

Designing Mail for Success

Welcome to this workshop presentation titled: Designing Mail for Success.

Let's begin by reviewing the agenda and objectives



During this presentation, I will be providing the technical specifications for designing the following forms of mail: Cards, Letters and Flats.

Keep in mind that due to the limited time of this workshop, I cannot provide or discuss every applicable or possible technical requirement or recommendation related to cards, letters and flats. I will be providing the most critical elements and tips. All of the applicable/necessary standards can be found in our Domestic Mail Manual (DMM) on via our Postal Explorer website at http:pe.usps.gov.



The objectives of this presentation are twofold:

•To empower you with the ability to return to your respective offices and create mailpieces that perform well in the Postal automated mail stream.

•To help you reduce your risk of incurring additional postage at the point of Postal acceptance.



Now that I have provided you with the agenda and objectives, let's get started by reviewing the physical characteristics necessary for designing and mailing postcards.



To qualify for First-Class Postcard postage rates, your design must be made from a single sheet of unfolded and uncreased paper. The dimensions of your design must fall within the minimums and maximums identified on this slide. This parameters are as follows: For height, your design must be at least 3-1/2" inches while not exceeding 4-1/4" inches. The length of your design must be at least 5" inches and cannot exceed 6" inches. With respect to thickness, the paper being used for your design must yield a uniform thickness of between .007" inch to .016" inch. With this in mind, avoid using any form of die-cuts on postcards. The use of any form of die-cut on a postcard will result in the design no longer qualifying for postcard rates and it may result in the design being considered non-mailable.

In general, Postcards must be rectangular in shape, but can have rounded or finished edges so long as the radius of the rounding does not exceed 1/8" inch. A good tool for use to ensure compliance for postcards with finished edges is a credit card. Virtually all credit cards in use today maintain finished edges that are equal to or less than 1/8" inch. Simply overlay your credit card over your design to verify the radius.

Now when it comes to Postcards, one really important thing to remember is that postcard postage rates only exist in our First-Class pricing structure. I bring this to your attention because frequently customers mail postcard size designs under our Presorted Standard pricing structure. In these cases, those customers knowingly or not pay letter prices for their postcard size designs.



Now that we have reviewed the dimensional requirements for Postcards, let's review the applicable formatting requirements for the face/address side of the design.

The address side of a card is the side bearing the delivery address and postage. The address side may be formatted to contain a message area. Cards that do not contain a message area on the address side are subject to the applicable standards for the rate claimed. Miscellaneous graphics or printing, such as symbols, logos, or characters, that appear on the address side of cards not containing a message area are generally acceptable provided the items are not intended to convey a message. Cards claimed at the Presorted or automation card rates that contain a message area on the address side must be divided vertically or horizontally and meet the following additional standards, as applicable.

Vertically divided cards.

The address side of the card must be divided into a right portion and a left portion, with or without a vertical rule. The left portion is the message area.

The delivery address, postage, and any USPS marking or endorsement must appear in the right portion. The right portion must be at least 2-1/8 inches wide (measured from the right edge of the card, top to bottom inclusive).

For cards claimed at the Presorted rate, nondelivery address information may extend into the right portion only above the address block and if the information is shaded or surrounded by a border that has at least 1/8 inch clearance between the delivery address block and the border. Mailers may choose not to shade or border the nondelivery address information if there is at least 1/8 inch of clear space around the delivery address block. For cards claimed at the automation rate, the standards for automation-compatible mail in *Physical Standards for Automation Letters and Cards*, must be met.

