23.1 SCOPE.

23.1.1 Purpose. This section establishes the methods of revising engineering drawings. These procedures apply only to drawings that have been released.

23.2 APPLICABLE DOCUMENTS. Note: DoD Policy Memo 05-3 "Elimination of Waivers to Cite Military Specifications and Standards in Solicitation and Contracts" has eliminated the need for waivers to use MIL-SPECS and MIL-STDS on DoD contracts. (See PREFACE 1, Section 2)

L-P-519 Plastic Sheet, Glazed and Matte Finish

MIL-PRF-5480 Data Engineering and Technical Reproduction

(Supersedes: MIL-D-8510)

MIL-STD-100 Engineering Drawing Practices

(CNCLD Supsd by: ASME Y14.100 & Appendices, ASME Y14.24, Y14.34M &

Y14.35M)

MIL-STD-973 Configuration Management

ASME Y14.5M Dimensions and Tolerancing

ASME Y14.35M Revision of Engineering Drawings and Associated Documents

ASME Y14.100 Engineering Drawing Practices

IPC-2221A Generic Standard on Printed Board Design

(Supersedes: IPC-D-275 & MIL-STD-275)

IPC-2222 Sectional Design Standard for Rigid Organic Printed Boards

(Supersedes: IPC-D-275 and MIL-STD-275)

- **23.3 DEFINITIONS.** (Applicable to drawing change procedures alphabetically listed.)
- **23.3.1** Advance Document Change Notice (ADCN). An advance notice of approved revisions that will be incorporated on the drawing at a later date. See PARAGRAPH 23.17.
- **23.3.2 Approval.** An endorsement applied manually or electronically (Approval Indicator) attesting to the correctness of a document or a revision made on the document.
- **23.3.3 Approval Indicator.** Any symbol adopted by the design activity to indicate approval.
- **23.3.4 Associated Documents.** General reference to documentation which supports and is directly related to drawing content, such as Parts Lists, Data Lists, Index Lists, Indentured Lists, Wiring Lists and Application Lists.
- 23.3.5 Change of Drawing Status.
- **23.3.5.1 Inactivate A Drawing.** The process of removing a drawing from active status. Inactive drawings may be those no longer used or those superseded by other documents, and are not used for fabrication. Vellums or microfilm records are retained and may be reactivated for use when required.
- **23.3.5.2 Obsolete A Drawing.** An obsolete drawing is one which has been replaced by another drawing of the same number, and shall be conspicuously marked "OBSOLETE". The word shall be located in the general area of the Title block, on sheet one (1) only of a book form drawing and on every sheet of multi-sheet drawings with .25 inch high characters. The replacement drawing shall be assigned the next revision letter and all previous entries in the Revisions Block shall be removed and "REDRAWN WITHOUT CHANGE" or "REDRAWN WITH CHANGE" entered, followed by a description of the changes.

- **23.3.5.3 Canceled Drawings.** A canceled drawing is one which has been removed from the system and the number retired, never to be used again.
- **23.3.6** Commercial And Government Entity (CAGE) Code. A five character code listed in Cataloging Handbook H4/H8 which is assigned to commercial and government activities that manufacture or develop items or provide services or supplies for the government, For the commercial sector where there is no requirement for the CAGE Code, the CAGE Code block in the Title Block may be eliminated or lined through.
- **23.3.7 Data Process System.** A system to collect, process and reproduce data in a selected format through the use of electronic or other automated equipment.
- **23.3.8 Design Activity.** An activity having responsibility for the design of an item. The activity may be government, commercial or nonprofit organization.
- **23.3.8.1 Design Activity, Current.** An activity currently having responsibility for the design of an item and the preparation or maintenance of drawings and associated documents. Current design activity could be the original activity or new activity when that responsibility is transferred from another design activity.
- **23.3.8.2 Design Activity, Original.** An activity having had the responsibility originally for the design of an item and whose drawing number, name and address (City and State) or CAGE Code is shown in the Title Block.
- **23.3.9 Digital Data.** Data created and stored on a computer system which employs a display on which the user and the computer interact to create entities for producing layouts, drawings, numerical control tapes or other engineering data. Digital data also includes 2D and 3D solid model CAD files.
- **23.3.10 Direct Drawing Change.** A change incorporated onto the original drawing at the time it is authorized and recorded on a Document Change Notice (DCN) See PARAGRAPH 23.7.4.
- **23.3.11 Document.** A specification, drawing list, standard, pamphlet, report or any printed, typewritten or other information relating to the design, procurement, manufacture, test or acceptance inspection of an item or service.
- **23.3.12 Document Change Notice (DCN).** A record of revisions that have been or will be incorporated on a drawing and the authorization for those changes. See PARAGRAPH 23.17.
- **23.3.13 Document Change Request (DCR).** A document used to officially request drawing changes. See PARAGRAPH 23.16.
- **23.3.14 Drawing.** An engineering document or digital data files that discloses directly or by reference, by means of graphic or textual presentations, or combinations of both, the physical and functional requirements of an item.
- **23.3.15 Drawing Changes.** Drawing changes are additions, deletions and/or revisions to any information appearing on the drawing.
- **23.3.16** Incorporate An Advance Document Change Notice (ADCN). To incorporate an ADCN is to transfer information from a released ADCN to a drawing.
- **23.3.17 Interchangeability.** Interchangeability is a condition which permits the direct interchange or substitution of one component for another without modification or selection of the component. Upon interchange of components, the same physical and functional characteristics of the original components are assured. See TABLE 23-1.
- **23.3.17.1 Functionally Interchangeable Parts.** Functionally interchangeable parts are items equivalent in characteristics of operation, performance, durability, serviceability, structural strength, material, protective finish and safety.

- **23.3.17.2 Physically Interchangeable Parts.** Physically interchangeable parts are those equivalent parts capable of being installed, removed or replaced without sustaining damage, or causing misalignment, damage to, or interference with adjoining part or portions of the complete assembly.
- **23.3.18 Original.** The current design activity's full size reproducible drawing or digital data file(s) which includes the official revision record. The original may also be a 2D or 3D solid model CAD file, such as an annotated digital model which is the sole product definition and deliverable. See SECTION 26 for more information.
- **23.3.19 Pre-Released ADCN.** A pre-released ADCN is the same as a DCN but initially requires only the approval of the responsible design activity. It is used for a more rapid release of changes where an emergency condition exists and for a specific period.
- **23.3.20 Revision.** Changes made to an original or associated document after authorized release which requires the revision level to be advanced.
- **23.3.21 Revision History Block.** A designated area on the drawing reserved for describing or summarizing revisions to the drawing and for recording certain specifics regarding the revisions.
- **23.3.22 Superseded.** A notation used to indicate that a document has been replaced by another document with a different document number or to indicate that an original has been replaced by a new original.

23.4 GENERAL CHANGE PROCEDURES.

23.4.1 Basic Rules. Basic rules to be followed with regard to drawing numbers when revisions to an established (released) drawing are being considered. The type of change has to be considered with respect to interchangeability. A decision must be made to either retain the present drawing number with a new revision issued or to assign a new drawing number to a new drawing. See TABLE 23-1.

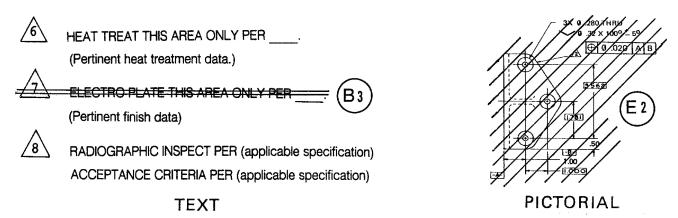
	Change Do	cuments			
Types of Changes	Document Change Request (DCR) ADCN or DC				
Within limits of physical and functional interchangeability	Constitutes a request only until	Retain the same drawing number and suffix number.			
Functional interchangeability affected	approved by the responsible design activity. May be initiated by personnel outside or within the design activity. When approved, changes are implemented by the	Retain the same drawing number with a new suffix number, or a new drawing number may be issued.			
Physical interchangeability affected	issue of a DCN.	Assign a new drawing number. On tabulated drawings, a new suffix number may be assigned.			

ITEM IDENTIFICATION AND CHANGE DOCUMENT USAGE TABLE 23-1

- **23.4.2 Revision Methods.** Revisions shall be by removal of information made by erasure (or deletion) or crossing out, addition of information, or by redrawing.
- **23.4.2.1 Crossing-Out Restrictions.** The crossing-out method shall be used only with the concurrence of the Government Design Activity. This restriction only applies to government-related projects.

23.4.2.2 Crossing-Out Method When Permitted. A series of parallel or diagonal uniformly spaced lines shall be placed on the face of the drawing over the item or text being removed. The superseding information, if any, or reference to its location shall be placed near the portion crossed out and identified by a revision letter balloon. Crossing-out method is applicable to manually prepared drawings only.

For Example:



- **23.4.3 Change In Dimensions.** In general, any change in a dimension of a part should be made to scale. However, it is permissible to leave the delineation of the part unchanged when the new proportion of the part is not noticeably different from the original one. If the change is not made to scale, the practice outlined in SECTION 3, PARAGRAPH 3.5.5 shall be followed. If the drawing is redrawn, delineation shall be made to scale. When the drawing is prepared by an interactive computer graphics (CAD) system, the scale of the feature shall be maintained.
- **23.4.4 Revision Practice To Existing Engineering Drawing.** The same drawing practices, graphic symbols, lettering style, designations, and lead/ink application (for manually-prepared and revised drawings) used in creating the original drawing format shall be used for the changes to be made unless otherwise directed by the design activity. When the drawing being revised does not specifically reference the applicable dimensioning and tolerancing standard or the document's issue by number or date, or both, the matrix shown in SECTION 5, APPENDIX 1, TABLE 5A-1 ,within this DRM shall be used to identify the proper standard by which the original drawing was produced. This information shall be specified in the General Notes and the revisions made to the Engineering Drawing shall comply with the referenced Dimensioning and Tolerancing Standard.
- **23.4.4.1 Changes to a Drawing After Release.** A change to a drawing or associated documents, including a change to rights in data or security classification, requires the revision level to be advanced and shall be recorded in the Revision History Block.

23.4.5 Revisions Not Requiring Revision Level Advance

- a. Adding CAGE Code within the Title Block.
- Initial inclusion of the Distribution Statement.
 - (1) The addition of "a" and "b" shall be concurrent with another appropriate revision and shall not be included in the Revision History block.
- c. A drawing or associated list need not be revised for the sole purpose of maintaining common revision levels between drawing and list.

23.4.5 (Continued)

- Drawings identified as having been "REDRAWN WITHOUT CHANGE" in the Revision History block when the original has been damaged beyond repair, become too crowded, lost or similar circumstances, is replaced with a drawing of duplicate requirements of the original. The names of the individuals whose signatures appear in the original Title Block and are still available, are entered in the new original Title Block. The notation as shown in FIGURE 23-19 shall be used, however, the advancement of the revision letter is not required.
 - (1) Exception to "d" is the conversion of manually prepared and maintained drawings to digitally maintained (CAD) document (Drawings/Lists). This action constitutes a change and the advance to the next revision letter is required.
- A Distribution Statement and Delivery Contract Numbers may be added to copies of the contractor's drawings upon release for delivery to the Government without revision action.
- 23.4.6 Revisions Requiring Advancing The Revision Level. Any change to a drawing or associated list aside from those listed in PARAGRAPH 23.4.5 requires advancing the revision letter. Change of security classification is considered a revision advancement also. Whenever a change to the Distribution Statement and the CAGE Code occur, this shall require a change in the drawing revision level as well as an entry in the revision block.
- 23.4.7 Continuing the Recording of Revisions When Space is Limited. Recording of revisions may be on an additional supplementary Revision History block or on another sheet when additional room is needed. When the Revision History block is continued on another sheet, a reference to its location shall be made. If new sheets are added/deleted, see PARAGRAPH 23.15.5.

23.5 IDENTIFYING REVISIONS ON DRAWINGS.

- 23.5.1 Revision Locations On Drawings. The location of revisions on the drawing shall be identified by one of the following methods as directed by the design activity.
 - a. Description in the Revision History block with zone locator for clarity.
 - b. Revision Authorization Document, ADCN/DCN referenced in the Description Column of the Revision History block.
 - c. Revision symbol on the field of the drawing.
 - d. Combination of a., b. and c. for ease of tracking.

23.6 AUTHORIZATION PROCEDURES.

- 23.6.1 Change Request. The responsible engineer has the primary responsibility for initiating document change requests or for approving document change requests originated outside the project. On receipt of an approved Document Change Request (DCR) and/or Drafting Work Request (DWR), the responsible organization determines the correct procedure for implementing the change. See PARAGRAPHS 23.17.1 23.18.1 and FIGURE 23-10.
- 23.6.2 Change Authorization and Format. An ADCN/DCN form is used to authorize and record drawing changes. The form may be prepared per FIGURE 23-11 and the applicable change condition in FIGURE 23-29. When additional sheets are required, use the drawing change notice continuation sheet shown in FIGURE 23-12. Typing or legible hand lettering is permissible.
- 23.6.3 Approval Indicator. A personal Symbol assigned to an authorized person for applying to a drawing, revision or associated document prepared by digital data (computer) method to indicate approval by that responsible individual. (See PARAGRAPH 23.7.9.6b.)

