

NOT MEASUREMENT
SENSITIVE

MIL-T-47500/1(MI)
24 March 1989

MILITARY SPECIFICATION
TECHNICAL DATA PACKAGES,
DRAWINGS, DESIGN

This specification is approved for use by the Department of the Army and is available for use by all departments and agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This detail specification prescribes requirements for design drawings acquired in support of Department of Defense material.

1.2 Classification. Design drawings shall be acquired in one or both of the following classes.

- a. Conceptual (see 6.3.1)
- b. Developmental (see 6.3.2)

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation (see 6.2).

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Commander, U.S. Army Missile Command, ATTN: AMSMI-RD-SE-TD-ST, Redstone Arsenal, AL 35898-5270, by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC A4643

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SPECIFICATIONS

MILITARY

MIL-D-5480	Data, Engineering and Technical,
MIL-T-47500	Reproduction Requirements for Technical Data Packages, General Specification for

STANDARDS

MILITARY

DOD-STD-100	Engineering Drawing Practices
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(Unless otherwise indicated, copies of federal and military specifications, standards, and handbooks are available from the Naval Publications and Forms Center, (ATTN: NPODS), 5801 Tabor Avenue, Philadelphia, PA 19120-5099).

2.2 Order of precedence. In the event of a conflict between the text of this document and the reference cited herein (except for associated detail specifications, specification sheets, or MS standards), the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 General. The contract or purchase order will identify the class of drawings to be acquired. This document is to be used in conjunction with MIL-T-47500.

3.2 Existing drawings and associated lists. Drawings and associated lists prepared prior to the application of this specification shall be acceptable if they meet the requirements of MIL-T-47500 for existing data except as modified in 3.6 herein.

3.3 Classes of drawings. Drawings prepared under this specification shall be as classified in 1.2.

3.3.1 Conceptual drawings. These drawings shall present design concepts in graphic form, including appropriate textual information for analysis and evaluation. Such drawings may vary from simple sketches through complex formal drawings as required to present the proposed concept either independently or in conjunction with required reports.

3.3.2 Developmental drawings. These drawings provide sufficient data to support design analysis and prototype development of the contract end item.

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3.4 Selection of drawings. The complexity of the design shall determine the types and quantity of drawings required to convey the engineering concept or to enable the contractor to fabricate developmental or prototype hardware. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the selection of the types and quantity of necessary drawings.

3.5 Drawing preparation. The drawings shall be prepared to meet the acquisition requirements (see 6.2) and the following:

3.5.1 Requirements of DOD-STD-100. The requirements of DOD-STD-100 do not apply unless otherwise specified in the contract or purchase order.

3.5.2 Control drawings. Control drawings as defined in DOD-STD-100 shall not be prepared as a part of design drawings unless otherwise specified in the contract or purchase order.

3.5.3 Company standards. Company standards shall be acceptable for reference on design drawings provided:

a. They are identified by name and address of issuing company, Commercial and Government Entity (CAGE) code, document title and number, and contract number.

b. They do not define requirements for items, material, or processes defined by Government specifications, standards, or nationally recognized industry association specifications or standards.

c. They contain the necessary information for design drawings.

d. They have legibility and reproducibility in accordance with 3.6.

e. All documents referenced in a company standard shall also be supplied and shall meet the same requirements as for a company standard.

3.5.4 Content. Drawing delineations shall be sufficient to accomplish the following:

a. Evaluation of concept which includes information sufficient to demonstrate the feasibility of the design to accomplish required objective.

b. Evaluation of developmental design, including identification of materials and processes utilized.

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3.6 Legibility and reproducibility. Legibility and reproducibility shall be such that every line, number, letter, and character of data is clearly legible and readable. Drawings shall be of such legibility and reproducibility as specified in MIL-D-5480, however, only a second generation copy capability is required.

3.7 Selection of options. Drawings shall be prepared to meet the requirements of the selection worksheets (MIL-T-47500).

4. QUALITY ASSURANCE PROVISIONS

4.1 Quality control procedures. The contractor's procedures for design drawings shall, as a minimum, include:

4.1.1 Drawing inspection. Drawings to be submitted shall be inspected to assure they include all the drawings, referenced documents, and company standards necessary to make a complete set.

4.1.2 Contract requirements. The drawings shall be inspected to the applicable requirements of section 3 to ensure the required information is adequate to meet contract requirements.

4.1.3 Legibility and reproducibility. Drawings shall be inspected for legibility and reproducibility as specified in 3.6.

4.1.4 Inspections. The drawings shall be inspected to insure:

- a. Proper marking of classified information.
- b. Proper marking for rights in technical data.
- c. Inclusion of unique or complex test or procedure.
- d. Proper measurement system.
- e. That design drawings and company standards have not been submitted, when suitable specifications, standards or drawings are known to exist (see 3.2).

5. PACKAGING

5.1 Packaging. Packaging shall be as specified in MIL-T-47500 and the contract or purchase order.

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6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory).

6.1 Intended use. Design drawings provide engineering design information sufficient to evaluate an engineering concept or information sufficient to fabricate development hardware.

6.2. Acquisition requirements. Acquisition documents must specify the following:

- a. Title, number, and date of this specification.
- b. Applicable data item descriptions (6.2.2).
- c. Issue of DODISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.1.1).
- d. Applicable selection worksheet (reproduced completed and included as part of the contract (see 3.7)).

6.3 Data requirements. The following Data Item Descriptions (DID's) must be listed, as applicable, on the Contract Data Requirements List (DD Form 1423) when this specification is applied on a contract, in order to obtain the data, except where DOD FAR Supplement 227.475-1 exempts the requirement for a DD Form 1423.

<u>Ref Para</u>	<u>DID Number</u>	<u>DID Title</u>	<u>Suggested Tailoring</u>
3.5	DI-CMAN-80778	Conceptual and development design drawings	--

The above DID's were those cleared as of the date of this specification. The current issue of DOD 5010.12-L, Acquisition Management Systems and Data Requirements Control List (AMSDL), must be researched to ensure that only current, cleared DID's are cited on the DD Form 1423.

6.4 Definitions.

6.4.1 Conceptual drawings. These drawings are used to verify preliminary design and engineering. They are one of the factors used to determine that the technology is feasible and that the design concept has utility against stated military requirements in order to reduce technical uncertainty. These drawings may evolve into developmental design drawings.

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6.4.2 Developmental drawings. These drawings are used to fabricate developmental hardware for test or experimentation and define a specific design approach. In addition, the data shall be suitable for evaluation of the inherent ability of the design to attain the required performance. These drawings may evolve into product drawings.

6.5 Subject term (key word) listing.

Drawings, conceptual
Drawings, design
Drawings, developmental

Custodian:
Army - MI

Preparing activity:
Army - MI

(Project No. CMAN-0014-1)

Review activities:
Army - AR, AT, AV, CE, CR, GL, ME, SM