UNITED STATES POSTAL SERVICE •	
Postcards - Horizontally Divided	
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For horizontally divided postcards, the address side of the card must be divided into an upper portion and a lower portion, with or without a horizontal rule. The portion of the address side that does not contain the delivery address is the message area. The delivery address, postage, and any USPS marking or endorsement must appear within the portion containing the delivery address. As an alternative, when the delivery address appears within the lower portion, it is permissible for the postage, return address, and any USPS marking or endorsement to appear in the upper portion. The portion bearing the delivery address must be at least 1-1/2 inches high (measured from the top or bottom edge of the card, as applicable, right edge to left edge inclusive). For cards claimed at the Presorted rate, nondelivery address information may extend into the portion containing the delivery address only if it appears above the address block and if the information is shaded or surrounded by a border that has at least 1/8 inch clearance between the delivery address block and the border. Mailers may choose not to shade or border the nondelivery address information if there is at least 1/8 inch of clear space around the delivery address block. For cards claimed at the automation rate, the standards for automation-compatible mail in Physical Standards for Automation Letters and Cards and Barcode Placement, must be met.



In addition to the dimensional and formatting standards that we have reviewed, let's go over some other important considerations to keep in when designing postcards.

The first additional consideration is the use of perforations or tearing guides. In general, postcards containing these perforations or tearing guides do not tend to perform or hold up well during postal processing on automated equipment. If perforations must be used, consider the following: Use of a "Per to Bridge" ratio of 1:1 or better with no more than 8 perforations per inch. Avoid using vertical perforations, but if you must consider refraining from applying perforations within ½" of either the top or bottom edge.

Another consideration to keep in mind with respect to postcards is the Aspect Ratio. While retail or nonautomation postcards are not required to be designed within an acceptable Aspect Ratio, postcards being claimed at automation rates must afford an acceptable Aspect Ratio. We will discuss the Aspect Ratio in-depth during the upcoming letter-size mail portion of this presentation.

The next consideration is the creation of double cards. Remember that the second panel must be created solely for reply purposes and that it cannot contain a message to the original addressee.

The last consideration for postcards involves where mailer applied barcodes can be positioned along with understanding Postal needs with respect to background and print colors. Since this consideration is the same when designing letter-size mailings, we will cover these elements during the letter-size design portion of this presentation.



In order to create letter-size designs for successful processing on Postal automated equipment, you need to be mindful of and understand the following automation compatibility characteristics.



For a letter-size design to be considered automation compatible, it must be rectangular in shape. Not only is this important for automation, but note that all mail 1/4" inch of less in thickness and non-rectangular in shape is considered non-mailable. As information, a square is a rectangle so it is mailable as a letter. Unfortunately, letter-size squares present a different problem, which we will discuss later in a few slides.

Now like postcards, your letter-size card designs can contain slightly rounded or finished corners with a maximum radius of 1/8" inch. Again a good tool that can be used to verify compliance is on of your credit cards.



In addition to being rectangular in shape, a letter-size design must also meet these minimum and maximum height, length, thickness and weight standards. Some important facts to remember here as follows:

If your design is less than 3-1/2" inches in Height, less than 5" inches in Length or both, the design will not be automation compatible and it will also not be mailable. On the other in of the spectrum, your design will no longer be considered a letter if it exceeds the maximum dimension for Height, Length and/or Thickness. You will also want to make a note that weight plays a part in the automation compatibility of the design. As a result, I have provided some of the maximum weights and applicable associated special standards.



The next important characteristic is the orientation of the delivery address on your proposed design.

In the previous slide, I provided the minimum and maximum dimensions for a letter. What I did not tell you was how to determine the processing category (is it a letter, a flat or a parcel) of your proposed design. For determining the processing category, the length is defined as the longest dimension regardless of address placement and the height is considered the dimension that is perpendicular to the length. Now how you orient the delivery address on the design will not change it's processing category (if it started off as a letter it will remain a letter), but it can impact the design's rate eligibility and/or mailability. When you place the delivery address on the design, the dimension that runs parallel with the delivery address is considered the length and the dimension running perpendicular is the height. Let's look at the examples on this slide to obtain a better understanding of what I am trying to say. In example 1, you will note that the design's longest dimension is 9" inches with a perpendicular side of 6" inches and it's thickness is 1/8" inch. Based on these dimensions, the proposed design falls into the letter processing category. Now let's look at the two examples that contain lines representing different address orientations for this design. Example 2 shows the delivery address orientated parallel to the design's longest dimension and therefore neither the length or height of the design changes with respect to mailability or rate eligibility. Unfortunately, example 3 show the delivery address oriented parallel to the design's shorter dimension. In this case for mailability and rate eligibility purposes, the length is now considered 6" inches and the height is considered 9" inches. As a result, this letter would be considered non-machinable.