23.7 REVISIONS APPLIED TO THE DRAWING.

- **23.7.1 Revision Status.** The revision status of a drawing is identified by an upper case letter. The first change issued in the Revision History block or the reference to the Revision Authorization Document (ADCN or DCN) is identified by the letter "A". Each successive change uses the next letter of the alphabet in sequence, except the letters "I", "O", "Q", "S" and "Z" are never used. Upon exhaustion of the alphabet, revisions are identified by letters "AA", "AB", "AC", etc., then "BA", "BB", etc.. Revision letters shall not exceed two characters. The letter "X" is reserved for recording revisions to a drawing prior to its release. Changes beginning with "X1" and following with "X2", "X3" etc for each successive change. The use of a dash "-" shall be used only for the initial release of a drawing. Initial release does not constitute the need for a revision letter and the Revision History block may be left blank.
- **23.7.2 Approval Signatures.** Approval signatures on a ADCN or DCN are equal to those on the drawing affected by the change except as noted in Figure 23-29.
- **23.7.3 Limitation of Revisions.** An ADCN/DCN is issued against one drawing only.
- **23.7.4** Incorporation of Revisions On Drawings. All revisions incorporated on drawings are authorized by an ADCN/DCN unless otherwise specified in this section. For exceptions, see PARAGRAPHS 23.4.5 ,23.7.5 and ITEM 13 of FIGURE 23-29.
- **23.7.5 Undocumented Changes.** The following drawing corrections or additions may be made without having to record on an ADCN or DCN: (1) "similar to" data (2) required approval signatures (except checked) (3) weight information (4) misspelled words, (5) missing arrowheads and (6) next assembly.
- **23.7.6 Documenting Changes.** Each revision letter symbol change on an ADCN/DCN may be assigned a suffix (dash) number and is referenced to its drawing location by a zone symbol or other applicable reference, i.e., P/L (Parts List), T/B (Title Block), G/N (General Notes), etc. Changes made on the field of the drawing are identified by the last revision letter symbol enclosed in a .25 inch [6.35 mm] balloon. Previous revision symbols shall not be removed unless otherwise approved by the Government Design Activity (if applicable). Where several changes are contained within a small area of one zone, they may be recorded under one item number. See FIGURE 23-1. See Paragraph 23.7.8 for restrictions on the use of revision letter symbols.
- **23.7.7 Multiple Changes.** Multiple changes (two or more) to the same drawing incorporated at one time shall be identified the same revision letter and may be identified on the ADCN/DCN in numerical sequence and on the field of the drawing enclosed in the revision symbol balloon as a suffix (dash) number. See FIGURE 23-1.
- **23.7.8 Revision Symbol Restriction.** Revision Symbols shall not be used on Book-Form drawings, master-art-work of undimensioned drawings and schematic or wiring diagrams where conflicting symbols could occur.

23.7.9 Revision History Block Entries. The Revision History block columns are identified as follows:

		REVISION HISTORY		
ZONE	REV	DESCRIPTION	DATE	APPROVED
1	2	3	4	5

23.7.9.1 1 ZONE Column. To facilitate locating revisions on complicated or large drawings, the drawing zone method is used. The zone to which each revision description applies shall be entered in the zone column when space permits.

For example: a.

		REVISION HISTORY		
ZONE	REV	DESCRIPTION	DATE	APPROVED
3C 4D	Α	DCN 12345 (1) .375 WAS .500 (2) ADDED WELD SYMBOL		
	В	A solid line separates each re	evision lette	er.

When a single change appears in more than one zone, the zone entries may be made in the DESCRIPTION column immediately below the description of the change.

For example: b.

		REVISION HISTORY		
ZONE	REV	DESCRIPTION	DATE	APPROVED
	Α	DCN 12346 (1) .375 WAS .500 ZONES 3B, 4C, 5D (2) ADDED WELD SYMBOL		

When a single change appears on multi-sheet drawings, the zone entries may be made in the zone column together with the sheet number where the change occurs.

For example: c.

		REVISION HISTORY		
ZONE	REV	DESCRIPTION	DATE	APPROVED
1 4E 2 4D 3 3C	Α	DCN 12347 (1) .375 WAS .500 (2) ADDED WELD SYMBOL (3) 25° WAS 20°		

-Sheet No.



- REV (revision) Column. The revision column is used for each change made to the drawing by applying a revision letter in accordance with PARAGRAPH 23.7.1 and as shown in PARAGRAPH 23.7.9.1 a., b. and c.
- 23.7.9.3 (3) DESCRIPTION Column. The description of change(s) is entered into the Description Column by one or more of the following methods:
 - a. By entering the description of the change(s) directly in the Revision Block with the appropriate sequence number as shown in PARAGRAPH 23.7.9.1 a., b, and c.
 - b. By referencing a revision authorization document (ADCN/DCN) provided the revision authorization document describes the specific drawing change(s) in detail as shown in FIGURE 23-1.
- (4) DATE Column. The date entered in the Date Column shall be the date the change to the 23.7.9.4 drawing was completed and the next sequential revision letter has been placed in the Revision Column. The date shall be expressed numerically: Year-Month-Date.

For example:

		REVISION HISTORY		
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A		95-11-21	

23.7.9.5 (5) APPROVED Column. Authorized signature, name, or approval indicator as required shall be entered to acknowledge approval of change(s) made to the drawing.

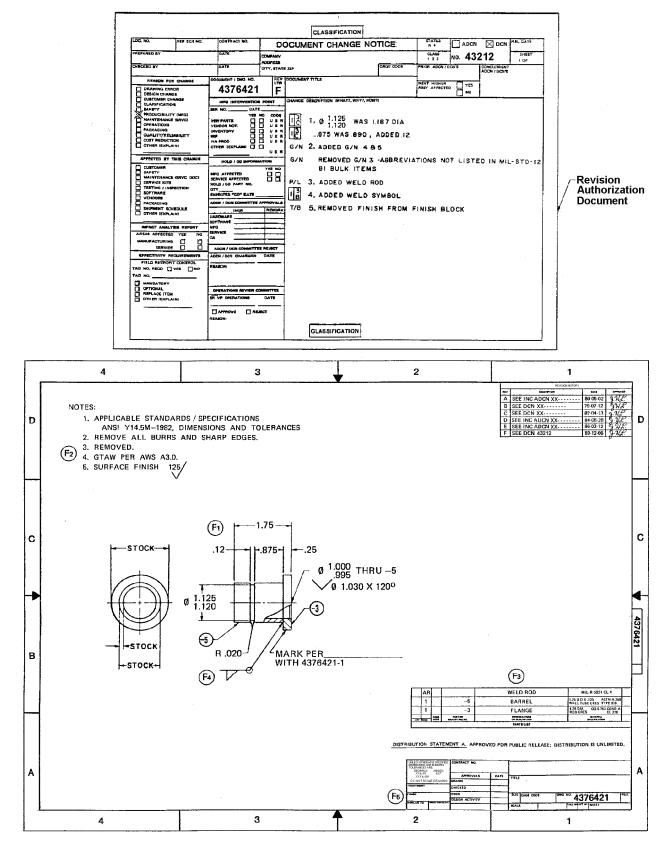
For example:

		REVISION HISTORY		
ZONE	REV	DESCRIPTION	DATE	APPROVED
	Α			Lieblich

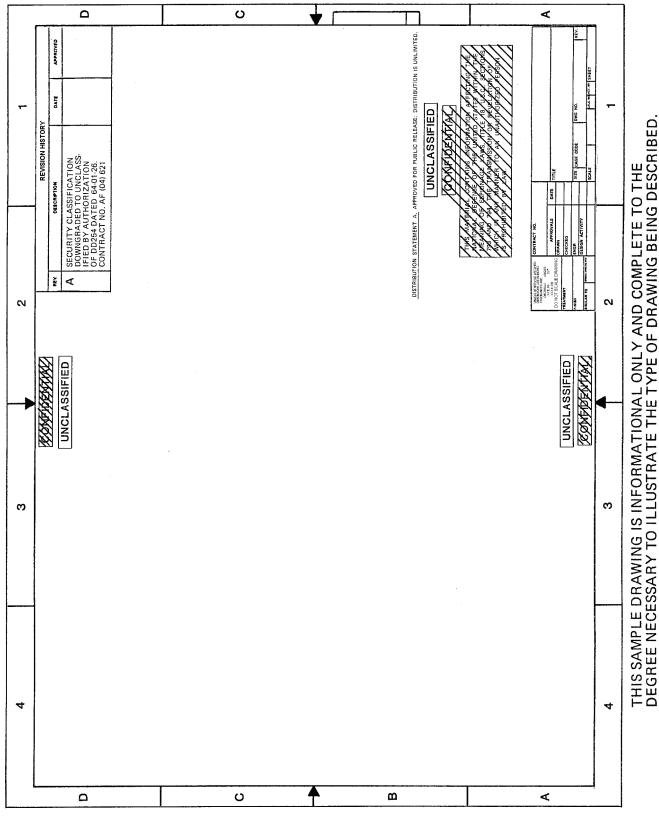
- 23.7.9.6 Revision History Block Entries By Digital Data Files (CAD). Digital files are revised in accordance with PARAGRAPHS 23.7.9.3 and 23.7.9.5 with the following exceptions:
 - The revision description shall not identify a revision to a digital data file as a redraw except when the drawing is converted from a manually maintained to a digitally maintained drawing.
 - b. Electronically generated signatures or names referred to as "Approval Indicator" are allowed provided there is an electronically coded authorization system. This applies to the Title Block, Revision Block and associated documents which have approval blocks.

23.8 REVISION APPLIED TO GENERAL NOTES.

- **23.8.1 Changes in General Notes.** A general note may be changed if the original purpose is maintained. Example: Note 5 is for sandblasting. The note contents may be changed providing its general intent "Sandblasting" is maintained. When the old note is removed, the note number cannot be reused for a note of a different subject.
- **23.8.2 Removing General Notes.** When a General Note has been removed, the word "REMOVED" shall appear in its place. See FIGURE 23-1.
- **23.8.3 Relisting General Notes.** On drawings that have been revised, redrawn, etc. the General Notes are listed in their original numerical order.



DIRECT DRAWING CHANGE FIGURE 23-1



CHANGE IN DRAWING SECURITY CLASSIFICATIONS FIGURE 23-2

23.9 REVISIONS APPLIED TO SECURITY CLASSIFICATIONS.

23.9.1 Changes to Security Classified Drawings. When an ADCN/DCN affects a classified drawing, and the data contained on the ADCN/DCN is unclassified, the statement below appears on the ADCN/DCN.

THIS DOCUMENT IS DOWNGRADED TO UNCLASSIFIED WHEN DETACHED FROM THE PARENT DRAWING.

The appropriate security classification is placed at the top and bottom of the ADCN/DCN. See FIGURE 23-11.

23.9.2 Security Classification Revision. Security classification revisions, upgrading or downgrading, are made by a direct drawing change only. When the security classification is revised, the existing classification is not removed from the drawing but is lined out, and the new classification is added (if any). See FIGURE 23-2. When redrawing drawings with previously revised security classifications or downgrading on redraw, the old lined-out classification is not repeated on the new drawing. See FIGURE 23-29, Item 12. The reclassification action constitutes a change; therefore, an applicable entry in the Revision History block is required.

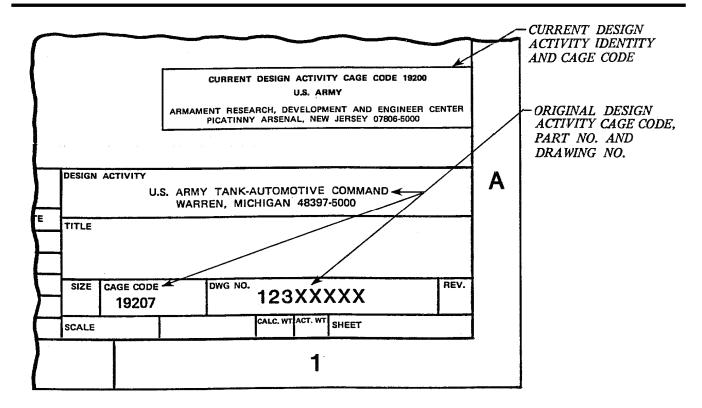
23.10 REVISION APPLIED TO TRANSFER OF DESIGN RESPONSIBILITY.

23.10.1 Revision of Design Activity Commercial And Government Entity (CAGE) Code. When design responsibility is transferred from one design activity to another, it is made by a direct change only. The drawing number and original design activity code identification will not be changed. The new design activity may add their code identification to the drawing near the Title block as follows:

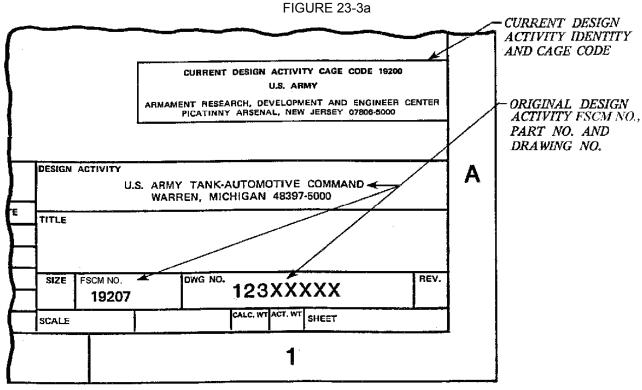
For example:

DESIGN ACTIVITY TRANSFERRED TO (CAGE Code) (Date).

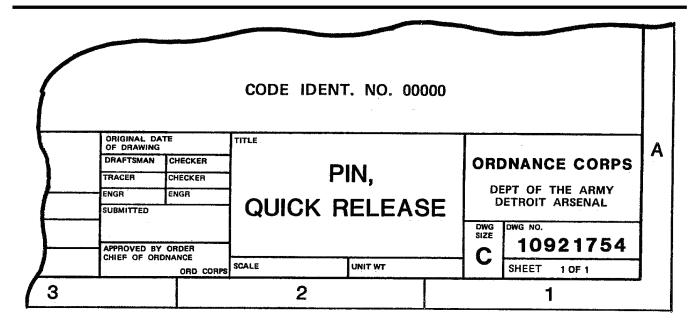
See FIGURES 23-3a through 23-3d for conditions relating to transfer of design responsibility.



