

American National Standard for Financial Services

X9.100-111-2004
(Formerly published as ANS X9.53-1996)

Specifications for Check Endorsements

Secretariat

Accredited Standards Committee X9, Inc.

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American National Standards Institute

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Foreword

(This Foreword is not a part of American National Standard Specifications for Check Endorsements, ANS X9.100-111-2004)

The American National Standards Institute first published the American National Standard Specifications for Check Endorsements, ANS X9.3-1981, in response to recommendations of a Joint Exception Item Task Force, consisting of members of the American Bankers Association, the Bank Administration Institute, the Federal Reserve, and commercial bankers.

In 1985, the Federal Reserve Board implemented a requirement for notice of dishonor for large dollar checks, which mandates notice by a payor institution to the Bank of First Deposit directly, rather than via the chain of endorsements.

In 1988, the Federal Reserve enacted Regulation CC and carried this concept further by requiring the expeditious return of checks to the Bank of First Deposit. Regulation CC did not require bypassing intermediate institutions, for, in some instance, Federal Reserve Banks are themselves intermediate institutions. Therefore, the present document addresses differentiation and highlighting of that critical endorsement, the Bank of First Deposit (BOFD). This standard, however, also recognizes the ongoing need to identify the chain of endorsers and responds to that need by streamlining the endorsements of holders subsequent to the BOFD.

In 1993, the ASC X9 developed the standard ANS X9.36, Legibility Specifications for Endorsements in order to enhance the human readability of endorsements, which are required by Regulation CC. In 1995 the ASC review committee combined the intent of ANS X9.36 and ANS X9.3 into ANS X9.53-1995 because significant forces of change had altered the needs of the industry with respect to endorsements. ANS X9.53 superseded ANS X9.36 and ANS X9.3-- both of which have been withdrawn.

In 2000 the ASC review committee found it necessary to incorporate reflectance and PCS specifications for the Payee and Bank of First Deposit Areas to further improve endorsement legibility, especially in imaging applications. This new standard, ANS X9.100-111 replaces ANS X9.53 with new "image friendly" specifications, while adapting to a new ASC X9B numbering system. This standard still provides specifications to financial institutions and their customers on endorsement content, legibility, and color as well as separate placement of three kinds of endorsement: payees, Bank of First Deposit, and subsequent institutions. It includes the use of a legibility gauge, although ASC X9 makes no representation or warranty with respect to the gauge. Effective 2003, all ANS X9B standards will be renumbered as detailed in ASC X9/TG-100, available as a free download at <http://x9.org/docs.html>.

The establishment of these specifications is considered another step leading toward automation of the return item process and reduction of related exception item processing costs. With the increased use of imaging technology to provide further automation in check processing, compliance of the legibility specifications is especially important as the use of color to separate endorsements is of diminishing usefulness.

Furthermore, the developers of this standard recognize current initiatives and work efforts that are focusing on the development of Image Replacement Documents may require the promulgation of additional endorsement standards to identify both truncating and reconverting banks. To that end, the X9 Committee is expecting to identify new markers, such as brackets or asterisks, to distinguish the new endorsement identities that are expected to be introduced. American Standards Committee X9B will not attempt to specify new endorsement requirements in this standard, but will review this standard for impacts at the appropriate time.

The user's attention is called to the possibility that compliance with this standard may require use of an invention covered by patent rights.

By publication of this standard, no position is taken with respect to the validity of this claim or of any patent rights in connection therewith. The patent holder has, however, filed a statement of willingness to grant a license under these rights on reasonable and non-discriminatory terms and conditions to applicants desiring to obtain such a license. Details may be obtained from X9.

Approval of an American National Standard requires verification by ANSI that the requirements for due process, consensus, and other criteria for approval have been met by the standards developer.

Consensus is established when, in the judgment of the ANSI Board of Standards Review, substantial agreement has been reached by directly and materially affected interests. Substantial agreement means much more than a simple majority, but not necessarily unanimity. Consensus requires that all views and objections be considered, and that a concerted effort be made toward their resolution.

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Introduction

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Suggestions for the improvement or revision of this Standard are welcome. They should be sent to the X9 Committee Secretariat, Accredited Standards Committee X9, Inc., Financial Industry Standards, P.O. Box 4035, Annapolis, MD 21403 USA.

This Standard was processed and approved for submittal to ANSI by the Accredited Standards Committee on Financial Services, X9. Committee approval of the Standard does not necessarily imply that all the committee members voted for its approval.

At the time it approved this standard, the X9 committee had the following members:

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Under ASC X9 procedures, a working group may be established to address specific segments of work under the ASC X9 Committee or one of its subcommittees. A working group exists only to develop standard(s) or guideline(s) in a specific area and is then disbanded. The individual experts are listed with their affiliated organizations. However, this does not imply that the organization has approved the content of the standard or guideline.

The X9B14 working group that developed this standard had the following members:
Daniel Welch, Chair, Bank of America
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Specifications for Check Endorsements

1 Scope

This standard provides for the legibility and uniformity of the endorsement process. It specifies the parameters for the design elements on the back of the check and the placement and data content of endorsements. This standard includes an informative annex that provides a method for measuring the legibility of endorsements with the use of a legibility gauge.

This standard is not intended to modify existing MICR standards for checks.

2 Normative reference(s)

The following standards contain provisions that, through references in this text, constitute provisions of this American National Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this American National Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below.