When it comes to successful processing on Postal automated equipment, "Flexibility" is an important element. As a result, your letter-size design must be flexible enough to bend around the various radial drums that are present within our equipment. As information, our letter processing equipment generally processes mail at a rate of 40K pieces per hour, which equals roughly 11 pieces per second.



Up to this point, I have provided you with specific needed characteristics for your letter-size mail to be successfully processed on Postal automation equipment. In this slide and the next, I want to discuss some specific characteristics that you want to avoid.

Avoid using closures (such as clasps, buttons, or similar closure devices) as well as enclosing odd-shaped items (such as pens, pencils or loose keys) within your mailing design.



In addition, avoid enclosing or wrapping your design in any plastic material. As information, translucent envelopes are considered to be made of plastic and are not automation compatible.



Remember when I told you previously that a letter-size square shape was considered rectangular and mailable, but presented different automation compatibility concerns? What I was referring to was this. In addition to being rectangular in shape, the letter-size design must also afford an acceptable Aspect ratio. The Aspect ratio is determined by dividing the length of the design by it's height. The result must fall between 1.3 to 2.5. In the case of a square shape, such as say 5" inches x 5" inches, the Aspect ratio afford would be (obtain audience input). That's correct. The Aspect Ratio of a square will always be "1", which falls outside of the necessary perimeters for automation compatibility. This means that a letter-size square is mailable, but considered non-machinable. An easy way to verify the Aspect Ratio for your designs is to obtain and use the Postal Service's Notice 3A template.



Lets discuss some of the basic design standards specific to letter-size folded self-mailer (FSM) designs:

Dimensions: Height: 3.5" to 6" max. Length: 5" to 10.5" max. Weight: Up to 3 oz.

The minimum paper basis weight for a Basic FSM format is 70lb Book grade. When a Basic FSM letter format exceeds 1 ounce weight, the minimum paper basis weight increases to 80lb Book grade. All references to paper basis weight are at **Book** grade except where newsprint paper is allowed.

When optional elements are incorporated into the design (such as permissible die-cuts, perforated pull-open strips and popp-out panes, loose enclosures and attachments), the minimum paper basis weight is at least 80lb Book grade but also increases for pieces over 1 ounce total weight.

FSMs using newsprint are required to be quarter-fold style only and must be minimum 55lb newsprint paper. Quarter-fold with newsprint paper formats also require 1.5" minimum non-perforated tabs.



FSM fold patterns can either horizontal or vertical in relation to the length of the mailpiece.

For horizontal folded pieces the final fold is always at the bottom with the final panel folded up to the top on the non-address side.

Vertical folded pieces, commonly known as "oblong" have the final fold on the lead edge with the final panel folded from lead to trail edge on the non-address side.



When one or more sheets of paper are folded, sections referred to as panels are formed. Each of these sections is a separate panel.

Here are the basic rules for folded self-mailer panels.

1. Both sides of a panel are "one and the same" panel.

2. Panels are equal or nearly equal in size. If panels vary in size, the shorter panels are covered by full size panels.

3. Internal partial or shorter panels count toward the total number of panels allowed.

4. Final panel is folded from bottom to top on the non-address side, or from lead to trail edge on the non-address side of an oblong style mailpiece.



Flaps are optional. They can be internal or external and are almost always incorporated into the closure method. Like panels, there are specific standards for the size and orientation of external flaps that are intended to prevent damage or opening of letters in automation letter sorters.

External flaps on pieces with horizontal folds must be folded from top down on the non-address side. Flaps must be at least 1.5" long as measured at the longest point, but cannot extend any closer than 1" from the bottom edge.

