elements
- b. Label examples displaying layout and content
- c. Applicable Intelligent Mail package barcode (IMpb) and Intelligent Mail matrix barcode (IMmb) standards

This is a formatting document and does not include variable labeling content specific to mail classes, extra or ancillary services, or specific mailing programs.

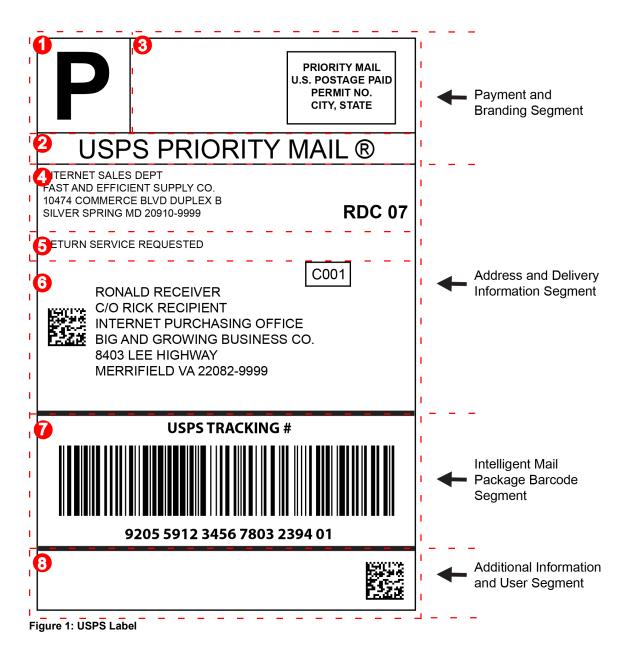
1.3. Audience

This document is designed for use by any party interested in creating or understanding USPS parcel labeling requirements. This may include:

- a. Third-party vendors and partners developing shipping software applications
- b. Customers integrating USPS shipping capabilities in their custom shipping systems
- c. Integrators or Value Added Resellers (VARs) producing shipping labels
- d. Postal Service employees involved in label production, label processing, or assisting third-parties in label development

1.4. The Domestic Mail Manual and Publications

The Mailing Standards of the United States Postal Service Domestic Mail Manual (DMM) as well as supporting documents such as Publication 199, Intelligent Mail Package Barcode (IMpb) Implementation Guide for Confirmation Services and Electronic Payment Systems and USPS2000508, Intelligent Mail Package Barcode (IMpb) Specification are the official sources for the standards described in this document. The information in this guide is meant to clarify and enhance the information in these documents but does not supersede them.



- - 2. Service Banner

1. Service Icon Block

- 3. Postage Payment Area
- 4. Return Address Section
- 5. Endorsement Section
- 6. Delivery Address Section
- 7. Intelligent Mail Package Barcode Segment
- 8. Additional Information and User Segment

2. Label Design Elements

2.1. General Design Considerations – Color and Font

All USPS shipping labels should be printed in black ink on a white background with the exception of the additional information and user section which may include color if desired. Fonts must be sans serif (e.g.: Arial, Helvetica, or Verdana) and of sufficient quality to be processed by USPS Optical Character Recognition (OCR) equipment.

Specific font and type sizes are provided throughout this guide. However, label designers should be aware that font appearance (and dimensions) may vary significantly from printer to printer and different fonts may produce characters of different heights. Additional information on font usage may be found in Appendix D.

2.2. Payment and Branding Segment

The payment and branding segment of a USPS label consists of three sections: the service icon block, the service banner, and the postage payment area.

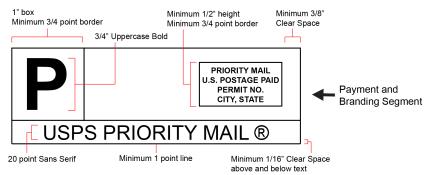


Figure 2: Payment and Branding Segment

2.2.1. Service Icon Block •

The service icon block should appear in the upper left-hand corner of the shipping label. The service icon block is required and must be used in conjunction with the service banner.

- a. The service icon block is a 1-inch block¹.
- b. Letters inside the block must be 3/4 inch or greater.
- A minimum 3/4-point must border the 1-inch square.
- d. There should be a minimum 1/16 inch space between the letter and the border.

Valid entries include:

- a. The letter P indicates Priority Mail
- b. The letter G indicates USPS Ground Advantage
- c. The letter E indicates Priority Mail Express
- d. A solid box or a box with two intersecting diagonal lines indicates Parcel Select, Media Mail, Library Mail, and Bound Printed Matter.
- The letter H indicates hazardous materials (see Section 4.5)

¹ A reduced service icon block may be acceptable for smaller and/or specialty labels with approval from USPS.



Figure 3: Service Icon Blocks

2.2.2. Service Banner 2

The service banner is located directly below the postage payment area and service icon block and includes the class of mail and price marking. The service banner is required and must be used in conjunction with the service icon block. The service banner meets DMM requirements for identification of mail class marking below the permit imprint and may eliminate the need for inclusion of the mail class within the permit imprint itself.

- a. The service banner must extend across the entire shipping label.
- b. The service banner must be bordered above and below by minimum 1-point separator lines.
- c. There must be a 1/16-inch clearance between the service banner text and the borders.
- Text within the service banner must be printed in a minimum 20-point bold sans serif
 font.
- e. Text within the service banner must fit onto a single line.
- f. Text within the service banner must be in uppercase letters.
- g. Text within the service banner must be centered within the banner.
- h. Text within the service banner should include the appropriate class marking (e.g.: MEDIA MAIL) preceded by the text "USPS" and any applicable price markings (e.g.: SINGLE-PIECE, SNGLP, PRESORTED, or PRSRT).
- i. Trademark and registered trademark symbols are optional.

USPS PRIORITY MAIL EXPRESS ®

Figure 4: Service Banner

2.2.3. Postage Payment Area 69

Evidence of postage payment should appear in the upper right-hand corner of the label. Postage Payment may consist of any of the following:

- a. Postage Stamps
- b. Metered Postage
- c. PC Postage
- d. Permit Imprint Indicia
- e. Postage Guarantee

Postage stamps, metered postage, and PC Postage are proprietary formats of USPS or its approved meter vendors and PC Postage providers and are not further elaborated in this document.

2.2.3.1. Permit Imprint

The standards for permit imprint indicia are outlined in Section 604, *Postage Payment Methods*, of the DMM and are summarized below.

a. The indicia must be legible and oriented in the same direction as the address.

- b. Unless otherwise specified, for example, as in the Company Permit described below, all text should be in uppercase and should contain the following information:
 - i. The class of mail and applicable price marking (e.g.: SINGLE-PIECE, SNGLP, PRESORTED, or PRSRT) as defined in the DMM.
 - ii. The text "U.S. POSTAGE PAID" or "U.S. POSTAGE AND FEES PAID."
 - iii. The city and state of the permit, except when used with USPS Ship or Electronic Verification System (eVS) as described below.
 - iv. The text "PERMIT NO." followed by the permit number, except when used with USPS Ship, eVS or ePostage as described below.

Though not required, the following formatting suggestions are recommended:

- a. The indicia should be no less than 1/2 inch in height.
- b. A minimum 3/4-point line should border the entire indicia.
- c. A clear space of 3/8 inch should surround the entire indicia.

The following additional markings are required for specific classes of mail when applicable:

- a. Priority Mail and USPS Ground Advantage cubic parcels must bear the price marking "Cubic" or "CUBIC" directly above, below, or to the left of the indicia.
- b. Cubic Soft Pack must additionally include the package length, width and cubic tier.



Figure 5: Permit Imprint

2.2.3.2. Company Permit Imprint: USPS Ship, eVS, and ePostage

For USPS Ship, eVS, and ePostage mailings, a "Company Permit Imprint" is preferred. Company permits replace the permit number, city, and state with an approved company name which is provided as part of the onboarding process. Additionally, USPS Ship mailings require the marking USPS Ship, eVS mailings require the marking eVS or e-VS, and ePostage mailings require the marking ePostage or e-Postage as the last line of the permit imprint. Refer to Publication 205, *Electronic Verification System (eVS) Business and Technical Guide*, for more information on USPS Ship, eVS, and ePostage permit imprint requirements.



Figure 6: Company Permit Imprint

2.2.3.3. Postage Guarantee Permit Imprint

Returns Labels follow the same general rules as standard Permit Imprints described above and include the text "NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES." Postage Guarantee Permit Imprint is only valid for specific USPS programs.



Figure 7: Postage Guaranteed Permit Imprint

2.3. Address and Delivery Information Segment

The address and delivery information segment consists of the return address, any endorsements, the retail distribution code, delivery route code, and delivery address.

Specific rules for address formatting can be found in the DMM Section 602, *Basic Standards for All Mailing Services – Addressing*. Additional information on address formatting can be found in Appendix C.

