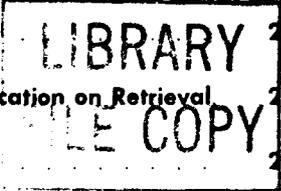


**PROGRAM DOCUMENTS  
ON  
105-mm MICROFICHE**

JUN 29 1983

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Pagination Sequence	3	1.03 Program documents are distributed throughout the Bell System to all locations requiring the software documentation associated with Stored Program Control Systems (SPCS), such as Electronic Switching Systems and for programs designed for use with general-purpose (commercial) computers having specific Bell System applications. They are essential to the understanding of how the	
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Bell System except under written agreement

## SECTION 006-310-100

systems operate and include descriptions of the programs, program listings, and office-sensitive data.

### B. Requirement Precedence

1.04 The interpretation of the words "shall" and "should," as used herein, is as follows:

- (a) The word "shall" indicates a mandatory requirements.
- (b) The word "should" indicates a desirable requirement which may be waived after suitable investigation and consideration of the requirement application. Otherwise, such requirements shall also be considered mandatory.

### DESCRIPTION

#### A. Microfiche

1.05 A microfiche is a sheet of microfilm containing multiple micro-images in a grid pattern. (See Fig 1.) It usually contains a header and/or other identification of its contents readable without magnification. The first generation fiche (master microfiche) can be a solid sheet of 105-mm film, 148 mm long, or can be made up from strips of 16-mm film. When stripped-up fiche is used as the master, an intermediate microfiche (second generation copy) is frequently used for producing user microfiche because it is easier to handle and typically less fragile.

#### Polarity

1.06 All micro-images of program documents shall be negative (clear lines on a dark background).

#### Reduction and Magnification on Retrieval

1.07 The simulated or actual reduction for all documents shall be 24X +1.0X -0.5X. Magnification on retrieval of information through the use of prints or reader screen images shall be a minimum of 20.5X, except that in systems where the microfiche information content is entirely upper case alphanumeric information and micro-images simulate or are a 24X reduction of minimum 0.1-inch height characters, a magnification minimum 18.0X is permissible. Source documents must be of library quality to insure legibility.

1.08 Documents are recorded on film by photographing hard copy originals (source document method) or by recording directly on film from digital data by use of a COM device.\* The information is then available in a uniform reduced format for later use in readers and/or reader-printers which magnify the images to readable size. Silver halide film is specified for permanent records because of its archival qualities.

1.09 Diazo copies of the silver microfiche are used by Bell Laboratories in the design and development of programs; by Western Electric to meet engineering, production, and installation needs; by the Bell Operating Companies (BOC) for the engineering, operation, and maintenance of their offices; and by AT&T for similar purposes.

1.10 Substantial savings accrue from the use of microfiche instead of paper at the reproduction and distribution levels, which permits lower documentation costs to Bell System users. Simplified filing plus reduced floor space and filing equipment requirements also add to these savings.

#### Header

1.11 Each microfiche shall have a header (title area) containing title and indexing-type information, readable without magnification, which adequately identifies the micro-image content. (See Fig 1.) Headers may be positive or negative. Headers with colored backing can serve to code fiche, thereby facilitating retrieval from a user's file. The header shall conform to the following specifications:

- (a) Location—Shall be at the top of each microfiche.
- (b) Micro-images—Shall not appear in the header area.
- (c) Header backing —If an opaque or semi-opaque backing material is used behind the header, it shall not increase the thickness of the microfiche by more than 0.013 mm (0.0005 inch).

-----  
\*A COM device is a recorder that converts binary digital data from a computer into human or machine readable form (usually on the face of a CRT screen) and records the information on microfilm.

Header information is not usually reproducible by printing when opaque or semi-opaque backing is used. Accordingly, header backing may be used on user microfiche where appropriate but shall not be used on master microfiche.

- (d) Header backing material—Shall be light in color to provide contrast with header information; applied uniformly; and restricted to the header area.

#### Format

1.12 Format varies with the size and proportions of units of information to be recorded. Table A presents the only row/column grid arrangements approved for program documents. See paragraph 1.19 for filming strategy to be used for specific document types. See Fig 2 through 4.

**TABLE A**  
**MICROFICHE FORMAT**

FORMAT DESIGNATION	NOMINAL REDUCTION	ROWS	FRAME ARRAY		FIG
			COLUMNS	FRAMES	
7x7*	24X	7	7	49	3
7x9†	24X	7	9	63	4
7x14‡	24X	7	14	98	2

-----  
\* 17 by 11 inch documents

† 14 by 11 inch documents

‡ 8-1/2 by 11 inch documents

**Note:** Frame arrays are based on text, contents of source documents, or simulated originals.

#### Right-Reading Images

1.13 When first generation microfiche is held with the header at the top and right-reading, all micro-images shall be upright and right-reading when viewed from the nonsensitized side of the film. Lines of text shall be parallel to the bottom edge of the microfiche.

#### Pagination Sequence

1.14 When a microfiche is held so that the header is at the top and right-reading, the first

micro-image shall be at the top left corner of the grid of the information area. Succeeding frames shall appear in sequence from left to right and downward from row to row, horizontal sequencing (see Fig 5); or from top to bottom and left to right, from column to column, vertical sequencing (see Fig 6). See paragraph 1.19 for page sequencing for specific document types. When desirable, indexing information readable without magnification may be shown within appropriate frames of the information area. Frames may be left blank on microfiche to allow for positioning of additional information on subsequent issues or to separate information categories when more than one information category appears on a microfiche. This should be avoided, when possible, to maximize image packing on the fiche. Documents with different numbers shall not appear on the same fiche.

#### Coordinate Designations

1.15 Frame coordinate designations, eg, A01, AC2, G12, etc, should appear within the information area of each frame as part of the reduced micro-image on all COM and source document-produced documents. (See Fig 4.) The designation should be centered at the top of each frame, preferably outside the sheet borderline, and located so as to avoid the coordinate designation being confused with the section and page numbers of the document. When the microfiche is made by photographing source documents rather than by using a COM device and it is not practical to include the coordinates within the frames, inclusion of the identity of the rows (A through G) is permitted in the left margin centrally located at the beginning of each row. These characters shall be readable without magnification. See Fig 1.

**Note:** Numerical columnar designations, allowed in bottom margins by national microfiche standards, are not recommended in this standard. Microfiche cutters generally use a combination of margin cutmarks and electro-optical circuitry to detect where to actuate the cutter(s). Column designations can cause unwanted cutter operation, and should be avoided.

#### B. Header Content

1.16 Uniformity of header format and content facilitates both the use of microfiche and the retrieval of specific information from large

microfiche files. In this connection, consideration must be given to:

(a) Header text—Information should consist of alphanumeric characters with the following parameters:

- (1) Upper case characters.
- (2) Minimum character height of 0.100 inch (2.5 mm).
- (3) Alphanumeric density of 11.3 characters per inch.
- (4) Vertical separation between consecutive lines of a minimum of one-half the height of the upper case character, eg, 0.050 inch for 0.100-inch height characters.
- (5) Linework of text preferably solid strokes, rather than dots, dashes, scanlines, etc.

**Notes:** These requirements effectively limit header information capacity to a maximum of 3 lines of text by 62 characters per line for the 7-row fiche format when filmed at 24X.

(b) Format and content—The header area shall be divided into fields, each allocated for microfiche identification information as follows (see Fig 7 through 21 for field assignments for specific document types and systems):

- (1) Pagination indicator symbol—When vertical sequencing of images (pages) is used, the indicator symbol V (upper case V) shall appear in the header area. The symbol shall be located close to the left-hand edge of the header (on the second line from the top) where it can be easily seen, and shall precede all other information. (See Fig 6.) When horizontal sequencing is used the indicator symbol H shall appear in this position. (See Fig 5.) Vertical sequencing is normally used for program listings and tabular-type information to facilitate user reference. Horizontal sequencing is used mostly for book-type information.
- (2) Document image identification—The remainder of the left third of the header area shall be used to identify the document as to number, issue, generic, PIDENT, section, rating, etc. Where a restrictive use notice is

applicable to the microfiche contents, the label NOTICE or PRIVATE (readable with the unaided eye) shall appear after the document rating. Asterisks may be used in place of spaces preceding and following the label to highlight its presence. The appropriate proprietary marking such as NOTICE or PRIVATE and text of the proprietary statement shall appear in bold print at the bottom of the index frame of each microfiche requiring the proprietary information marking. Where the microfiche does not provide an index, the applicable proprietary marking and text shall appear as a separate image on each microfiche of the set. The image shall appear immediately after the last image on each fiche.

(3) Microfiche identification/image content index—The right third of the header area shall contain information identifying the microfiche set and shall provide additional indexing information for accessing image information content. Microfiche set identification shall appear in the upper right-hand corner, indicating the specific microfiche and the number of microfiche comprising the complete set, eg, 3 of 12, which identifies the fiche as the third fiche of a 12-fiche set. The space on the two lines immediately below is to be used for detailed indexing information when micro-image content is ordered serially, such as by page number and address for PRs, and to continue sequentially from fiche to fiche. The first and last items in the sequence appearing on the fiche are to be identified.

(4) System identification—The center third of the three lines of the header shall be used to identify the system to which the document images belong plus any subsystem information that may be required. The third line may be used for completing the proprietary label as explained in paragraph 1.16(b)(2).