EXAMPLE OF DRAWING NOTATION WHEN DESIGN RESPONSIBILITY IS TRANSFERRED

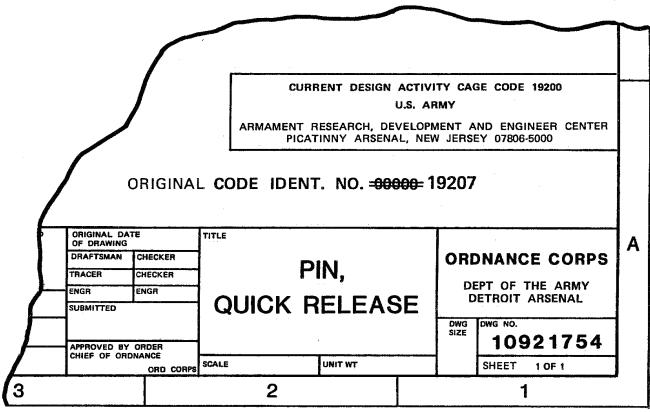


EXAMPLE OF DRAWING ENTRIES WHEN REDRAWN AFTER
DESIGN RESPONSIBILITY WAS TRANSFERRED
FIGURE 23-3b



EXAMPLE OF "00000" CAGE CODE (CODE IDENT) PRIOR TO CHANGE. FIGURE 23-3c

NOTE: DRAWINGS With "00000" CAGE Code (CODE IDENT). Drawings having a CAGE Code (CODE IDENT) of "00000" which is associated with the original design activity drawing number shall be changed to reflect the current CAGE Code of the original design activity. See FIGURES 23-3c and 23-3d.



EXAMPLE OF CHANGE TO THE CURRENT CAGE CODE
OF THE ORIGINAL DESIGN ACTIVITY
FIGURE 23-3d

- **23.10.2** Effect OF Transferring Design Responsibility On Source Control Drawings (SOCD). When the design responsibility for a source control drawing is transferred, the name and address of the cognizant design activity in the drawing note "ONLY THE ITEM DESCRIBED "shall also be revised to reflect the transfer of design responsibility. See SECTION 4 for SOCD drawing NOTE 1.
- **23.10.3** Rights To Technical Data That Expire or Change. When the rights to an item expire or change due to an engineering revision to the drawing, the right shall be so explained in detail in the description column of the Revision block including the contract number which authorized the change. The revision authorization document (DCN) alone is not acceptable in this situation. See FIGURE 23-4. Any legend or notation that appears on the drawing that is affected by the change in rights shall be updated.

		SH	REV.			1								
	REVISION HISTORY													
NE	REV		DES		DATE	APPROVED								
	Α	DCN W5	A2678	86-01-18		86-05-24	J.H.L.							
	В	DCN W6	A2317	86-12-21		86-12-30	J.H.L.							
	C		ED TO . ACT NO			87-10-13	J.H.L.							
	D	DCN W6	A3917	88-10-12		88-11-16	J.H.L.							
					ex	plain in detai	il							

EXAMPLE OF REVISIONS BLOCK NOTATION FOR CHANGES IN DRAWING RIGHTS FIGURE 23-4

23.11 REVISION APPLIED TO SEPARATE PARTS LIST (PL).

23.11.1 Revision Separate Parts List. When the parts list is separate from the drawing, it is revised in the same manner as a drawing. There is no requirement for a drawing and its separate parts list to have the same change letter. See SECTION 10.

23.12 REVISION APPLIED TO REMOVAL OF SUFFIX IDENTIFIER (DASH) NUMBERED ITEMS.

23.12.1 Removing Suffix Identifier (Dash) Numbered Items. When a part identified by a suffix identifier (dash) number is removed from a drawing or parts list, the word "REMOVED" is inserted in the Description column. The suffix identifier (dash) number is left in the part number column and the Find number is left in the Find number column (if Find numbers were listed), and all other information on that line is deleted. See FIGURE 23-5.

			-5	BRACKET	CRES	QQ-S-763 CL321 COND A	3
			-3	REMOVED			2
			-1	BRACKET	CRES	QQ-S-763 CL321 COND A	1
QTY	REQD	CAGE	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATE SPECIFIC	RIAL CATION	FIND
				PARTS LIST		_	

REMOVAL OF A SUFFIX IDENTIFIER (DASH) NUMBERED ITEM FIGURE 23-5

23.13 REVISION HISTORY BLOCK ENTRIES.

- **23.13.1 Revision Date.** Dates shown in Revision History blocks shall be specified numerically by year-month-day (e.g.,95-04-14).
- **23.13.2 Contents.** The Revision History block contains the change letter in the LETTER Column, the change(s) or reference to an ADCN/DCN in the DESCRIPTION Column, and the DATE Column may be left blank since dates are recorded on the ADCN/DCN. See FIGURE 23-29.
- **23.13.3 Approval Signatures** The Approval Signature block will be signed by an authorized drawing checker. See FIGURE 23-29.
- **23.13.4 Description In Revision History Block.** The statement placed in the Description column may be selected from those samples listed in FIGURE 23-29.
- 23.13.5 Recording Separate Revisions. Each revision letter level shall be separated by a horizontal line.
- **23.13.6 Revision Description Recorded Directly In The Revision History Block.** Whether the revision authorization document (ADCN/DCN) preassigns or does **not** preassign the revision letter and does **not** describe each change on the ADCN/DCN, the changes shall be itemized in the Revision History block of the drawing. See PARAGRAPH 23.7.9.3a. A note on the ADCN/DCN may be added that reads "SEE REVISION HISTORY BLOCK ON DRAWING FOR DESCRIPTION OF CHANGE(S)".

23.13.7 Rules Relating To Use of Revision Authorization Documents Identified As ADCN and DCN, When:

- a. ADCN/DCN preassigns a revision letter next in sequence in advance of change(s) being incorporated on the original drawing. Each change is described on the ADCN/DCN using the revision letter assigned and supplemented by an appropriate sequence suffix (dash) number to the revision letter to permit ready identification of each change on the field of the drawing. See FIGURE 23-1.
- b. ADCN/DCN does **not** preassign a revision letter in advance of the change(s) being incorporated on the original drawing. The change(s) may be identified as set forth in "a" and the applicable revision letter assignment is made and the change(s) is made to the drawing at the same time.
- c. Each preassigned revision authorized document (ADCN/DCN) incorporated at the same time shall have preassigned revision letters and shall be incorporated as separate revisions in alphabetical sequence to the drawing. The appropriate ADCN/DCN revision letter in the Revision History block shall be the same. See FIGURE 23-1.
- d. Several revision authorized documents (ADCN/DCN) that do **not** have preassigned revision letters shall be incorporated at the same time as a group. the change(s) are entered in numerical sequence as a suffix (dash) number to the applicable revision letter assigned. The incorporation of several, non-preassigned revision level, revision authorization documents (ADCN/DCN) shall raise the revision letter by only one level.
- **23.13.8 Revision History Retention.** The latest revision, with the change authorization document identification or revision description within the Revision History block, shall be listed on the drawing. However, previous revisions may be removed or omitted as permitted by implementing PARAGRAPH 23.13.9a.
- **23.13.9 Removal of History Retention.** Removal of revision history is accomplished by the following preferred method. Other alternate methods are listed in ASME Y14.35M. The method selected shall be consistent for the total Technical Data Package (TDP).

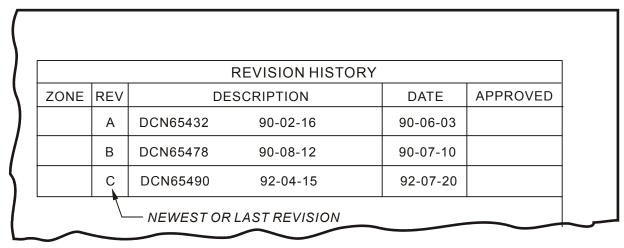
23.13.9 (Continued)

- a. Remove all previous revision history except as noted in sub-paragraph "b" that follows and the retention of a line entry for each revision level that identifies the revision authorization document(s) and date of the revision. See FIGURE 23-4.
- b. Revision entries addressing rights in data or security classification shall not be removed, but retained. See FIGURE 23-4.

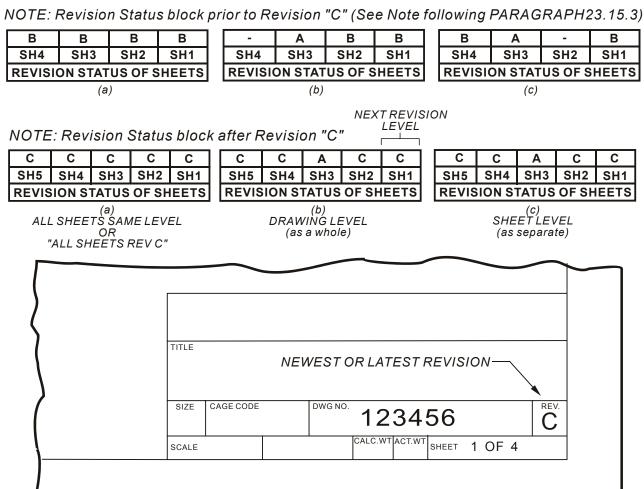
23.14 COMPLETION OF REVISED DRAWINGS.

- **23.14.1 Processing Revised Drawings.** All revised drawings are resubmitted for approval signatures and necessary reproduction in accordance with applicable release procedures.
- **23.15 REVISION STATUS OF SHEETS BLOCK CONTROL METHODS TO MULTI-SHEET DRAWINGS AND DRAWINGS IN BOOK FORM.** Three methods are acceptable as described below. However, the method selected shall prevail for the entire Technical Data Package (TDP). If the Revision Status block of Sheets is not on sheet one (1) the location thereof shall be indicated on sheet one (1).
- 23.15.1 "ALL SHEETS SAME LEVEL METHOD"- Revision History Block Entries for Multi-Sheet Drawings When The Same Revision Letter Applies To Each Sheet Of The Drawing Concurrent changes affecting any or all sheets are identified by the same revision letter on all affected sheets and on sheet one (1). The sequence of revision letters applies to the drawing without regard to the specific sheet(s) to which the revision applies. See FIGURE 23-6a. Revision Status of Sheets block may be replaced by a notation stating that the revision status of all sheets are the same, such as "ALL SHEETS ARE REV ___". (the applicable revision letter). See FIGURE 23-6a. Digital data file generated/revised drawings will use the note "ALL SHEETS ARE REV___" in lieu of the Revision Status block.
- 23.15.2 "SHEET LEVEL METHOD"- Revision History Block Entries for Multi-Sheet Drawings When Each Sheet is Treated As A Separate Document When a change is made on any or all sheets, the latest change letter is entered in the change letter column of all affected sheets and on sheet one (1) whether sheet one (1) is affected or not. The revision letter does not advance for any sheets not affected by the change. For sheets that have never been revised, a dash (-) shall be entered in the appropriate box. Changes are recorded in the revision description column of each affected sheet in accordance with the applicable change condition. Those sheets not affected shall remain "As Is". See FIGURE 23-6c.
- 23.15.3 "DRAWING LEVEL METHOD"- Revision History Block Entries for Multi-Sheet Drawings When Revision Letter Applies To the Drawing As A Whole. The concurrent changes affecting any or all sheets are identified by the same revision letter and on sheet one (1). The latest revision letter represents the revision level of the drawing as a whole and not to the individual sheets. See FIGURE 23-6b.

NOTE: The following FIGURE 23-6 provides an example of presenting each of the three (3) methods described in PARAGRAPHS 23.15.1, 23.15.2 and 23.15.3. The Example portrays a four (4) sheet drawing where Sheets 2 and 4 are revised and sheet 5 is added. Also affected is entering the current revision letter in the Title block, Microfilm Drawing block and the Margin Drawing Number block when included on the drawing form.



REVISION CONTROL METHODS



REVISION CONTROL STATUS BLOCK METHOD FIGURE 23-6

23.15.4 "BOOK FORM DRAWINGS" Revision History Block Entries For Multi-Sheets When Each Sheet is Treated as a Separate Document. Revision Status of Sheets block is generally part of the preprinted Book Form format located above the Title block. (See SECTION 6, FIGURE 6-24 herein) or added as required. When preprinted , the first unused sheet number block shall be lined out with a diagonal line. (See FIGURE 23-6.1). Revision control for Book Form drawings is best accomplished by the use of the "Sheet Level Method". Book Form continuation sheets (sheet 2 and subsequent) need not include a revision block.

REV																							
SHEET	43	44	45	46	47	48	49	50															
REV																							
SHEET	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
REV S	TATU	ıs	RI	ΞV	_	_	_	_	_	_	_	_	_										
OF SH	IEET	S	SHE	EΤ	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19

REVISION STATUS SHEETS BLOCK FIGURE 23-6.1

23.15.5 Addition/Deletion Of A Sheet To A Multi-Sheet Drawing. When a multi-sheet drawing is revised to add/delete a new/old sheet(s), the following note; "THIS SHEET ADDED/DELETED", shall be placed in the Description block of the new/old sheet(s). The addition/deletion of drawing sheets constitutes a change; Therefore, an applicable entry in the Revision History block on sheet one (1) is required as shown in FIGURE 23-7.

		SH	REV.			1							
	REVISION HISTORY												
NE	REV		DES	CRIF	PTION	DATE	APPROVED						
	С	THIS SHE			86-03-18								

SHEET ADDED/DELETED OF REVISION HISTORY BLOCK NOTATION FOR MULTI-SHEET DRAWING FIGURE 23-7

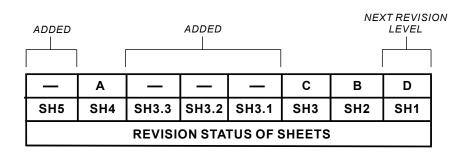
23.15.6 Status Block Treatment When Adding and Deleting Sheets for Multi-Sheet Drawings

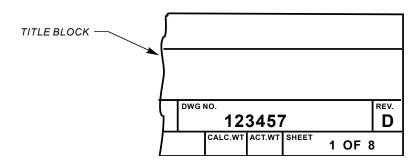
23.15.6.1 Adding Sheets. Added sheets constitute a change to the drawing and shall be entered at the revision level next in sequence for sheet one (1). This revision shall be entered in the Revision Status block on sheet one (1) as shown in FIGURE 23-7. Additional sheets shall require one of the following procedures:

- a. Added sheets between sheets 3 and 4 shall be numbered in a decimal-number sequence; for example, these sheets added between sheets 3 and 4 would be numbered 3.1, 3.2 and 3.3. See FIGURE 23-8 (Preferred).
- b. New and revised sheets shall be numbered using consecutive whole numbers (Not illustrated).