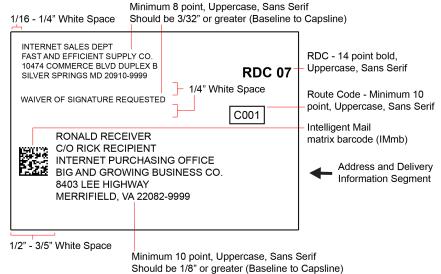


Figure 8: Address and Delivery Information Segment

2.3.1. Return Address Section 4

A return address should conform to the following rules:

- a. The return address should be placed between 1/16 and 1/4 inch from the left edge of
- b. The return address should be printed in an 8-point or greater sans serif font resulting in characters of 3/32 inch (baseline to capsline) or greater. For more information on font selection please refer to Appendix D.
- c. The return address should be printed in uppercase letters.
- d. All lines of the return address should be left justified and evenly spaced.

2.3.2. Endorsement Section 6

Endorsements are used to provide delivery instructions, carrier release, or to request ancillary or extra services.

Placement of the endorsement is dependent on the type of endorsement and is determined by the following:

- a. A retention period specified by the mailer must be placed directly above the return address.
- b. Any ancillary service endorsement (e.g.: Address Service Requested, Forwarding Service Requested, Return Service Requested, Change Service Requested) must be placed in one of these four positions:

- i. Directly below the return address.
- ii. Directly above the delivery address area (which includes the delivery address block and any related non-address elements such as a barcode, keyline, or optional endorsement line).
- iii. Directly to the left of the postage area and below or to the left of any price marking.
- iv. Directly below the postage area and below any price marking.
- c. Any extra service endorsements (e.g. Special Handling, Return Receipt Requested, Restricted Delivery) must be placed directly above the return address, if not included in the banner text.
- d. The carrier release endorsement "CARRIER—LEAVE IF NO RESPONSE" must appear directly to the left of the postage area (preferred) or placed directly below the return address. A minimum 1/4 inch clear space must appear between any other printing and the carrier release endorsement and ancillary service endorsement. If an ancillary service endorsement is used, the carrier release endorsement must be separated from the ancillary service endorsement by the equivalent of one blank line of the type size used.

When used, endorsements must conform to the following rules:

- a. Endorsements must be printed in a minimum of an 8-point sans serif font resulting in characters of 3/32 inch (baseline to capsline) or greater. Additional information on fonts may be found in Appendix D.
- b. Endorsements must be printed in upper case letters.
- c. Endorsements must have a clear space of at least 1/4 inch above, below, and to either side.
- d. Endorsements must be oriented in the same direction as the return address and delivery address

2.3.3. Delivery Address Section 6

The delivery address should be located on the label according to the following rules:

- a. The delivery address should be printed at least 1/2 inch from the left edge of the label and indented at least 1/4 inch from the left margin of the return address and any endorsements.
- b. The delivery address should be printed using a 10-point or greater sans serif font in upper case letters resulting in characters of 1/8 inch (baseline to capsline) or greater.
- c. All lines of the delivery address should be left justified and evenly spaced.

The delivery address section is also one of two places to include the Intelligent Mail matrix barcode (IMmb). When used, the IMmb should be located directly to the left of the delivery address. Please note that this may require additional indentation of the delivery address (3/5") to allow for the barcode's required clear zone. For more information on the IMmb, refer to Section 6.

2.3.4. Delivery Route Code and Retail Distribution Code

Delivery route codes and retail distribution codes (RDC) are included on labels produced by USPS systems and are recommended for labels produced by PC Postage providers. They may also be required by Negotiated Service Agreements or as part of a specific USPS mailing program.

The RDC should be formatted and located on the label according to the following rules:

- a. The RDC should be printed in 14-point bold sans serif font.
- b. The RDC value must always be a 2-digit value.
- c. The RDC should be placed in the upper right-hand corner of the address and delivery information segment.
- d. When necessary, the RDC may be placed below other information required in the upper right-hand corner of the address block.
- e. The RDC should be prefixed with the text "RDC" using the same font size and type as the RDC.

The route code should be formatted and located on the label according to the following rules:

- a. The route code should be indented from the right edge of the label and the RDC.
- b. The route code should be printed in a font no smaller than the delivery address. The recommend minimum font size is 10 points resulting in characters of 1/8 inch or greater.
- c. The route code should be located to the right of and above the delivery address and below any endorsements.
- d. Ideally, the route code should be right justified with an imaginary box surrounding the entire delivery address block.
- e. The entire route code should be bordered by a minimum 1-point box with a minimum of 1/16 inch between the text and the border.

2.4. Intelligent Mail Package Barcode Segment

The Intelligent Mail package barcode segment is the most stringently defined segment of the label and compliance with the following standards is required for proper processing and certification. Formal specifications on barcode creation may be found in Appendix A of this guide, or in the supporting document USPS2000508, *Intelligent Mail Package Barcode (IMpb) Specification*.

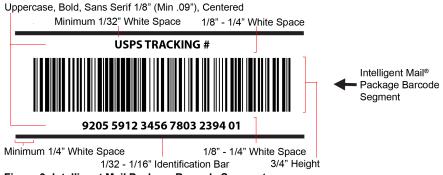


Figure 9: Intelligent Mail Package Barcode Segment

2.4.1. Intelligent Mail Package Barcode Segment •

The Intelligent Mail Package Barcode Segment is comprised of four elements:

- a. Identification Bars
- b. Barcode Banner Text
- c. GS1-128 Barcode
- d. Human Readable Representation of the barcode data

Identification bars are required above and below the barcode section.

- a. Identification bars must be 1/32 to 1/16 inch thick.
- b. Identification bars must have a minimum clear space of 1/32 inch above or below the corresponding barcode banner or human readable indicator.
- c. Identification bars must extend for the full length of the barcode including the clear zone, but may extend further.

The barcode banner identifies the services and characteristics of the barcode.

- a. The barcode banner must be printed in an uppercase bold sans serif font which results in characters of 29/32 (0.09") to 1/8 inch (baseline to capsline).
- b. The barcode banner should be centered above the barcode.
- c. The barcode banner must have a clear space of 1/8 to 1/4 inch between the banner and the barcode.
- d. The barcode banner must not exceed the length of the identification bars.
- e. Appropriate banners can be found in Publication 199, Intelligent Mail Package Barcode (IMpb) Implementation Guide for Confirmation Services and Electronic Payment Systems, or Publication 205, Electronic Verification System (eVS) Business and Technical Guide.

The GS1-128 barcode contains machine readable information specific to the mailpiece. Detailed specifications for the GS1-128 barcode are provided in Appendix A.

- a. The barcode must be at least 3/4 inch in height².
- b. The barcode must have a minimum clear space above and below of 1/8 inch.
- c. The barcode must have a minimum clear space at least 10 times the X-dimension with a recommendation of 1/4 inch to either side.

The human readable text below the barcode should display the relevant data of the barcode as described below.

- a. The human readable indicator should be printed in an uppercase bold sans serif font which results in characters of 29/32 (0.09") to 1/8 inch (baseline to capsline).
- b. The human readable indicator should be centered below the barcode.
- c. The human readable indicator must have a clear space of 1/8 inch to 1/4 inch between the text and the barcode.
- d. The human readable indicator should not exceed the length of the identification bars.
- e. When using the IMpb, the human readable indicator should <u>not</u> include the Application Identifier 420 or the ZIP Code.
- f. The human readable indicator should be parsed into groups of 4 with any remaining digits grouped at the end.

2.5. Additional Information and User Segment

2.5.1. Additional Information and User Segment ³

The additional information and user segment may contain information required for specific services or programs which is not otherwise defined in this labeling guide, or for any

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² Though discouraged, with approval from USPS, a ½-inch barcode may be allowed for specific labeling requirements.

information as otherwise defined by the label creator such as shipment date, weight³, return merchandise authorization (RMA) numbers, or purchase order numbers which should not be included in the address segment. This segment may be also used for specific shipment or shipper information including branding and logos.

The additional information and user segment is also the second of two places to include the Intelligent Mail matrix barcode (IMmb). When used, the IMmb should be right justified leaving room for clear zone requirements and margins. For more information on the IMmb, refer to Section 6.

Though generally freeform in design, information in the additional information and user information segment should conform to the following conventions:

- a. Text should appear right justified (in order for OCR software to better differentiate this information from the address blocks) allowing room for the IMmb.
- b. Any blocks of information should be separated by a minimum of four character spaces to ensure readability by delivery associates.
- c. Font size of text in this area should be smaller than that used in the Delivery Address Area but should adhere to the same font and style guidelines as other text on the label (e.g.: sans serif, capital letters, and a minimum 1/16 inch away from any edge or other element on the label).

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³ Although somewhat common in current practice to include this shipping information to the right of the return address, it is preferred to locate this information in the Additional Information and User Segment.

3. Recommended Label Formats

3.1. Design considerations

The USPS preferred label size is the shipping industry standard of 4x6 inches. However, it is understood that a single label layout or size will not fit all applications or parcel sizes and shapes. To this end, this document provides recommendations that may be applied to "non-standard" label sizes. A 6x3 inch and a 4x4 inch label are described herein and are intended to assist shippers by defining smaller formats and sizes that may more readily fit parcels which do not support the standard 4x6 inch label.

3.2.4x6 Labels

The 4x6 (4 inches wide and 6 inches high) label is the USPS recommended layout for parcel labels. This layout allows for optimum spacing of all elements and still allows space for additional information and user elements to be defined by the mailer. With this layout, the payment and branding, addressing, and barcode segments can be grouped together with user specific elements placed at the top and/or bottom of the label. Appendix F showcases sample labels using this layout.