### C. Micro-image Content

#### Character Sizes

1.17 To assure legibility and reproducibility, alphanumeric characters should conform to the general requirements of Specification X-74308, Standards for Alphanumeric Computer Output Microfilm (COM) for Engineering Information Systems, and Section 006-300-100, Standards for Microfiche of

Source Documents. Where an application requires prolonged viewing of micro-images on a reader, the reader magnification should be such that the user will be viewing character sizes equivalent to those usually found on comparable original paper documents, that is, usually 0.1-inch height upper case characters with maximum information content per document as indicated in Table B.

TABLE B

## INFORMATION CAPACITY OF DOCUMENTS

NOMINAL SIZE OF DOCUMENT PAGE SIMULATED (INCHES)	TEXT CAPACITY (MAX)	
	LINES	CHARACTERS/LINE*
11 by 8 1/2	64	80
11 by 14	64	132
11 by 17	64	160

\*When distribution includes book-bound paper copies these figures become 72, 126, and 155 characters, respectively, to allow for a 1-inch margin along the bound edge for binding or hole punching.

## Indexing Data

1.18 A frame index should be prepared for each microfiche in accordance with the following requirements:

(a) Image size—Micro-images containing indexing data shall be of a size representative of the micro-images on the microfiche, ie, simulating an 8-1/2 by 11 inch page image for a 7x14 array, an 11 by 14 inch page image for a 7x9 array, and an 11 by 17 inch page image for a 7x7 array, at the appropriate reduction.

(b) Contents—The index on each microfiche should contain information such as the document title, the first item and/or page in each image, the first item of each distinct category in image, and the microfiche frame coordinates (frame numbers) where frequently referenced information appears on the microfiche. The index pages should be numbered and should indicate the number of sheets in the set of frames containing

the index, as follows: for a single sheet, 1 of 1; for a 3-sheet set, 1 of 3, 2 of 3, and 3 of 3; etc.

**Note:** The full proprietary notice, if applicable, shall appear at the bottom of each microfiche index page.

(c) When an index is provided, the index frame or frames shall be recorded in their normal sequence as the last frame(s) of the fiche.

## D. Header Layouts and Filming Strategy

1.19 Header layouts, filming procedures, page sequencing, and header backing colors for specific document types are shown in Fig 7 through 21. Table C keys document types to these figures.

TABLE C

## DOCUMENT INDEX

DOCUMENT TYPE	REPRESENTATIVE EXAMPLES	
	DOCUMENT PREFIX	FIGURE NUMBER
Document Index	PG	7
Program Listing	PR	8
Supplementary Information		
General	PK	9
ESS No. 4 Maps	PK	10&11
Program Description	PD	12
Input Message Manual	IM	13
Output Message Manual	OM	14
Trouble Locating Manual	TLM	15
Program Notice	PN	16
Program Change	PC	17
Program Application Instruction	PA	18
Microcode Listing	MC	19
Parameter Data Assembly	PDA	20
Translation Data Assembly	TDA	21
Program Listing Supplement	PRS	22

## E. Production Techniques

1.20 Standards for production are described in Section 006-310-100, Standards for Microfiche of Source Documents; and Specification X-74302, Standard for Computer Output Microfilm (COM) Generated Microfiche.

**F. Legibility, Reproducibility, and Quality Inspection**

1.21 All microfiche images, when displayed on a reader screen or reproduced on paper, must exhibit a high degree of legibility and readability. For this purpose, legibility is defined as the image quality of a character, ie, letter, number, or symbol, which enables the reader to positively and quickly identify it to the exclusion of all other characters. Readability is defined as the quality of a group of characters, recognizable as words or numbers when the reader is familiar with the character set being used. Because of this, when fiche content is viewed "in context," it is sometimes possible for incomplete information to be easily and correctly interpreted, and therefore usable, even though the same information may be unintelligible when considered "out of context." Such obviously usable copy should not be denied quality inspection approval.

**Requirement**

1.22 Prints enlarged from 24X diazo duplicate microfiche made from original silver microfiche shall be legible and not exceed 24.0X nor be less than 20.5X for all microfiche formats. In systems where the microfiche content is entirely upper case, alphanumeric information in which micro-images simulate a 24X reduction of minimum 0.1-inch height characters, a magnification of minimum 18.0X is permissible.

**Method of Testing**

1.23 See Specification X-74302, Standards for Computer Output Microfilm (COM) Generated Microfiche, and Section 006-310-100, Standards For Microfiche of Source Documents. Sections of these standards include applicable requirements for:

- (a) Test materials and equipment
- (b) Microfiche test frames
- (c) Determination and prevention of physical defects
- (d) Film bow and other dimensional criteria
- (e) Background density
- (f) Base density
- (g) Contrast
- (h) Resolution
- (j) Archival quality
- (k) Production methods & materials
- (l) Checking dimensions
- (m) Duplication
- (n) Micro-image placement and orientation.

**G. Microfiche Handling**

1.24 Microfilm emulsions are relatively soft-surfaced media with information content susceptible to damage. Special care should be taken in handling and filing all microfiche in order to prolong usefulness as an information vehicle. This becomes more important when characters are smaller and more easily obliterated. In this regard the following items should be given consideration:

- (a) The use of clean, soft, light-colored gloves in handling dry film minimizes deposits of dirt, oil, fingerprints, and harmful chemicals, and helps avoid scratches and abrasions of emulsion surfaces, all of which are detrimental to image longevity, clarity, and good reproduction.
- (b) Cleanliness and good housekeeping minimize the presence of dust and dirt particles in the file and film-handling environment. Such particles can block out characters, cause film scratches, and interfere with good emulsion-to-emulsion contact necessary for making satisfactory quality duplicates.
- (c) Storage of microfiche in individual paper "pockets" in a file may aid in file handling and minimize abrasion, scratching, and buildup of detrimental deposits. In the absence of header backing material, such as is the case with original silver reproducibles, pockets can also furnish a contrasting background against which header information may be more easily read. Such advantages should be weighted against the added costs and the reduction in file capacity occasioned by the space taken by the pockets.

## 2. EQUIPMENT

### GENERAL

**2.01** Equipment needed will be specific for local requirements and therefore not covered within the scope of this specification. Listings of approved equipment can be found in Section 006-310-100, Standards for Microfiche of Source Documents, and in the Bell System Evaluation and Standards (BSES) catalog. These listings may be used as guides to the selection of equipment.

**2.02** Consideration should be given not only to the selection of equipment itself, but also to vendor services and the availability supplies, such as toner and paper for reader printers, when deciding from what source to make purchases. Dual fiche and multiple magnification readers and reader printers are obtainable which can expand the versatility of microfiche use. Some units can be used for both fiche and aperture cards.

### 3. GLOSSARY

**3.01** The following microfiche terms apply to this document:

**Column**—A vertical series of images on a microfiche.

**COM Generated Microfiche**—A 105-mm microfilm produced by a computer output microfilming device.

**Frame**—A rectangular area on a microfiche bounded by intersecting grid lines, within which a micro-image may be recorded.

**Frame, Single**—The smallest subdivision of a grid.

**Generation**—The remoteness of a film image from the original film image. The original is called the first-generation film; succeeding reproductions of the first-generation film are called second generation; reproductions of the second generation are called third generation; etc.

**Grid, Microfiche**—A defined array of horizontal and vertical boundaries which divide an area into uniform spaces called frames, within which micro-images may be recorded.

**Header**—Area at the top of a microfiche used to identify its contents.

**Header Backing**—A light-colored material or reflecting treatment applied to the back of the header to make the header information more readily visible.

**Master Microfiche**—A microfiche composed of first-generation film images.

**Microfiche**—A sheet of microfilm containing multiple micro-images in a grid pattern. It usually contains a title which can be read without magnification.

**Micro-image**—A unit of information, such as a page of text or a drawing, too small to be read without magnification.

**Reduction**—A measurement of the number of times a given linear dimension of an object is reduced when photographed, expressed as 18X, 24X, etc.

**Reference Corner, Reference Edge**—Datum from which the positions of frames and other fixed areas on the microfiche are determined.

