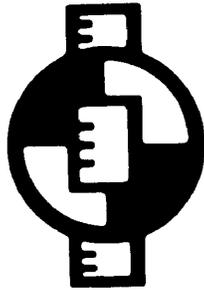


# CHAPTER 28



## ENGINEERING AIDE (EA)

NAVPERS 18068-28E

**CH-66**

Updated: April 2016

TABLE OF CONTENTS  
ENGINEERING AIDE (EA)

<b>SCOPE OF RATING</b>	EA-3
<b>GENERAL INFORMATION</b>	EA-4
<b>ENGINEERING AIDE</b>	EA-5
CONSTRUCTION DESIGN	EA-5
CONSTRUCTION MANAGEMENT	EA-5
DRAFTING	EA-6
ENGINEERING TECHNICAL SUPPORT	EA-6
FACILITIES SUPPORT	EA-7
MATERIALS TESTING	EA-7
SEABEE COMMON CORE	EA-7
SURVEYING	EA-8
UNDERWATER CONSTRUCTION	EA-8

NAVY ENLISTED OCCUPATIONAL STANDARD

FOR  
ENGINEERING AIDE (EA)



SCOPE OF RATING

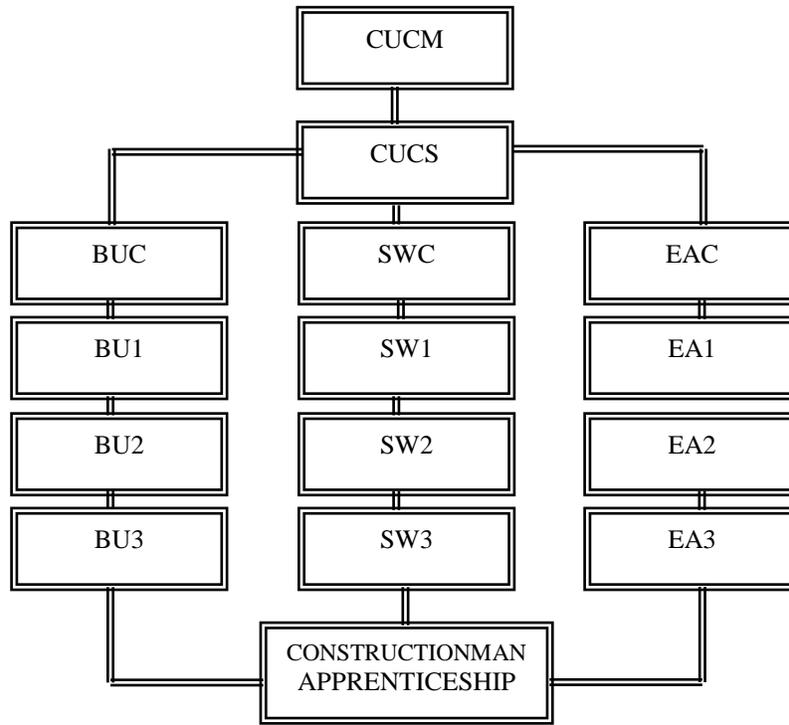
Engineering Aides (EA) plan, supervise, and perform tasks required in surveying, drafting, materials testing, and construction management; establish control survey points, run traverses, obtain and convert field notes into topographic maps, and stake out for excavations; prepare, edit, and reproduce construction drawings; maintain systems to test and design aggregate mixes for soil-cement, concrete, and bituminous applications; prepare timekeeping records, construction schedules, and planning and estimating, quality control and progress reports; provide facilities support; maintain individual combat readiness; and perform tasks required in combat and Humanitarian Assistance/Disaster Recovery operations (HADR).

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This Occupational Standard is to be incorporated in Volume I, Part B, of the Manual of Navy Enlisted Manpower and Personnel Classifications and Occupational Standards (NAVPERS 18068F) as Chapter 28.

## GENERAL INFORMATION

### CAREER PATTERN



Normal path of advancement to Chief Warrant Officer and Limited Duty Officer categories can be found in OPNAVINST 1420.1.

For rating entry requirements, refer to MILPERSMAN 1306-618.

### **SAFETY**

**The observance of Operational Risk Management (ORM) and proper safety precautions in all areas is an integral part of each billet and the responsibility of every Sailor; therefore, it is a universal requirement for all ratings.**

**Job Title**  
**Engineering Aide**

**Job Code**  
**001160**

**Job Family**  
 Architecture and Engineering

**NOC**  
 TBD

**Short Title (30 Characters)**  
 ENGINEERING AIDE

**Short Title (14 Characters)**  
 ENGINEER AIDE

**Pay Plan**                      **Career Field**  
 Enlisted                              EA

**Other Relationships and Rules**  
 NEC's 5501, 5503, 5708, 5712, 5931, 5932, 5933, 6021, 9920.

**Job Description**

Engineering Aides plan, supervise, and perform tasks required in surveying, drafting, materials testing, and construction management; establish control survey points, run traverses, obtain and convert field notes into topographic maps, and stake out for excavations; prepare, edit, and reproduce construction drawings; maintain systems to test and design aggregate mixes for soil-cement, concrete, and bituminous applications; and prepare timekeeping records, construction schedules and planning and estimating, and quality control and progress reports. As project managers, they plan, staff, direct, and control multiple construction projects to include problem solving, planning, estimating, scheduling, cost control, and personnel management ensuring compliance with specifications, code requirements, plans, and contracts; and act as project supervisors and trainers for junior personnel.