Similar to panels, external flaps on vertical folded pieces are folded from the lead edge toward the trail edge. These flaps must be at least 5" long as measured at the longest point but cannot be any closer than 1" from the trail edge. That minimum length is needed to prevent snags when other pieces enter the machine stacker bin.

External flaps may be die-cut shapes, but it is highly recommended these shapes be a rounded, oval or soft line shape. Die-cut flaps must be sufficiently sealed to the non-address side panel to prevent snagging on other mailpieces or sort equipment. We highly recommend the use of a glue-line seal that follows the contour of the die-cut shape to create a solid seal.



There are many closure method options for sealing folded self-mailers. Adhesives, commonly known as glue, tabs or cohesive are acceptable options. A proper closure is very important to ensure the mailpiece maintains physical integrity from transport, to entry, to delivery.

Adhesives come in many forms and are applied to one panel or flap which is adhered by the glue to the opposite panel or flap. Cohesive material is not a glue and therefore must be applied to opposing panels that when pressed together, the pressure applied to the two cohesive portions permanently bonds the panels. Continuous glue lines are recommended. If using glue spots, which are round or irregularly shaped, or elongated glue lines which are line segments, a minimum of three are required. Four are required if the piece weight exceeds 1 ounce. The adhesive is placed on the edge opposite the final fold, or on the lead and trail edge for horizontal folded pieces, or along top and bottom of oblong pieces. The outer two spots or elongated glue lines are placed within ¹/₄" of the edges, the third and fourth placed in line with the outer ones and are spaced evenly across the remaining space.

Tabs can be used but **cannot** be perforated or placed on the bottom edge. A minimum of two tabs is now required. Three tabs may be required when the total weight is over 1 ounce and/or optional design elements are incorporated. Basic style FSMs under 1 oz only require two 1" tabs.

There are options available for tab placement. Both tabs can be placed along the edge opposite the final fold, so both can be placed at the top, or on trail edge of an oblong style FSM. For horizontal folded pieces, tab placement can also be one on the lead and the other on the trail edge, both within 1" from top. If a third tab is required, it must be placed on the lead edge within $\frac{1}{2}$ " from bottom. In creating even more alternatives to meet mailer needs, two 2" tabs may be used in lieu of the three tab closure method.

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I've included slides of three of the most common booklet designs. I thought it would be helpful to go through a few to illustrate how paper weight, sealing method, and maximum and minimum size requirements vary between the various designs.

When developing the new booklet standards, Postal Headquarters tested pieces submitted by mailers over a 2-year time frame to determine what design changes would reduce jams and damage to the mailpiece. They also had to consider the impact the new standards would have on the mailing industry. The required minimums are incremental changes which will help to reduce the jams and damage to the mailpiece. The recommended paper weights and tab size (e.g., 2" when 2.5 oz or more) give the booklet more of a chance of processing with less, and in some cases, no jams or damage. This is a good point for mailers to consider when choosing between using the minimum required or recommended minimum paper weight or tab size.

Maximum weight for booklets is 3 ounces. A letter size piece weighing more than 3 ounces is considered a heavy letter and must be prepared in a sealed envelope.



READ SLIDE

Mailers should take note of the different minimum paper weight requirements that apply based on the size of the mailpiece. Tests showed the weight of the paper had a major impact on the amount of jams and damage to the mailpiece.



This design is of a booklet which has cover pages that are longer than the interior pages. Frequently, the ends of the cover pages are folded down to form a perforated flap, which generally includes a coupon or information the recipient wants to keep. The new standards require that this flap be folded to the inside of the booklet and that it must not be perforated. During the tests the engineers observed booklets with this design with flaps that were perforated and folded to the outside of the booklet. They observed many of these flaps that did not stay sealed down, which allowed other mailpieces to get caught under the flap. Additionally, many times the perforations burst during processing.