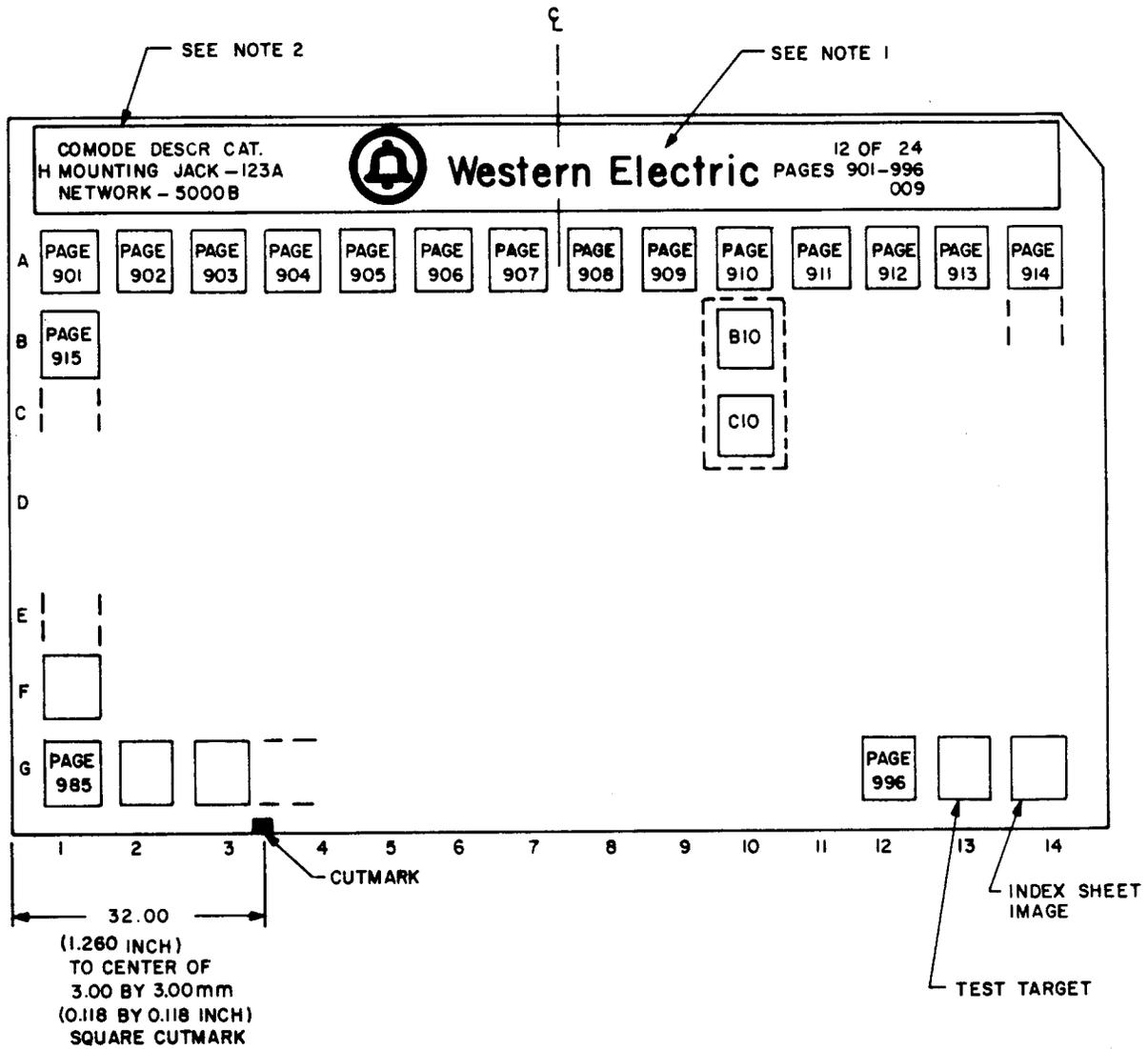
**Resolution**—The ability of optical systems and photo-materials to render visible fine detail of an object; a measure of sharpness of an image, expressed as the number of lines per millimeter, discernible in an image. Resolution in processed microfilm is a function of film emulsion, exposure, camera lens, camera adjustment, camera vibration, and film processing.

**Right-Reading**—Orientation of text or images which are legible in a normal reading position.

**Row**—A horizontal series of micro-images on a microfiche.

**User Microfiche**—A microfiche intended for distribution to users as distinct from master microfiche whose function is to create user microfiche. Normal usage of user microfiche involves display on a reader and preparation of enlarged prints.

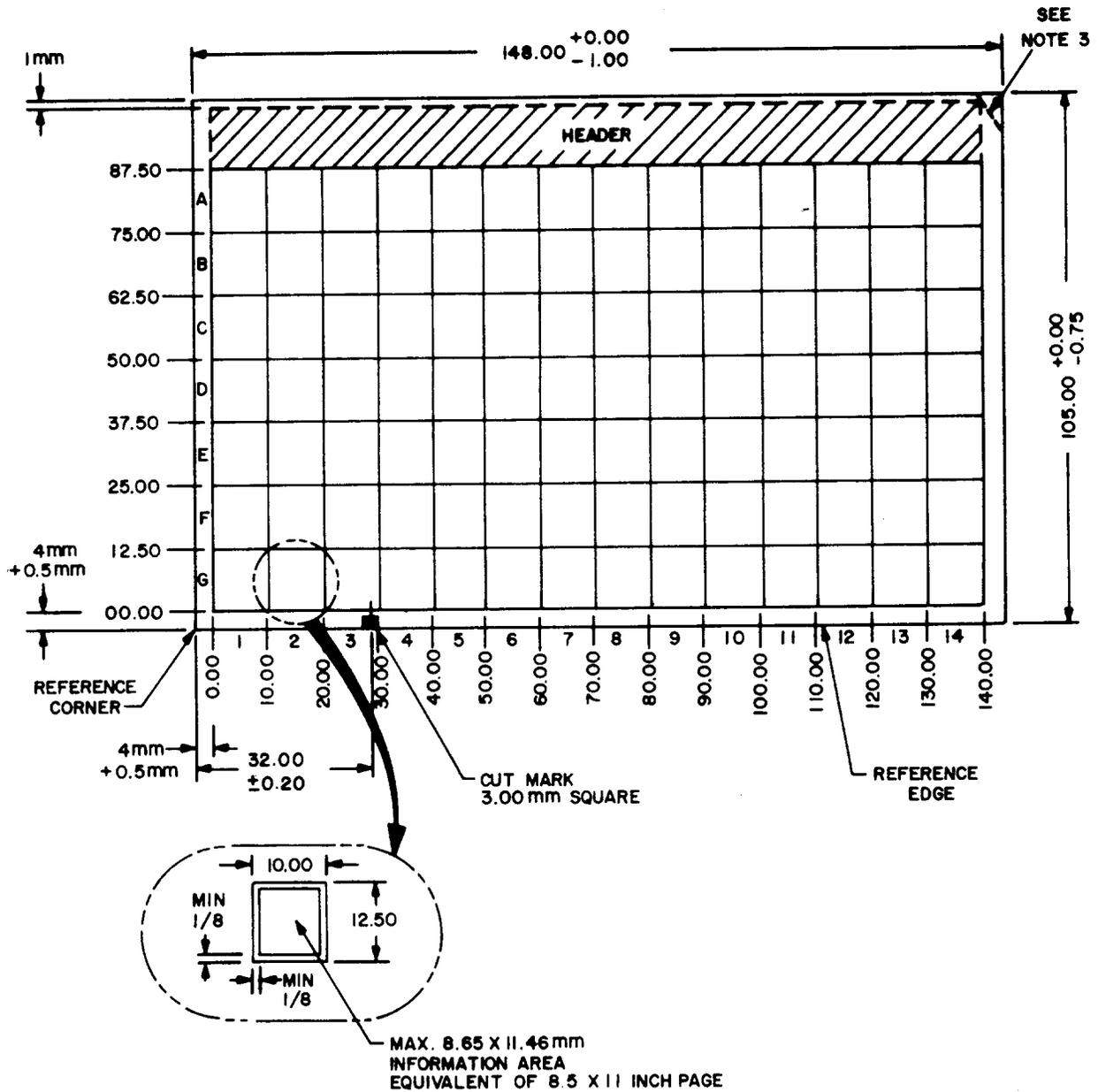
**3.02** For additional micrographic terminology, see NMA TR-2-1980, National Microfiche Association "Industrial Standard, Glossary of Micrographics".



NOTES:

1. WHEN A COMPANY SIGNATURE IS USED (BELL SEAL AND LOGOTYPE), IT SHALL BE PREPARED IN ACCORDANCE WITH THE BELL SYSTEM CORPORATE IDENTIFICATION PROGRAM.
2. TYPICAL HEADER INFORMATION INDICATING PROJECT NAME AND TYPE OF DOCUMENT. CHARACTERS PREFERABLY 2.54mm(0.100 INCH) HIGH AND MAX. 12 CHARACTERS PER 25.4mm (1 INCH) OF HORIZONTAL LINE.