ANS X9.7-1999, Bank Check Background and Convenience Amount Field

ANS X9.13-1999, Specifications for the Placement and Location of MICR Printing

ANS X9.18-1998, Paper Specifications for Checks

ANS X9.27-2000, Print and Test Specifications for Magnetic Ink Character Recognition.

ANS X9.51-1998, Document Fraud Deterrent Icon

ANS X9/TG-2, R1995, Understanding and Designing Checks

ANS X9/TG-100-2003, Organization of Standards for Paper-based and Image-based Payments

Federal Reserve Regulation CC: Section 229.35--Indorsements and Appendix D

American Bankers Association Key to Routing Numbers. Skokie, IL: Thomson Financial Publishing (revised bi-annually).

NOTE: Be aware that Standards and Technical Guidelines are regularly revised. In all cases the most recent revision date represents the correct version. Be especially careful if the revision date indicates that the referenced publication is more than five (5) years old. Also, all Standards and Technical guidelines are cross-linked. In the event that the same information is referenced in two or more standards, the publication with the most recent revision date is considered to be the correct version.

3 Definition(s)

3.1 aligning edge (X9.13)

The bottom edge of a document when its face is viewed.

3.2 arrow points (X9.100-111)

Special symbols to be used before and after the nine-digit routing number in endorsements by the Bank of First Deposit; for example, > 111122223 <.

3.3 Bank of First Deposit (BOFD) (X9.100-111)

Same as "Depository Bank."

3.4 block form of endorsement (X9.100-111)

A format of endorsement in which the contents are arranged in successive lines, such that the minimum width is consumed by the endorsement.

3.5 carbonized band (X9.100-111)

A band of carbonized material on the back of the check to facilitate a carbon impression of critical information. The most common form of this band will extend from leading edge to trailing edge on the reverse of the check.

3.6 clear band (MICR) (X9.27)

A horizontal band, 0.625 inch high, on the front and back of the document, measured from the aligning edge, that must be free of any magnetic ink other than that of the E-13B font.

3.7 depository bank (X9.100-111)

3.7.1 The first bank to which a check is transferred, even if such bank is also the paying bank or the payee; or

3.7.2 a bank to which a check is transferred for deposit in an account at such bank, even if the check is physically received and indorsed first by another bank.

3.8 endorsement or indorsement (X9.100-111)

Information used to transfer a negotiable instrument from one holder to another.

Endorsements are placed on a document by payee(s), by the Bank of First Deposit, and by institutions subsequently handling the document.

3.9 endorsement areas (X9.100-111)

Regions on the reverse of a check reserved for endorsements according to a functional role in the collection of cash items.

3.10 full endorsement (X9.100-111)

The endorsement placed on a document by the Bank of First Deposit. This endorsement includes the nine-digit routing number, date, institution's name/location, trace/sequence

number and branch. The full endorsement will also include the “arrow points” at each end of the nine-digit routing number.

3.11 leading edge (X9.13)

The right edge of a document when its face is viewed.

3.12 legibility (X9.100-111)

Legibility is defined as the quality of a letter or numeral that enables a reasonable observer to identify it positively and quickly to the exclusion of all other letters or numerals.

3.13 linear form of endorsement (X9.100-111)

As used in this standard the linear form of endorsement is that in which the contents of the endorsement are laid out next to each other in a straight line extending horizontally across the check, so as to consume the least vertical space.

3.14 print contrast signal (PCS) (X9.7)

The ratio of the print contrast of a specific printed point to the reflectance of its surrounding background.

3.15 reflectance (X9.7)

The ratio of light reflected from a test sample to light reflected from a standard, such as barium sulfate. Reflectance is expressed as a percentage. Reflectance measurement uses photopic spectral response to simulate the human eye, diffuse illumination and viewing geometry, black sample backing, and a 0.008-inch circular area.

3.16 routing number (X9.13)

The nine-digit numeric identifier of a financial institution as assigned by the American Bankers Association or its agent. Routing Numbers are used for routing purposes on checks, and virtually all other MICR documents, such as deposit tickets and batch tickets. A specific numeric series is reserved for internal bank usage.

3.17 trailing edge (X9.13)

The left edge of the document when its face is viewed.

3.18 transit endorsement (X9.100-111)

The transit endorsement is an endorsement placed on the document by an institution handling the document after the Bank of First Deposit. This endorsement is limited to nine-digit routing number and date, with trace/sequence numbering optional. “Arrow points” are not allowed.

4. Endorsement Characteristics

4.1 BOFD and Transit Endorsement Ink

BOFD endorsement shall be in black ink. Black is also the recommended ink color for all other endorsements. Print Contrast Signal (PCS) of the endorsement shall minimally be 0.30.

4.2 Endorsement Areas, Priority and Location

The back of the check is reserved for endorsements.

Note that endorsement location and security features information is encouraged as long as it does not interfere with endorsement legibility. See 4.3.2, Background PCS, and see Figure 5 for an example.

4.2.1 Endorsement Priority

The following priority considerations must be made in designing and processing checks.

- (1) Payee Endorsement
- (2) Endorsement of the first financial institution through which the document is negotiated.
- (3) Endorsements of subsequent institutions processing the document.