NOTES:

- 1. The total number of sheets is updated accordingly on sheet one (1).
- 2. Any cross-reference between sheets in the field of the drawing shall be updated when sheets are added.





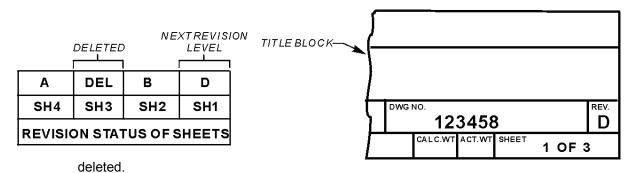
ADDING SHEETS TO MULTI-SHEET DRAWINGS FIGURE 23-8

23.15.6.2 Deleting Sheets. When sheets are deleted, the revision level of sheet one (1) shall be advanced to the appropriate revision level, and the action shall be explained in the Revision History block as shown in Figure 23-7. One of the following procedures will apply:

- a. Remaining sheets shall not be renumbered. The Revision Status of Sheets block shall be updated by replacing the revision letter with the notation "DEL". See FIGURE 23-9 (Preferred).
- b. Remaining sheets shall be renumbered to maintain a consecutive whole numbered sequence. The Revision Status of Sheets block and total number of sheets shall be updated accordingly on sheet one (1). (Not illustrated).

NOTES:

- 1. The total number of sheets is updated accordingly on sheet one (1).
- Any cross references between sheets in the field of the drawing shall be updated when sheets are



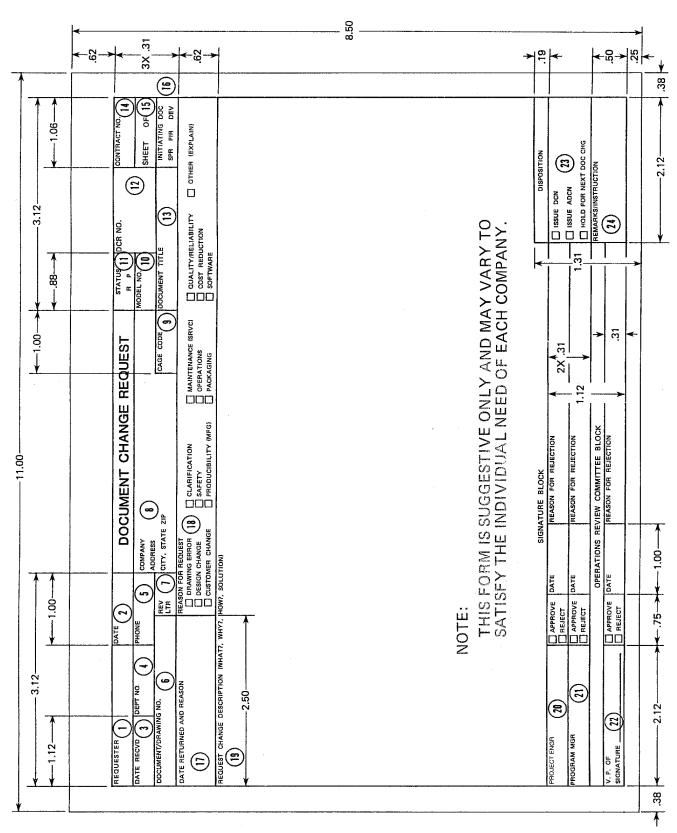
DELETING SHEET(S) TO MULTI-SHEET DRAWINGS FIGURE 23-9

- **23.15.7 Revisions To Production Master Drawings.** Revisions to production master drawings (Master Pattern) made from the original stable base artwork regarded as the original artwork master drawing or CAD file shall be made on duplicate masters or CAD system and marked in accordance with 6-38 of SECTION 6 herein.
- 23.16 DOCUMENT CHANGE REQUEST (DCR).
- **23.16.1 General Procedure.** The Document Change Request (DCR) form (See FIGURE 23-10) is used to request drawing changes. It may be initiated by personnel outside the project or within the project.
- **23.16.2 DCR Form Entries.** Processing the entries that follow come under the function and control of Configuration Management's established procedures for each company and in accordance with MIL-STD-973.
- **23.16.2.1** (1) **REQUESTER Block. See FIGURE 23-10.** Name of individual requesting change to a drawing for one or more reasons. The request is not limited to any person or reason.
- 23.16.2.2 (2) DATE Block. Enter the date the request is submitted.
- **23.16.2.3 3 DATE RECEIVED Block.** Record the date the request was received and logged by Engineering records.
- 23.16.2.4 (4) **DEPARTMENT Block.** Name of department (if within the company) the request came from.
- **23.16.2.5 (5) PHONE Block.** Enter the phone number where the requester may be reached for further information and questions.
- **23.16.2.6 (6) DOCUMENT/DRAWING NUMBER Block.** Enter Document/Drawing Number to be changed. A Document/Drawing change shall be limited to one Document Change Request number assignment only. If the change involves other documents/drawings, they shall be listed on the first change request and others referenced in the Request Change Description field. Each of the referenced documents/drawings shall be treated accordingly when appropriate.
- 23.16.2.7 (7) REVISION LETTER Block. Enter the revision letter of the Document/Drawing for which the change is be requested.
- 23.16.2.8 (8) **DESIGN ACTIVITY Block.** Name, address, city, state and zip code of the design activity responsible for the product.
- 23.16.2.9 (9) CAGE CODE Block. CAGE Code of the design activity.
- 23.16.2.10 (10) MODEL NUMBER Block. Enter model number or product, if applicable.
- **23.16.2.11** (11) **STATUS Block.** Circle "R" for routine if the Change Request is not a priority. Circle "P" for priority if the Change Request is an emergency such as a production line stopper, if safety is involved, or the like.
- 23.16.2.12 (12) DESIGN CHANGE REQUEST (DCR) NUMBER Block. Enter the number assigned by Engineering Records; use on any copy when referenced and when returned to the requester.
- 23.16.2.13 (13) DOCUMENT TITLE Block. Enter the Document/Drawing Title affected by this Document Change Request (DCR).
 23.16.2 (Continued)

- 23.16.2.14 (14) CONTRACT NUMBER Block. Enter the contract number or other number as applicable.
- **23.16.2.15 SHEET__OF__Block.** Enter Sheet one (1) and total number of sheets on first sheet. Enter sheet number only for each of the follow-on sheets.
- 23.16.2.16 (16) INITIATING DOCUMENT Block. CIRCLE one of the following:
 - a. SPR System Problem Report
 - b. PIR Product Improvement Request
 - c. DEV- Development Engineering Document

NOTE; The foregoing documents are not required or necessary to initiate a Document Change Request (DCR).

- 23.16.2.17 (17) DATE RETURNED AND REASON Block. Engineering Records enters date when the DCR is returned to the requester for insufficient data and/or enters date when returned to requester after review and completion.
- 23.16.2.18 (18) REASON FOR REQUEST Block. Check all boxes that apply. More than one reason may be checked.
- 23.16.2.19 (19) REQUEST CHANGE DESCRIPTION Block. Enter the reasons for requesting the change(s) as follows:
 - a. What is the change?
 - b. Why is it needed?
 - c. Offer possible solution with suitable text and illustrations.
- **23.16.2.20 PROJECT ENGINEER SIGNATURE Block.** Project Engineer enters his/her signature and enters a check in the Approve or Reject block and enters date. If rejected, enter reason.
- **23.16.2.21 21 PROGRAM MANAGER SIGNATURE Block.** Program Manager enters his/her signature and enters a check in the Approve or Reject block and enters date. If rejected, enter reason.
- **23.16.2.22 VICE PRESIDENT OF Block.** Enter the appropriate DEPT/DIV of the company responsible for the product or contract. Enter the VP's signature and date. If rejected, enter reason.
- 23.16.2.23 (23) DISPOSITION Block. Disposition of the DCR after completion is to notify the requester by checking one of the action blocks the following:
 - a. Issue DCN.
 - b. Issue ADCN.
 - c. Hold for next Document Change.
- 23.16.2.24 (24) REMARKS/INSTRUCTIONS Block. Enter any additional information that can be helpful or indicative of an unusual need to process the DCR.
- **23.16.3 Processing.** After a Document Change Request (DCR) has been prepared, the original is forwarded to the responsible design activity for action. The design activity completes the applicable disposition block, etc., and returns a copy to the person requesting the change. The original is delivered to the responsible group for implementation.



DOCUMENT CHANGE REQUEST DCR FIGURE 23-10

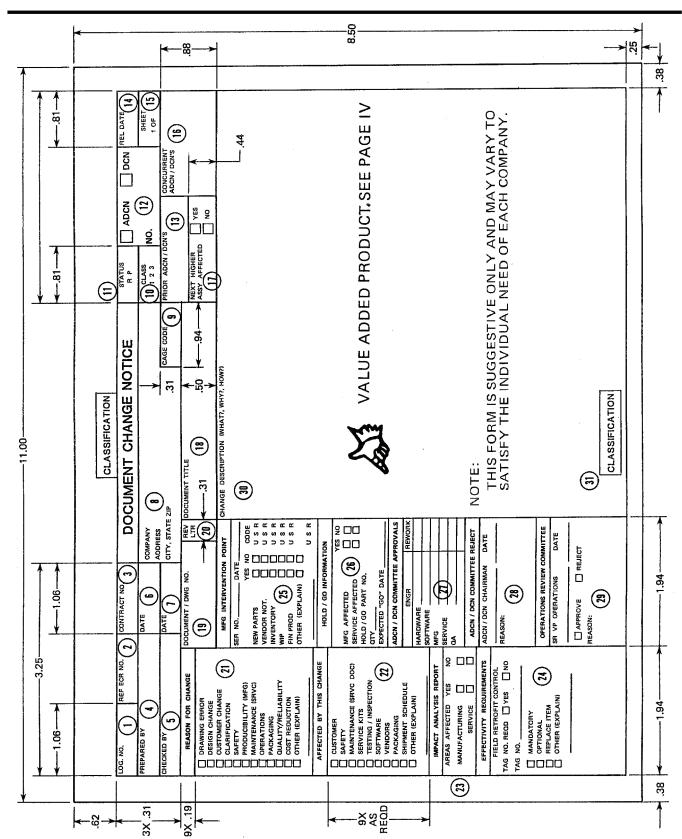
- 23.17 DOCUMENT CHANGE NOTICE (DCN) AND ADVANCE DOCUMENT CHANGE NOTICE (ADCN). See FIGURES 23-11 and 23-12.
- **23.17.1 General Procedures.** Upon receipt of an approved Document Change Request (DCR), the responsible group will prepare and issue an ADCN or a DCN, as applicable. When a DCN is prepared, all outstanding ADCNs are incorporated.
- **23.17.1.1 Restrictive Use of ADCNs.** An Advance Document Change Notice (ADCN) does not advance the revision letter of the affected drawing. Every effort should be exercised to avoid the use of ADCNs since it adds additional workload for users and data distribution systems. An additional reason not to use ADCNs is the potential confusion arising from the drawing no longer being the sole document defining the product until the changes are incorporated; it is possible that the changes on the ADCN(s) may exist separately from the drawing for some time until they are incorporated the into the drawing.
- **23.17.1.2 Routing of ADCNs.** Advance DCNs are used to authorize drawing changes before revision of the affected drawing master originals. Released ADCNs are considered an integral part of the drawing(s) and represent change(s) to that drawing(s). Therefore they are attached (stapled) to that drawing(s).
- **23.17.2 Maximum Number Of ADCNs Allowed** The maximum number of ADCNs recommended to accumulate prior to incorporation is five (5). Multi-sheet ADCNs are limited to a maximum of two sheets. All outstanding ADCNs are incorporated prior to final submittal of the drawing to the customer.
- **23.17.3 Description Of Revision.** A brief description of each change is written in a manner that will provide adequate information for incorporation at a later date, i.e., .250 WAS .375; REMOVED G/N 1 WAS "REMOVE ALL BURRS AND SHARP EDGES"; ADDED G/N 6 "DIMENSIONS APPLY AFTER PLATING".
- **23.17.4 ADCN/DCN Form Entries.** Control and Processing the entries that follow come under the function of Configuration Management and established procedures of each company in accordance with MIL-STD-973.
- 23.17.4.1 1 LOG NO. Block. See FIGURE 23-11 and 23-12. Engineering Records assigns a log number within this block. This log number is used to track the DCN until approved. When completion and approval signatures are entered, the DCN number is assigned and entered. The release date is entered and used in the Revision History block of the affected drawing.
- 23.17.4.2 (2) REFERENCE ENGINEERING CHANGE REQUEST NO. (REF ECR NO.) Block. Enter the ECR that was reviewed and approved by the ADCN/DCN Committee that initiated the preparation of an ADCN/DCN.
- 23.17.4.3 (3) CONTRACT NO. Block. Enter the contract number or product number.
- 23.17.4.4 4 PREPARED BY Block. The signature of the hardware/software design engineer.
- 23.17.4.5 (5) CHECKED BY Block. The signature of the hardware/software design checker.
- **23.17.4.6 6 DATE Block**. The date the ADCN/DCN was initiated by the hardware/software design engineer is entered and expressed YR-MO-DA.
- **23.17.4.7** (7) **DATE Block.** The date the ADCN/DCN was completed by the hardware/software checker is entered and expressed YR-MO-DA.
- 23.17.4.8 (8) **DESIGN ACTIVITY Block** Name, address, City, State and Zip code of the design activity responsible for the product.
- 23.17.4.9 9 CAGE CODE Block. CAGE Code of the design activity.