3.2.1. Payment and Branding Segment

The 4x6 label allows for inclusion of all elements of the payment and branding segment including the service icon block and banner as well as a permit imprint or other postage payment method. The total size of this segment on the 4x6 label should be approximately 1 5/16 inches in height.

3.2.2. Addressing Segment

The 4x6 label allows sufficient space for inclusion of a return address, endorsements, and a delivery address. This format provides an area for the delivery address of approximately 3 1/4 x 1 5/16 inches (including margins) or 3 3/20 x 1 5/16 inches when the IMmb is used.

3.2.3. Intelligent Mail Package Barcode Segment

On all label sizes, the Intelligent Mail package barcode segment requirements must be adhered to as described in Section 2.4 above. This segment of the label should be approximately 1 1/2 inches in height.

3.2.4. Additional Information and User Segment

On a 4x6 label the additional information and user segment may be placed above or below the payment and branding, addressing, and Intelligent Mail package barcode segments or split between the two.

Care should be taken when placing the additional information and user segment at the top of the label not to include address information which could be misinterpreted by OCR scanning equipment as either the return address or delivery address.

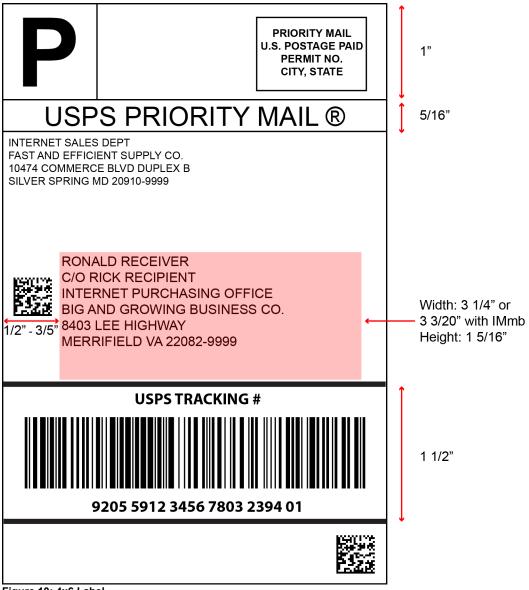


Figure 10: 4x6 Label

3.3.4x4 Labels

The 4x4 (4 inches wide and 4 inches high) label allows for less information than the 4x6 label but may be a useful format when shipping smaller sized parcels. The following guidance is provided for formatting a 4x4 label. However, placement of label elements may vary based on mailing requirements and, as such, the suggestions below are meant as guidelines as opposed to rules.

3.3.1. Payment and Branding Segment

The reduced size of the payment and branding segment will most likely require a reduction in the size of the service icon block and service banner on a 4x4 label in order to devote the largest area possible to the addressing segment. In this case, a 0.5-inch service icon in parallel with the service banner is recommended as shown in Figure 11 below.

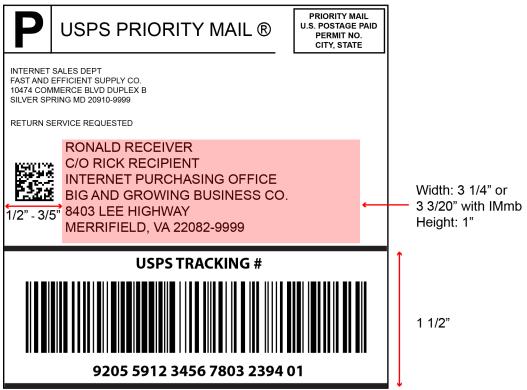


Figure 11: 4x4 Label

3.3.2. Addressing Segment

The addressing segment on a 4x4 label is reduced in size from that of a 4x6 label but should still allow sufficient space for inclusion of a return address, endorsements, and a delivery address. However, the area for the delivery address will be reduced to approximately 1 inch in height. This measurement assumes a single endorsement and may be increased or decreased to accommodate fewer or greater endorsements or address lines. Reduced font sizes may also be necessary for the delivery address to maintain white space requirements; however, this is not preferred.

3.3.3. Intelligent Mail Package Barcode Segment

On all label sizes, the Intelligent Mail package barcode segment requirements must be adhered to as described in Section 2.4 above. This segment of the label should be approximately 1 1/2 inches in height.

3.3.4. Additional Information and User Segment

A 4x4 label devoting maximum space to addressing may not have room for an additional information and user segment. If this area is included, it will be necessary to alter or reduce the addressing segment accordingly.

3.4.6x3 Labels

The 6x3 (6 inches wide and 3 inches high) label may be a useful format when shipping unusually shaped mailpieces such as mailing tubes. Placement of label elements may vary

based on mailing requirements and, as such, the suggestions below are meant as guidance as opposed to rules.

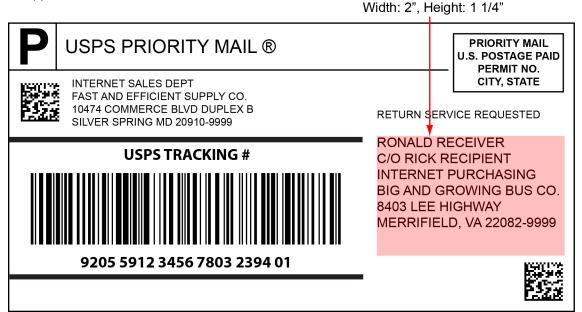


Figure 12: 6x3 Label

3.4.1. Payment and Branding Segment

The reduced size of the payment and branding segment in the 6x3 label will likely require a reduction in the size of the service icon block and service banner. In this case, a 0.5-inch service icon in parallel with the service banner is recommended as shown in Figure 12.

3.4.2. Addressing Segment

The 6x3 label requires the addressing segment to be split, with the return address and endorsements left justified at the top of the label and the delivery address right justified below the payment and branding segment. Furthermore, since the 6x3 label format reduces the area available for a delivery address to approximately 2 inches wide by 1 1/4 inches high, the use of smaller fonts or a reduced number of lines in the delivery address may be necessary. The reduced area for this section will also reduce the number of characters available per line.

The 3x6 label does not offer space for the standard placement of the IMmb. Space permitting, it may be included right justified below the delivery address and/or to the left of the return address.

3.4.3. Intelligent Mail Package Barcode Segment

On all label sizes, the Intelligent Mail package barcode segment requirements must be adhered to as described in Section 2.4 above. This segment of the label should be approximately 1 1/2 inches in height. However, on the 6x3 label the barcode can be left justified and its identification bars should be limited to the length of the barcode plus its clear space requirement of 1/4 inch on either side.

3.4.4. Additional Information and User Segment

A 6x3 label created as described in this section will contain approximately 1/3 inch for the additional information and user segment. This area may be expanded based on the need for endorsements and delivery address space.

4. Returns and Program-Specific Labels

4.1. USPS Returns Services Labels

USPS Returns services include labels for Priority Mail Return service, Priority Mail Express Return service, and USPS Ground Advantage Return service. USPS Returns label standard sizes are 4x6, 4x4, or 3x6 and must be certified by the USPS for use prior to distribution. All other label sizes require written approval from the National Customer Support Center (NCSC). USPS Returns services labels must conform to the following specifications in addition to the general labeling rules described in Section 2 of this document.

4.1.1. Payment and Branding Segment

USPS Returns services labels require a postage guarantee imprint as defined in Section 2.2.

The service icon block and service banner on USPS Returns services labels should match the product markings for Priority Mail Return service, Priority Mail Express Return service, or USPS Ground Advantage Return service described in Section 2.2 of this document.

4.1.2. Addressing Segment

The return address of the customer using the label to mail the parcel back to the permit holder must appear below the service banner in the upper left-hand corner of the label. If the return address is not pre-printed, space must be provided for the customer to enter a return address.

4.1.3. Intelligent Mail Package Barcode Segment

As with all labels, the Intelligent Mail package barcode segment requirements must be adhered to as described in Section 2.4 above; furthermore, commercial mailers must also include ZIP+4 in the IMpb using constructs C01 and C05 described in Section 5.2.1.

4.1.4. Additional Information and User Segment

Additional information (e.g.: company logo, Return Merchandise Authorization (RMA) number, inventory barcode) may be included in the additional information section if it does not interfere with any of the required elements of the USPS Returns services label.



Figure 13: USPS Returns Services Label

4.2. Priority Mail Open and Distribute Labels

Priority Mail Open and Distribute (PMOD) labels have unique requirements which affect the address and delivery segment. Requirements for the remainder of the label segments remain consistent⁴ with standard label formats.

4.2.1. Addressing Segment

Priority Mail Open and Distribute address labeling is dependent on the destination postal facility. Addressing data should be derived from the Drop Entry files located at the USPS Facility Access and Shipment Tracking (FAST) web site (http://fast.usps.com).

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⁴ Open and Distribute shipments may have container labeling requirements, in addition to address labels, which are not discussed in this document. Please refer to the DMM for a full description of Open and Distribute program requirements.