4.2.2 Endorsement Locations (See Figure 1)

4.2.2.1 Payee Endorsement Area

The area nearest the trailing edge and extending 1.5 inches toward the leading edge shall be reserved for the payee to endorse the item. Any legends that are to be placed on the back of the check (e.g., release of claims) shall allow the payee to endorse in this specified area without interference.

4.2.2.2 Bank of First Deposit Area

The area commencing 3.0 inches from the leading edge of the document and extending to 1.5 inches from the trailing edge is defined as the Bank of First Deposit Area. The full endorsement of the Bank of First Deposit shall be placed in this area, but should be limited to the area above the MICR Clear Band and within 2.750 inches from the aligning edge. No other endorsements should encroach upon the Bank of First Deposit area.

4.2.2.3 Transit Endorsement Area

The area extending from the leading edge of the document and extending 3.0 inches toward the trailing edge shall be reserved for transit endorsements. Transit endorsements should be limited to the area above the MICR Clear Band.

4.3 Endorsement Area Background

4.3.1 Reflectance

The reflectance of the background in all endorsement areas on the back of the check shall be a minimum of 60% as measured by the method given in the annex of ANS X9.7.

4.3.2 Background PCS

The methods for measuring PCS are defined in the ANS X9.7 Annexes. See Figure 4.

4.3.2.1 Transit Endorsement Background

The PCS within the background of the Transit Endorsement area shall not exceed 0.30 with the exception of any legends in a 0.15-inch wide band parallel to the leading edge of the check.

4.3.2.2 Bank of First Deposit Background

The PCS within the Bank of First Deposit (BOFD) Area shall not exceed 0.18.

4.4 Endorsement Area Data Content

4.4.1 Payee Endorsement Area

The Payee Endorsement Area shall be reserved for endorsements of the payee (and other holders) prior to deposit. Endorsements in this area may be handwritten, hand stamped, typed, or machine printed. See Figure 3 for an example of a customer endorsement stamp.

4.4.2 Bank of First Deposit Area

The Bank of First Deposit Area shall be reserved exclusively for the endorsement of the BOFD. This endorsement shall be the full endorsement of the institution. A full endorsement includes nine-digit routing number bracketed by arrow points, date, institution's name/location, and optionally branch, telephone number, and trace/sequence number. When using a block form of endorsement, the endorsement should be entirely in this area. However, overflow out of this area is allowed, provided that the nine-digit routing number (with arrow points) shall be entirely contained in the area, and that the majority of information remains within the area. When using a linear form of endorsement, the routing number as the key identification element shall be contained in the Bank of First Deposit Area. Other elements of the linear endorsement may extend into other areas as necessary. See Figure 2 for examples of acceptable forms of endorsement.

4.4.3 Transit Endorsement Area

The Transit Endorsement Area shall be reserved for transit endorsements by institutions. These endorsements shall be limited to nine-digit routing number, date, and trace/sequence number. All transit endorsements shall be entirely contained within this area. Elements shall not extend into the Bank of First Deposit Area. Additional payee information and other holders that cannot be contained in the limited space available for the payee endorsement may be put in the transit endorsement area.