- 23.17.4.10 CLASS Block. Circle the appropriate *class.
 - a. **CLASS 1**: All CLASS 1 DCNs must have Operations Review Committee approval before incorporation.
 - (1) Engineering non-recurring cost greater than \$XX,XXX.XX*.
 - (2) Manufacturing non-recurring cost greater than \$XX,XXX.XX*.
 - (3) Service non-recurring cost greater than \$XX,XXX.XX* or life cycle service cost greater than five times the preceding amount.
 - (4) A total non-recurring cost greater than \$XX,XXX.XX*.
 - (5) A change in unit cost which will result in a product cost change of more than \$XXX.XX*.
 - (6) A change which requires an alteration in the performance specifications.
 - (7) A change which affects the manufacturing build rate.
 - b. CLASS 2: All ADCN/DCNs can be approved by ADCN/DCN Committee.
 - (1) A change which has cost impact on profits of less than \$XX,XXX.XX*.
 - c. **CLASS 3:** Changes to documentation only which have no impact on hardware or software. These changes concern minor corrections in spelling grammatical errors and clarifications.
 - * Dollar values to be determined by each individual company.
- **23.17.4.11** (11) **STATUS Block.** The letters "R" and "P", "Routine" and "Priority" respectively, are circled as appropriate. When the change is routine, it is processed without priority. Circle "P" if the ADCN/DCN is an emergency such as a manufacturing stoppage or safety problem.
- 23.17.4.12 (12) ADCN/DCN NUMBER Block. The ADCN/DCN number is recorded and assigned by engineering after approval. The log number is used to identify the change(s) until approved.
- 23.17.4.13 (13) PRIOR ADCN/DCN NUMBER Block. List the prior ADCN/DCNs which need to be completed before releasing this ADCN/DCN.
- 23.17.4.14 (14) RELEASE DATE Block. Date on which the ADCN/DCN has been approved.
- **23.17.4.15** (15) SHEET NUMBER Block. Sheet one (1) and total number of sheets is entered in this block. Enter sheet number only for each of the follow-on sheets.
- **23.17.4.16** (16) **CONCURRENT ADCN/DCNs Block.** List ADCN/DCNs which have the same effectivity or affect installation of this ADCN/DCN.
- 23.17.4.17 (17) NEXT HIGHER ASSEMBLY AFFECTED Block. Indicate whether the next higher assemblies are affected by this ADCN/DCN and the need for follow-through-action.
- 23.17.4.18 (18) **DOCUMENT TITLE Block.** Enter the Document's Title.
- 23.17.4.19 (19) DOCUMENT DRAWING NUMBER Block. Enter the Document Drawing Number affected by this change. No more than one document shall be changed per ADCN/DCN number assignment.

- 23.17.4.20 (20) REVISIONS LETTER Block. Enter the current revision letter of the Document Number affected by this ADCN/DCN.
- **23.17.4.21** (21) **REASON FOR CHANGE Block.** Check all applicable blocks that are one or more reasons for making change(s) to a drawing. When a company uses a DCN form for initial release of a drawing, the Change Discription Block will state what ASSY the part is being released into. The next higher ASSY Block will reflect if it applies or not.
- 23.17.4.22 (22) AFFECTED BY THIS CHANGE Block. Areas that are impacted by this change(s) are checked and described in detail in the Change Description Block.
- 23.17.4.23 (23) IMPACT ANALYSIS REPORT Block. The appropriate block is checked if a manufacturing and /or service impact analysis report has been prepared. Concern may be stated in the Change Description Block of the ADCN/DCN. NOTE: This is a Configuration Management Function.
- 23.17.4.24 (24) EFFECTIVITY REQUIREMENTS Block. Appropriate blocks are checked to determine the importance and extent of repairing or replacing the item.
- 23.17.4.25 (25) MANUFACTURING REQUIREMENTS Block. Appropriate blocks are checked and coded to determine when, at what point, and what action manufacturing is to take on items to be made, those in process, finished items and items in inventory. The following actions are required:
 - a. S/N Serial Numbers of units affected by this change.
 - b. DATE Date on which the ADCN/DCN is effective. This date may be post-dated to delay the effect of the ADCN/DCN for use in conjunction with another effectivity.
 - c. NEW PARTS Check (YES) if purchase orders have not been issued. Otherwise check (NO).
 - d. VENDOR NOTIFICATION Check (YES) if purchase orders issued are affected by the change and the vendor notified. Otherwise check (NO).
 - e. INVENTORY Check (YES) if the change affects parts in storage. Otherwise, check (NO).
 - f. WIP (WORK IN PROCESS) Check (YES) if the change affects work in process. Otherwise, check (NO).
 - g. FINISHED PRODUCTS Check (YES) if the change affects finished products. Otherwise, check (NO).
 - h. OTHER Any additional requirements stated here.
 - i THE CODES Circle appropriate Code "U" "R" "S" "O".
 - (1) "U" Use as is until depleted.
 - (2) "R" Rework existing parts to "change" for use on the indicated next assy
 - (3) "S" Scrap existing parts after intervention point is met.
 - (4) "O" Additional text is required for clarification and indicating what action is to be taken.
- 23.17.4.26 (26) HOLD/GO INFORMATION Block. Officially notify Manufacturing and Service that an item is subject to redesign and that action should be taken to limit procurement. A "HOLD" action must have a "GO" ADCN/DCN to release the item from "HOLD" status.

- 23.17.4.27 ADCN/DCN COMMITTEE APPROVALS Block. When an ADCN/DCN is approved, the committee members shall affix their signatures on the lines provided. If the ADCN/DCN changes again after the signatures are affixed, it will be rerouted and considered as "reworked" and initiated by the committee members under "REWORK".
- 23.17.4.29 (29) OPERATIONS REVIEW COMMITTEE Block. The signature of Vice President of Engineering and date is entered on the line provided and the appropriate approve or reject block checked. The reason for rejected should be stated. When additional space is needed, use the change description field adjacent to the rejection blocks.
- 23.17.4.30 (30) CHANGE DESCRIPTION Block. A description of the reason for change should answer these questions:
 - a. What is the change?
 - b. Why is it needed?
 - c. How will it correct the need for change?

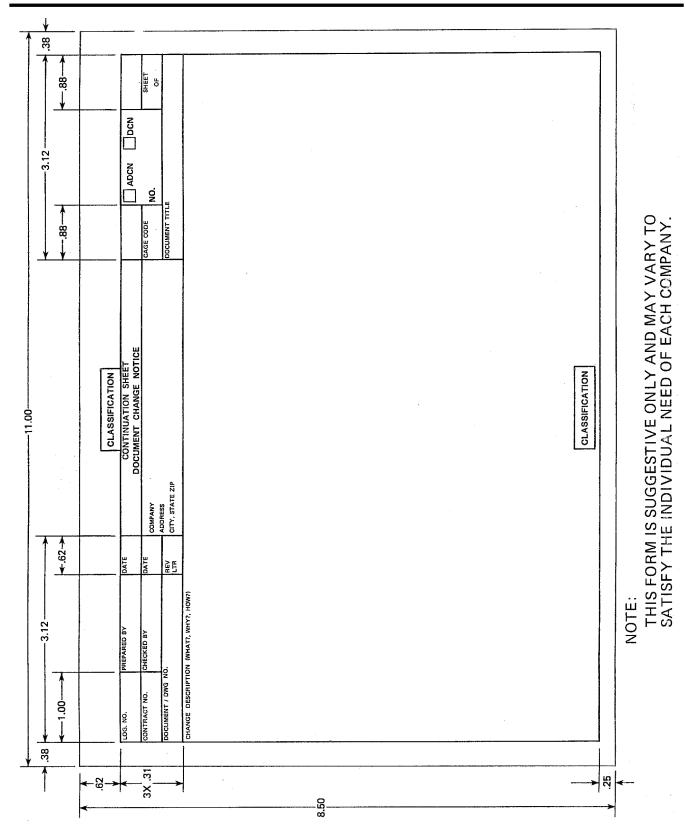
The use of drawing zone letters and numbers together with "WAS" and "IS" techniques shall be used. THE ADCN/DCN is an extension of the drawing and used for traceability.



<u>"SUGGESTED"</u>

DOCUMENT CHANGE NOTICE (DCN) AND ADVANCE DOCUMENT CHANGE NOTICE (ADCN)

FIGURE 23-11



"SUGGESTED"

DOCUMENT CHANGE NOTICE (DCN) AND ADVANCE DOCUMENT CHANGE

NOTICE ADCN CONTINUATION SHEET

FIGURE 23-12

- **23.17.5 PROCESSING COMPLETED ADCNs.** The ADCN original is submitted for check with a copy of the latest/current drawing and all outstanding, unincorporated ADCNs. After receiving all required approvals, the original is processed through the release group and a copy is attached to all prints of the subject drawing. After an ADCN is incorporated, the original, microfilm, or acceptable digital master is retained as a record of the change.
- **23.17.6 Changes To Released ADCNs.** After release an ADCN is considered an integral part of the subject drawing, and therefore cannot be canceled, but may be revised in part or in entirety by another ADCN or DCN. Each item of an ADCN or DCN that revises an item on a previously released but unincorporated ADCN is accomplished by stating "REF ITEM____OF___CHANGE ADCN" at the end of the new item's revision description. When the "WAS" condition for the superseding ADCN or DCN is shown, it will be the "IS" condition from the superseded ADCN.
- **23.17.7 Pre-Releasing An ADCN.** When a critical time element exists, the pre-release of an ADCN may be initiated by the design activity to authorize a change, pending release of the fully approved ADCN. A pre-released ADCN is supplied in a composite form.
- **23.17.7.1 Approval Signatures.** All procedures governing the use of an ADCN apply with the exception of the initially required approval signatures. Only the responsible design activity approval is required to authorize implementation.
- **23.17.7.2 Pre-Released Copy.** The pre-released (hard) copy is used as the working document, remaining in effect until the specified "Void Date", or until replaced by the fully approved ADCN. The period of effectivity shall be established by each Division. Changes to a pre-released copy are accomplished only by a superseding DCN, ADCN, or another pre-released ADCN.
- **23.17.7.3 Original Copy.** The original ADCN is immediately processed by the responsible engineer. Release and distribution of the fully approved ADCN, without revision, is mandatory and automatically supersedes the pre-released copy. Minor changes that do not affect fabrication or design are permitted.
- **23.17.7.4 Identification.** The original ADCN and all copies are identified with the identical drawing number and change letter.
- 23.18 DOCUMENT CHANGE NOTICE (DCN) ROUTING. See FIGURES 23-11 and 23-12.
- **23.18.1 Processing Completed DCNs.** The DCN original, when completely incorporated, is submitted with the drawing, a print of the drawing prior to change, and a print of each outstanding ADCN for check. The checked DCN original becomes the "Change Record" for the related drawing change, and is processed in accordance with individual Division procedures.

23.19 CHANGES REQUIRING NEW IDENTIFICATION

- 23.19.1 Reasons For New Identification.
 - a. Whenever a part's performance or durability is affected.
 - b. A replacement is not interchangeable.
 - c. When a replacement part is limited in its performance for the part it replaces.
 - d. When the part has been altered, selected or a source control item, the part must be reidentified.

23.20 ASSEMBLIES THAT CONTAIN NON-INTERCHANGEABLE PARTS.

23.20.1 Reidentified Parts Follow-up Of Non-Interchangeable Parts Used In Repairable Assemblies. When repairable assemblies contain a non-interchangeable part, the part number reidentification of the non-interchangeable part, of its next assembly and all progressively higher assemblies, shall be reidentified up to and including the assembly where interchangeability is re-established.

23.21 NEW PART NUMBER IDENTIFICATION RULING.

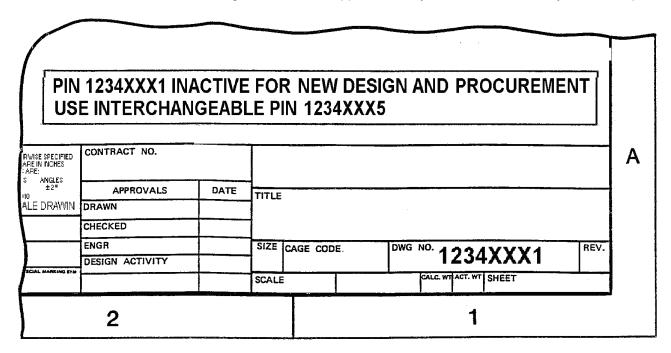
23.21.1 Changes Not Requiring New Identification. When a part assembly is changed in such a manner that conditions of PARAGRAPH 23-19 do not occur, the part number shall not be changed. Under no condition shall the number be changed only because a new application is found for an existing part.

23.21.2 Permissible Change To Part Number When A Tabulated Listing Is Added.

When an item has been furnished to the Government, the applicable part number shall not be changed unless conditions in PARAGRAPH 23-19 apply. However, when a design activity desires to create a tabulated listing or a standard because of multiple application of an item, the aforementioned need not apply. The superseded drawing shall identify the document which superseded it. The superseding document shall identify the part numbers the items replaced.

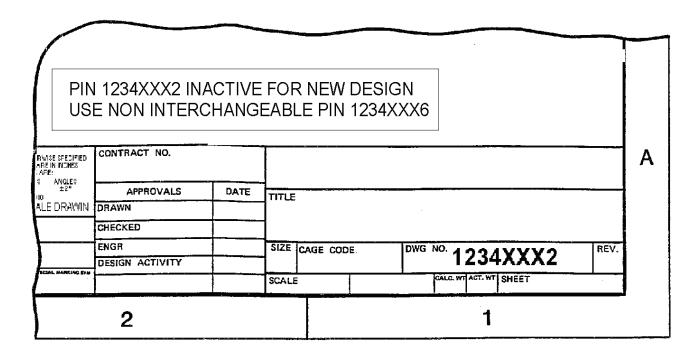
23.22 ITEM REPLACEMENT PROCEDURES.