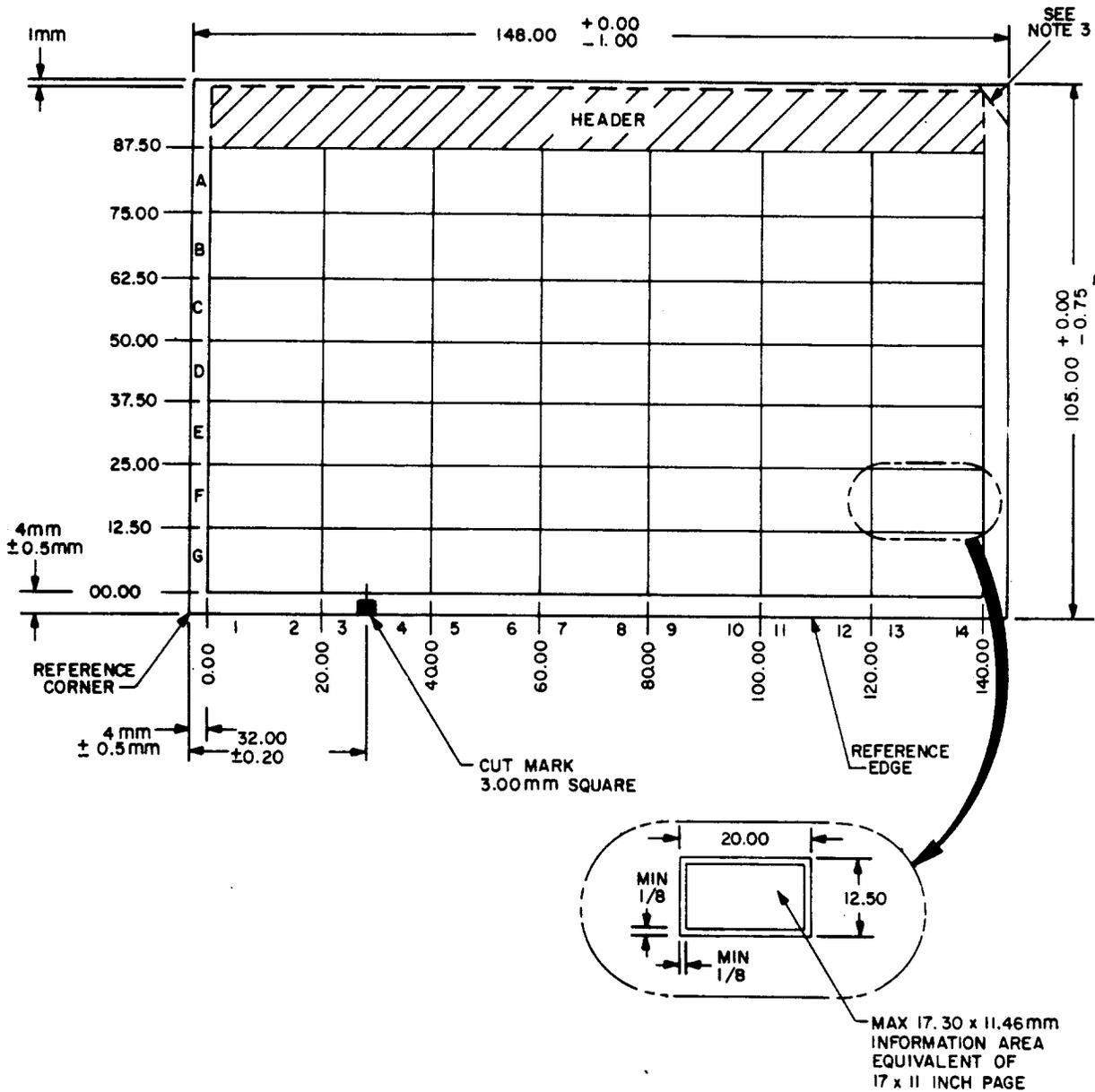
Fig 1—Typical Microfiche



NOTES:

1. DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
2. GRID LINES SHOWN IN THIS FIGURE DO NOT APPEAR ON MICROFICHE.
3. CORNER CUT SHOWN IS FOR ODD GENERATION FILM. FOR EVEN GENERATION FILM IT SHALL BE AT UPPER LEFT CORNER.

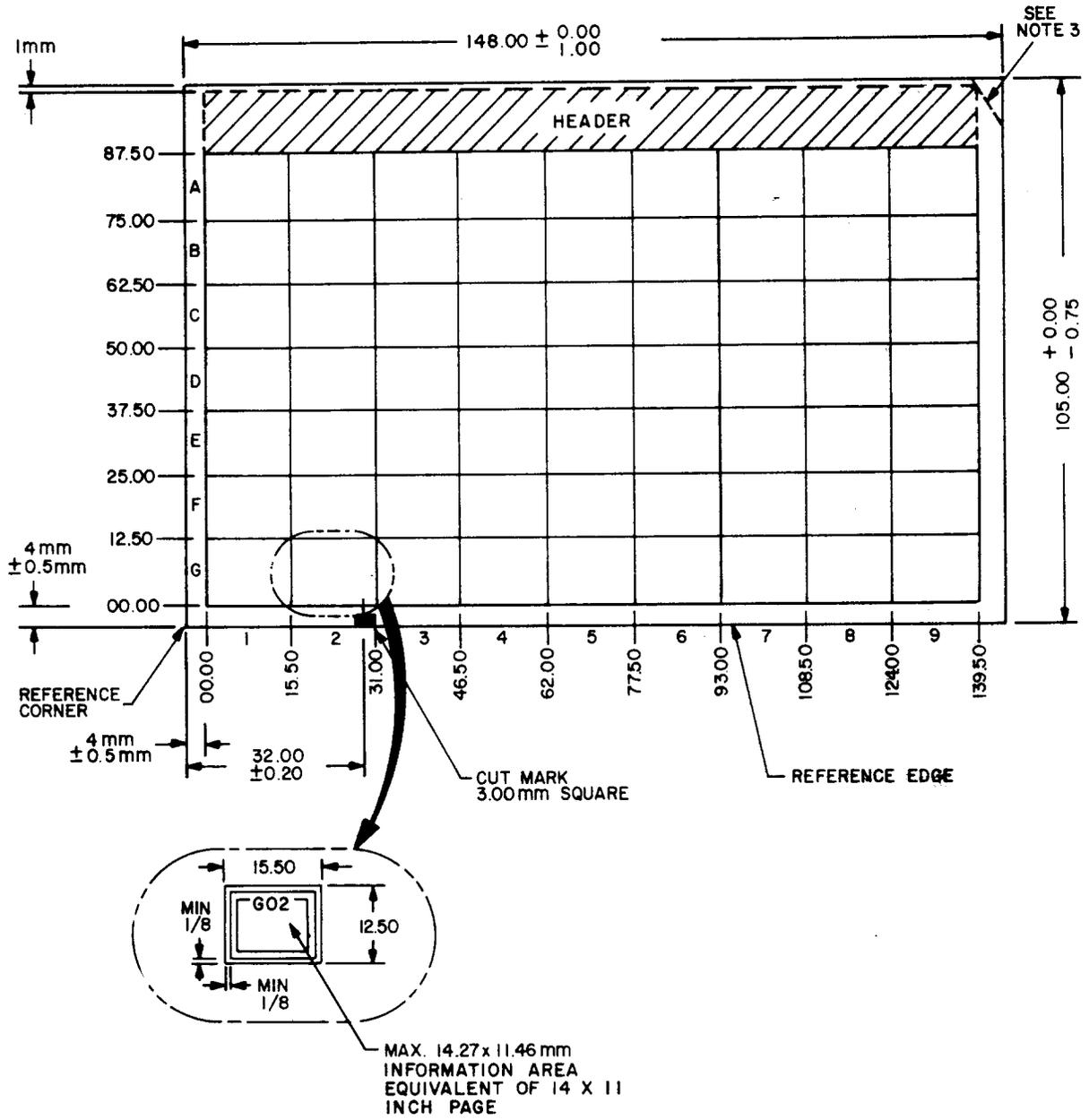
Fig 2—Microfiche Format 7 by 14



NOTES:

1. DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
2. GRID LINES SHOWN IN THIS FIGURE DO NOT APPEAR ON MICROFICHE.
3. CORNER CUT SHOWN IS FOR ODD GENERATION FILM. FOR EVEN GENERATION FILM IT SHALL BE AT LEFT CORNER.

Fig 3—Microfiche Format 7 by 7



NOTES:

1. DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
2. GRID LINES SHOWN IN THIS FIGURE DO NOT APPEAR ON MICROFICHE.
3. CORNER CUT SHOWN IS FOR ODD GENERATION FILM. FOR EVEN GENERATION FILM IT SHALL BE AT UPPER LEFT CORNER.
4. THE G02 SHOWN IN THE DETAIL OF THE FRAME IN THE INFORMATION AREA IDENTIFIES THE COORDINATES OF THE FRAME AS BEING ROW G COLUMN 02.

Fig 4—Microfiche Format 7 by 9

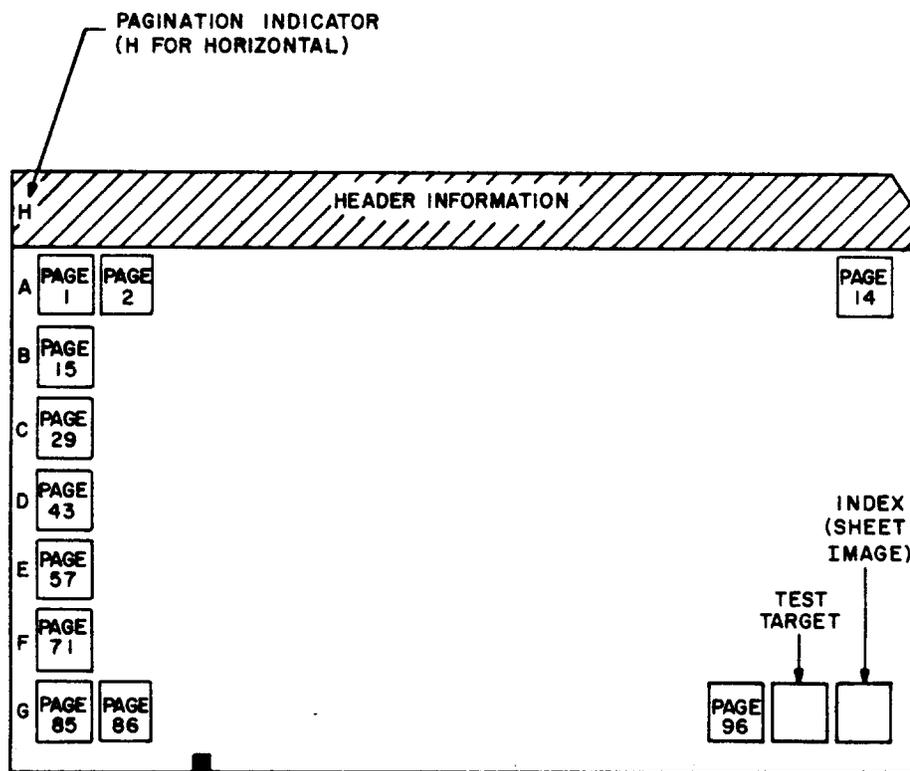


Fig 5—Pagination (Horizontal Sequencing) 105-mm Computer-Generated Microfiche Format 7 by 14