**PERSONAL AND BUSINESS SIZED CHECKS
(Back Orientation)**

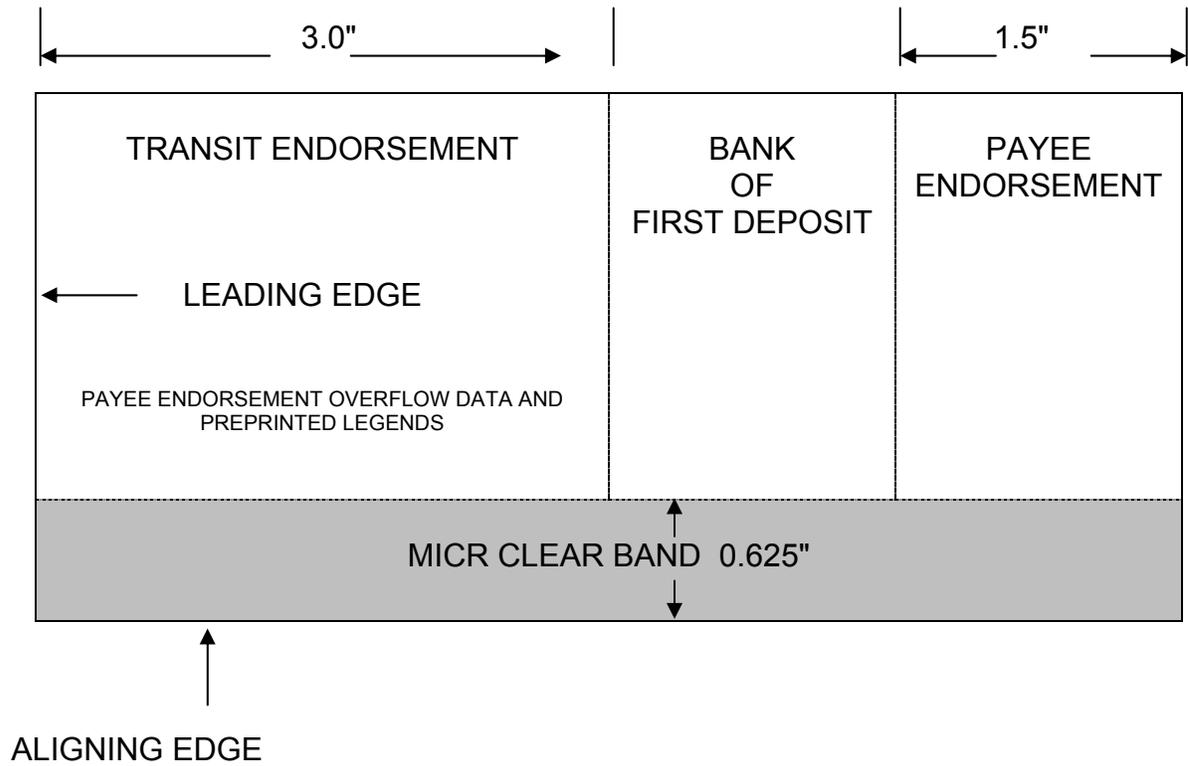


Figure 1 – Endorsement Locations

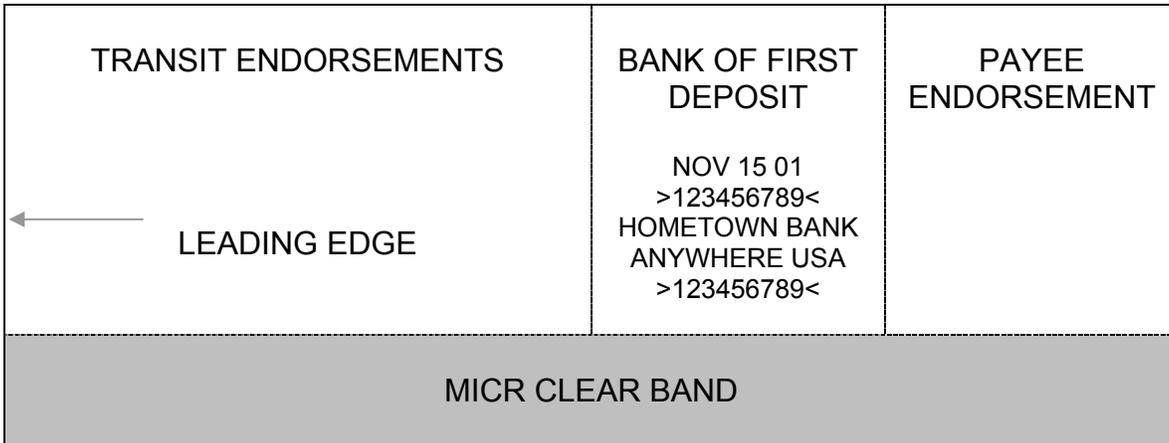


FIGURE 2A (10 POINT ARIAL)

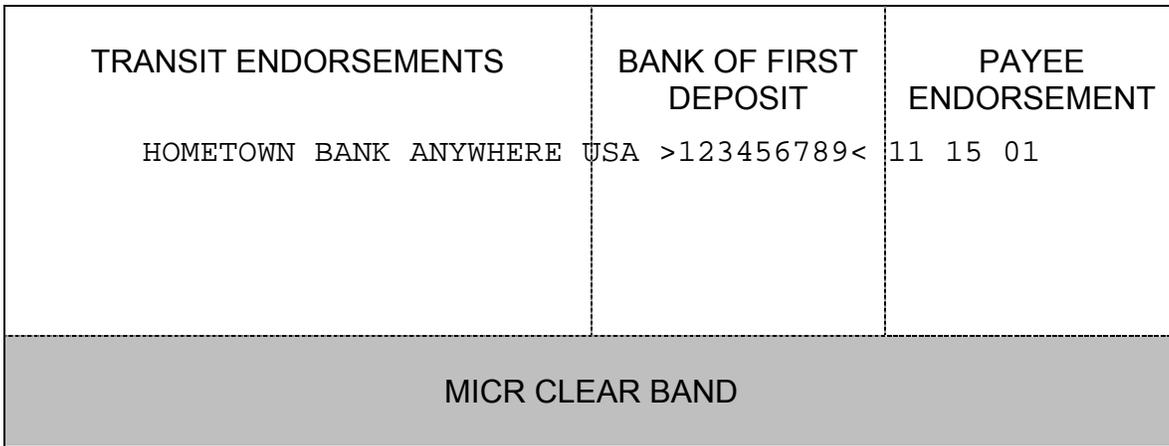


FIGURE 2B (12 POINT COURIER)

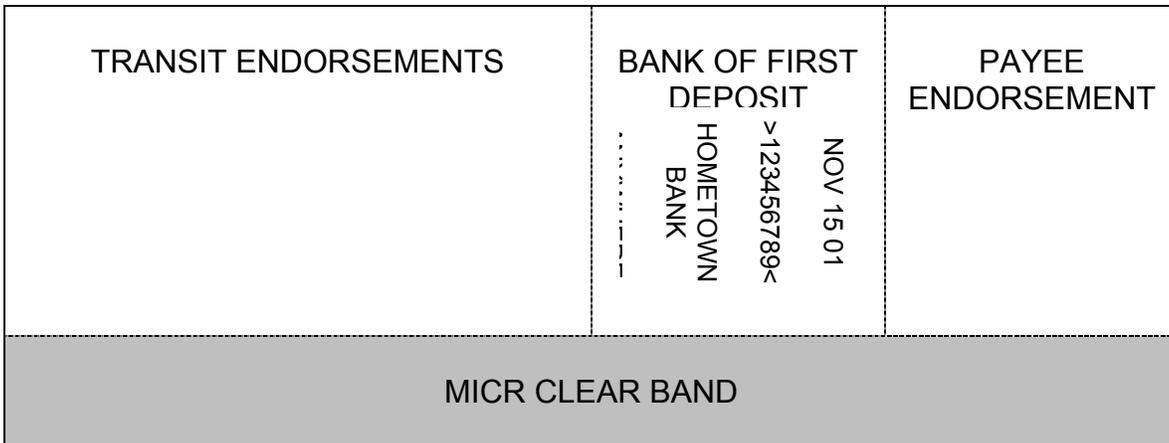


FIGURE 2C (10 POINT ARIAL)