23.22.1 Interchangeable Items. When an item is replaced by another existing or new item, which is physically and functionally interchangeable, the note "INACTIVE FOR NEW DESIGN AND PROCUREMENT USE INTERCHANGEABLE PART NO. 123XXX" shall be applied over the Title block of the drawing for the replaced item, as shown in FIGURE 23-13. The new item will replace the old in all present and future applications. The addition of the note constitutes a change; therefore, an applicable entry in the Revision History block is required.



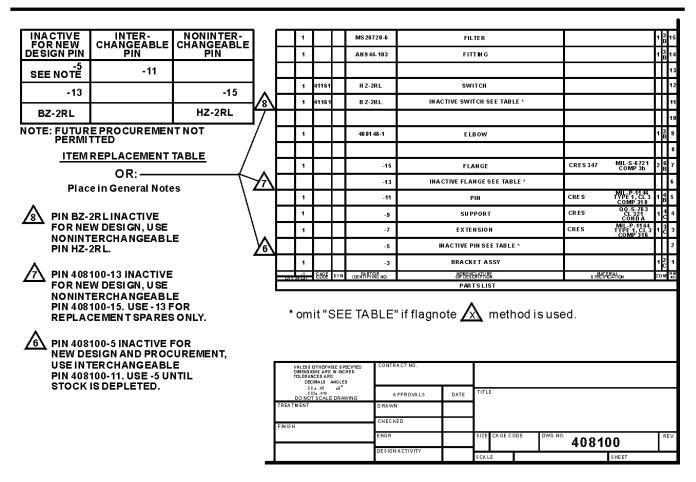
EXAMPLE OF INTERCHANGEABLE PARTS NOTATION FIGURE 23-13

23.22.2 Non-Interchangeable Items. When an item is to be replaced by another existing or new item which provides a design improvement but is not interchangeable, the note "INACTIVE FOR NEW DESIGN USE NON-INTERCHANGEABLE PART NO. 124XXX" shall be applied over the Title block of the drawing for the replaced item as shown in FIGURE 23-14. The new item will replace the old item only in new design work. The old item will continued to be used in all its applications. The addition of the note constitutes a change; therefore, an applicable entry in the Revision History block is required.



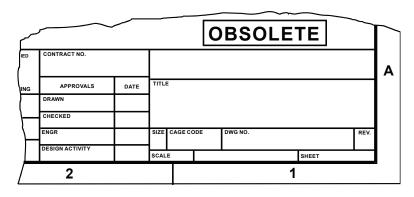
EXAMPLE OF NON_INTERCHANGEABLE PARTS NOTATION FIGURE 23-14

23.22.2.1 Item Replacement Procedures On Drawings With Multiple Items. When not all items on a drawing are replaced, the notations for replaced or other instructions shall be contained by a drawing flag note or table for each affected item. See FIGURE 23-15.



EXAMPLE OF ITEM REPLACEMENT PROCEDURES ON DRAWINGS WITH MULTIPLE ITEMS FIGURE 23-15

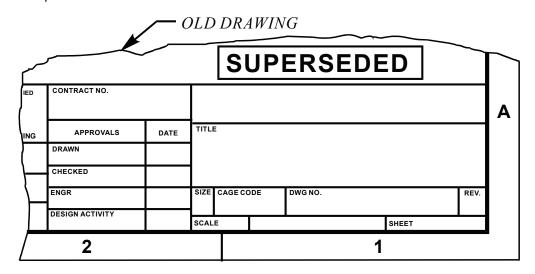
23.22.3 Obsolete Items. When an item is no longer used and not replaced by another item, the word "OBSOLETE" shall be added to its drawing over the Title block as shown in FIGURE 23-16 When a drawing consists of multi-sheet and/or book-form, the "OBSOLETE" notation shall be added to all sheets. The addition of the word constitutes a change; therefore, an applicable entry in the Revision History block is required.



EXAMPLE OF OBSOLETE NOTATION FIGURE23-16

23.22.4 Redrawn With Same Drawing Number.

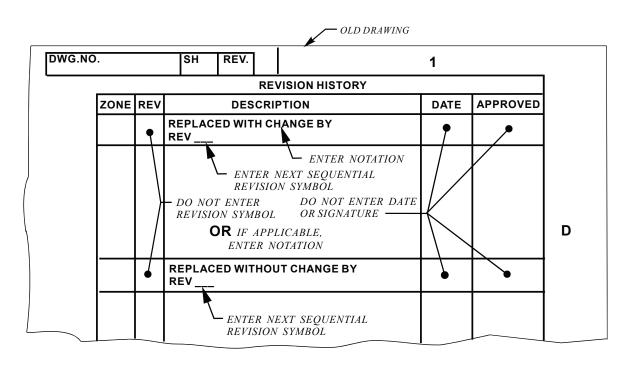
23.22.4.1 Superseded (OLD) Drawing. When a drawing is redrawn (same number), the word "SUPERSEDED" shall be added to the old drawing over the Title block with .25-inch high characters as shown in FIGURE 23-17. The addition of the word constitutes a change; therefore, an applicable entry in the Revision History block is required See FIGURE 23-18.



EXAMPLE OF TITLE BLOCK WITH SUPERSEDED (OLD) DRAWING NOTATION

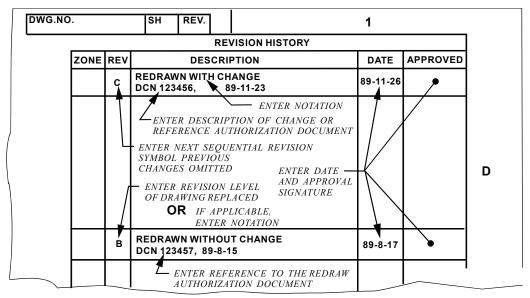
WHEN REDRAWN USING SAME DRAWING NUMBER

FIGURE 23-17



EXAMPLE OF REVISION BLOCK OF SUPERSEDED (OLD) DRAWING WITH REPLACEMENT (REDRAWN) NOTATION USING SAME DRAWING NUMBER FIGURE 23-18

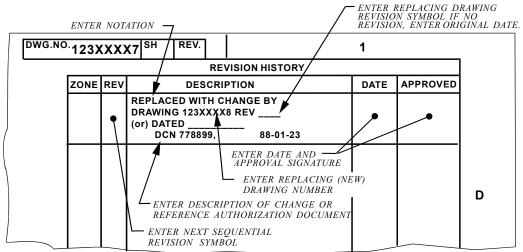
23.22.4.2. Superseding (NEW) Drawing: Same Drawing Number. The original date, contract number and Title block names (signatures if available) of the old drawing shall apply to the new drawing. The Revision History block of the new redrawn drawing with changes shall contain a notation as shown in FIGURE 23-19. Changes shall be described in accordance with FIGURES 23-29 and 23-30. All previous revision symbols, cross-outs and revision notations, shall be omitted from the superseding drawing. Redrawn drawing without changes shall contain the notation as shown in FIGURE 23-19 shall be entered in the Revision History block. The drawing shall contain an original date different than the superseded drawing.



SUPERSEDING (NEW) DRAWING NOTATIONS REDRAWN WITH SAME NUMBER FIGURE 23-19

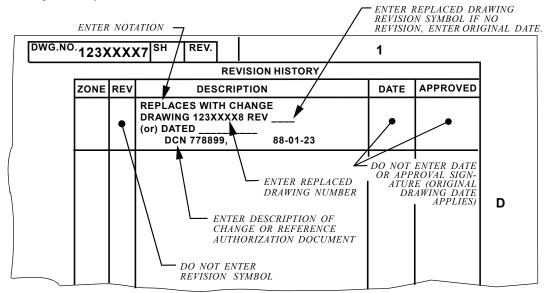
23.22.5 Redrawn With Different Drawing Number.

23.22.5.1 Superseded (OLD) Drawing Replaced By Drawing With Different Number. Where the data base of the original drawing is to be maintained, the notation as shown in FIGURE 23-20 shall be entered in the Revision History block of the superseded drawing. The word "SUPERSEDED" shall be added just above the Title block with .25-inch high characters as shown in FIGURE 23-17.



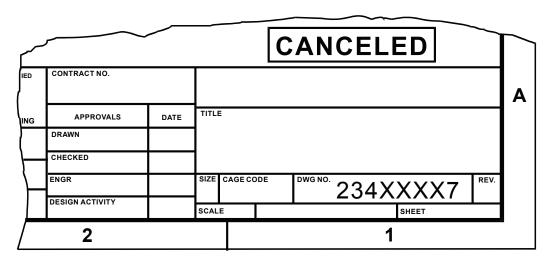
SUPERSEDED (OLD) DRAWING REPLACED BY DRAWING WITH DIFFERENT NUMBER FIGURE 23-20

23.22.5.2 Superseding (NEW) Drawing: Different Number. Notation as shown in FIGURE 23-21 shall be entered in the Revision History block of the superseding drawing. The drawing shall contain an original date different than the superseding drawing. Changes shall be described in accordance with FIGURES 23-1 and 23-29 and the design activity.

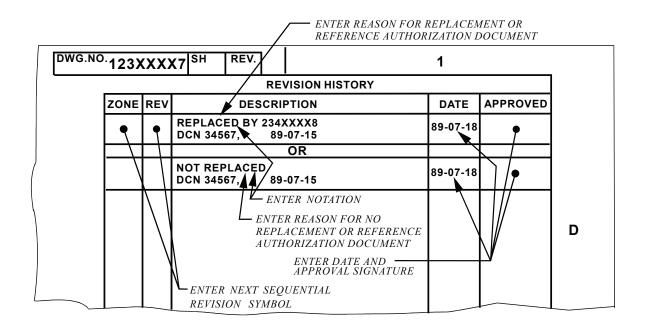


SUPERSEDING (NEW) DRAWING NOTATIONS REPLACING DRAWING
WITH DIFFERENT NUMBER
FIGURE 23-21

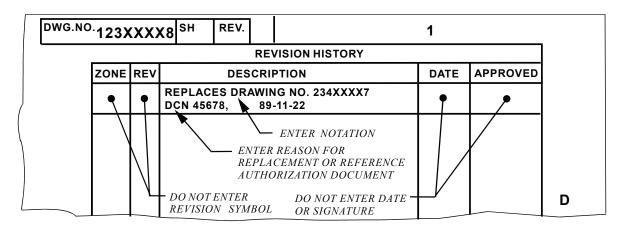
- **23.22.6 Reinstating A Replaced/Superseded/Obsolete Drawing.** All notations relating to the removal of a drawing shall be removed from the drawing. This action constitutes change; therefore, an applicable entry in the Revision History block is required. The next higher revision letter shall be used. Reason for reinstating shall be entered in the Revision History block.
- **23.22.7 CANCELED Drawing.** Canceled drawings of items considered to be non-functional or unsafe shall be removed from the system and the number retired, never to be used again. The drawing shall be conspicuously marked: "CANCELED" with .25-inch high characters located in the general area of the Title block on sheet one (1) only of a book-form drawing and on every sheet of single and multi-sheet drawings A new change letter is required to cancel a drawing using the next revision letter available. See FIGURES 23-22, 23-23 and 23-24.



EXAMPLE OF TITLE BLOCK WITH "CANCELED" NOTATION FIGURE 23-22



EXAMPLE OF REVISION HISTORY BLOCK OF "CANCELED" DRAWING FIGURE 23-23



EXAMPLE OF REVISION HISTORY BLOCK FOR REPLACEMENT (NEW) DRAWING
OF "CANCELED" DRAWING
FIGURE 23-24

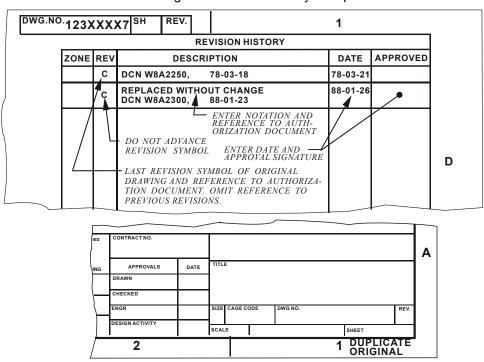
23.23 REVISIONS MADE TO ASSOCIATED LISTS

- **23.23.1 Associated List(s) Revisions.** Manually prepared associated lists shall be revised as necessary for compatibility with related drawing changes. Changes shall be identified and described in the same manner as drawings and as directed by the design activity. However, a drawing or associated list need not be revised for the sole purpose of maintaining common revision levels between drawing and list. Lists may be revised independently of the associated drawings; however, related changes shall be incorporated
- **23.23.2 Revision of an Associated List in its Entirety.** When a separate Parts List (PL), Data List (DL), Index List (IL) or Indentured List (ID) is to be revised and reissued in its entirety, all sheets shall show the same revision level, including those that have not been revised.
- **23.23.3 Revision of Digital Data Prepared List.** Revision letter shall be shown for each sheet and be the same for all sheets.

- **23.23.4 Adding Items.** New or superseding item may be either added chronologically at the end of a list or inserted in the list in the proper sequence. Additional sheets may be added when the last sheet will not accommodate additions.
- **23.23.5 Deleting Items.** Items to be deleted shall retain the same Find number. The nomenclature shall be erased and the word "DELETED" inserted in the nomenclature or description column. When using digital data techniques, items deleted shall be omitted on the next list run or the word "DELETED" may be inserted in the nomenclature or description column.