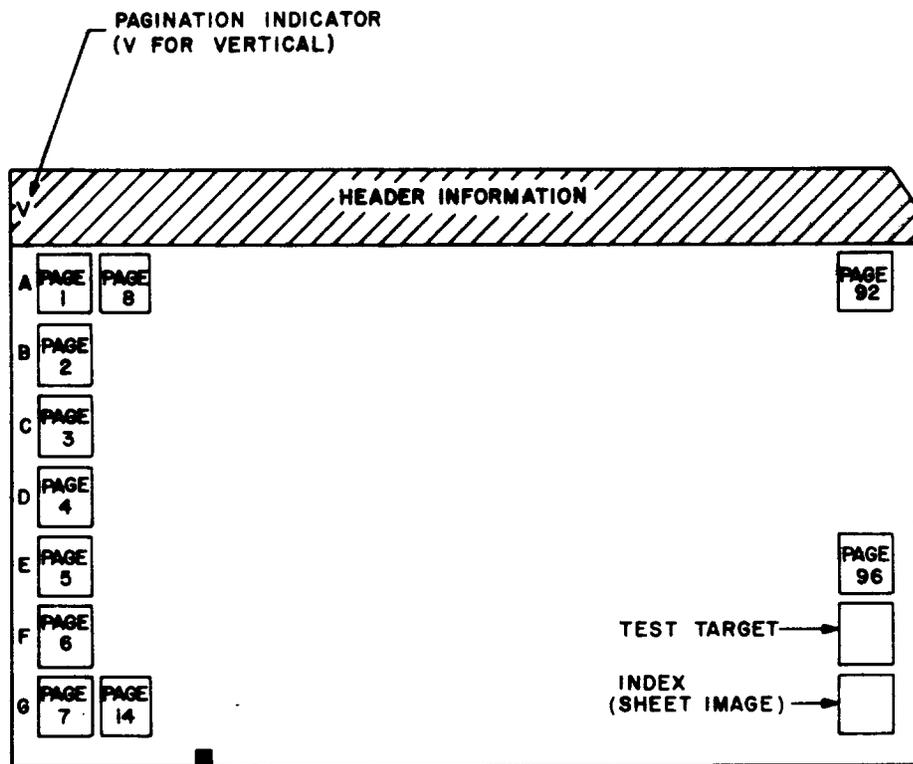
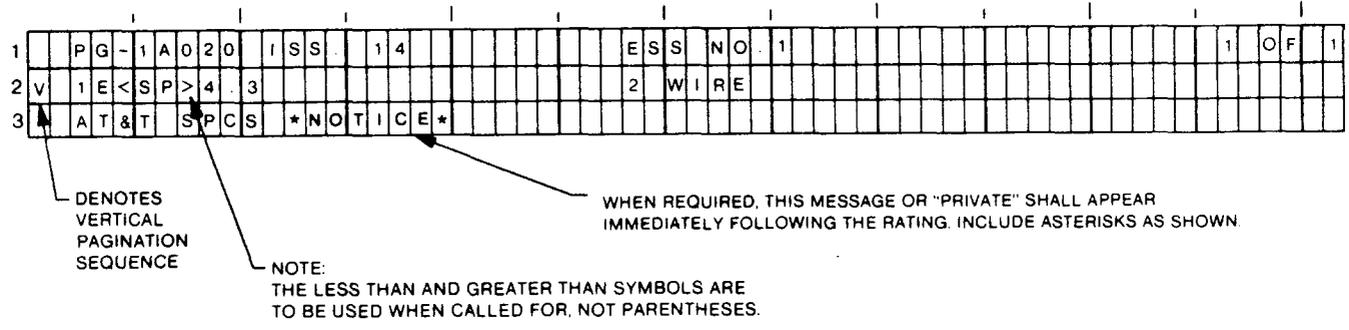
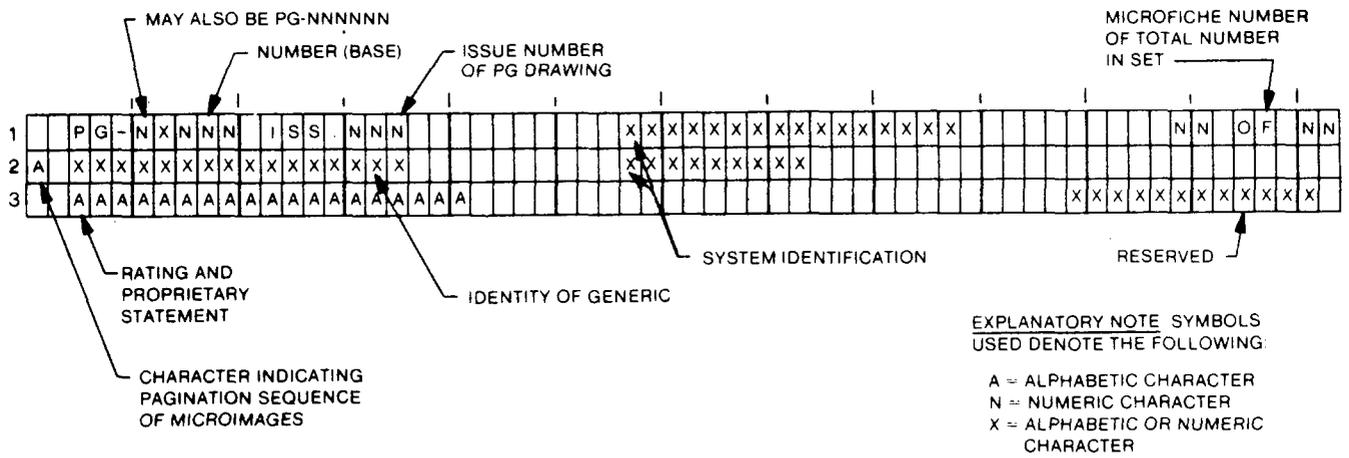
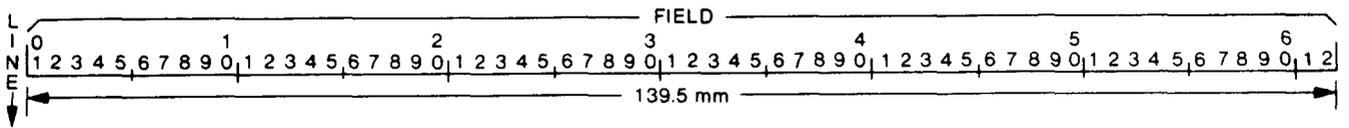


Fig 6—Pagination (Vertical Sequencing) 105-mm Computer-Generated Microfiche Format 7 by 14



DOCUMENT INDEX (PG)

DESCRIPTION

ORIGINALS CAN BE 8½" x 11", 11" x 14", OR 11" x 17" PAGES OR CAN BE COM PRODUCED ON MICROFICHE WITH THE PROPORTIONS OF AN 11" x 14" PAGE.

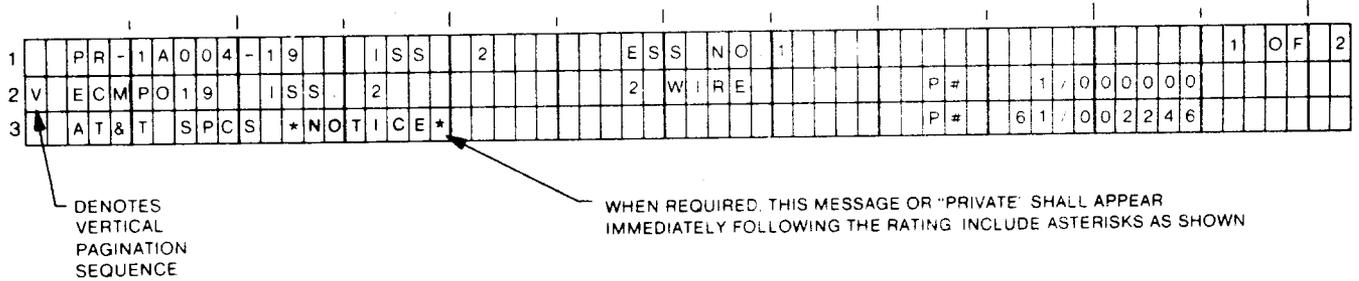
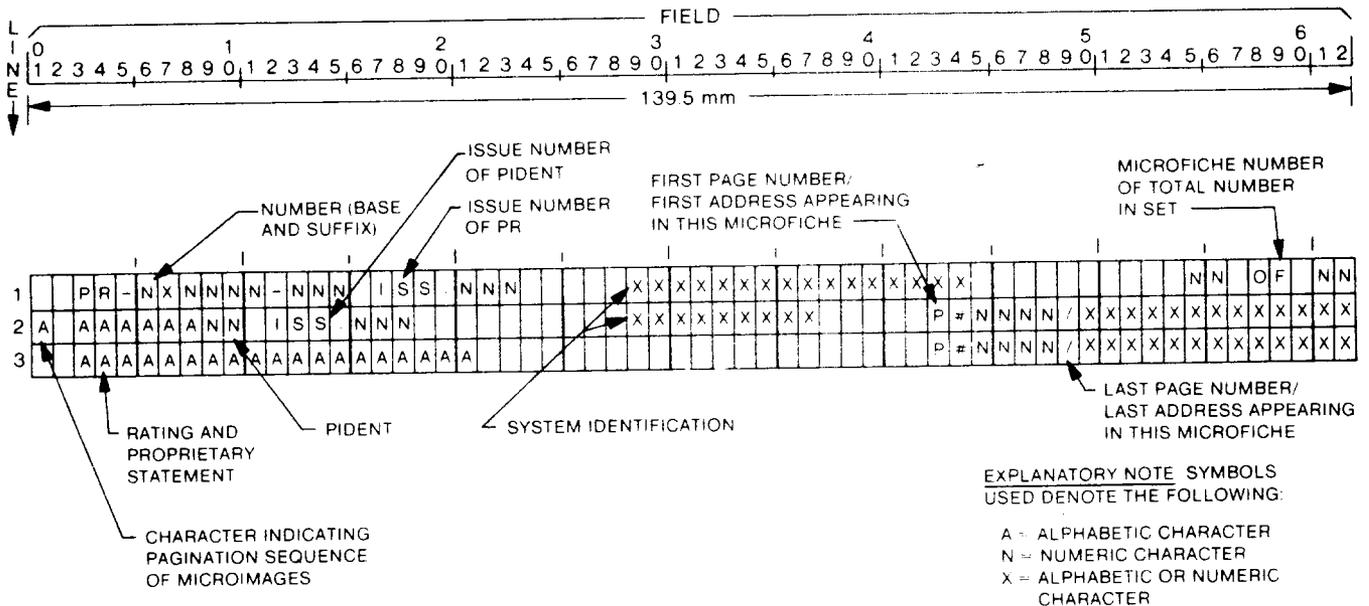
FILMING:

ON BOTH INITIAL ISSUE AND REISSUES, FILM ENTIRE PG.  
 WHEN SOURCE-DOCUMENT FILMING IS EMPLOYED, FILM WITH 7 x 7/7 x 14 FORMAT.  
 11" x 14" PAGES TO BE CENTERED IN THE DOUBLE FRAME.  
 WHEN GENERATED ON COM, EMPLOY A 7 x 9 FRAME FORMAT.  
 USE VERTICAL PAGINATION.

HEADER BACKING:

LIGHT BROWN.

**Fig 7—PG Header Content and Layout**



PROGRAM LISTINGS (PR)

DESCRIPTION

ORIGINALS CAN BE 11" x 14" PAGES OR CAN BE COM PRODUCED ON MICROFICHE WITH THE PROPORTIONS OF AN 11" x 14" PAGE.

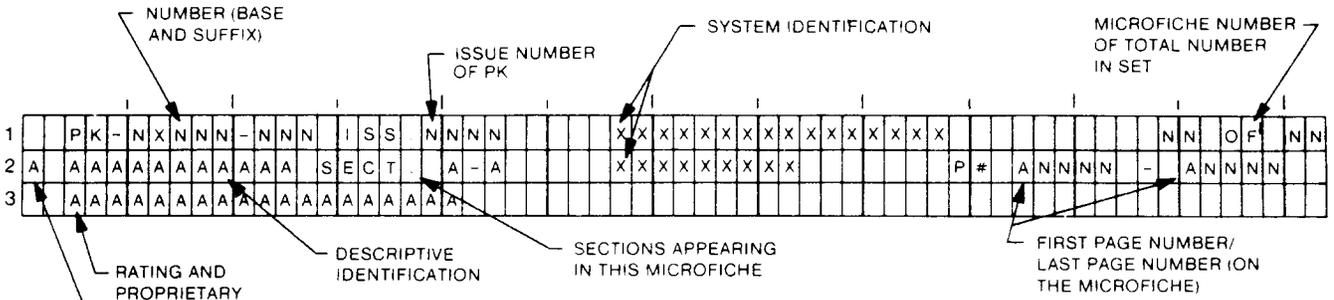
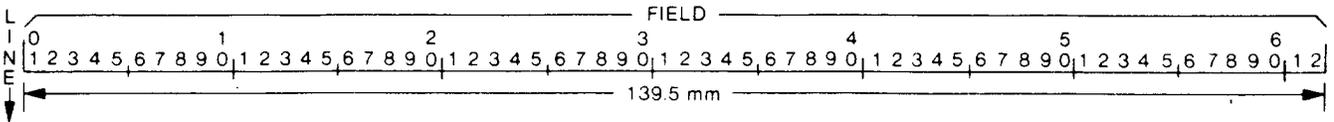
FILMING

ON BOTH INITIAL ISSUE AND REISSUE, FILM EACH AFFECTED PIDENT. EACH PIDENT SHALL START ON A SEPARATE FICHE WITH PR-INDEX ON FIRST FICHE ACCOMPANYING FIRST PIDENT. WHEN GENERATED ON COM EMPLOY VERTICAL PAGINATION AND A 7 x 9 FRAME FORMAT WHEN SOURCE-DOCUMENT FILMING IS PERFORMED, EMPLOY VERTICAL PAGINATION AND A 7 x 7 FRAME FORMAT 11" x 14" PAGES TO BE CENTERED IN THE DOUBLE FRAME. INDEX LOCATED IN THE LOWER RIGHT-HAND CORNER OF THE MICROFICHE SHALL INCLUDE THE PAGE NUMBER AND RELOCATABLE OR ABSOLUTE ADDRESS AND ASSOCIATED MICROFICHE ROW AND COLUMN IDENTIFICATION.

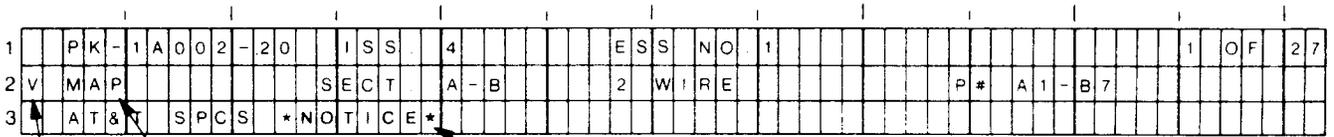
HEADER BACKING:

LIGHT YELLOW

**Fig 8—PR Header Content and Layout**



EXPLANATORY NOTE SYMBOLS USED DENOTE THE FOLLOWING  
 A = ALPHABETIC CHARACTER  
 N = NUMERIC CHARACTER  
 X = ALPHABETIC OR NUMERIC CHARACTER



DENOTES VERTICAL PAGINATION SEQUENCE  
 CAN BE: MAP  
 COMPOOL  
 RAW DATA  
 DATA POOL  
 TEST ACCESS  
 WHEN REQUIRED, THIS MESSAGE OR "PRIVATE" SHALL APPEAR IMMEDIATELY FOLLOWING THE RATING. INCLUDE ASTERISKS AS SHOWN.

**SUPPLEMENTARY INFORMATION (PK)**

**DESCRIPTION:** ORIGINALS VARY WITH SECTIONS; GENERALLY, A AND B SECTIONS ARE 8 1/2" x 11" PAGES. C SECTIONS ARE 11" x 14" (MAP AND COMPOOL) AND 11" x 17" (RAW DATA). ORGANIZED BY SECTIONS WITH A SECTION INDEX. REISSUED ON A SECTION OR PAGE BASIS.

**FILMING:** WHEN SOURCE DOCUMENT FILMING IS EMPLOYED, FILM ENTIRE PK IN A 7 x 7 x 14 FRAME FORMAT. 11" x 14" PAGES TO BE CENTERED IN THE DOUBLE FRAME. WHEN COM PRODUCED, FILM ENTIRE PK IN A 7 x 9 FRAME FORMAT. USE VERTICAL PAGINATION, WITH EACH SECTION STARTING ON A NEW FICHE EXCEPT THAT SECTIONS A & B MAY BE ON THE FIRST FICHE.

**HEADER BACKING:** LIGHT BLUE

Fig 9—PK Header Content and Layout, ESS No. 1



<u>MAP NAME</u>	<u>INDEXED BY FIRST AND LAST</u>	<u>INDEXING EXAMPLES</u>
INDEX AND PIDENT MAP	PIDENT OF FICHE	ABDGOO TO VRFY03
LDR KNOWN SYMBOL MAP	SYMBOL ON FICHE	AAAAAA TO ERATSUB
PAGE INFORMATION MAP	CLASS/PROG/PAGE NO. ON FICHE	1 1 1 TO 1 7 3
ADDRESS SPACE MAP	ADDRESS ON FICHE	00001000 CS TO 07055405 CS
AVAILABLE SPACE MAP	ADDRESS ON FICHE	00000400 PS TO 07060330 PS
PATCHES BY PIDENT MAP	PIDENT ON FICHE	ABDGOO TO VRFY03
PATCHES BY SECT MAP	SECTION ON FICHE	ABDGOO TO ZERODIST
TV ADDRESS MAP	SLOT ON FICHE	00000 TO 06035

## NOTE:

FOR ADDRESS SPACE AND AVAILABLE SPACE MAPS SHOW CS FOR CALL STORE, PS FOR PROGRAM STORE, AND FS FOR FILE STORE.