Figure 2 – Examples of Acceptable Forms of Endorsement

PAY TO THE ORDER OF
YOUR INSTITUTION
YOUR CITY, U.S.A. 12345
000067894
FOR DEPOSIT ONLY
THE ABC COMPANY
123-456-78

Figure 3 – Sample of a Customer Endorsement Stamp

Endorsement Areas on Checks Between
Minimum Check Size (6.00" by 2.75") and
Maximum Check Size (8.75" by 3.67")

**VIEW OF BACK
OF CHECK**

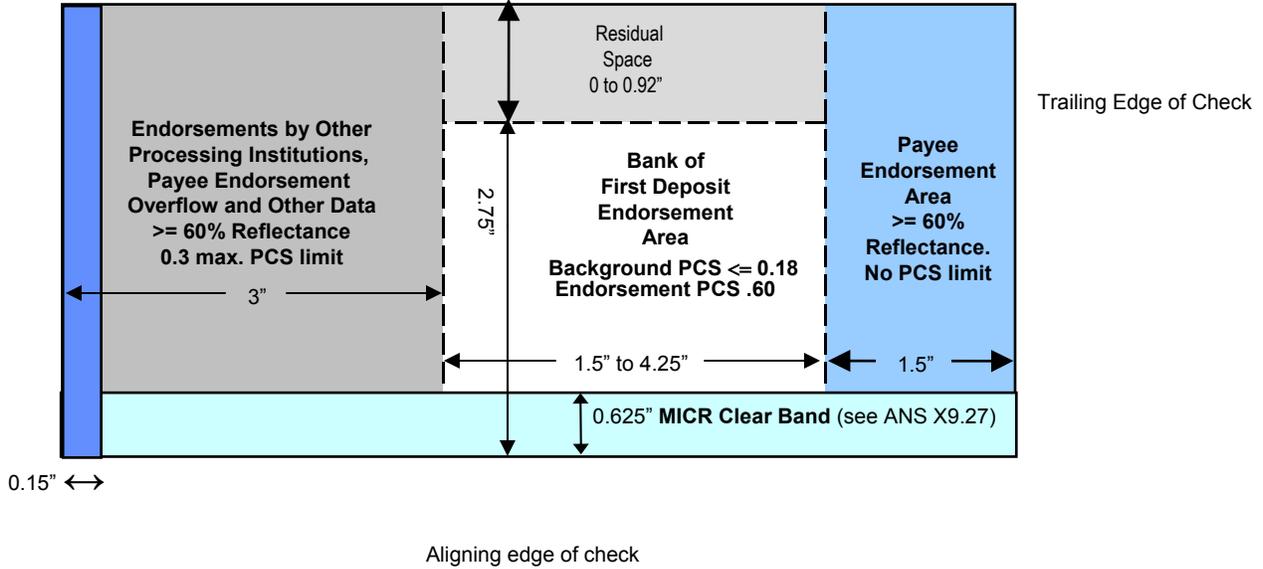


Figure 4 – Master Layout for Back of Check

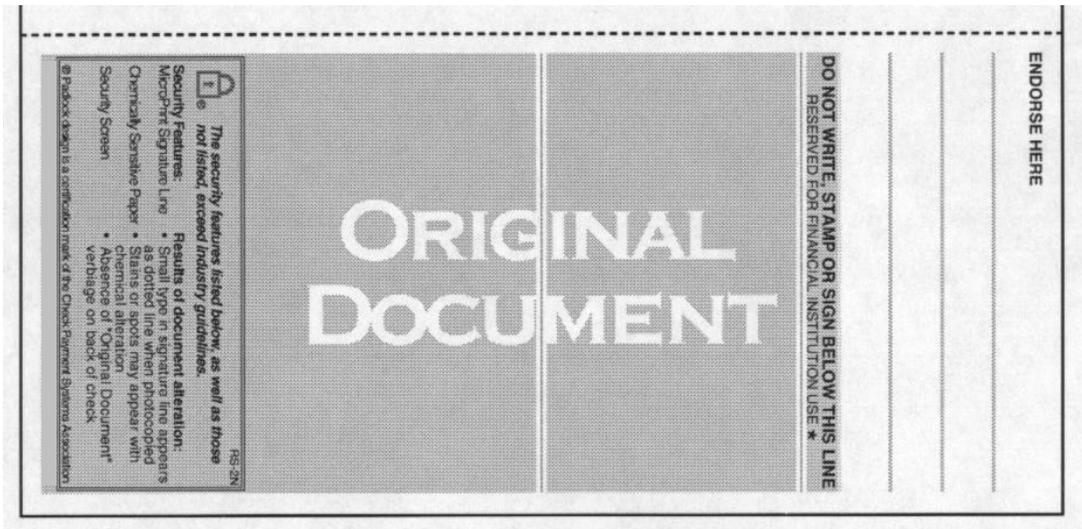


Figure 5 – Sample Safety Warnings with Dropout Background Shown

Annex A (informative)

Implementation Considerations

(This annex is not a part of American National Standard Specifications for Check Endorsements, X9.100-111-2004, but is included for information purposes only.)