23.24 DUPLICATE DRAWING.

- **23.24.1 Duplicate Original Drawing Master Material Requirements.** Drawing masters shall be plastic sheets in accordance with L-P-519, TYPE I or II, Class 2 (.003 or .004 thick). Undimensioned drawings and printed circuit board masters shall be in accordance with MIL-PRF-5480, (per IPC-2221A & 2222) or L-P-519, TYPE I or II, Class 1 (.007 thick). Drawings and associated lists prepared from digital data are also acceptable.
- **23.24.2 Rules Governing Duplicate Originals.** Duplicate originals are not prepared for the purpose of maintaining duplicate records. Their application is limited to:
 - a. Establishing a new original drawing to replace an existing drawing that has become worn or is otherwise not maintainable as an original (in this case the original form from which the duplicate original is made shall be destroyed upon verification of the duplicate original). See PARAGRAPH 23-24.3 & FIG. 23-25.
 - b. Providing a base drawing to serve as a point of departure upon which changes can be made to produce a new uniquely identified original drawing and will be separately maintained in the future.
- **23.24.3 Duplicate Original "As Is".** When an original drawing has been damaged beyond repair, it is replaced using the method described below, (i.e., field of drawing has not been touched-up or reconstructed). The words "REPLACED WITHOUT CHANGE" shall be added to the Revision History block and the words "DUPLICATE ORIGINAL" shall be added to the drawing in the lower right hand border as shown in FIGURE 23-25. The revision level shall not be raised unless changes are simultaneously incorporated.

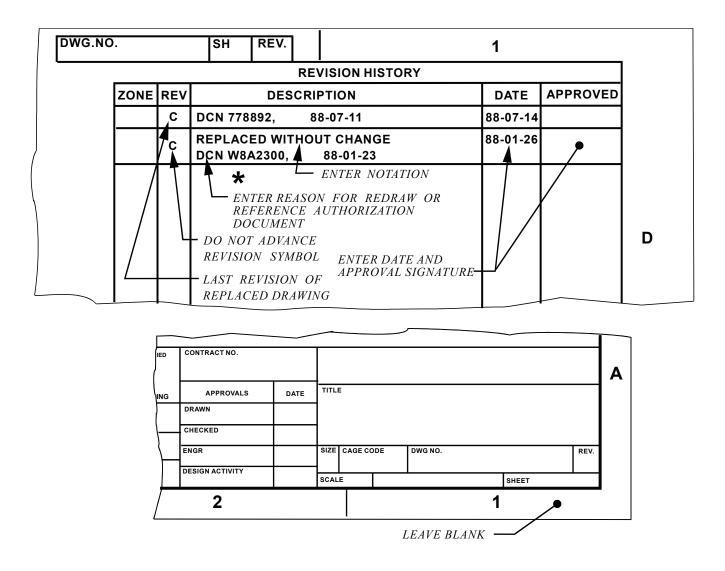


EXAMPLE OF DUPLICATE ORIGINAL NOTATION (NO "TOUCH-UP" PERMITTED)
FIGURE 23-25

- **23.24.4 Duplicate Original "Touch-up".** If reconstruction or touch-up is required, the drawing shall be considered "REDRAWN WITHOUT CHANGE". The words "REDRAWN WITHOUT CHANGE" shall be added to the Revision History block. No other words need be added to the lower right hand border as shown in FIGURE 23-26. A drawing may also be redrawn to replace an original that is too cluttered to incorporate changes, or to convert manually maintained data to digitally maintained data. When a drawing is redrawn without change, the revision level of the drawing need not be advanced.
- **23.24.5 Duplicate Digitally Maintained Data.** Reproductions of digitally maintained data with the same revision level as that currently released shall not be considered redrawn and shall be marked with a note below the Revision History block that reads:

CAD MAINTAINED, CHANGES SHALL BE INCORPORATED BY THE DESIGN ACTIVITY.

NOTE: Refer to FIGURE 23-26 for location identified with *



EXAMPLE OF DUPLICATE ORIGINAL NOTATION WHEN

"TOUCH UP" IS INVOLVED

FIGURE 23-26

23.25 CONFIGURATION BASELINES.

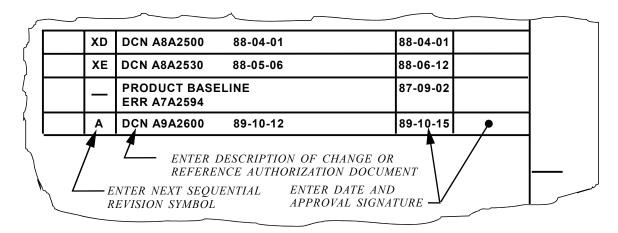
23.25.1 Identification Of Configuration Management Baselines. Revision actions, when desirable, may be used to indicate baseline information on the drawing in the following manner:

a. In the event that product drawings are initiated during the validation phase of the acquisition cycle and become part of the Allocated Baseline, the example in FIGURE 23-27 would apply.

.NO.			SH	REV.			1	
			•		RE	VISION HISTORY	_	
Z	ZONE	REV		DES	CRI	PTION	DATE	APPROVED
Γ		XA	FINISH	NOTE 1	0 A C	DDED	85-07-12	
Г		ХВ	DIM .06	± .02 V	/AS	.06 ± .01	87-03-01	
T		хс	ALLOCA ERR A7		ASE	LINE	87-09-02	
			(G.	ENERAI	LYA	GRELEASE RECORD CONFIGURATION FUNCTION)		

EXAMPLE OF NOTATION FOR ALLOCATED BASELINE FIGURE 23-27

b. As Technical Data Package (TDP) Element Product Drawings (Formerly Level 3 of DOD D-1000) mature during full scale development and become part of the Product Baseline, they can be identified as shown in FIGURE 23-28



EXAMPLE OF NOTATION FOR PRODUCT BASELINE FIGURE 23-28

23.26 REVISIONS TO PRODUCTION MASTER.

23.26.1 Revisions to Production Master Drawings. Revisions to production master drawings shall be made to the original master drawing only. New duplicate masters shall be reproduced from the revised original master or digital data files system and shall be marked "DUPLICATE PRODUCTION MASTER. DO NOT REVISE."

 $THIS\,FIGURE\,SIMULATES\,THE\,REVISION\,\,BLOCK\,OF\,AN\,ACTUAL\,DRAWING\,EXCEPT\,IN\,SOME\,EXAMPLES\,THE\,SAME\,ENTRIES\,ARE\,ALTERNATES\,FOR\,THE\,PREVIOUS\,ENTRY/S.$

RELEASE GROUP ENTERS RELEASE DATE OF REVISED DRAWING & ON DCN WHEN APPLICABLE

— AUTHORIZED CHECKER SIGNS & ENTERS
DATE OF SIGNATURE IN APPROVAL COLUMN
& ON DCN WHEN APPLICABLE

ITEM	CHANGE CONDITION		REVISION HISTORY BL	OC#	↓ Ĩ	& ON DCN WHEN APPLICABLE REMARKS				
<u> </u>	CHANGE CONDITION			. '	V					
1	Incorporating ADCNs	C	DESCRIPTION SEE INC A, B, & C ADCN	DATE	APPROVED	All changes authorized by the released ADCN(s are incorporated. If any approved changes are not incorporated or if additional changes are made a DCN must be issued, see item 3.				
2	Direct drawing change without outstanding ADCN s	D	SEE D DCN			Record all changes made to the drawing except as noted in 23.7.3				
3	Direct drawing change with outstanding ADCN s	Н	SEE INC E, F & G ADCN & H DCN			All outstanding ADCNs must be incorporated at this time. Any ADCN items that are changed or not incorporated must be noted on the DCN. (see 23.7.3)				
4	Drawing redrawn or reproduced without change, no outstanding ADCNs	_	Old Drawing REPLACED WITHOUT CHANGE BY REV L			See footnote 1, 2, & 3. A DCN is not issued and the revision letter doe				
		L	REPLACES REV L DATED 5-21-88 (enter old revision letter & date old revision was released) WITHOUT CHANGE			not advance.				
5	Drawing redrawn or reproduced without change, but outstanding ADCNs incorporated		Old Drawing REPLACED WITHOUT CHANGE BY REV N			See footnote 1, 2, & 3 A DCN is not issued and the revision letter on the new drawing advances to the latest out- standing ADCN. The incorporation of ADCNs is not considered additional changes.				
		N	New Drawing REPLACES REV L WITHOUT CHANGE. SEE INC M & N ADCN			is not considered additional changes.				
6	Drawing redrawn or reproduced with change, no outstanding ADCNs		Old Drawing REPLACED WITH CHANGE BY REV M			See footnote 1, 2, & 3 A DCN is issued in accordance with item 2.				
		М	New Drawing REPLACES REV L WITH CHANGE. SEE M DCN							
7	Drawing redrawn or reproduced with change, and outstanding ADCNs incorporated		Old Drawing REPLACED WITH CHANGE BY REV P			See footnote 1, 2, & 3 All outstanding ADCNs must be incorporated at this time. Any ADCN items that are changed or not incorporated must be noted on the DCN				
		M	New Drawing REPLACES REV L WITH CHANGE. SEE INC M & N ADCN & P DCN			(see 23.7.3)				
8	Inactivate a drawing, no superseding document, no outstanding ADCNs	R	SEE R DCN			The drawing advances to the next change lette and a DCN is issued stating "INACTIVE FOR				
9	Inactivate a drawing, no superseding document, outstanding ADCNs incorporated or not incorporated	т	ADCNs incorporated SEE INC R & S ADCN & T DCN ADCNs not incorporated SEE INC T DCN. R & S ADCN RETAINED FOR RECORD & NOT INC			The drawing advances to the next change le and a DCN is issued stating "INACTIVE FOF FUTURE DESIGN" This same statement is placed near the T/B in .25 high letters. The drawing original may be destroyed after rele and microfilming. See footnote 4.				
10	Superseded drawing		Use applicabe entry of item 8 or 9			The statement in the "REMARKS" column of item 9 & 10 apply except replace "INACTIVE FOR FUTURE DESIGN" with "INACTIVE FOR FUTURE DESIGN, SUPERSEDED BY (enter document no.)				
11	Reinstating an inactivated drawing	U	ADCNs previously incorp. SEE U DCN			The drawing advances to the next change lette and a DCN is issued stating "DRAWING REACTIVATED". The inactivation statement				
		U	ADCNs not previously incorp SEE INC R & S ADCN & U DCN			near the T/B is removed and all unincorporated ADCNs are incorporated. See footnote 4.				
12	Security Classification change	V	SECURITY CLASSIFIC- ATION DOWNGRADED (or UPGRADED) TO (new security classification) BY AUTHORITY OF (see remarks column) DATED (date of authorizing document) CONTRACT (applicable contract number or PROJECT designation) (Signature of authorized classifying officer) A Aprela			The drawing advances to the next change lette but a DCN is not issued. If a DCN is issued for additional changes, the statement "REVISED SECURITY CLASSIFICATION, SEE REVISION BLOCK" is included on the DCN. The authority may be a "DD254" (Security Requirements Check List) or a Company or Customer project letter (to implement interim action). Existing classifications on the drawing are lined out and the new classification, if any, added. See footnote 1 if reclassification occur simultaneous with redraw.				

REVISION HISTORY BLOCK DESCRIPTION

Continued from preceding page)

ITEM	CHANGE CONDITION		REVISION HISTORY BL	оск		REMARKS
13	Transfer of drawings from outside Company Facilities	Z	DESCRIPTION SEE Z DCN	DATE	APPROVED	Prior to accepting these drawings, a letter from the old design activity must be on file with the Release Group stating that the design activity has been transferred to XXX Corporation. The drawings and any outstanding change notices are microfilmed prior to making any changes. After microfilming, the drawing advances to the next change letter and a DCN is issued listing all changes. The statement "DESIGN ACTIVITY TRANSFERRED TO (enter new CAGE Code.)" will appear on the DCN and near the drawing T/B. Any other changes required to ensure the drawings meet the minimum Facility and/or contract requirements shall be made at this time, including the incorporation of all outstanding change notices, the removal of any old design activity restrictive markings and the addition of the appropriate Company legend. The drawing is checked by all applicable drawing review organizations and their signatures on the DCN signify drawing acceptance. All old design activity specifications, standards, etc., referenced on the drawings must be on file with the Release Group and, wherever allowed by the old design activity, have the activity transfer statement added. If the old design activity makes the above changes prior to shipment, the drawings shall be microfilmed and prints sents to all applicable drawing review organizations. If the drawings meet the minimum requirements, no change will be required.
14	Transfer of drawings from one Company Facility to another or to another Company	AA	Example 1 SEE INC Z ADCN & AA DCN Example 2 SEE INC Z ADCN DESIGN ACTIVITY TRANSFERRED TO (enter new design activity CAGE Code) Example 3 DESIGN ACTIVITY TRANSFERRED TO (enter new design activity CAGE Code) CAGE Code) Example 3 DESIGN ACTIVITY TRANSFERRED TO (enter new design activity CAGE Code). Z ADCN OUTSTANDING			Preferred Method The old design activity shall incorporate all outstanding ADCNs and issue a DCN. The statement "DESIGN ACTIVITY TRANSFERRED TO (enter new CAGE Code)" will appear on the DCN and near the drawing T/B, (See Example 1). The DCN may be omitted if the proper authority has issued written instructions listing the drawing numbers to be transferred, (See Example 2). The drawings and DCNs will be microfilmed prior to shipment of the drawings. The new design activity shall remicrofilm the drawings and submit prints to all drawing revieworganizations who will ensure the drawings met the minimum Facility and/or contract requirements. Existing signatures will be honored. however, if additional signatures are required and there are no other changes, the statement "ADDED ADDITIONAL SIGNATURES" shall be entered in the revision block and the drawing shall advance to the next change letter. Alternate Method When approved by the new design activity, the old design activity may leave active ADCNs outstanding (See Example 3) or, when necessary may transfer the drawings and outstanding ADCNs without any changes, the new design activity must make the changes in accordance with Example1 or 2 immediately after receipt and microfilming.
15	Changes to Tooling drawings	A	Preferred Method SEE A DCN (or SEE INC A ADCN) Alternate Methods 150 was .38 2. added note 4 Or A Jonea DWG REVISED. RECORD ONLY			When the drawing has approval signatures other than Design, Design Activity or Check, a DCN (or ADCN) must be issued recording the changes. The ADCN or DCN must have signatures equivalent to those on the affected drawing. When the drawing has no approval signatures other than Design, Design Activity or Check, the responsible engineer has the option of recording the changes in the revision block or adding the statement shown. In either case the drawing advances to the next changes letter and the engineer sign at the end of the revision block notation. The "APPROVAL" column is signed by an authorized checker only if the drawing has been checked.