For shipments addressed to a Destination Delivery Unit (DDU), the address should be formatted as follows:

Line 1: The text "OPEN AND DISTRIBUTE AT:"

Line 2: The text "DDU –" followed by the destination facility name

Line 3: The destination facility street address

Line 4: The city, state and ZIP+4

For example:

OPEN AND DISTRIBUTE AT: DDU – Beverly Hills Carrier Annex 820 N San Vincente Blvd West Hollywood CA 90069-9998

For shipments addressed to a sectional center facility (SCF), an administrative support facility (ASF), an area distribution center (ADC), or Network Distribution Center (NDC), the address should be formatted as follows:

Line 1: The text "OPEN AND DISTRIBUTE AT:"

Line 2: Text indicating the facility type (SCF, ASF, ADC, or NDC) followed by the state and National Air and Surface System (NASS) Code of the destination facility.

For example:

OPEN AND DISTRIBUTE AT: ADC PHILADELPHIA PA 190

OPEN AND DISTRIBUTE AT: SCF DOMINICK V DANIELS NJ 07099

The facility name and the NASS Code can be obtained through the combination of either the Address File and a Mail Direction File or the Facility File and a Mail Direction File, all of which are provided in the Resources section of the FAST system.

Below the delivery address, the label should indicate the class and processing category of the enclosed mail. OPEN AND DISTRIBUTE AT: DDU – FAIRFAX POST OFFICE 10660 PAGE AVE FAIRFAX VA 22030-9998

OPEN AND DISTRIBUTE AT: ADC WASHINGTON DC 200

OPEN AND DISTRIBUTE AT: ASF SALT LAKE CITY UT 841

OPEN AND DISTRIBUTE AT: SCF WASHINGTON DC 200

OPEN AND DISTRIBUTE AT: NDC WASHINGTON DC 20799



Figure 14: PMOD Address and Label (not drawn to scale)

4.3. Hold For Pickup Labels

The Hold For Pickup service has specific addressing requirements which affect the address and delivery segment of the label. Requirements for the remainder of the label segments remain consistent with standard label formats.

INTERNET SALES DEPT FAST AND EFFICIENT SUPPLY CO. 10474 COMMERCE BLVD DUPLEX B SILVER SPRING MD 20910-9999

HOLD FOR PICKUP

HOLD FOR: RONALD RECEIVER C/O ABC POST OFFICE 8403 LEE HIGHWAY MERRIFIELD VA 22082-9999

Figure 155: Hold For Pickup Address Segment

Height = 1" 3/32" Left justified uppercase text

3/16" Banner 1/8" Bold sans serif centered text

Height = 1 5/16" 1/8" Indented left justified uppercase text

4.3.1. Addresssing Segment

Hold For Pickup labels require a Hold For Pickup banner directly below the return address and above the delivery (Pickup Location) address. The Hold For Pickup banner should conform to the following requirements:

- a. The banner should be 3/16 inch in height.
- b. The banner should be printed in reverse type (white letters on a black background).
- c. The text "HOLD FOR PICKUP" should be printed using a 10-point or greater sans serif font in upper case letters resulting in characters of 1/8 inch (baseline to capsline) or greater.
- d. There should be 3/32 to 1/16 inch of white space above and below the banner.

Requirements for the return address on a Hold For Pickup label remain consistent with the standard 4x6 or 4x4 label. However, the delivery address should contain the recipient name and the address of the post office at which the mailpiece will be held formatted as follows:

- Line 1: The text "HOLD FOR:" followed by the recipient name.
- Line 2: The text "C/O" followed by the post office facility name.
- Line 3: The post office street address.
- Line 4: The post office city, state, and ZIP Code.

As with other delivery addresses, the following rules should also be followed:

- a. The delivery address should be printed at least 1/2 inch from the left edge of the label and indented at least 1/4 inch from the left margin of the return address and recipient address.
- b. The delivery address should be printed using a 10-point or greater sans serif font in upper case letters resulting in characters of 1/8 inch (baseline to capsline) or greater.
- c. All lines of the delivery address should be left justified and evenly spaced.

4.4. ePostage Labels

ePostage labels must adhere to the following specifications in addition to the general labeling rules described in Section 2 of this document.

4.4.1. Payment and Branding Segment

ePostage mailings require the marking ePOSTAGE or e-Postage as the last line of the permit imprint.

4.4.2. Addressing Segment

ePostage labels must conform to the following specifications in addition to the general addressing rules described in Section 2 of this document.



PRIORITY MAIL EXPRESS U.S. POSTAGE PAID COMPANY NAME ePOSTAGE

USPS PRIORITY MAIL EXPRESS ®

INTERNET SALES DEPT FAST AND EFFICIENT SUPPLY CO. 919 PHILADELPHIA AVE SILVER SPRING MD 20910-4913 04/30/23 Mailed From 20910 1 lb 8 oz FLAT RATE ENV

WAIVER OF SIGNATURE NO SUNDAY/HOLIDAY DELIVERY



RONALD RECEIVER C/O RICK RECIPIENT INTERNET PURCHASING OFFICE - WEST BIG AND GROWING BUSINESS CO. 1441 E BUCKEYE RD PHOENIX AZ 85036-9999





9270 1912 3456 7800 0615 06



Figure 16: ePostage Label

a. Weight and Flat Rate Markings

It is recommended that the Return Address section of the Priority Mail and Priority Mail Express labels includes right-justified Flat Rate description, if applicable. The Rate Indicator field from Shipping Services file's Detail Record 1 (SSF v1.7 Record Position: 373-374, SSF v2.0 Field Position: 37) may be used as the source for this description mapping.

Weight shall be presented in the corresponding measurement units depending on the mail class used. Either actual or "priced" weight (rounded up to the nearest whole number) can be used. Ounce-based mail class labels should display the weight in ounces (oz) and pound-based mail classes should display the weight in pounds (lb).

b. Regional Distribution Codes

Identifying shipments that can be processed within the local service area can in most cases improve the delivery service by one or more days. When applicable, the Retail

Distribution Code (RDC) identifying a shipment that can be processed within the local service area should be placed on the right side of the label in the area below the price-based markings and above the carrier route.

c. Additional Considerations

Shipping Date (mm/dd/yy) and Mailed From ZIP Code are optional, but if provided on the label shall be right justified in the Return Address section.

Carrier Route Code is also optional, and if present shall be located to the right of and above the delivery address and below any endorsements. Carrier Route Code is only applicable when using a USPS Address Management System product that provides this information.

4.4.3. Intelligent Mail Package Barcode Segment

The Barcode Banner Text must end with "EP". As with all labels, the rest of the Intelligent Mail package barcode segment requirements must be adhered to as described in Section 2.4 above.

4.4.4. Additional Information and User Segment

This segment may be used for specific shipment or shipper information including branding and logos if it does not interfere with any of the required elements.

4.5. Hazardous Materials Labels

To ensure easy identification and to protect the safety of the mail, hazardous materials labels should adhere to the following specifications as well as to the general labeling rules described in Section 2 of this document and the regulations set out in Publication 52, Hazardous, Restricted, and Perishable Mail. In addition, specific Service Type Codes (STC) have been reserved for hazardous materials shipments. Please refer to Publication 199, Intelligent Mail Package Barcode (IMpb) Implementation Guide for Confirmation Services and Electronic Payment Systems for more information on Service Type Codes or to Publication 52, Hazardous, Restricted, and Perishable Mail for more information on hazardous materials.

4.5.1. Payment and Branding Segment

The service icon block for hazardous materials must contain an "H" regardless of the mail class. The service banner remains unchanged.

4.5.2. Addressing Segment

Hazardous materials shipments must include the Intelligent Mail matrix barcode to the left of the delivery address. See Appendix B for more information on the Intelligent Mail matrix barcode. Additionally, specific mail classes require or exclude endorsements when shipping hazardous materials. For more information, please refer to Publication 52, *Hazardous*, *Restricted*, *and Perishable Mail*. For Ground shipments only, the text "HAZMAT – Surface Transportation Only" should be added below the return address, if possible, in such a way as it does not interfere with any endorsements.

4.5.3. Intelligent Mail Package Barcode Segment

The IMpb banner should be appended by the text "HAZMAT" to further identify the package as containing hazardous materials.



Figure 17: Hazardous Materials Surface Transportation Label

4.5.4. Additional Information and User Segment

Hazardous materials shipments must include the Intelligent Mail matrix barcode right justified in the Additional Information and User Segment. See Appendix B for more information on the Intelligent Mail matrix barcode.

4.6. USPS Smart Locker Labels

USPS Smart Locker labels must adhere to the following specifications in addition to the general labeling rules described in Section 2 of this document.

4.6.1. Addresssing Segment

USPS Smart Locker labels should include a banner directly below the return address and above the delivery (Pickup Location) address. The banner is optional, but recommended, and when used must be formatted as follows:

- a. The banner should be 3/16 inch in height.
- b. The banner should be printed in reverse type (white letters on a black background).
- c. The text "DELIVER TO USPS SMART LOCKER" should be printed using a 10-point or greater sans serif font in upper case letters resulting in characters of 1/8 inch (baseline to capsline) or greater.
- d. There should be 3/32 to 1/16 inch of white space above and below the banner.

USPS Smart Locker destinations also have unique delivery address requirements:

- Line 1: The recipient's name.
- Line 2: The text "USPS SMART LOCKER".
- Line 3: The city, state and unique delivery ZIP Code of the USPS Smart Locker location.



