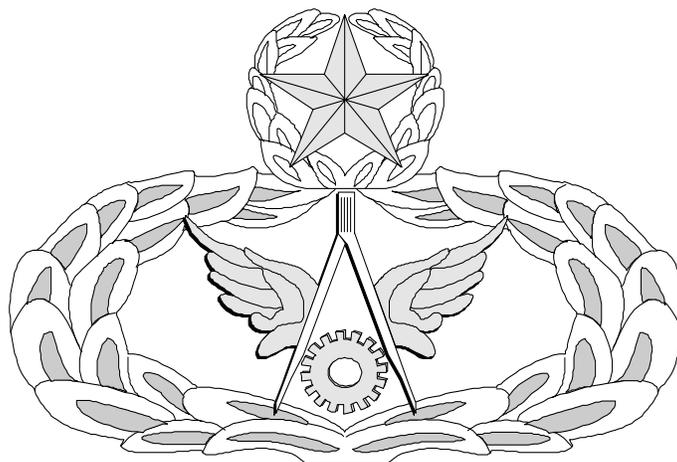


## AFSC 3E0X2

# ELECTRICAL POWER PRODUCTION



**MASTER**



**BASIC**



**SENIOR**

## CAREER FIELD EDUCATION AND TRAINING PLAN

CAREER FIELD EDUCATION AND TRAINING PLAN

**ELECTRICAL POWER PRODUCTION SPECIALTY  
3E0X2**

**Table of Contents**

**Preface** .....4

**Abbreviations/Terms Explained** .....6

**Part I**

**Section A - General Information** .....10

    Purpose

    Uses

    Coordination and Approval

**Section B - Career Field Progression and Information** .....12

    Specialty Descriptions

    Skill/Career Progression

        Apprentice (3-Level)

        Journeyman (5-Level)

        Craftsman (7-Level)

        Superintendent (9-Level)

        Civil Engineer Manager

    Training Decisions

    Community College of the Air Force Academic Programs

    Career Field Path

**Section C - Skill Level Training Requirements**.....24

    Purpose

    Specialty Qualification Requirements

        Apprentice (3-Level)

        Journeyman (5-Level)

        Craftsman (7-Level)

        Superintendent (9-Level)

        Civil Engineer Manager

**Section D - Resource Constraints**.....31

    Purpose

    Training Constraints

**Section E - Transition Training Guide**.....33

**PART II**

**Section A - Specialty Training Standard .....34**  
Implementation  
Purpose  
Recommendations  
Qualitative Requirements  
AFQTP Documentation Record

**Section B - Course Objective List ..... 66**

**Section C - Support Materials .....67**

**Section D - Training Course Index .....68**

**Section E - Major Command (MAJCOM)-Unique Requirements .....69**

**Section F - Home Station Training .....70**

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## PREFACE

1. This Career Field Education and Training Plan (CFETP) is a comprehensive education and training document that identifies life-cycle education/training requirements, training support resources, and minimum core task requirements for this specialty. The CFETP will provide personnel a clear career path to success and instill rigor in all aspects of career field training.

2. The CFETP consists of two parts used by supervisors to plan, manage, and control training within the career field.

**2.1. Part I** provides information necessary for overall management of the specialty.

**2.1.1. Section A** provides general information about how the CFETP will be used.

**2.1.2. Section B** identifies career field progression information, duties and responsibilities, training strategies, and career field path.

**2.1.3. Section C** associates each skill level with specialty qualifications (knowledge, education, and training).

**2.1.4. Section D** indicates resource constraints.

**2.1.5. Section E** identifies transition training guide requirements for SSgt through MSgt.

**2.2. Part II** includes the following:

**2.2.1. Section A** identifies the Specialty Training Standard (STS) to include duties, tasks, and technical references to support Air Education and Training Command (AETC)-conducted training, wartime course, and correspondence course requirements.

**2.2.2. Section B** contains the course objective list and training standards supervisors will use to determine if airmen satisfy training requirements.

**2.2.3. Section C** identifies available support materials. Air Force Qualification Training Packages (AFQTPs) and CerTests support both Upgrade Training (UGT) and qualification training.

**2.2.4. Section D** identifies a training course index supervisors can use to determine resources available to support training. Included here are both mandatory and optional courses, and exportable courseware.

**2.2.5. Section E** identifies MAJCOM-unique training requirements supervisors can use to determine additional training required for the associated qualification needs.

