

## DATA ITEM DESCRIPTION

Form Approved  
OMB No. 0704-0188

2. TITLE  BASE ELECTRONIC SYSTEM ENGINEERING PLAN (BESEP)	1. IDENTIFICATION NUMBER  DI-MISC-81506
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3. DESCRIPTION/PURPOSE  The BESEP translates a requirement concept into a resource concept and is the basic technical reference governing electronics and other affected phases of shore electronic project planning and implementation. The BESEP provides required information on electronic systems, equipment, and devices to be used, their pertinent parameters, technical characteristics, principle environmental requirements and system performance objectives.			
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4. APPROVAL DATE (YYMMDD) 960107	5. OFFICE OF PRIMARY RESPONSIBILITY (OPR) N/SPAWAR (PMW 172-2)	6a. DTC REQUIRED	6b. GIDEP REQUIRED
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7. APPLICATION/INTERRELATIONSHIP The BESEP assures the control availability of a complete and authoritative engineering plan and major material equipment list for use as a project management tool. It also provides a formally approved technical basis for evaluating performance of systems, or increments thereof, in term of the degree of which approved design objectives are achieved. It also provides a document of record for use by operating support and management agencies after the project has been completed.  7.1 This DID supercedes DID UDI-R-22582 dated 1 July 1976.			
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8. APPROVAL LIMITATION	9a. APPLICABLE FORMS	9b. AMSC NUMBER N7176
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10. PREPARATION INSTRUCTIONS  10.1 The Base Electronic System Engineering Plan shall be prepared in accordance with the guidelines and instructions contained herein.  10.2 <u>General Requirements</u> . This section establishes a basis for engineering and development of a project. It shall include; but not limited to the following data:  a. Historical data leading to the establishment of the project. b. Reference to an appropriate paraphrasing of operation requirements and other guidance documents. c. Overall objectives of the systems to be provided. d. Identification of existing or other proposed systems/facilities affected or with which compatability is required. e. Requirements or provisions for incremental implementation. f. Special requirements for continuity of operation of existing facilities during project execution. g. Special clearance considerations due to safety of flight, radiation hazards, security, etc. h. General plan for selection of sites, or identification and description of site already selected. i. System packaging guidance(i.e, transportable or fixed plant). j. Special requirements of operational flexibility and convenience.  (CONTINUED ON PAGE 2)			
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11. DISTRIBUTION STATEMENT  Approved for public release; distribution is unlimited			
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## Block 10; Preparation Instructions (continued)

10.3 Electronic System Design and Installation. This section shall describe the operational and technical concepts and philosophy underlying the selection of electronic equipment, their combination into required electronic system(s) and the discrete designs developed and adopted to meet the stated operational requirements. It shall provide or refer to appropriate technical criteria and standards (including siting) and describe all significant technical and operational features to be incorporated. Single-line flow diagrams, typical equipment cabinet loadings, panel layouts, shall be provided as required for clarity.

This section shall also detail the electronic characteristics of the site and describe the influence of these characteristics on the system design and application.

10.4 Electronic Equipment. This section shall consist primarily of types and quantities of required electronic equipment and test equipment tabulated by site location. It shall include tabular information such as equipment nomenclature, height, weight, electrical voltage, phase, frequency, regulation and power required, water cooling requirements, heat load, special internal (to equipment) cooling air circulation, maintenance and operational access space required.

10.5 System Checkout and Acceptance. This section shall consist of electronic equipment standards and system checkout procedures integrated into an overall system test plan. Reference shall be made to those applicable procedures for the test and checkout of equipment and systems which have previously been published. System functional appraisal and acceptance standards must be established in terms of the operational requirements and within the scope of the project. Any special "software" or documentation required for test, checkout, acceptance and turnover shall initially be a part of this section of the BESEP or provided as it is developed.

10.6 Physical Plant. This section is designed to contain information on the electronic equipment and/or systems which affects the design of the supporting structures/buildings for housing the equipment for the project and which has not been covered for specific equipment as described in preceding sections. To be especially noted are those special features, limitations, or requirements dictated by the quantities or kinds of specific equipment, antennas, etc., as their presence relates to the architectural, structural, mechanical and electrical portions of the plant design, including clearance, siting, and access requirements. Single-line typed drawings illustrating planned layouts of equipment and antennas shall be prepared to assist in defining the necessary information. Tabulations, where appropriate, of personnel loadings, movements, occupancy, consumption and other such support requirements shall also be made. For each site or location and for each applicable area of interest, as noted below, appropriate requirements shall be described:

(Continued on page 3)

## Block 10; Preparation Instructions (Continued)

a. Structures

- (1) Equipment floor loadings
- (2) Openings
- (3) Special features, including wireways and trenching

b. Electronic equipment power panel board location recommendations, special RED or BLACK panel designation and special power requirements (including circuit breaker quantity and sizes) at specific panels such as no-break or 400 cycle power.

c. Identification of RED areas.

d. Planned antenna location, list of antennas required, types, performances required or expected, frequency ranges, cable types, and termination location in the building.

e. RF shielding requirements and other precautions required to guard against radiation hazards and characteristics of the source of radiation.

f. Electronic equipment areas of concentrated heat load.

g. Specific requirements for special air conditioning or environmental control.

h. Recommended location of compressed air outlets, specifying pressure and valve requirements based on equipment, maintenance or air powered tool requirements, where required.

i. Grounding system.

j. Internal security.

10.7 Drawings cited above shall be in the contractor's format.