**DoD Relationship**

Group Title                      DoD Code  
 Construction, General              171000

**O\*NET Relationship**

Occupation Title                      SOC Code  
 Civil Engineering Technicians              17-3022.00

Job Family  
 Architecture and Engineering

**Skills**

*Critical Thinking*  
*Management of Personnel Resources*  
*Operation and Control*  
*Complex Problem Solving*  
*Management of Material Resources*  
*Coordination*  
*Mathematics*  
*Judgment and Decision Making*  
*Active Listening*  
*Operation Monitoring*

**Abilities**

*Information Ordering*  
*Deductive Reasoning*  
*Inductive Reasoning*  
*Oral Expression*  
*Control Precision*  
*Problem Sensitivity*  
*Manual Dexterity*  
*Mathematical Reasoning*  
*Response Orientation*  
*Reaction Time*

**CONSTRUCTION DESIGN**

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Draft architectural designs
E4	CORE	Draft civil engineering designs
E4	CORE	Draft electrical component designs
E4	CORE	Draft heavy construction designs
E4	CORE	Draft mechanical component designs
E4	CORE	Draft structural members designs

**CONSTRUCTION MANAGEMENT**

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E6	CORE	Conduct three-phase quality control inspections
E4	CORE	Develop construction activity estimates
E5	CORE	Develop construction environmental protection plans
E5	CORE	Develop construction project packages
E5	CORE	Develop construction safety plans
E4	CORE	Develop construction sketches and diagrams
E5	CORE	Develop project three-phase quality control plans
E5	CORE	Establish construction site layouts
E4	CORE	Inspect construction materials

E6	CORE	Inspect construction projects
E4	NON-CORE	Interpret construction drawings and specifications
E4	CORE	Inventory project tools and materials
E5	CORE	Lead construction projects
E5	CORE	Maintain construction project resources
E5	CORE	Maintain facilities
E7	NON-CORE	Manage camp maintenance operations
E7	CORE	Manage construction environmental protection programs
E6	CORE	Manage construction project resources
E7	CORE	Manage construction projects
E7	CORE	Manage construction safety programs
E7	CORE	Manage facilities maintenance programs
E6	NON-CORE	Manage maintenance contracts
E7	CORE	Manage project quality control programs
E7	CORE	Manage three-phase quality control programs
E6	NON-CORE	Monitor construction project contracts
E5	CORE	Supervise construction project safety operations
E6	CORE	Supervise construction projects
E6	CORE	Supervise construction safety operations
E6	CORE	Supervise environmental protection programs
E6	CORE	Supervise facilities maintenance programs
E6	CORE	Supervise planning and estimating operations
E5	CORE	Supervise project three-phase quality control programs
E5	CORE	Turnover construction projects
E5	NON-CORE	Validate project surveys and elevation data

#### **DRAFTING**

<b><u>Paygrade</u></b>	<b><u>Task Type</u></b>	<b><u>Task Statements</u></b>
E4	CORE	Analyze construction drawings
E4	CORE	Develop construction plans using Computer-Aided Drafting (CAD) software
E4	CORE	Prepare construction drawings
E4	CORE	Produce construction drawings
E5	CORE	Supervise drafting operations

#### **ENGINEERING TECHNICAL SUPPORT**

<b><u>Paygrade</u></b>	<b><u>Task Type</u></b>	<b><u>Task Statements</u></b>
E4	CORE	Calculate engineering and construction design requirements
E6	NON-CORE	Conduct building inspections
E6	NON-CORE	Consolidate construction project specifications
E5	CORE	Develop unit operational reports
E4	CORE	Maintain engineering technical libraries
E4	CORE	Maintain engineering tool kits

E4	CORE	Maintain technical plan files and records
E7	CORE	Manage engineering support operations
E6	CORE	Supervise engineering support operations

#### **FACILITIES SUPPORT**

<b><u>Paygrade</u></b>	<b><u>Task Type</u></b>	<b><u>Task Statements</u></b>
E6	NON-CORE	Administer facilities maintenance contracts
E5	NON-CORE	Administer facilities maintenance programs
E4	CORE	Coordinate facilities maintenance program requests
E7	NON-CORE	Manage facilities contract administration programs
E7	NON-CORE	Manage facilities maintenance programs