**2.2.6. Section F** identifies home station training references and courses material required for this specialty in support of contingency/wartime training.

**3.** Using guidance provided in the CFETP will ensure individuals in this specialty receive effective and efficient training at the appropriate point in their careers. This plan will enable us to train today's work force for tomorrow's jobs. At unit level, supervisors and trainers will use Part II to identify, plan, and conduct training commensurate with the overall goals of this guide.

## ABBREVIATIONS/TERMS EXPLAINED

**Advanced Distributive Learning (ADL).** Anytime, anyplace learning within DoD consisting of instructional modules comprised of sharable content objectives in an Internet/Intranet environment.

**Advanced Training (AT).** A formal course which provides individuals who are qualified in one or more positions of their Air Force Specialty (AFS) with additional skills/knowledge to enhance their expertise in the career field. Training is for selected career airmen at the advanced level of the AFS.

**Air Force Career Field Manager (AFCFM).** An individual on the Air Staff charged with the responsibility for overseeing all training and career field management aspects of an Air Force specialty or group of specialties.

**Air Force Job Qualification Standard/Command Job Qualification Standard (AFJQS/CJQS).** A comprehensive task list that describes a particular job type or duty position. Used by supervisors to document task qualifications. The tasks on the AFJQS/CJQS are common to all persons serving in the described duty position.

**Air Force Qualification Training Package (AFQTP).** An instructional package designed for use at the unit to qualify, or aid qualification, in a duty position or program, or on a piece of equipment. AFQTPs identify the Air Force's standardized method for performing the task. The AFQTP may be printed (paper-based), computer-based, or in other audiovisual media.

**Career Field Education and Training Plan (CFETP).** A comprehensive, multipurpose document encapsulating the entire spectrum of education and training for a career field. It outlines a logical growth plan that includes training resources and is designed to make career field training identifiable, to eliminate duplication, and to ensure this training is budget defensible.

**Certification and Testing (CerTest).** A multi-media evaluation program used to test an individual's knowledge of principles and procedures in their career field.

**Commercial Off The Shelf (COTS).** Commercially-procured training products.

**Computer-Based Training (CBT).** A self-paced stand-alone computer product used to deliver interactive subject and task knowledge.

**Continuation Training.** Additional training exceeding requirements with emphasis on present and future duty assignments.

**Core Task.** A task Air Force Career Field Managers (AFCFMs) identified as a minimum qualification requirement within an Air Force specialty or duty position. These tasks exemplify the essence of the career field.

**Course Objective List (COL).** A publication derived from initial/advanced skills course training standard, identifying the tasks and knowledge requirements, and respective standards provided to achieve a 3-, 5-, and 7-skill level in this career field. Supervisors use the COL to assist in conducting graduate evaluations in accordance with AFI 36-2201, Developing, Managing, and Conducting Training.

**Critical Task.** Tasks that have been identified by the work center supervisor as having a detrimental effect on mission accomplishment if not performed correctly. Critical tasks may or may not be the same as core tasks but are mandatory if identified as 'critical' to the individual's position by the supervisor or work center.

**Diamond Tasks (◆).** Diamond tasks are extremely important to the career field. Diamond tasks are the same as core tasks with one exception--equipment shortfalls at most locations have created problems with the actual hands-on certification of these tasks. In instances where required equipment is not available for instruction, completion of the task's AFQTP and passing the corresponding CerTest is all that is required for upgrade and qualification training. Hands-on certification should be accomplished at the first opportunity when equipment is available.

**Distance Learning (DL).** Includes Video Teleseminar (VTS), Video Teletraining (VTT), and Computer-Based Training (CBT). Formal courses that a training wing or a contractor develops for export to a field location (in place of resident training) for trainees to complete without the on-site support of the formal school instructor. For instance, courses are offered by Air Force Institute of Technology, Air University, and Training Detachment.

**Duty Position Task.** The tasks assigned to an individual for the position currently held. These include as a minimum all core tasks, critical tasks, and any other tasks assigned by the supervisor.

**Enlisted Specialty Training (EST).** A mix of formal training (technical school) and informal training (on-the-job) to qualify and upgrade airmen in each skill level of a specialty.

**Exportable Training.** Additional training via computer-assisted, paper text, interactive video, or other necessary means to supplement training.

