

## DATA ITEM DESCRIPTION

Form Approved  
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503

TITLE

2. IDENTIFICATION NUMBER

Facility Design Criteria

DI-FACR-81451

3. DESCRIPTION/PURPOSE

3.1 This data is used to identify specific technical requirements upon which the facility design is to be predicated before detailed design is initiated. The criteria are qualitative in nature and can be translated by qualified facility designers into construction bid packages that will result in facilities that are compatible with the air vehicle (or other system) and its support equipment, as well as meeting other special requirements of the using service.

4. APPROVAL DATE  
(YYMMDD)

950123

5. OFFICE OF PRIMARY RESPONSIBILITY (OPR)  
F/ASC-EMF

6a. DTIC APPLICABLE

6b. GIDEP APPLICABLE

7. APPLICATION/INTERRELATIONSHIP

7.1 This Data Item Description (DID) contains the format and content preparation instructions for the data product generated by the specific and discrete task requirement as delineated in the contract.

7.2 This DID supersedes DI-S-3557/F-107-1.

8. APPROVAL LIMITATION

9a. APPLICABLE FORMS

9b. AMSC NUMBER

F7104

10. PREPARATION INSTRUCTIONS

10.1 Format. Contractor format is acceptable.

10.2 Content. The document shall include:

a. Scope.

(1) The Facilities Design Criteria (FDC) document is to describe the facility requirements for the system. The FDC will not mandate specific construction methods or materials, but it shall establish performance requirements. It should not address the problem of total workload on a particular common-use facility generated by a mixed force of similar systems, nor should it assume anything about the quantity and types of facilities available at a particular development site.

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11. DISTRIBUTION STATEMENT

DISTRIBUTION STATEMENT A: Approved for public release, distribution is unlimited.

## Block 10, Preparation Instructions (Continued)

(2) This section of the FDC document shall begin as follows: "This part of the document establishes the requirements and basic restraints or constraints imposed upon the development of an architectural and engineering (A&E) design for (insert nomenclature) facility (or facilities) in support of (insert system nomenclature)." Subsequent sentences and paragraphs shall briefly describe the intended purpose and general use of the facility (or facilities) with respect of the system to which it is related.

b. General concept. Describe the use to which the facility (or facilities) will be put. Describe the flow of personnel, material, and maintenance. Describe the functions to be performed in the facility (or facilities), including time elements, number of pieces for an eight hour day as an example.

c. Siting and layout.

(1) Include an area layout showing location of facility (or facilities) with respect to general area.

(2) Include detailed site layout to provide site selection information and constraints such as those listed in the subparagraphs below for guidance to using service facility planners who will perform the site selection and layout at the bases scheduled to receive the new system.

a. Access requirements; special widths requirements.

b. Required relationships between outside elements.

c. Clearances.

d. Parking, loading, required setbacks, paving, any other related requirements.

e. Explosive hazards data

(3) Provide a floor layout of the required facility (facilities) to show:

a. Functional arrangement of areas.

b. Dimensional requirements.

c. Height requirements (cross sections or elevations as required).

d. Location of real property installed equipment.

Block 10, Preparation Instructions (Continued)

- e. Doors; heights, widths, and location of entrances.
- f. Clear-span requirements (no column intrusion allowed).
- g. Location of special electrical or mechanical provisions.
- h. Special foundations required.
- i. Blackouts, elevations, anchor bolts, or provisions for "not in contract" equipment.
- j. Hoist requirements (locations and loads).

(4) General criteria.

a. Civil

- 1. Axle or wheel loads on roads.
- 2. Special lane widths of roads.
- 3. Turn radius and weight provisions for special vehicles.
- 4. Jack loads; transfer requirements.
- 5. Parking; number and size of vehicles.
- 6. Grades on roads.
- 7. Special water and sewage (state quantities and nature)
- 8. Special fire protection requirements (exterior).
- 9. Fencing and security.

b. Architectural

- 1. Personnel occupancy types; hours per day.
- 2. Designation of use of areas within the facility.
- 3. Types of special and oversized doors required.

**Block 10, Preparation Instructions (Continued)**

4. Floor level requirements. Floor drainage.
5. Controlling or critical dimension requirements.
6. Window requirements (if any).
7. Security requirements (vaults, secure storage rooms, secure conference rooms, or related structures).

**c. Structural**

1. Crane and hoist locations and loads. Control requirements.
2. Floor loads (pounds per square foot).
3. Point or concentrated loads (pounds and dimensions).
4. Clear span and column free area(s).
5. Blast loads; shielding requirements.
6. Personnel ladders; elevators (freight load requirements)
7. Transfer piers; dock loads.
8. Clear ceiling heights.

**d. Mechanical**

1. Interior potable water (state if unusual quantities or qualities are required).
2. Environmental limits. Temperature, humidity, and ventilation.
3. Compressed air.
4. Fire protection.
5. Vibration and acoustical requirements.
6. Equipment cooling requirements (British Thermal Units (BTU) per hour).
7. Special mechanical systems (hydraulic, cooling, or other special requirements).

## Block 10, Preparation Instructions (Continued)

## e. Electrical

1. Power requirements -- type and magnitude (voltages, frequency, phase, quality and allowable tolerances).

2. Light intensities.

3. Communications requirements.

4. Grounding (type and location).

5. Power factor.

6. Backup power requirements.

f. Equipment. Provide layout and list each piece of equipment.

1. Equipment designation.

2. Number of units required.

3. Purpose of equipment.

4. Size of equipment (governing dimension and weight).

5. Power requirements (alternating Current (AC) volts, phase, frequency, Direct Current (DC) volts, normal and peak kilowatts (KW), and power factor(s)).

6. Cooling requirements -- heat gain (BTU's per hour), type cooling, in-out temperatures, and relative humidity requirements.

7. Minimum access requirements, front, back, and sides.

8. Other system requirements (hydraulic, compressed air, or other special requirements).

g. Special features -- special requirements not covered above.

h. Operability and maintainability requirements.

Block 10, Preparation Instructions (Continued)

i. Hazards and effects.

1. Radio Frequency (RF) radiation.
2. X-ray radiation.
3. Electrical shock.
4. Lightning.
5. Other hazards (smoke, explosion, and any other)

j. Growth potential.

k. Safety.

- l. Waste products disposal (human, toxic gases or liquids, nuclear, hazardous waste (regulated), solid waste).