**Fig 11—PK Indexing, ESS No. 4**

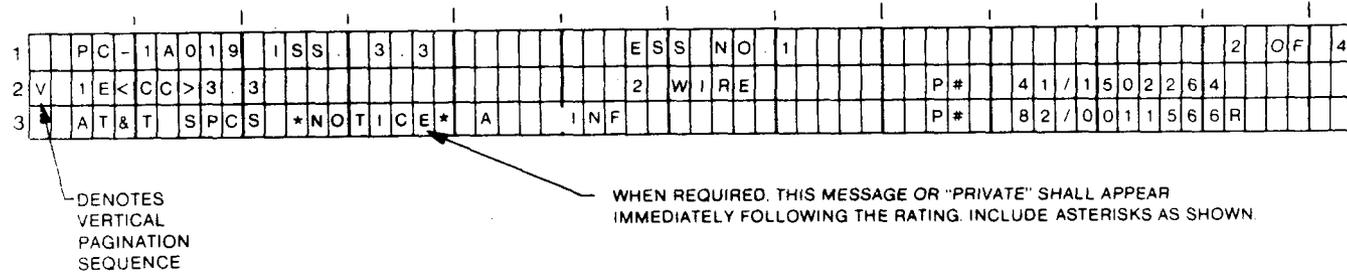
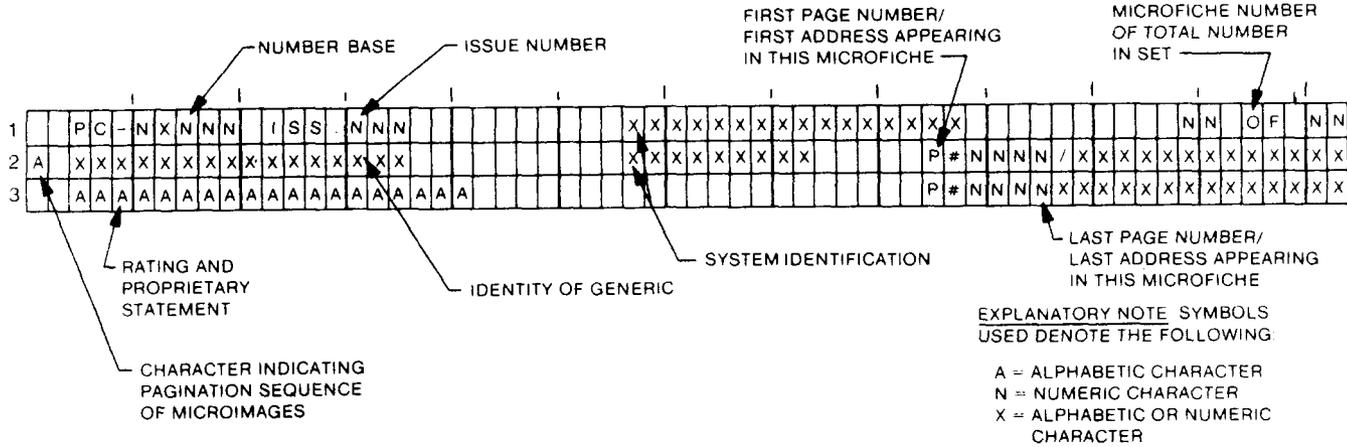
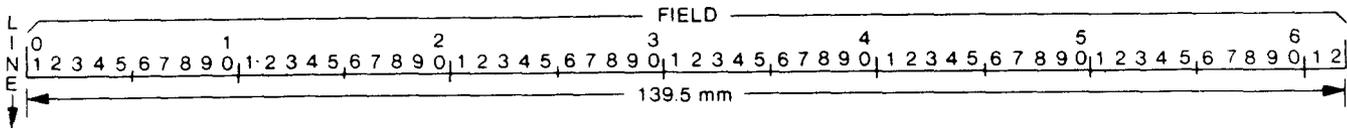












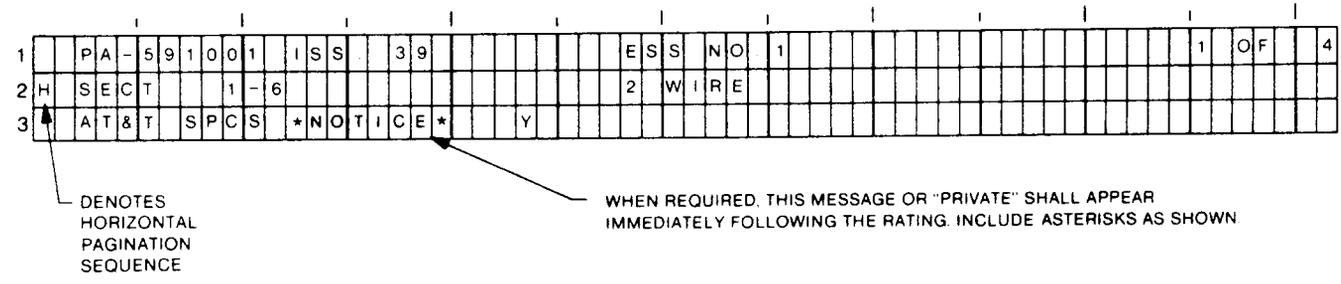
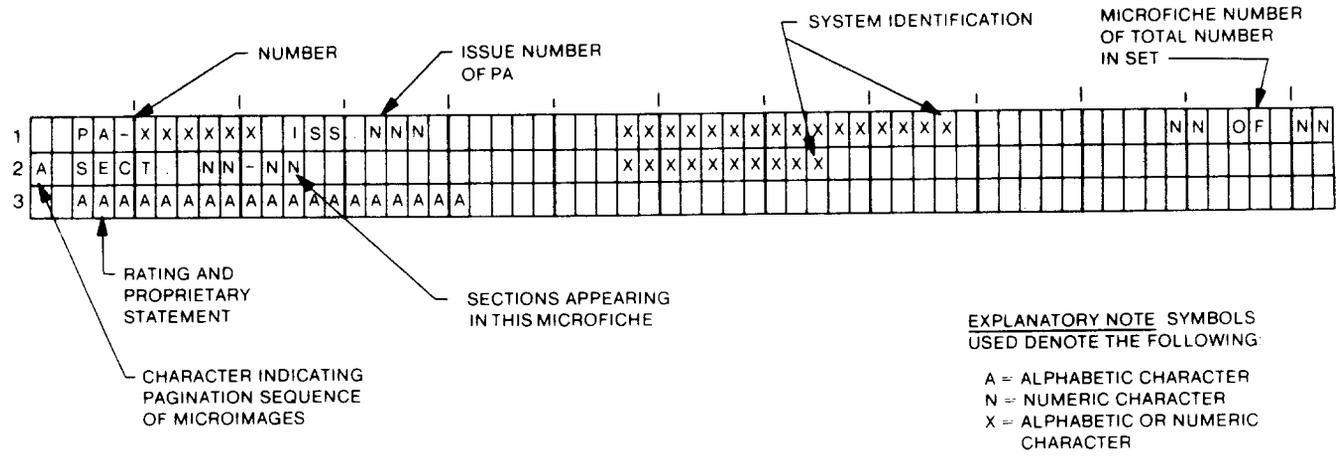
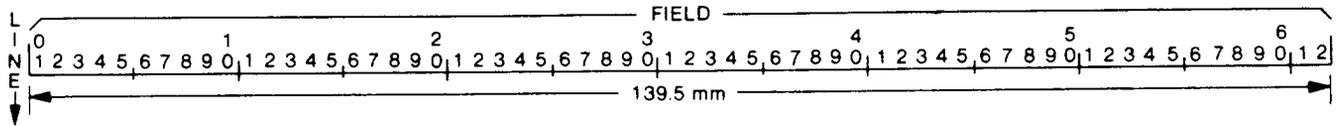
**PROGRAM CHANGE (PC)**

**DESCRIPTION:** ORIGINALS CAN BE 11" x 14" PAGES OR CAN BE COM PRODUCED ON MICROFICHE WITH THE PROPORTIONS OF AN 11" x 14" PAGE.

**FILMING:** WHEN GENERATED ON COM. EMPLOY VERTICAL PAGINATION AND A 7 x 9 FRAME FORMAT. WHEN SOURCE-DOCUMENT FILMING IS PERFORMED, EMPLOY VERTICAL PAGINATION AND A 7 x 7 FRAME FORMAT. 11" x 14" PAGES TO BE CENTERED IN THE DOUBLE FRAME.