A.1 General

The Federal Reserve Board issued Regulation CC in 1988 with requirements for the Bank of First Deposit endorsement data content and placement. The required endorsement must include the nine-digit routing number bracketed by arrow points, date, institution's name, and location. Optionally, an endorsement may include a telephone number, and/or a trace/sequence number. This annex expands on endorsements and provides some guidance on improvements in check design, endorser design, font shape, and ongoing maintenance that can enhance the legibility of check endorsements.

A.2 Education

Financial institutions should undertake an education of all account holders in the proper endorsement of a check. Emphasis should be placed on the need to include in the endorsement the name of the financial institution in which credit for the item is received. Financial institutions should consider providing customers with stamps that include the institution's nine-digit routing number and the account number of the account holder. These stamps should be designed such that the data can be placed on the check within the boundaries of the Payee Endorsement Area. Commercial customers should include the nine-digit routing number of the deposit institution as part of any automated endorsement devices. An example of an endorsement stamp for a customer is shown in Figure 3.

A.3 Check Designs

Check designs should conform to the payee endorsement location. Suppliers of checks should be encouraged to promote endorsement area designators or targets printed in a light color or dropout ink to encourage payee endorsement in the correct location.

A warning box listing the security features embodied in the check may be placed in the transit endorsement area provided that the ink used to print the statement will not interfere with the legibility of the transit endorsement. The warning box should be placed in the Transit Endorsement Area as close to the leading edge as possible. See ANS X9.51 for more specific details. See Figure 5 for an example.

A.4 Endorsement Equipment

Equipment vendors should provide at least two customer selectable endorsement areas. They are encouraged to continue the present practice of providing unique endorsement locations within their own product line. This practice has reduced the problem of superimposing endorsements on subsequent handlings.

A.5 Importance to Imaging Applications

Imaging applications are especially sensitive to marginally legible endorsements. Compliance to this standard is particularly important to preserve as readable, the endorsement contents within an image of the check.

A.6 Intermediary Processors Responsibility

Check processors should initiate procedures insuring that items received that have been previously processed, are endorsed in the Transit Endorsement Area.

A.7 Additional Information on Endorsement Printing

The benefits derived from the standard by the banking industry would be further enhanced if:

1. Bank of First Deposit endorsements are designed with large size (i.e., 10 point or larger), upper case, and open-faced type. Some type styles that can accomplish the purpose of legibility are Arial, Courier, Geneva, Helvetica, Monaco, New York, and Times Roman.
2. Endorsements are applied evenly and are dark enough so that all information is legible, but not with so much ink that typefaces fill in, causing information to be unreadable.
4. Endorsement layouts are designed so that the nine-digit routing number avoids the carbon band found on some checks. The endorsement avoids the reverse of the MICR Clear Band area so as to facilitate other applications of this region, such as automating return item handling (see Figure 2).
5. Regularly scheduled maintenance is performed to ensure proper operability of the endorsing mechanism.

A.8 Warning on Optional Endorsement Content

Depository banks are warned not to include information in the endorsement that could be confused with the required information. For example, a nine-digit zip code could be confused with the nine-digit routing number.

A.9 Legibility of Endorsements

A basic measure of legibility as applied to check endorsements is the probability that an observer can correctly identify each independent nine digit routing number from an endorsement. There are four major factors - contrast, reflectance, size of the graphic elements, and the resolution of the printing process - that contribute to the legibility of an endorsement. The size of the graphic elements (e.g. line width, character width and height, openness of type style, etc.) should be sufficiently large to allow a margin of safety for satisfactory reading. Those who print endorsements must allow for this margin of safety,

noting that legibility is directly affected by other factors, including viewing distance and illumination at the work site as well as the resolution of the printed information. Information on endorser plates, rolls, and stamps should be limited so a large type font (e.g., Helvetica 10 point type or greater) can be used. Duplicating the routing number in another place within the endorsement area also provides a significant opportunity for improved reading.

Equipment manufacturers of endorser mechanisms should consider the use of technologies that provide consistent print quality without the need for frequent operator maintenance. Indicators or messages for replacing ink cartridges or ribbons can encourage the operator to provide the recommended maintenance at the proper interval. The designer of font shapes for matrix print endorsers should consider the likely confusion of characters such as 0, 8, 6, and 9 when one or two ink dots are missing or obscured. Each financial institution should frequently review the placement and printing of endorsements by its customers and other processors and develop a means of communicating when placement of their endorsement is improper.

A.10 Impacts and Liability for Illegible Endorsements

Readers should recognize that the potential exists for losses to occur as a result of unreadable endorsements. Specifically, punitive charges may be assessed to banks responsible for delaying the return cycle by misqualifying returns. Additional information on liability is available in Regulation CC and UCC. Information about other Federal Reserve practices is available from any Federal Reserve office.