In addition to nonperforated flaps that must be folded to the inside, this design can be perfect bound or saddle stitched. The top open edge must be sealed or secured closed. We prefer the top open edge be sealed with a continuous glue line along the flap. But, mailers are allowed to use glue spots instead of a continuous glue line. If glue spots are used, there must be at least two glue spots which each must be a minimum of 1" in diameter and be placed along the top edge within $\frac{3}{4}$ " of the right and left edges.

This design must use a minimum of 80 pound paper for the cover of the booklet. The maximum length is 9.5".



While the mailing standards allow the folded spine to be on the leading or trailing edge, booklets with the folded spine on the trailing edge tested less successfully when the height of the booklet exceeded 5 inches. We suggest placing the folded spine on the leading edge when the height will be more than 5 inches.

Maximum Weight – 3 oz. Maximum Height – 6 inches Maximum Length – 10.5 inches Cover paper weight – 40 Lb



We have discussed or defined characteristics that either negatively impact or enhance our ability to successfully process your mail through our automated equipment, but that's just half the battle.

We now need to talk about the other half of the process which is equally important. In addition to the need for your mailing designs to be able to successfully get from one end of our equipment to the other, we also need for our equipment to be able to successfully find and read either the address information or for automation eligibility the mailer applied barcode that appears on the mail. With this in mind, there are several considerations that you must be aware of.

No matter whether your letter-size design is a envelope, card style, folded self-mailer or booklet type piece, consider avoiding or at the very least limiting the use of the material identified in this slide.



In addition to the material being used, the colors selected for the background and print on the mailing design is equally important. What we really want is a nice black print for the barcode with a white background that appears directly behind or in close proximity to the barcode. This allows for maximum reflectance and contrast. Can you use different colors for the print and background? Possibly. It depends on the combination. In general, a dark print in conjunction with a light pastel color background typically affords the necessary minimums for both reflectance and contrast. Its when you try to go outside of this realm where the end result becomes more difficult to know. If you are considering a print and background combination outside of what has been described, I recommend that you create a mock-up of the proposed design and provide it to a Mailpiece Design Analyst for evaluation. They have the tools necessary to review the sample and to provide you with the needed guidance to ensure a color scheme success. Near the end of this presentation, I will provide you with the contact information for our MDA helpdesk.

Again, these readability standards apply not only to letters, but includes postcards and flats as well.



While the material, background and print color play a significant role in our whether our automated equipment is successful in reading the print or barcode appearing on your design, another important element deals specifically with the positioning of the mailer applied barcode on your design.

You have the following placement options for Intelligent Mail® barcode on your letter-size design. The barcode can either be printed within the lower right conventional barcode clear zone or as part of the address block.

If printing the barcode within the lower right conventional barcode clear zone, you will note that the horizontally right most bar of the barcode must be positioned between 3-1/2" inches to 4-1/4" inches from the lower right edge and that Vertically, the barcode must be within the area between 3/16 inch and 1/2 inch, both measured from the bottom edge of the piece

If you print the barcode within the delivery address block (either directly above or below the delivery address), the barcode must be positioned so that the right most bar of the barcode is positioned at least $\frac{1}{2}$ " inch away from the right edge, the left most bar is positioned at least $\frac{1}{2}$ " away from the left edge and is no more than 10-1/2" inches away from the right edge, the bottom of the barcode and address block must be at least $\frac{5}{8}$ " inch away from the top of the barcode can be no more than 4" inches away from the bottom edge.

As information these barcode positioning requirements are the same for postcards.



We have discussed the applicable standards and recommendations for creating postcards and letter-size designs that can be successfully processed on Postal automated equipment.

Lets turn our attention now to reviewing and understanding the standards and related recommendations for designing flat-size designs for automation success.



When it comes to flat-size dimensional requirements, one important thing to remember is that they vary depending on whether the mail is trying to qualify for automation or not. In general, non-automation flats must exceed on or more of the maximum dimensions for letters while not exceeding the maximum dimensions identified in this slide. As you can see in this slide, the minimum dimensions for automation flats are different. For automation flat rate eligibility, the minimum height is 5" inches and the minimum length is 6" inches. The minimum thickness for automation flats is .009" inches.