**HEADER BACKING:** SILVER GRAY

**Fig 17—PC Header and Content and Layout**



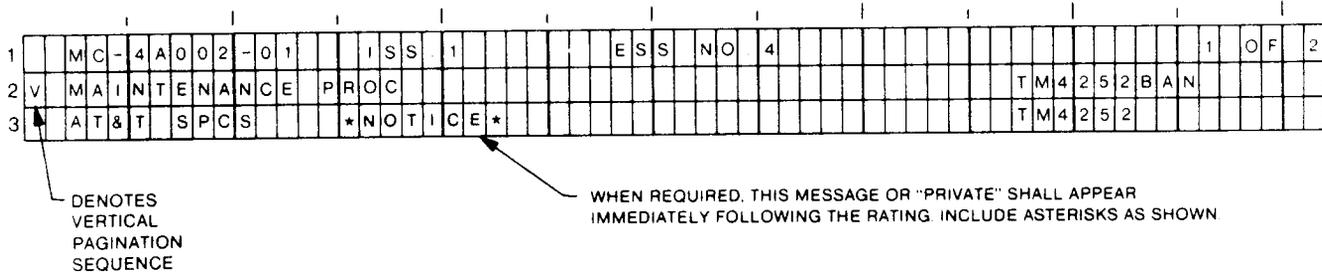
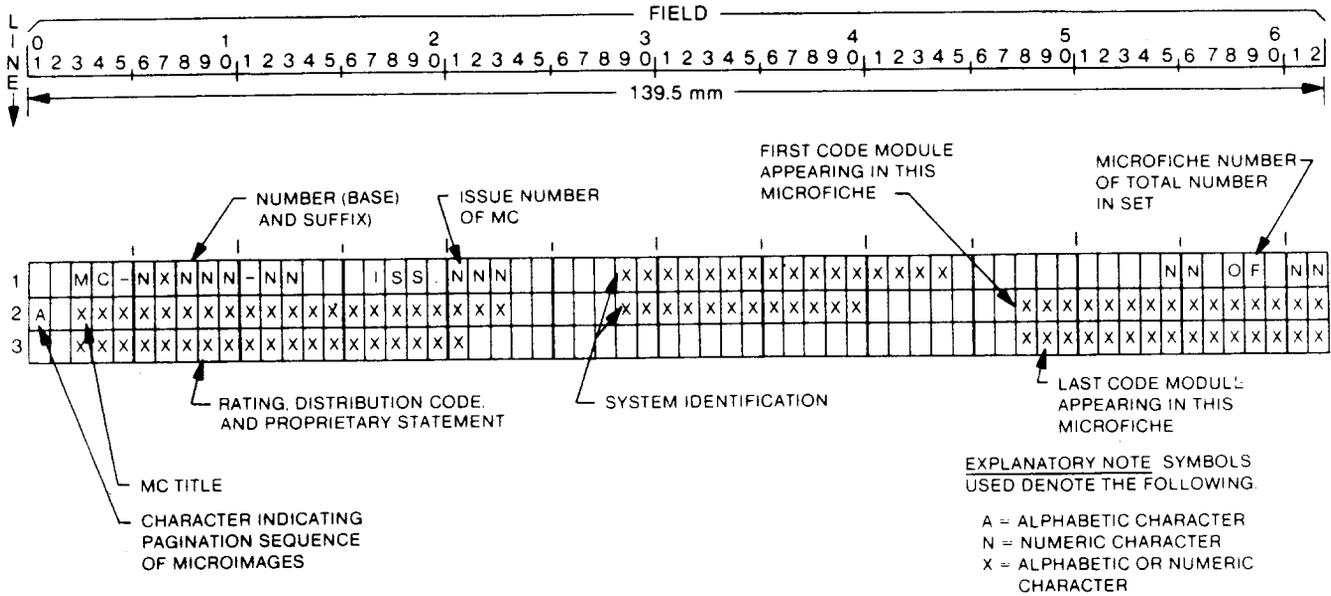
PROGRAM APPLICATION INSTRUCTIONS (PA)

DESCRIPTION: ORIGINALS USUALLY 8½" x 11" PAGES. MAY BE ORGANIZED BY SECTIONS WITH A SECTION INDEX

FILMING: ON BOTH INITIAL ISSUE AND REISSUE, FILM ENTIRE PA IN A 7 x 14 FRAME FORMAT. USE HORIZONTAL PAGINATION, WITH EACH SECTION STARTING IN A NEW ROW. CONTINUING A SECTION FROM ONE FICHE TO THE NEXT IS PERMITTED

HEADER BACKING: PINK

**Fig 18—PA Header Content and Layout**



**MICROCODE LISTINGS (MC)**

**DESCRIPTION:** ORIGINALS CAN BE 8½" x 11" OR 11" x 14" PAGES OR CAN BE COM PRODUCED ON MICROFICHE WITH THE PROPORTIONS OF AN 11" x 14" PAGE.

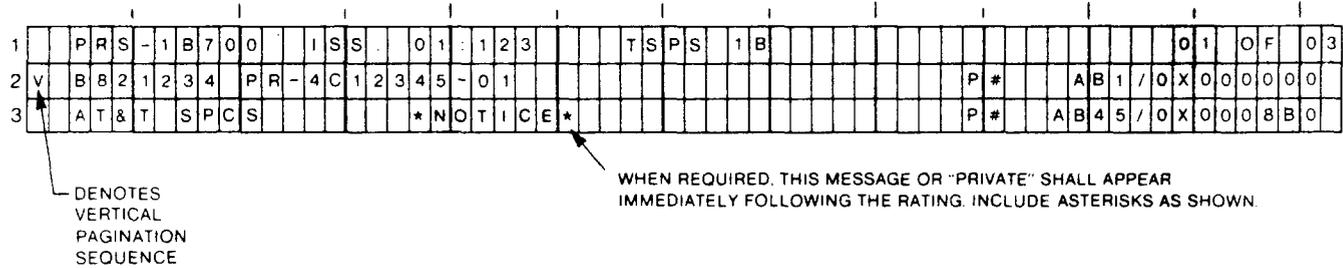
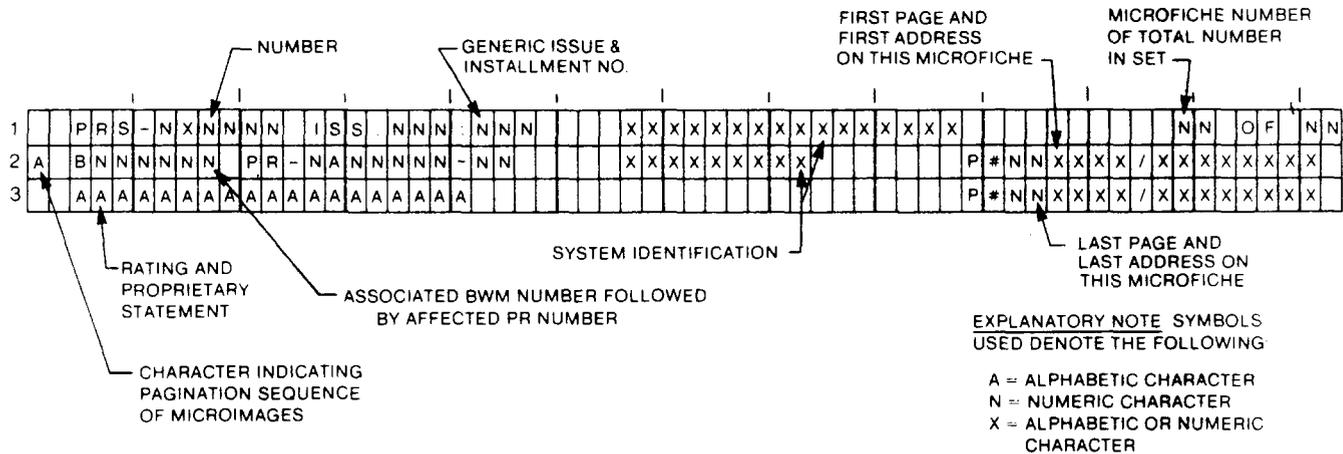
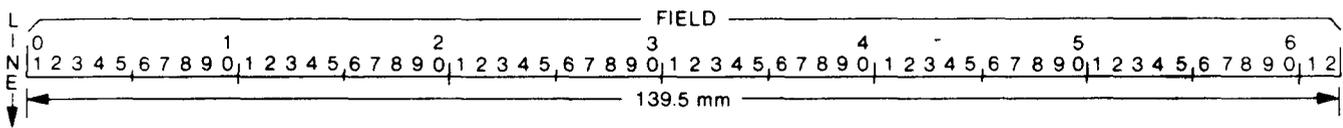
**FILMING:** ON BOTH INITIAL ISSUE AND REISSUE, FILM ENTIRE MC IN A 7 x 9 FRAME FORMAT USING VERTICAL PAGINATION SEQUENCE OF MICROIMAGES WHEN FILMING IS PERFORMED. 8½" x 11" PAGES ARE TO BE LEFT-JUSTIFIED AND 11" x 14" PAGES ARE TO BE CENTERED IN THEIR FRAMES. INDEX LOCATED IN THE LOWER RIGHT-HAND CORNER OF THE MICROFICHE SHALL RELATE PAGE NUMBERS, CODE MODULES AND ASSOCIATED MICROFICHE ROW AND COLUMN IDENTIFICATION.

**HEADER BACKING:** LIGHT YELLOW

**Fig 19—MC Header Content and Layout**







PROGRAM LISTING SUPPLEMENTS (PRS)

- DESCRIPTION: ORIGINALS MUST BE COM PRODUCED ON MICROFICHE.
- FILMING: ON BOTH INITIAL ISSUE AND REISSUE, FILM EACH AFFECTED PR(P-FILE) OR OR SUBSET  
EACH SHALL START ON A SEPARATE FICHE  
FILM EACH CUMULATIVE INDEX SEPARATELY AS THE FIRST FICHE IN EACH INSTALLMENT  
EMPLOY VERTICAL PAGINATION AND A 7 x 9 FRAME FORMAT  
INDEX LOCATED IN THE LOWER RIGHT-HAND CORNER OF THE MICROFICHE SHALL INCLUDE THE PAGE NUMBER OR APPLICABLE FUNCTION REFERENCE
- HEADER BACKING: SILVER GREY

Fig 22—PRS Header Content and Layout