Figure 18: USPS Smart Locker Label

4.7. Bulk Parcel Return Service Labels

There are two labels associated with Bulk Parcel Return Service (BPRS): outbound and optional. The outbound shipping label (available only on USPS Marketing Mail) must conform to the general labeling rules described in Section 2 of this document with either "Return Service Requested - BPRS" or "Address Service Requested - BPRS" endorsement.

The optional BPRS label may be enclosed in the outbound shipment for use after the package has been opened and adhere to the following specifications in addition to the general labeling rules described in Section 2 of this document.

4.7.1. Payment and Branding Segment

Optional BPRS labels require a postage guarantee imprint defined in Section 2.2. Below the indicia a minimum of three (3) horizontal bars are required; the bars must be uniform in length, at least 1 inch long, at least 1/16 inch thick and evenly spaced.

The "USPS MARKETING MAIL" or "USPS STANDARD MAIL" class endorsement must be printed in 1/4 inch uppercase letters and placed below the postage guarantee endorsement. Optional BPRS labels do not support a Service Icon Block or Service Banner.

4.7.2. Addressing Segment

The return address of the customer using the label to mail the parcel back to the permit holder must appear in the upper left-hand corner of the label. If the return address is not preprinted on the label, space must be provided for the customer to enter a return address.

Above the delivery address the label must display the BPRS legend.

- Line 1: The first line of the legend must read "BULK PARCEL RETURN SERVICE" in capital letters at least 3/16 inches in height.
- Line 2: The second line of the legend must include the text "PERMIT NUMBER" or "PERMIT NO." followed by the actual permit number and the name of the issuing Post Office (city and state) in capital letters and Post Office ZIP Code. Though a size for line 2 is not mandated in the DMM, an 8-point font resulting in characters of approximately 3/32 of an inch is recommended.
- Line 3: The last line of the legend should include the name and delivery address (street or Post Office box number) of the permit holder or merchant. Though a size for line 3 is not mandated in the DMM, an 8-point font resulting in characters of approximately 3/32 of an inch is recommended.

The entire legend should be bordered by a minimum 1-point box with 1/16 inch clearance between the box and text.

The delivery address itself should be formatted as follows:

- Line 1: The text "POSTAGE DUE UNIT"
- Line 2: The text "U.S. POSTAL SERVICE"
- Line 3: The delivery address line for the postage due unit
- Line 4: The city, state and ZIP Code of the postage due unit at the Post Office where the BPRS permit is authorized

The delivery address must be located at least 3/16 inch below the "BULK PARCEL RETURN SERVICE" legend and must also meet the requirements in Section 2.3.3 above.

4.7.3. Intelligent Mail Package Barcode Segment

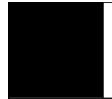
As with all labels, the Intelligent Mail package barcode segment requirements must be adhered to as described in Section 2.4 above; furthermore, commercial mailers must also include ZIP+4 in the IMpb using constructs C01 and C05 described in Section 5.2.1.

4.7.4. Additional Information and User Segment

This segment may be used for specific shipment or shipper information including branding and logos if it does not interfere with any of the required elements of the optional BPRS label.



Figure 19: BPRS Label



STANDARD MAIL U.S. POSTAGE PAID PERMIT NO. CITY, STATE

USPS STANDARD MAIL ®

INTERNET SALES DEPT FAST AND EFFICIENT SUPPLY CO. 10474 COMMERCE BLVD DUPLEX B SILVER SPRING MD 20910-9999

RETURN SERVICE REQUESTED - BPRS



RONALD RECEIVER C/O RICK RECIPIENT INTERNET PURCHASING OFFICE BIG AND GROWING BUSINESS CO. 8403 LEE HIGHWAY MERRIFIELD VA 22082-9999

USPS TRACKING #



9270 2912 3456 7800 0615 03



Figure 20: BPRS Outbound 4x6 Label

5. Appendix A: IMpb Specifications

The following appendix has been excerpted, edited and abbreviated from the document: USPS2000508, *Intelligent Mail Package Barcode (IMpb) Specification* (Cage Code: 27085) and other documents and adapted for commercial mailers. For non-commercial barcode usage or for additional details the reader is directed to the USPS2000508 specification and is encouraged to check with USPS for updated versions.

Whereas this guide describes the usage of barcodes on labels, and this appendix outlines barcode specifications, USPS2000508 remains the basis for all technical requirements.

5.1. Intelligent Mail Package Barcode Data

The following fields are used to create an Intelligent Mail package barcode (IMpb).

5.1.1. Postal Code Application Identifier

The Postal Code Application Identifier (AI) is a specific 3-digit GS1 application identifier that is used to designate the presence of a delivery Postal Code within the IMpb. This field will always be "420" and, must precede the destination ZIP Code if such routing information is provided.

Source: Always "420."

5.1.2. Destination ZIP Code

This field should contain the destination ZIP Code associated with the mailpiece being labeled. This field may be 5 or 9 digits in length depending on the use of a ZIP Code or ZIP+4.

Source: Specific to the mailpiece.

5.1.3. Channel Application Identifier

The Channel Application Identifier (AI) is a specific 2-digit application identifier used to identify both the business induction channel from which the mailpiece originated and to indicate where USPS may locate a payment record for the mailpiece. Valid IMpb Channel Application Identifiers are "92", "93", "94", and "95." AI "92" and AI "93" are for use by commercial mailers. AI "94" is for USPS online channel mailings and AI "95" is reserved for the USPS retail environment.

Source: For the commercial mailer, always a "92" when used with a 9-digit Mailer ID or "93" when used with a 6-digit Mailer ID.

5.1.4. Service Type Code

The 3-digit Service Type Code (STC) field identifies the mail class of the parcel and the presence of any extra services.

Source: Specific to the mailpiece being identified. A complete list of service type codes can be found in Publication 199, *Intelligent Mail Package Barcode (IMpb) Implementation Guide*

for Confirmation Services and Electronic Payment Systems, or Publication 205, Electronic Verification System (eVS) Business and Technical Guide.

5.1.5. Mailer ID

The Mailer ID (MID) field may be 6 or 9 digits in length. Most mailers will be assigned a 9-digit MID which is used in conjunction with AI "92." On an individual basis, some mailers or consolidators may be assigned a 6-digit MID and would then use AI "93."

Source: Each mailer should obtain a unique MID from USPS.

5.1.6. Serial Number

Each IMpb must contain a serial number which uniquely⁵ identifies the mailpiece associated with the mailer ID. Commercial mailers, depending upon the length of their mailer ID, may use a 7, 10, 11, or 14-digit serial number as defined in Table 2, IMpb Constructs.

Source: Defined by the mailer uniquely for each mailpiece. Use of a sequential number is recommended.

5.1.7. Mod 10 Check Digit

Each IMpb construct must include a 1-digit, Mod 10 check digit as the final digit in the barcode data string. The Mod 10 check digit is calculated using the package identification code (PIC) portion of the data, which includes the channel AI, STC, MID and serial number.

Source: Calculated from the barcode data (See Section 5.3 for additional details).

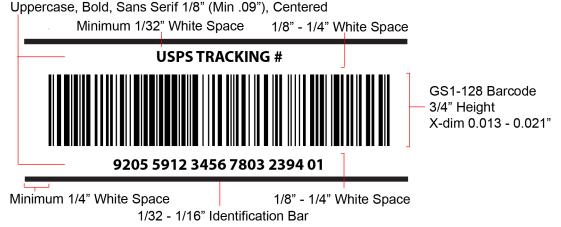


Figure 21: Intelligent Mail Package Barcode

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⁵ IMpb serial number uniqueness must be maintained for a minimum of 120 days.

5.2. Intelligent Mail Package Barcode Data Constructs

5.2.1. Commercial Mailer Constructs

The Intelligent Mail package barcode is created by combining the barcode data previously defined as described in the chart below.

Туре	pe No. Data Field		Field Length	Comments		
Routing Data	1	Postal Code Application Identifier	3	Designates the presence of a delivery Postal Code. Field is always "420." Should be suppressed from human readable indicator.		
Routin	2	Destination ZIP Code	5 or 9	Identifies the postal routing ZIP Code and follows the Postal Code AI. Should be suppressed from human readable indicator.		
Data)	3	Channel Application Identifier	2	Identifies the channel from which the mailpiece originated. Always "92" or "93" for commercial mailers.		
racking	4	Service Type Code	3	Identifies the mail class or product and the presence of any extra services.		
PIC or T	5	Mailer ID	6 or 9	Assigned Mailer ID 9-digit used with AI "92", 6-digit used with AI "93."		
Package Identification Code (PIC or Tracking Data)	6	Serial Number	7,10, 11,14	Uniquely identifies the mailpiece associated with this Mailer ID. May be 7 or 11 digits when used with a 9-digit Mailer ID. May be 10 or 14 digits when used with a 6-digit Mailer ID.		
Package Iden	7	Mod 10 Check Digit	1	A 1-digit, Mod 10 Check Digit is the final digit in the IMpb data string calculated using the package identification code portion of the data, which is the string from the channel Al through the serial number.		

Table 1: IMpb data field overview

Together, these data elements are combined to create an Intelligent Mail package barcode. USPS supports 10 commercial mailer⁶ IMpb constructs that can be formed from the data elements and lengths defined above. These are identified in Table 2 below.