A.11 Prior Endorsement Guarantees

When Payee Endorsements are omitted--which is common practice in lockbox collection arrangements--a collecting financial institution automatically guarantees prior endorsements (or the absence of prior endorsements). Under the UCC, a specific guarantee of prior endorsement is not necessary. (See UCC 4-207(a) and 4-208(a).) Use of guarantee language in endorsements, such as "P.E.G." ("Prior Endorsements Guaranteed"), may result in reducing the type size used in bank endorsements, thereby making them more difficult to read.

A.12 Carbonized Band

Use of a carbonized band is not recommended because of potential interference or potential conflicts with other requirements of this standard and legal regulations. When present, it should be contained in an area between 1.400 inch and 1.900 inch above the aligning edge. See Figure 6 for an example of a document with a carbonized band.

Depiction of Business check with carbon stripe on back. The holes to the right are used for alignment in a register type record system and would be removed prior to the check entering the payment system.

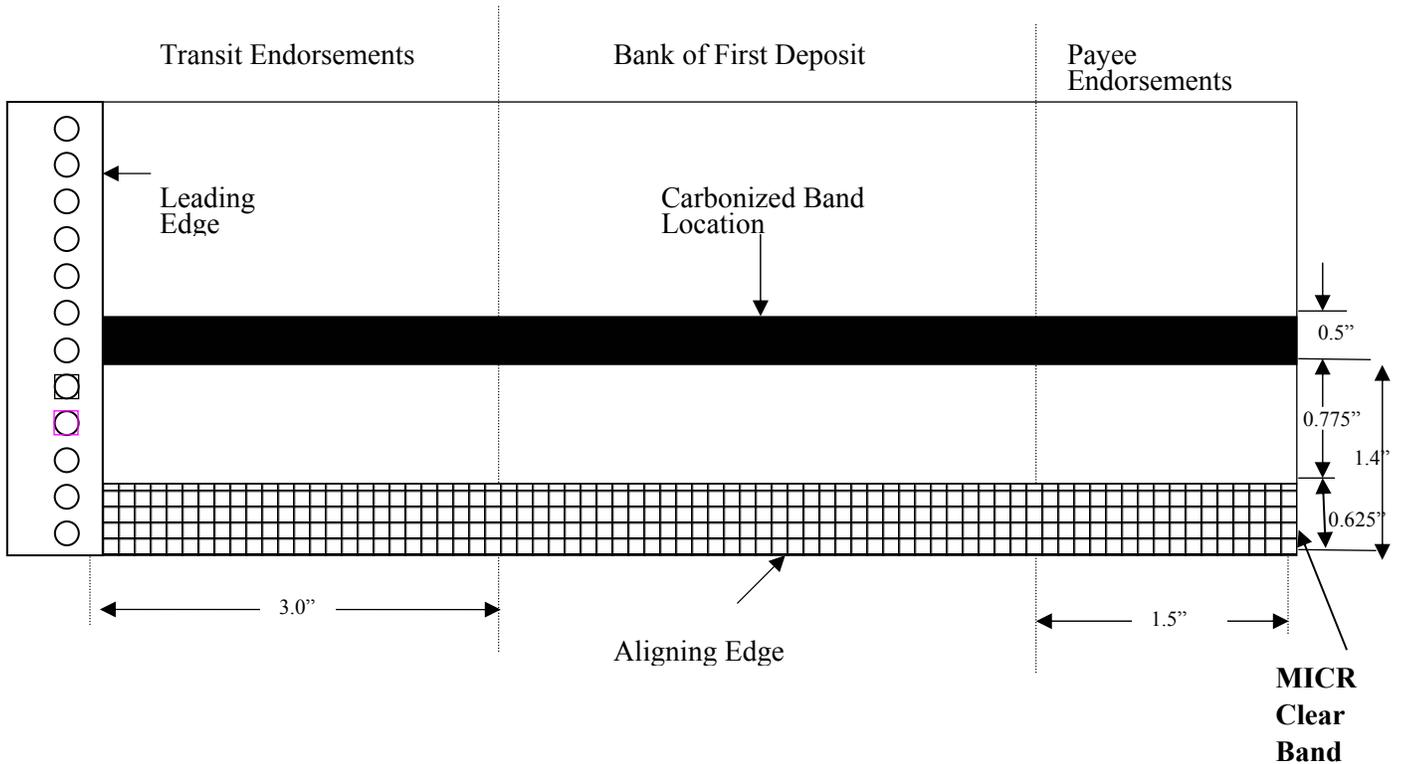
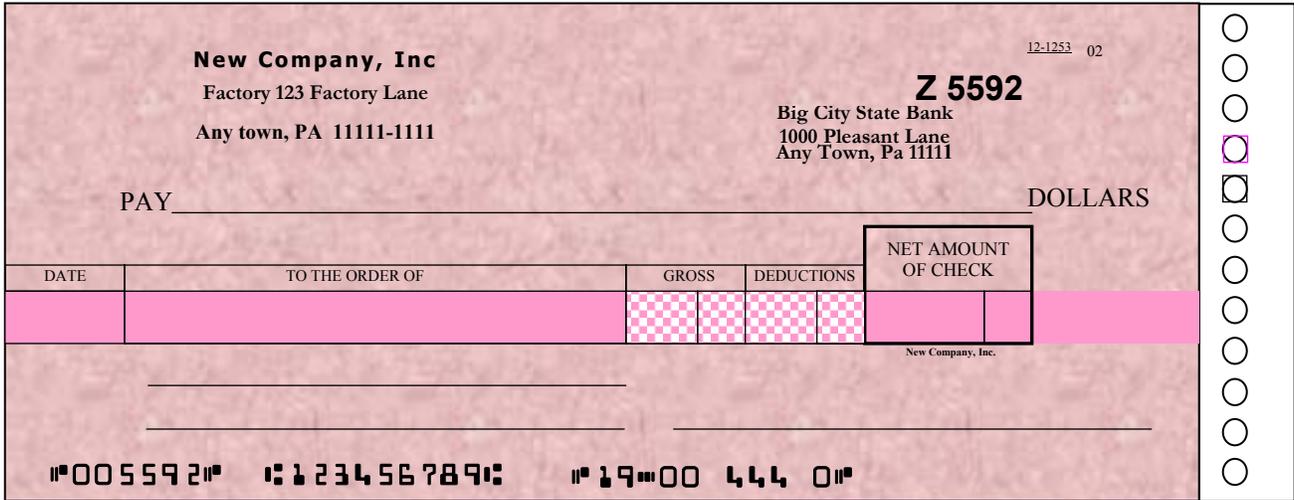