Another thing to remember is that unlike postcards and letters, the orientation of the delivery address on flats have no bearing on identifying the height or length of the design. The length will always by the longest dimension and the height will be the dimension that runs parallel to the length.



Another important element for successfully designing flats is placing the delivery address in the proper location. Due to the deployment of new flat sorting equipment, the Postal Service implemented revised address placement standards for flats in March of 2009. This slide shows some examples of how to position the delivery address on a catalog style flat-size design. (*go over the examples in the slide at this point*). We have also published Poster 182 that provides a more in-depth listing of examples for reference including envelopes, flat-size cards and designs enclosed in polywrap. These revised standards apply to all classes of flat mail except for First-Class flats. Additionally, understand that mail not bearing the delivery address properly oriented will be subject to the corresponding First-Class postage rate.



Like postcards and letters, flat-size designs also need to be flexible enough to be successfully processed through Postal automated equipment. This slide shows how to perform the flexibility test on all flats. Go over the procedures listed below:

All flats

1. Place the piece with the length parallel to the edge of a flat surface and extend the piece halfway off the surface.

2. Press down on the piece at a point 1 inch from the outer edge, in the center of the piece's length, exerting steady pressure.

3. The piece is not flexible if it cannot bend at least 1 inch vertically without being damaged.

4. The piece is flexible if it can bend at least 1 inch vertically without being damaged and it does not contain a rigid insert. No further testing is necessary.

5. Test the piece according to 1.3b. or 1.3c. below if it can bend at least 1 inch vertically without being damaged and it contains a rigid insert.

If your flat design contains any rigid items, additional flexibility testing is required.



While automation flats need to be flexible (as we discussed on the last slide), they can not be too flimsy. This slide shows the testing procedures and deflection standards necessary for flats that are 10" inches or longer. Go over the following testing procedures:

For pieces 10 inches or longer

1. Place the piece with the length perpendicular to the edge of a flat surface and extend the piece 5 inches off the surface. Turn the piece around 180 degrees and repeat the process.

2. The piece is automation-compatible if it does not droop more than 3 inches vertically.

Note that for flats that less than 10" inches in length, the maximum droop cannot exceed two inches less than the amount of length extended over the edge



Like postcards and letters, our flat sorting equipment also needs to be able to locate and read the mailer applied barcode. Now as you will notice with this slide, the available location for applying the mailer applied barcode on flats is far less restrictive than the standards for postcards and letters.

In general, the mailer applied barcode can appear anywhere on the flat-size design so long as it as it is positioned more than 1/8" inch away from any edge.



As with postcards and letters, the are also other considerations to keep in mind when creating flat-size designs.

One major consideration is maintaining a uniform thickness. Flat-size mailpieces must be uniformly thick so that any bumps, protrusions, or other irregularities do not cause more than 1/4-inch variance in thickness. When determining variance in thickness, exclude the outside edges of a mailpiece (1 inch from each edge) when the contents do not extend into those edges. Also, exclude the selvage of any polywrap covering from this determination. Mailers must secure nonpaper contents to prevent shifting of more than 2 inches within the mailpiece if shifting would cause the piece to be non-uniform in thickness or would result in the contents bursting out of the mailpiece.

Another important consideration involves the use of polywrap coverings. If you plan to use polwrap or poly bags, make sure that you purchase the material from an approved vendor listed on our RIBBS website. You will also want to ensure that you adhere to our seam and overhang (selvage) standards.



Go over the listed available resources.



Go over the MDA helpdesk contact information.



That concludes this presentation.

At this time, I would like to open the floor up to questions regarding any of the topics that where discussed during our presentation.

ANSWER QUESTIONS.

We appreciate your time and attention today and we hope that you have found our workshop to be beneficial to you. Have a great day!