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⁶ Commercial mailer IMpb constructs are used for permit imprint mailings. Online constructs, not included in this document, exist for PC Postage and metered mailings. For more information, please refer to reference document USPS2000508, *Intelligent Mail Package Barcode (IMpb) Specification*.

	Postal	Dest	Channel	070		Serial	Check	_	Total Barcode
Construct	Code Al	ZIP	Al	STC	MID	Number	Digit	Length	Length
C01	3	9	2	3	9	7	1	22	34
C02	3	5	2	3	9	11	1	26	34
C03	3	5	2	3	9	7	1	22	30
C04	0	0	2	3	9	7	1	22	22
C05	3	9	2	3	6	10	1	22	34
C06	3	5	2	3	6	14	1	26	34
C07	3	5	2	3	6	10	1	22	30
C08	0	0	2	3	6	10	1	22	22
C09	0	0	2	3	6	14	1	26	26
C10	0	0	2	3	9	11	1	26	26

Table 2: IMpb constructs

The IMpb must be formatted according to these constructs. However, these various constructs allow for flexibility in field length to meet the requirements of different mailers.

Most mailers will be assigned a 9-digit mailer ID and will use a channel AI of "92" and constructs C01–C04 or C10. On an individual basis, large mailers may be assigned a 6-digit mailer ID and would then use a channel AI of "93" along with constructs C05–C09.

Depending on the length of the mailer ID and the postal code information, different length serial numbers may also be used. This option enables large-volume mailers to maintain uniqueness among their mailpieces, or alternatively, allows mailers to embed their own data within the IMpb serial number.

This variability in length allows the IMpb to be either 22, 26, 30, or 34 digits in length depending upon the channel AI, serial number, and length of the postal code data (ZIP or ZIP+4). Although it is acceptable for a mailer to use different IMpb constructs on different mailpieces, it is recommended that one construct be chosen to provide consistency in the data exchanged between the mailer and USPS.

5.2.2. Formatting the Intelligent Mail Package Barcode

Once a construct has been chosen, the IMpb can be created as described in the example below.

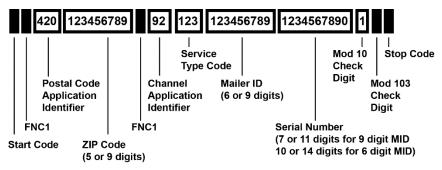


Figure 22: Barcode Construct

5.3. Calculating the MOD 10 Check Digit

A MOD 10 check digit is used as the final digit in the Intelligent Mail package barcode. The check digit calculation is based only upon the digits that make up the PIC, specifically the Application Identifier, Service Type Code, Mailer ID, and Serial Number. It does not include the Postal Routing Code Application Identifier or the Postal Routing Code (when present).

The following example from USPS200508 illustrates how to conceptually calculate a MOD 10 Check Digit⁷.

For the data:

- a. Application Identifier = 91
- b. Service Type Code = 01
- c. Mailer ID = 123456789
- d. Serial Number = 00000001

Calculate the MOD 10 check digit using the following steps:

Step 1: Create a two-row matrix, labeled 1 through 22, 1 being the most significant position (i.e., right-most position). Starting from the least significant position of the matrix (position 22), copy each digit of the PIC all the way to position 2 (excluding the position of the check digit shown in the example below by a "?").

Position	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
PIC	9	1	0	1	1	2	3	4	5	6	7	8	9	0	0	0	0	0	0	0	1	?

Figure 23: Illustrative Matrix for Positions/Values in a PIC - Step 1

Step 2: Starting from position 2 of the matrix, add the values from the even-numbered boxes.

Position	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
PIC	9	1	0	1	1	2	ω	4	5	6	7	8	9	0	0	0	0	0	0	0	1	?

Figure 24: Illustrative Matrix for Positions/Values in a PIC - Step 2

For the example: 1 + 0 + 0 + 0 + 9 + 7 + 5 + 3 + 1 + 0 + 9 = 35

Step 3: Multiply the result of step 2 by 3.

For the example: $35 \times 3 = 105$

Step 4: Starting from position 3 of the matrix, add the values from the odd-numbered boxes, skipping position 1 because it is the position of the check digit.

Position	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
PIC	9	1	0	1	1	2	3	4	5	6	7	8	9	0	0	0	0	0	0	0	1	?

Figure 25: Illustrative Matrix for Positions/Values in a PIC - Step 4

For the example: 0+0+0+0+8+6+4+2+1+1=22

Step 5: Add up the results for steps 3 and 4.

⁷ Please note that this example, taken from the source document, uses a legacy barcode construct with an application identifier of "91" however, this does not affect the calculation logic.

For the example: 105 + 22 = 127

Step 6: The check digit is the smallest number which, when added to the result obtained

through step 5, gives a number that is a multiple of 10.

For the example: 127 + X = 130 therefore X = 3

Thus the resulting PIC is 9101 1234 5678 9000 0000 13.



NOTE: The dimension of the matrix (the number of cells) will vary depending on the length of the PIC, which in this example is 22.

The following code excerpt demonstrates one method of implementing this calculation programmatically. This example uses Visual Basic scripting which automatically converts data type providing the conversion from strings to integers. Your implementation may require additional steps.

Dim PIC_without_checkdigit As String
Dim PIC_with_checkdigit As String
Dim checkdigit As String
Olim checkdigit As Integer
Dim i As Integer

Start with Al & STC & MID & Seq no.
Variable to hold the final PIC
Variable to hold the check digit
Variable to increment the loop

Seq is Leg (DIC without checkdigit) To 4 Start 2

checkdigit = checkdigit * 3 'Multiply the checksum by 3

For i = Len(PIC_without_checkdigit) - 1 To 1 Step -2 'Loop back through the odd values checkdigit = checkdigit + Mid(PIC_without_checkdigit, i, 1)

Next 'Value'

'Loop back through the odd values 'Add the current value to the checksum 'Next value'

PIC with checkdigit = PIC without checkdigit & checkdigit 'Concatenate the check digit to the PIC

Both the conceptual and programming examples above progress backwards through the data to calculate the check digit as this supports any length PIC whether it contains an odd or even number of digits. It is possible to calculate the same checksum by progressing forward through the data by first determining if the data string is odd or even.



Note: All current commercial IMpb constructs (C01–C10) result in an initial data string length which is odd (without the check digit). However, this is subject to change.

5.4. IMpb Identification and Layout Requirements

In addition to the IMpb itself, the Intelligent Mail package barcode segment of the label also includes a human readable representation of the Package Identification Code, a USPS banner, and identification bars. These indicators, described below, serve as a guide in distinguishing the IMpb from other potential barcodes on a package.

5.4.1. Human Readable Representation of the Encoded Barcode Data

A human readable interpretation of the data characters represented in the Package Identification Code portion of the IMpb should be displayed below the barcode as specified within this document. The human readable text should not include the Postal Routing AI (420) or the ZIP Code (5 or 9-digit).

The human readable text should be displayed at least 1/8 inch, but not more than 1/4 inch below the IMpb. The printed height of the characters should be within the range of 1/10 inch to 1/8 inch. To enhance readability, the human readable representation of the IMpb data should be printed in a bold⁸, sans serif font and parsed or separated as defined in this document.

5.4.2. IMpb Banner

The IMpb banner must be printed in all uppercase letters centered above the barcode. A clear zone of 1/8 inch, but not more than 1/4 inch must be maintained between the bottom edge of this text and the top of the IMpb. The banner should be printed in a boldface sans serif font. The printed height of the characters should be within the range of 1/10 to 1/8 inch. The USPS Banner may not exceed the total combined length of the barcode and the minimum clear zones to its left and right. A table of service banners can be found in Publication 199, Intelligent Mail Package Barcode (IMpb) Implementation Guide for Confirmation Services and Electronic Payment Systems, or Publication 205, Electronic Verification System (eVS) Business and Technical Guide.

When creating labels for packages which will carry hazardous materials, the text "HAZMAT" should be appended to the IMpb banner. When creating labels for use with USPS Ship, Electronic Verification Service (eVS) or ePostage, the characters "USPS Ship," "eVS" or "EP" respectively should also be appended⁹.

5.4.3. Identification Bars

Horizontal black lines with a thickness within the range of 1/32 to 1/16 inch thick should be printed above the USPS Banner and below the human readable representation of the IMpb data. The lines must extend at least the total combined width of the barcode and the minimum clear zones to its left and right but may extend beyond this measurement up to the width of the label.

5.5. Physical IMpb Requirements

5.5.1. Barcode Symbology

The Intelligent Mail package barcode consists of a data string encoded in a format generally following the GS1–128 specification that supports the use of Application Identifiers and concatenation ¹⁰. However, USPS has selectively deviated from GS1–128 specifications in several instances as required by operational constraints. Unless otherwise specified, the mailer must follow GS1 system rules for encoding element strings in GS1–128 barcode symbols. Only subset C is be permitted for this application.

Not all fonts/typefaces print with the same thickness of stroke; "boldface" is meant as a subjective recommendation, conveying the need for emphasis and readability. Fonts such as Helvetica Bold or Arial Bold are examples of simple, boldface fonts which would satisfy USPS requirements.

 $^{^{9}}$ An optional dash (-) may be used to separate the banner and the HAZMAT, USPS Ship, eVS, or EP marking.