Figure 6 – Sample Business Check with Carbonized Band

Annex B (informative)

Legibility Testing

(This appendix is not a part of American National Standard Specifications for Check Endorsements, X9.100-111-2004, but is included for information purposes only.)

B.1 Legibility Gauge

1. A gauge can be used to obtain numerical values for endorsement print quality. The Legibility Gauge No. 2, available through Clearwave Electronics, or a functional equivalent may be used. The higher the gauge reading step, the greater the legibility of the endorsement. The minimum step number at which endorsements will be acceptable under this standard is step 4. Any reading lower than step 4 requires that action be taken to improve endorsement print quality.
2. Gauges may be obtained by contacting:

Clearwave Electronics Inc.
8701 Buffalo Avenue Niagara, Falls NY 14304
Toll free: 888 751 8977
FAX: 888 751 8988
E-mail: sales@clearwave.net

B.2 Procedure for Testing Compliance of Endorsements

1. To insure correct operation of the legibility gauge, take readings on the calibration guide print samples (provided with the gauge package). Measurements shall be within one number of the printed values.
2. When the calibration procedure has been completed satisfactorily, evaluation of the legibility of endorsements can begin. Place the document to be evaluated endorsement side up, on a ¼-inch thick (or greater) pad of flat, unlined, white paper.
3. Position the gauge over the endorsement, readable side up, and in firm contact with the endorsement to be evaluated. Handle the gauge by the edges to avoid rubbing or smearing surfaces.
4. View the endorsement through the gauge at a normal reading distance and under good lighting conditions.
5. Start at step #15, where the endorsement is not likely to be read through the gauge. Use progressively lower steps until all the endorsement characters can be read easily.

6. Reposition the gauge very slightly upwards and sideways at this step, still maintaining firm contact, to maximize the interference, if any, of the gauge pattern at the selected step with the endorsement characters.
7. If the endorsement cannot be read easily, move the gauge down one step and repeat Clause B.2.6.
8. If the endorsement can still be read easily, record the step number at which legibility of the endorsement has been established.
9. Repeat measurements should agree within plus or minus one numerical step.

Annex C

(informative)

Impacts of Check Imaging and Truncation of Original Paper Checks

(This annex is not a part of American National Standard Specifications for Check Endorsements, X9.100-111-2004, but is included for information purposes only.)

As the banking industry speeds toward payment electronication goals, it is important that banks and their customers prepare for truncation of original paper items in favor of digital image replacements. Toward that end, it is important that consideration is given to some less common applications of paper checks—specifically, that financial institutions work with customers to avoid complications with maintaining legal equivalency of payments, without exposure to losses or other legal encumbrances.

Commentary on Regulation CC, Section 229.35 addresses the usage of contracts and loan agreements of checks and states that a paying bank is assigned responsibility for a loss resulting from a delay in return caused by endorsements that are not readable because of other material on the back of the check at the time that it was issued. While paying banks may shift these risks to their customers by agreement, it is recommended that guidelines be established to assure compliance to the standard and to protect from losses.

ANS X9.100-111 requires that non-endorsement printing within the Bank of First Deposit and Transit Endorsement Areas be printed at a PCS level that would have minimal impact to endorsement legibility and, ideally, drop out in imaging applications. While that has traditionally provided some leeway for printing “overflow” of lengthy legal legends that were not easily contained in the Payee Endorsement, it should be considered that information that does drop out would not be available for production of legal substitute checks as defined in the Check Clearing for the 21st Century Act which becomes effective on October 28, 2004.

The standard does allow for printing drawer information at higher, non-drop-out, PCS levels in the Payee Endorsement Area, which is where such information is usually found and where it should not interfere with critical endorsement information. Check designs that include drawer information printed in the Payee Endorsement Area should consider all elements for both human and machine readability. Additional recommendations regarding endorsement printing, including recommendations for fonts, are included in Annex A.

Annex D
(normative)

Conversion Table - Inches to Millimeters

<i>Inches</i>	<i>Millimeters</i>
0.150	3.810
0.500	12.700
0.625	15.875
0.775	19.685
0.920	23.368
1.400	35.560
1.500	38.100
1.900	48.260
2.750	69.850
3.000	76.200
3.670	93.218
4.250	107.950
6.000	152.400
8.750	222.250