REVISION HISTORY BLOCK DESCRIPTION FIGURE 23-29 (Continued on next page)



Figure 23-29 Footnotes:

- 1. NEW APPROVAL DATES AND SIGNATURES EQUIVALENT TO THE REPLACED DRAWING ARE REQUIRED IN THE TITLE BLOCK (T/B) OF THE REDRAWN OR REPRODUCTION DRAWING. THE PERSON MAKING THE CHANGE ENTERS THEIR NAME AND THE DATE THE REDRAW WAS STARTED IN THE T/B AND ENTERS THE ORIGINAL RELEASE DATE IN THE T/B'S RELEASE DATE BLOCK. PREVIOUS REVISION HISTORIES ARE NOT CARRIED FORWARD TO THE NEW DRAWING. IF A SECURITY CLASSIFICATION CHANGE OCCURS SIMULTANEOUS WITH THE REDRAW, BOTH DRAWINGS WILL CARRY THE STATEMENT SHOWN IN ITEM 13 WHEN APPLICABLE TO BOTH DRAWINGS. THE NEW DRAWING WILL CARRY ONLY THE LATEST CLASSIFICATION.
- 2. PRINT THE WORD "SUPERSEDED" IN .25 HIGH LETTERS NEAR THE T/B ON THE OLD DRAWING. (THE OLD DRAWING ORIGINAL MAY BE DESTROYED AFTER MICROFILMING.)
- 3. IF THE ORIGINAL DRAWING OR CAD FILE OF THE OLD DRAWING HAS BEEN LOST, THE DCN OR REVISION HISTORY BLOCK ON THE NEW DRAWING WILL STATE "ORIGINAL DRAWING OR CAD FILE LOST".
- 4. WHEN THE DRAWING HAS NOT BEEN SIGNED BY ANY OF THE DRAWING REVIEW ORGANIZATIONS OR WHEN SIGNED BY CHECK ONLY, THE DCN MAY BE OMITTED AND THE REVISION HISTORY BLOCK STATEMENT "SEE ______DCN" REPLACED WITH THE APPLICABLE DCN STATEMENT.

REVISION HISTORY BLOCK DESCRIPTION FIGURE 23-29 Footnotes

Note: This figure simulates the revision blocks and "REVISION STATUS OF SHEETS" block of an actual multisheet drawing except some entries are alternates for the previous entry (or entries).

ITEM	CHANGE CONDITION AND CHANGE NOTICE(S)	DWG SH NO.	AD	DITIO	NS AN	D CHAN	IGES TO	REMARKS								
1	Incorporating ADCN(s) & DCN	1	LTR		DESCRIPTION DATE APPROVED							See Figure 23-29, items 1				
	A Change ADCN B SEE INC A					A ADC	N & B	DCN				thru 4 for similar changes and the requirements for the				
	ZONE ITEM 1 8 1. REMOVED G/N; WAS							changes. See footnotes 1, 2,								
	1 8 1. REMOVED G/N; WAS H "SAND BLAST PER"	ND BLAST PER"					EV STATUS F SHEETS	& 3.								
	1 3 2. 3.750 DIA WAS 3.875 DIA				4	3	2									
	B 2. 5.750 BIA WAO 5.570 BIA	2	LTR			DESCR	IPTION			DATE	APPROVED					
	2 3 3135 WAS .130 .125		Α													
	4 6 4125 R WAS .250 R	4	LTR			DESCR	IPTION									
	<u> </u>		В				_									
	B Change ADCN ZONE ITEM															
	4 C 1. 3.40 WAS 3.25															
	4 8 D 2. 3.40 REF WAS 3.25 REF															
2	Sheet(s), except sheet 1, redrawn		LTR			DESCR	IPTION			DATE	APPROVED	The requirements of Figure				
	or reproduced without change, no outstanding ADCNs.	1	В	SEE	INC	A ADC	N & B	DCN				23-29,item 5 apply, except new approval signatures are				
	outstanding ADCNs.		-	SHE	ET 2 I	REPLA	CES R	EV A				not required. The slash in				
				DATI	ED 1-	5-88 W	ITHOU	T CHA	NGE			the "DATE" column of the old sheet(s) is replaced with the				
			Ь.,	Old s	heet 2							date for the revision letter shown.(The date can be				
		2	LTR	LTR DESCRIPTION DATE APPROVE								obtained from sh				
			Α									"REV STATUS OF SHEETS" block is not altered.				
		- REPLACED BY REV A WITHOUT CHANGE								See footnotes 1 & 3						
			<u> </u>	New sheet 2								A DCN is not issued				
			LTR	DESCRIPTION DATE APPROVED												
			Α													
L_										_		_				
3	Sheet(s), except sheet 1, redrawn or reproduced without change, but	1	LTR			DESCR				DATE	APPROVED	The requirements of Figure 23-29, item 6 apply, except				
	outstanding ADCNs incorporated.		В	SEE INC A ADCN & B DCN								new approval signatures are				
	C Change ADCN		C	C SHEET 2 REPLACES REV A DATED 1-5-88 WITHOUT CHANGE.								not required. The slash in the "DATE" column of the old				
	ZONE ITEM 4 5 1 750 WAS 812							EVBV				sheet(s) is replaced with the date for the revision letter				
	4 5 1750 WAS .812	OWAS .812 OUT CHANGE. SEE INC C ADCN									shown.(The date can be					
	4 6 2. 3.00 WAS 3.12				С	-	Α	С	RE	V R	EV STATUS F SHEETS	obtained from s "REV STATUS OF SHEETS"				
	[B =							1	SHE	ET	FSHEETS	block is updated to reflect the latest change letter of each				
		2	See i	item 2								revised sheet. See footnotes 1, 2 & 3				
			Old sheet 4							_						
		4	LTR							APPROVED	A DCN is not issued					
			В													
			-													
				New sheet 4							•					
			LTR						APPROVED							
			С													
				_												

- 1. NORMALLY, ONLY SHEET 1 AND THE AFFECTED SHEET(S) WILL BE REMOVED FROM STORAGE. AFTER REVISION AND RELEASE ONLY THE REVISED SHEET(S) SHOULD BE REMICROFILMED AND REPLACED IN THE ACTIVE MICROFILM FILE.
- 2. THE REVISION LETTER FOR EACH SHEET AND THE "REV STATUS OF SHEETS" BLOCK ADVANCE ONLY TO THE CHANGE LETTER AFFECTING THAT SHEET.
- 3. THE CHANGE LETTER BLOCK IN THE RIGHT HAND MARGIN OF EACH SHEET WILL CARRY THE SAME CHANGE LETTER AS THE REVISION HISTORY BLOCK FOR THAT SHEET.

CHANGES TO MULTI-SHEET DRAWINGS FIGURE 23-30 (Continued on next page)



(Continued from preceding page)

ITEM	CHANGE CONDITION AND CHANGE NOTICE(S)	DWG SH NO.	AD	DITIONS AND CHANGES TO REVISION H	REMARKS				
4	Sheet 1, redrawn or reproduced			Old sheet 1		The requirements of figure 23-			
	without change, no outstanding ADCNs.	nge, no outstanding 1 LTR DESCRIPTION DATE APPRO					29, item 5 apply. The "REV STATUS OF SHEETS" block on		
	ADONS.		В	SEE INC A ADCN & B DCN			the old sheet is not altered and is repeated on the new		
			-	SHEET 1 REPLACED WITHOUT CHANGE BY REV B			sheet. See footnotes 1 & 3.		
				New sheet 1	If other sheets are redrawn or reproduced without change at				
			LTR	DESCRIPTION	DATE	APPROVED	this time, add entries shown in item 2.		
			Α	SHEET 1 REPLACES REV B DATED 1-5-88 WITHOUT CHANGE			A DCN is not issued		
5	Sheet 1, redrawn or reproduced without change, but outstanding			Old sheet 1	The requirements of figure 23- 29,item 6 apply. The "REV				
	ADCNs incorporated.	1	LTR	DESCRIPTION	DATE	APPROVED	STATUS OF SHEETS" block on		
	C Change ADCN (age item 3)		В	SEE INC A ADCN & B DCN			the old sheet 1 is not altered but is updated to reflect the		
	C Change ADCN (see item 3)		-	SHEET 1 REPLACED WITHOUT CHANGE BY REV C			latest change letter of each sheet on the new sheet 1. See footnote 1 & 3.		
				New sheet 1			If other sheets are redrawn or		
			LTR	DESCRIPTION	DATE	APPROVED	reproduced with or without change at this time, add		
			С	SHEET 1 REPLACES REV B WITH- OUT CHANGE SEE INC C ADCN			entries shown in item 2 or 3 as applicable.		
		4	See appli	sheet 4 in item 1 and 3 for cable entries.					
6	Sheets redrawn or reproduced		Shee	t 1 when not replaced			The requirements of Figure 23-29, Item 7 & 8 apply,		
	with change.	1	LTR	DESCRIPTION	DATE	APPROVED	except new approval sign-		
	C Change ADCN ZONE ITEM	-	В	SEE INC A ADCN & B DCN			atures are not required unless sheet 1 is replaced. The "REV		
	1 8 1 ADDED G/N 12		С	SHEET 2 REPLACES REV A			STATUS OF SHEETS" block on the old sheet 1 is not alter-		
	G 2. REVISED MARKING			WITH CHANGE. SHEET 4 REPLACES REV B WITH CHANGE. SEE C DCN	ed but is updated to reflect the latest change letter of each sheet on the new sheet 1.				
	뿌						See footnote 1 & 3.		
	4 5 3812 DIA WAS .750 DIA		LTR	DESCRIPTION	IDATE.	APPROVED			
			B	SEE INC A ADON & B DON	DATE	APPROVED			
			╚		_				
			-	SHEETS 1, 2 & 4 REPLACED WITH CHANGE BY REV C					
			New	sheet 1					
			LTR	DESCRIPTION	DATE	APPROVED			
			С	SHEET 1 & 4 REPLACE REV B					
				WITH CHANGE.					
				WITH CHANGE. SEE C DCN	SHEET 2 REPLACES REV A WITH CHANGE. SEE C DCN				
			М						
				C - C C RE		EV STATUS			
			<u> </u>	4 3 2 1 SHE	F SHEETS				
				Old sheet 2 & 4					
		2&4	LTR	DESCRIPTION	DATE	APPROVED			
	A on sheet 2, B on sheet 4								
			-	REPLACED WITH CHANGE BY REV C					
				New sheet 2 & 4					
			LTR	DESCRIPTION	DATE	APPROVED			
			С		$\overline{}$				

<u>CHANGES TO MULTI-SHEET DRAWINGS</u> FIGURE 23-30 (Continued on next page))

(Continued from preceding page)

ITEM	CHANGE CONDITION AND CHANGE NOTICE(S)	DWG SH NO.	AE	DITIONS AN	D CHAI	REMARKS					
7	Inactivating, superseding or reactivating all sheets of a multisheet drawing.					The revision block entries and the requirements of Figure 23-29, Item 9 thru 12 apply. However, only sheet 1 is changed if (1) there are no outstanding ADCNs or (2) the ADCNs affect sheet 1 only and are incorporated or (3) the ADCNs are left outstanding.					
8	Inactivating or adding a sheet(s) to a multisheet drawing C Change DCN ZONE ITEM 1. SHEETS 2 & 4 INACTIVE FOR FUTURE DESIGN 2. ADDED G/N 13 3. ADDED SHEET 5	1	G/	B SEE INC A ADCN & B DCN C SHEETS 2 & 4 INACTIVE FOR FUTURE DESIGN ADDED SHEET 5 SEE C DCN INACTIVE SHEETS C C REV REV STATUS OF SHEETS Sheet 1 "SHEET" block SHEET 1 OF 13 G/N 13 will read:							The requirements of figure 23-29, item 9 & 10 apply, except if an item on an outstanding ADCN affects the inactivated sheet and is not incorporated the statement "ITEM &OF ADCN NOT INC" shall be added to the revision block of the inactivated sheet. Once a sheet has been inactivated that sheet number shall never be reused except if the same sheet is reactivated. The "REV STATUS OF SHEETS" block will always carry the notation "INACTIVE" for that sheet unless the same sheet is reactivated. See footnotes 1, 2, & 3.
	A on sheet 2, B on sheet 4 —	2&4	C INACTIVE FOR FUTURE DESIGN New sheet (s) LTR DESCRIPTION DATE APPROVED								
9	Reinstating an inactiviated sheet D Change DCN ZONE ITEM 1. SHEET 4 REACTIVATED	4	LTR B C	B SEE INC A ADCN & B DCN C SHEETS 2 & 4 INACTIVE FOR FUTURE DESIGN ADDED SHEET 5 SEE C DCN D SHEET 4 REACTIVATED SEE D DCN INACTIVE SHEET C D D REV SEE C SHEETS Reactivated sheet DESCRIPTION DATE APPROVED						The requirements of Figure 23-29, Item 12 apply, All unincorporated ADCN items affecting the reactivated sheet shall be incorporated. The inactivation statement in the revision block (and near the T/B) shall be removed from the reactivated sheet.	

CHANGES TO MULTI-SHEET DRAWINGS FIGURE 23-30