Mailers should pay close attention to the Data Constructs detailed in this document in order to construct the Intelligent Mail package barcode properly. Concatenated barcodes use a second Function 1 (FNC1) character immediately following the ZIP Code to join the routing information with the traditional PIC. Accidentally omitting this character will cause a format error.

5.5.2. Barcode X-Dimension

A GS1-128 barcode's X-dimension is the nominal width of the narrowest bar or space element within the barcode. X-dimensions are typically measured in mils, one mil being equivalent to 1/1,000 of an inch. The Intelligent Mail package barcode requires an X-dimension measuring between 0.013 inch (13.0 mils) and 0.021 inch (21.0 mils). X-dimensions ranging from 0.015 to 0.017 inch inclusive are preferred. The X-dimension must remain constant throughout the barcode symbol and may not vary.

5.5.3. Barcode Length

The overall length of the IMpb is a function of the number of characters encoded and the X-dimension used.

5.5.4. Barcode Height

The overall minimum height of the IMpb must measure at least 3/4 inch. USPS may permit an alternate height under certain conditions as specified in the DMM or by customer-specific USPS agreement.

5.5.5. Horizontal Barcode Quiet / Clear Zone

A clear zone measuring at least ten times the X-dimension must be maintained immediately to the left and right of the IMpb. No text, images, or other markings may appear in this area. USPS recommends a minimum clear zone of 1/4 inch.

5.5.6. Vertical Barcode Quiet / Clear Zone

A clear zone measuring at least 1/8 inch must be maintained directly above and below the IMpb. No text, images, or other markings may appear in this area.

5.6. Print Quality Requirements

The following print quality requirements apply to both the IMpb and IMmb.

5.6.1. Printer Resolution

USPS recommends a printer with a minimum resolution of 203 dots per inch (dpi) for printing the Intelligent Mail package barcode. Dots per inch is a measure of a printer's resolution, it is the number of individual dots that can be produced within a linear 1-inch (2.54 cm) space.

5.6.2. Reflectance / Symbol Contrast

The Intelligent Mail package barcode must be printed on a substrate which is uniform in color. Barcode scanning equipment responds to differences between light reflected from the darkest bar and lightest space within barcode symbols, including quiet zones. Reflectance will be measured on a USPS-specified reflectance meter or barcode verifier.

The reflectance value of the darkest bar within the barcode symbol (Rmin) must be equal to or less than half the reflectance value of the lightest space (Rmax), when measured in the red spectral range between 630 nanometers (nm) and 675 nm.

 $R_{min} \leq 0.5 R_{max}$

Symbol contrast is the difference between the highest reflectance value (Rmax) and the lowest reflectance value (Rmin) within the barcode symbol, including the quiet zones. The symbol contrast must be greater than or equal to 40 percent.

 $SC = R_{max} - R_{min}$ $SC \ge 40\%$

5.6.3. Barcode Quality

At least 70 percent of the IMpb in each mailing must have an overall symbol grade of "B" or better when measured with the appropriate aperture size in the red spectral range between 630 nanometers (nm) and 675 nm. The remainder must measure no less than a symbol grade of "C." Specified symbol grades are based upon the ISO/IEC 15416 Barcode Print Quality Guideline which recommends a method of measuring the quality parameters of printed barcode symbols.

The different symbol grades indicate print quality. Only the use of the appropriate aperture for the specific X-dimension of the barcode symbol under consideration will guarantee that the grade obtained from measurement of this symbol is the correct grade according to the ISO/IEC 15416 specified methodology. Therefore, in accordance with this methodology, the mailer should use a 10-mil aperture (0.250 mm) when measuring barcodes printed with X-dimensions between 0.013 and 0.021 inches (13–21 mils).

6. Appendix B: IMmb Specifications

The Intelligent Mail matrix barcode (IMmb) is a two-dimensional (2D) representation of the Intelligent Mail package barcode (IMpb) used to augment the IMpb and improve the readability of routing and tracking data. It is highly recommended for any soft pack, poly bag or other packaging whose irregular shape may impact the ability of scanners to accurately read the linear IMpb. It is also recommended for any shipment carrying hazardous materials. However, it may be used on any USPS parcel shipping label.

6.1. The Intelligent Mail Matrix Barcode Data

The IMmb data must match the IMpb as described in Sections 5.1 through 5.3 above including the GS1 application identifiers.

6.2. IMmb Identification and Layout Requirements

The IMmb should be dually located in both the Delivery Address and Additional Information and User sections of the label.

- In the Delivery Address section, it should be placed directly to the left of the delivery address leaving room for clear zone requirements and margins, noting that additional indentation of the delivery address may be required 11.
- In the Additional Information and User section, it should be placed right justified leaving room for clear zone requirements and margins.

No barcode banner, human readable representation or identification bars are required.

6.3. Physical IMmb Requirements

6.3.1. Barcode Symbology

The Intelligent Mail matrix barcode must be encoded in a Data Matrix GS1 DataMatrix format. The GS1 DataMatrix format is a two-dimensional (2D) variant of the GS1-128 barcode symbology.

6.3.2. Barcode X-Dimension and Modules Numbers

The Intelligent Mail matrix barcode requires an X-dimension measuring between 0.019 inch (19.0 mils) and 0.022 inch (22.0 mils). An X-dimension of 0.02 inches (20 mils) is recommended. The X-dimension must remain constant throughout the barcode symbol and may not vary.

The IMmb requires a symbol size of 20x20 modules resulting in a data region of 18x18 modules.

The size of the IMmb will be a factor of the X-dim and modules.

-

¹¹ On smaller labels, such as the 6x3 label, the IMmb in the address location may need to be relocated to left of the return address. When possible, it is preferable to always include two IMmb on the mailpiece.

6.3.3. Orientation

The IMmb must be oriented such that the "L" finder pattern is located in the lower, left-hand corner of the barcode when the label is viewed in a standard upright, portrait mode position.

6.3.4. Horizontal and Vertical Barcode Quiet / Clear Zone

A clear zone equal to five times (5X) the X-dimension, but no less than 0.1 inches, must be maintained around all four sides of the IMmb. No text, images, or other markings may appear in this area.

6.4. Print Quality Requirements

IMmb print requirements match the IMpb print requirements as described in Section 5.6 above except for the standards reference. ISO/IEC 15415 is the correct reference for the IMmb.

7. Appendix C: Addressing Considerations

The following appendix is provided as a "quick reference guide" to the reader to assist in proper addressing. For complete information on address preparation and formatting, the reader is directed to Publication 28, *Postal Addressing Standards*.

7.1. Address Elements

A residential delivery address may contain the following information.

Line	Data Element	Example	Requirement
1	Optional Endorsement	#BXNHHVF ************C002	Required for certain
	Line		programs and discounts
2	Key Line Data	#ABCDEFGHIJKLMNO3#/12345678	Required for certain programs and discounts
3	Intelligent Mail barcode (IMb)	բվիկիիկիկինինակինակիկայիրնկինկինանդնկին	Not applicable for parcels but may be required on letters and flats for certain programs and discounts
4	Recipient Line	MS MILDRED DOE	Required
5	Delivery Address Line	12 RESIDENTIAL DR NW	Required
6	City, State, ZIP (or ZIP+4) Line	KRYTON TN 38188-0002	Required

Table 3: Residential Delivery Addressing

A business delivery address may contain the following information:

Line	Data Element	Example	Requirement
1	Optional	#BXNHHVF *********C002	Required for
	Endorsement		certain
	Line		programs and
			discounts
2	Key Line Data	#ABCDEFGHIJKLMNO3#/12345678	Required for
			certain
			programs and
			discounts
3	Intelligent Mail	- թվիկվիմելինիաի խուլիիկությիր հայ հերմուներներն	Not applicable
	barcode (IMb)		for parcels but
			may be required
			on letters and
			flats for certain
			programs and
			discounts
4	Mailstop Code	MSC 4567ABCD	Optional
5	Attention Line	MS MILDRED DOE	Optional

6	Individual Title	PROFESSIONAL ENGINEER	Optional
7	Functional Title	DESIGN ENGINEERING MGR	Optional
8	Group, Department, Division	BRAKE CONTROL DIVISION	Optional
9	Business / Firm Name	BIG BUSINESS INC	Required
10	Delivery Address Line	12 E BUSINESS LN STE 209	Required
11	City, State, ZIP (or ZIP+4) Line	KRYTON TN 38188-0002	Required

Table 4: Business Delivery Addressing

At a minimum the delivery address should always contain the following information:

- a. Business Name or Recipient Line
- b. Delivery Address Line
- c. Last Line (city, state, and ZIP+4)

Other items, such as the optional endorsements line and key line may be required for certain USPS programs and discounts.

7.2. Delivery Addresses

For optimal mail delivery, the following formatting considerations should be observed:

- a. The delivery address line is critical to mail delivery and should be broken down into its distinct components of address number, pre-direction, street name, suffix, postdirection, secondary address identifier, and secondary address with one space between each of the components.
- b. The delivery address line should be limited to 40 characters. Suggested standard abbreviations to reduce the address line length to 40 characters or less can be found in Publication 28, *Postal Addressing Standards*. However, if all of the delivery address cannot fit in one line, then secondary address information can be placed immediately above the delivery address line.
- c. For domestic addresses, the last line of the address should contain the city, state, and ZIP (or ZIP+4) Code. The city and state should be separated by one space and the state and ZIP Code should be separated by 2 spaces. With the exception of the hyphen used in ZIP+4 formatting, all punctuation may be omitted in the last line of the address block.
- d. International addresses should be formatted according to the standards of the destination county and include the country name in English below any other address lines.
- e. Above the delivery line, optional endorsements and key line data may be placed in accordance with the mail sorting or discount requirement of various USPS programs.