#### **MATERIALS TESTING**

<b><u>Paygrade</u></b>	<b><u>Task Type</u></b>	<b><u>Task Statements</u></b>
E4	CORE	Compute bituminous mix design proportions
E4	CORE	Compute concrete mix design proportions
E4	CORE	Compute soil-cement mix design proportions
E5	CORE	Develop materials testing reports
E6	NON-CORE	Supervise batch plant operations
E5	NON-CORE	Supervise batch plant quality assurance programs
E6	CORE	Supervise materials testing operations
E4	CORE	Test asphalt materials
E4	CORE	Test concrete materials
E4	CORE	Test soil materials

#### **SEABEE COMMON CORE**

<b><u>Paygrade</u></b>	<b><u>Task Type</u></b>	<b><u>Task Statements</u></b>
E4	CORE	Apply combat life saving techniques
E4	CORE	Conduct Chemical, Biological, Radiological and Nuclear Explosive (CBRNE) defensive operations
E4	CORE	Conduct convoy operations
E4	CORE	Conduct Disaster Recovery Operations (DRO)
E4	CORE	Conduct embarkation and debarkation operations
E6	NON-CORE	Conduct Maritime Prepositioning Force (MPF) operations
E4	CORE	Conduct personal protection and decontamination operations
E4	CORE	Employ Advance Base Functional Component (ABFC) systems
E4	CORE	Employ grenades, mines, and pyrotechnics
E4	CORE	Employ land survival techniques
E4	NON-CORE	Maintain crew-served weapons
E4	CORE	Maintain field communications equipment
E4	CORE	Maintain Personal Gear Issue (PGI)
E4	CORE	Maintain small arms
E4	NON-CORE	Operate crew-served weapons

E4	CORE	Operate field communications equipment
E4	CORE	Operate small arms
E4	CORE	Patrol assigned areas
E7	CORE	Perform command and control of a company
E4	CORE	Perform command and control of a fire team
E6	CORE	Perform command and control of a platoon
E5	CORE	Perform command and control of a squad
E7	NON-CORE	Plan convoy operations
E4	CORE	Repair damaged airfields
E4	CORE	Set tactical defenses
E7	NON-CORE	Supervise Airfield Damage Repair (ADR) operations

### **SURVEYING**

<b><u>Paygrade</u></b>	<b><u>Task Type</u></b>	<b><u>Task Statements</u></b>
E4	CORE	Conduct construction surveys
E5	CORE	Conduct engineering surveys
E4	CORE	Conduct Global Positioning System (GPS) surveys
E4	CORE	Develop survey designs using Geographic Information Systems (GIS) software
E5	CORE	Supervise surveying operations

### **UNDERWATER CONSTRUCTION**

<b><u>Paygrade</u></b>	<b><u>Task Type</u></b>	<b><u>Task Statements</u></b>
E5	NON-CORE	Conduct oceanographic surveys
E5	NON-CORE	Maintain diving equipment
E5	NON-CORE	Maintain diving support equipment
E7	NON-CORE	Manage demolition operations
E7	NON-CORE	Manage diving emergency procedures
E7	NON-CORE	Manage diving equipment maintenance
E7	NON-CORE	Manage diving support equipment maintenance
E7	NON-CORE	Manage light salvage operations
E7	NON-CORE	Manage Maritime Prepositioning Force (MPF) pre-offload operations
E7	NON-CORE	Manage Naval Sea Systems Command (NAVSEA) system certification programs
E7	NON-CORE	Manage oceanographic surveys
E7	NON-CORE	Manage Offshore Petroleum Distribution System (OPDS) operations
E7	NON-CORE	Manage Remote Operated Vehicle (ROV) operations
E7	NON-CORE	Manage small craft operations
E7	NON-CORE	Manage underwater construction operations
E5	NON-CORE	Perform coxswain duties
E5	NON-CORE	Perform demolition operations
E5	NON-CORE	Perform diving emergency procedures
E5	NON-CORE	Perform diving operations
E5	NON-CORE	Perform light salvage operations

E5	NON-CORE	Perform Maritime Prepositioning Force (MPF) pre-offload operations
E5	NON-CORE	Perform Offshore Petroleum Distribution System (OPDS) operations
E5	NON-CORE	Perform Remote Operated Vehicle (ROV) operations
E5	NON-CORE	Perform small craft operations
E5	NON-CORE	Perform underwater construction operations
E6	NON-CORE	Supervise demolition operations
E6	NON-CORE	Supervise diving emergency procedures
E6	NON-CORE	Supervise diving equipment maintenance
E6	NON-CORE	Supervise diving operations
E6	NON-CORE	Supervise diving support equipment maintenance
E6	NON-CORE	Supervise light salvage operations
E6	NON-CORE	Supervise Maritime Prepositioning Force (MPF) pre-offload operations
E6	NON-CORE	Supervise Naval Sea Systems Command (NAVSEA) system certification programs
E6	NON-CORE	Supervise oceanographic surveys
E6	NON-CORE	Supervise Offshore Petroleum Distribution System (OPDS) operations
E6	NON-CORE	Supervise Remote Operated Vehicle (ROV) operations
E6	NON-CORE	Supervise small craft operations
E6	NON-CORE	Supervise underwater construction operations