

General 2D Intelligence Reference Guide

Division of Enterprise Technology Guide

Owner: Bureau of Publishing and Distribution

Effective Date: 1/10/2018

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Applicable For: DOA/DOA-Supported Agencies

Guide

BPAD requests that 2D document intelligence be used on all mailings, regardless of size, to optimize document security and inserter accuracy and efficiency.

The use of 2D barcoding leverages industry best practices to provide the most reliable mailing integrity and security. The Primary/Input 2D codes are scanned at the inserter to assemble page sets correctly and select the proper insert. Human readable characters are also printed below the barcode for the operators to visually verify that the machine is reading the document intelligence correctly. The Secondary/Output 2D barcode contains a sequence number and is placed in the address block for scanning on output after the document has been sealed in an envelope for mailing, ensuring that number of envelopes mailed matches the number expected. The address block barcode also contains a human readable component.

2D barcode document intelligence is the most reliable way to ensure the correspondence in each envelope reaches the intended recipient, greatly reducing the risk of PII or HIPAA security breaches.

Primary/Input Code:

1-3 - The first 3 characters of this 26-character code must be broken down by bit and serve as instructions for the inserting equipment. These characters can hold information such as sub-setting, diverts, and insert station select. Please see “2D Character Bit Level Programming” and “2D Intelligence Input and Output Strings” documents for further information.

4 – The 4th character is a spare and should always be a 0.

5-6 – Characters 5 and 6 indicate the sheet number within the set (i.e. 01, 02, 03). 7-8 – Characters 7 and 8 indicates the total number of sheets within the set.

9-14 – Characters 9-14 contain the 6-digit sequence number (i.e. 000001, 000002, 000003)

15-26 – Characters 15-26 can be used to store any desired job name information.

Secondary/Output Code:

1-6 – Characters 1-6 contain the 6-digit sequence number (the same as characters 9-14 of the primary code).

7-14 – Characters 7-14 can be used to hold job name information, note that this field is not as extensive as the job name information from the primary code.

Note: Please complete testing, submit final art, data (see [file processing guidance](#)), and a PSO form (DOA-3055) at least 4 days prior to intended mail date. BPAD must approve all paper stock as flecks in paper can impact the camera’s ability to interpret 2D codes. Also remember that testing or proofing delays will extend our turnaround time by however long it takes for revisions and approval.

[Sample breakdown of sets.](#)

Return address area
Upper Panel Option

☒ Mailing address area
000001 Upper Panel Option

Secondary/Output Code - .1378" x .1378" (3.5mm x 3.5mm)

This code must be a minimum of "1/2" over from the edge of the page when using BPAD enterprise envelopes. If using a non-enterprise envelope, ensure the 2D code is moved in 1/8" minimum from where the envelope window begins.

Please inquire with BPAD customer service for additional address placement options.

ADDRESS PLACEMENT

Primary/Input Code - .25" x .25" (6.35mm x 6.35mm)

A 3/16" clear zone is required on all sides of the 2D matrix. This includes from the edge of the sheet and all other print.



Table 1: Reference for Input 2D Inserting String

Character #	Bit #	Description	Notes
1	1	End of set	Last page of set
	2	End of subset	Last page of subset
	3	Spare	
	4	Start of subset	First page of subset
	5	Start of set	First page of set
2	1	Divert by Read	First page of set
	2	Unseal	First page of set
	3	Envelope Mark	First page of set
	4	Sequence Off	First page of set
	5	Select Station #1	First page of set
3	1	Select Station #2	First page of set
	2	Select Station #3	First page of set
	3	Select Station #4	First page of set
	4	Select Station #5	First page of set
	5	Select Station #6	First page of set
4		Spare	First page of set
5-6		Sheet Sequence within set	Every page of the set
7-8		Item count	Every page of the set
9-14		Envelope sequence number (1 – 999,999)	Same on every page set
15-26		Job Number	Every sheet of run

Table 2: Reference for Output 2D Inserting String

Character #	Bit #	Description	Notes
1-6		Envelope sequence number (1 – 999,999)	Same on every page set
7-14		Job Number	Every sheet of run

Table 3: Character Bit Level Programming

Input Character	Bit 1 (value 16)	Bit 2 (value 8)	Bit 3 (value 4)	Bit 4 (value 2)	Bit 5 (value 1)
1	0	0	0	0	1
2	0	0	0	1	0
3	0	0	0	1	1
4	0	0	1	0	0
5	0	0	1	0	1
6	0	0	1	1	0
7	0	0	1	1	1
8	0	1	0	0	0
9	0	1	0	0	1
A	0	1	0	1	0
B	0	1	0	1	1
C	0	1	1	0	0
D	0	1	1	0	1
E	0	1	1	1	0
F	0	1	1	1	1
G	1	0	0	0	0
H	1	0	0	0	1
I	1	0	0	1	0
J	1	0	0	1	1
K	1	0	1	0	0
L	1	0	1	0	1
M	1	0	1	1	0
N	1	0	1	1	1
O	1	1	0	0	0
P	1	1	0	0	1
Q	1	1	0	1	0
R	1	1	0	1	1
S	1	1	1	0	0
T	1	1	1	0	1
U	1	1	1	1	0
V	1	1	1	1	1

Version History (Completed by Policy Office Staff)

Version	Revision Date	Description of Changes
1	2/11/2026	Convert guide to ADA compliant template.