MR NEMO NIHILOV 123 MAGNOLIA ST HEMPSTEAD NY 11590-1234 ABC MOVERS 1500 E MAIN AVE SPRINGFIELD VA 22162-1010

ATTN MR J.K. PLAUSNER ABC COMPANY 334 MAIN ST FALLS CHURCH VA 10011-1234 MR G MARIUS APT 7 CASAMARI ABBEY RD ROME GA 30157-0086

INGE DIETRIC-DISCHER HARMANSTRASSE 7 5300 BONN 1 GERMANY

SSGT I KOSNOSKY UNIT 2050 BOX 4190 APO AP 96278-2050

Figure 26: Delivery Addresses

7.3. Return Addresses

The return address can be constructed in the same format as delivery addresses with the exception of optional endorsements and key line data. A return address is required in any of the following situations:

- Mail of any class bearing a printed ancillary service request or an ancillary service request embedded within an Intelligent Mail barcode
- Official mail
- Mail paid with pre-canceled stamps (except USPS Marketing Mail pieces weighing 13 ounces or less and bearing a mailer's postmark)
- Materials bearing a company permit imprint
- Priority Mail
- Periodicals in envelopes or wrappers
- Media Mail, Library Mail, and Bound Printed Matter (except unendorsed Bound Printed Matter)
- Parcel Select
- USPS Ground Advantage
- Registered Mail
- Insured mail
- Collect on Delivery (COD) mail
- Certified Mail if a return receipt is requested
- Priority Mail Express if a return receipt is requested
- Detached Address Labels
- Adult Signature
- USPS Returns services
- All packaging containing hazardous, restricted, or perishable mail in accordance with Publication 52, *Hazardous, Restricted, and Perishable Mail*.

8. Appendix D: Font Considerations

This appendix is included to clarify the definitions, terms, and measurements used in this guide regarding the use of text on labels and to clarify common misconceptions surrounding font and point size which can affect print readability and OCR capabilities.

8.1. Point Size

Point size is a standard measure of type. One point is approximately 1/72nd of an inch. However, that should not be interpreted to imply that a letter printed in a 72-point font will be 1 inch in height.

Font size includes a letter's ascent and descent. Ascent refers to that part of a character that rises above the capsline, and descent refers to that part of a character that falls below the baseline. Few, if any, letters will comprise the total points inherit in a font. A capital letter is measured from the baseline of a font to its capsline, which is a subset of the total font size or font height.



Figure 27: Font Size Basics

The size of the ascent and descent are incorporated in the font design and different fonts may be designed with different ascents and descents. For an example, refer to the differences between Times New Roman and Arial fonts below.



Figure 28: Font Comparison

Because font sizes may differ, the recommendations in this guide are given in both fonts and wherever possible, recommended size in inches. Careful attention to character sizing will ensure the most efficient processing of labels and parcels by USPS.

8.2. Sans Serif

Serifs are the short lines at the end of the main strokes of a character. Sans serif (without serif) refers to fonts without these lines. In the above example, Times New Roman is a serif font and Arial is a sans serif font. USPS OCR equipment requires sans serif fonts for optimum readability.

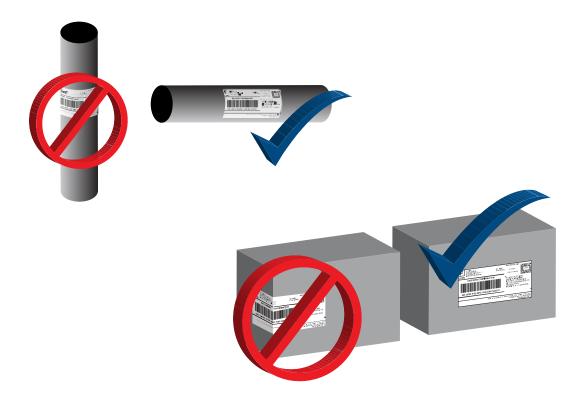
8.3. Recommendations

Fonts such as Arial, Verdana, Helvetica, Avant Garde, Century Gothic and Geneva are recommended for use in creating USPS labels.

9. Appendix E: Label Placement

Improperly applied shipping labels can cause scanning problems and affect the quality of tracking data provided by USPS. The following label placement guidelines will help ensure maximum label scanning and processing.

- a. Always place the label fully on the address side of the package without overlapping the side or any other label. When unmarked, the largest side of the box should be considered the address side.
- b. If for some reason, the Intelligent Mail package barcode appears on a separate label from the delivery address, you should place the barcode above or to the left of the delivery address with less than 1/2 inch between the label and the address.
- c. Do not cover USPS barcodes with tape or plastic wrap that may negatively impact readability of these barcodes.
- d. When placing a barcode onto a convex or round object (such as a mailing tube), it is very important that the barcode be placed on the package such that the bars of the barcode are perpendicular to the curve of the item (note: if a parcel curves in more than one direction, you should consider placing the item within a box or other flatsided container).



10. Appendix F: Sample Labels



Figure 29: USPS Ground Advantage USPS Ship



Figure 31: Priority Mail Express eVS



Figure 30: USPS Ground Advantage ePostage



Figure 32: Priority Mail Cubic

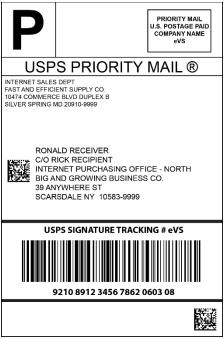


Figure 33: Signature Confirmation eVS

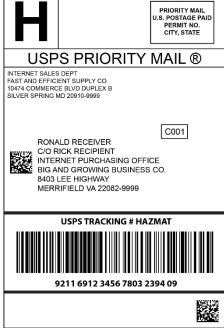


Figure 35: Hazardous Materials



Figure 34: Hold For Pickup



Figure 36: Cubic Soft Pack



Figure 37: USPS Ground Advantage Return

11. Appendix G: Reference Documents

The following documents providing input to this guide may be of interest to the reader:

- a. DMM 202, Elements on the Face of a Mailpiece
- b. DMM 602, Addressing
- c. DMM 604, Postage Payment Methods
- d. GS1 General Specifications
- e. GS1 DataMatrix Guideline
- f. ISO/IEC 15415:2011 Information technology Automatic Identification and Data capture Techniques Barcode Symbol Print Quality Test Specification Two-dimensional Symbols
- g. ISO/IEC 15416, Information Technology Automatic Identification and Data Capture Techniques - Barcode Print Quality Test Specification - Linear Symbols
- h. ISO/IEC 15417, Information Technology Automatic Identification and Data Capture Techniques Barcode Symbology Specification Code 128
- i. ISO / IEC 16022, Information technology Automatic Identification and Data Capture Techniques Data Matrix Barcode Symbology Specification.
- j. Publication 28, Postal Addressing Standards
- k. Publication 52, Hazardous, Restricted, and Perishable Mail
- I. Publication 199, Intelligent Mail Package Barcode (IMpb) Implementation Guide for Confirmation Services and Electronic Verification System (eVS) Mailers
- m. Publication 205, Electronic Verification System (eVS) Business and Technical Guide
- n. USPS2000508, Intelligent Mail Package Barcode (IMpb) Specification
- o. Intelligent Mail Matrix Barcode (IMmb) Technical Specifications

12. Appendix H: Revision History

Version	Author	Change Summary
1.0	P. Klausner	Original source document published 2012
1.1	P. Klausner	Corrected IMpb construct Figure.
2.0	P. Klausner /	Incorporated or revised the following standards: Priority Mail
	Y. Bakalov	Express, day-specific service banner extensions, route code,
		retail distribution code, Critical Mail, MRS IMpb. Removed
		obsolete content pertaining to the discontinued POSTNET and
		Legacy Confirmation Services Barcodes.
3.1	P. Klausner /	Incorporated Ground Advantage. Added IMmb. Updated
	Y. Bakalov	Returns section. Added ePostage, Hazardous Materials and
		USPS PO Box Locker labeling.
3.2	P. Klausner /	Updated USPS PO Box Locker banner to optional.
	Y. Bakalov	
3.3	P. Klausner /	Updated service icon and service banner as required elements.
	Y. Bakalov	Eliminated Parcel Select Lightweight. Renamed PO Box Locker to USPS Smart Locker.
3.4	P. Klausner /	Removed Service Banner Extensions and Parcel Return Service.
3.4	Y. Bakalov	Combined the Return Labels and Other Labels sections into a
	1. Dakaluv	new Returns and Program-Specific Labels section. Updated
		hazardous materials to require the service icon and IMmb.
3.4.1	P. Klausner /	Clarifications added for USPS Ship markings.
3.4.1	Y. Bakalov	Olarinoations added for Oor O orilp Markings.
3.4.2	P. Klausner /	Updated appendix references.
3.4.2	Y. Bakalov	Opualed appendix references.
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Table 5: Revision History