**Field Technical Training (Type 4).** Special or regular on-site training conducted by a Field Training Detachment (FTD) or by a Mobile Training Team (MTT).

**Initial Skills Training.** AFS-specific training an individual receives upon entry into the Air Force or upon retraining into this specialty for award of the 3-skill level. Normally, this training is conducted by AETC at one of the technical training wings.

**Instructional System Development (ISD).** A deliberate and orderly, but flexible, process for planning, developing, implementing, and managing instructional systems. It ensures personnel are taught in a cost-efficient way the knowledge, skills, and attitudes essential for successful job performance.

**Mission Ready Airmen (MRA) Training.** Initial skills training allowing airmen to perform select tasks unsupervised equal to 3-levels with one year of experience.

**Occupational Survey Report (OSR).** A detailed report showing the results of an occupational survey of tasks performed within a particular AFS.

**On-the-Job Training (OJT).** Hands-on, over-the-shoulder training conducted to certify personnel in both upgrade (skill-level award) and job qualification (duty position certification) training.

**Optimal Training.** The ideal combination of training settings resulting in the highest levels of proficiency on specified performance requirements within the minimum time possible.

**Proficiency Training.** Additional training, either in-residence, exportable advanced training courses, or on-the-job training provided to personnel to increase their skills and knowledge beyond the minimum required for upgrade.

**Qualification Training (QT).** Actual hands-on task performance training designed to qualify an individual in a specific duty position. This portion of the dual channel on-the-job training program occurs both during and after the upgrade training process. It is designed to provide the performance skills required to do the job.

**Readiness Training Package (RTP).** Establishes standard levels of knowledge and proficiency for common Disaster Preparedness and Readiness subject areas by providing instructors with training references, materials, and lesson objectives used in teaching and evaluating the course subject matter.

**Representative Sites.** Typical organizational units having similar missions, weapon systems or equipment, or a set of jobs, used as a basis for estimating average training capacities and costs within the Training Impact Decision System (TIDES).

**Resource Constraints.** Resource deficiencies, such as money, facilities, time, manpower, or equipment that precludes desired training from being delivered.

**Skills Training.** A formal course resulting in the award of a skill level.

**Specialty Training.** A mix of formal training (technical school) and informal training (on-the-job) to qualify and upgrade airmen in the award of a skill level.

**Specialty Training Standard (STS).** Describes skills and knowledge that airmen in a particular AFS need on the job. It further serves as a contract between the Air Education and Training Command (AETC) and the user to show the overall training requirements for an AFS taught in the resident and nonresident courses.

**Spin-up Training.** Training required just prior to a select deployment that delivers training necessary for mission accomplishment. It is typically predicated on hard to attain contingency skills.

**Standard.** An exact value, a physical entity, or an abstract concept, established and defined by authority, custom, or common consent to serve as a reference, model, or rule in measuring quantities or qualities, establishing practices or procedures, or evaluating results; a fixed quantity or quality.

**Supplemental Training.** Training for a portion of an AFS without a change in AFSC. Formal training on new equipment, methods, and technology that are not suited for on-the-job training.

**Total Force.** All collective Air Force components (active duty, Reserve, Guard, and civilian elements) of the United States Air Force.

**Training Capacity.** The capability of a training setting to provide training on specified requirements, based on the availability of resources.

**Training Impact Decision System (TIDES).** A computer-based decision support technology designed to assist Air Force Career Field Managers (AFCFMs) in making critical judgments relevant to what training should be provided to personnel within career fields, when training

should be provided (at what career points), and where training should be conducted (training setting). A TIDES template is used Air Force-wide for standardization and formatting of CFETPs.

**Training Planning Team (TPT).** Comprised of the same personnel as a U&TW; however, TPTs are more intimately involved in training development and the range of issues is greater than is normal in the U&TW forum.

**Training Requirements Analysis.** A detailed analysis of tasks for a particular AFS to be included in the training decision process.

**Upgrade Training (UGT).** Identifies the mandatory courses, task qualification requirements, and correspondence course completion requirements for award of the 5-, 7-, and 9-skill levels.

**Utilization and Training Workshop (U&TW).** A forum of the AFCFM, MAJCOM Functional Managers (MFMs), Subject Matter Experts (SMEs), and AETC training personnel that determines career ladder training requirements.

## PART I

### SECTION A - GENERAL INFORMATION

**1. Purpose.** This CFETP provides information necessary for the Air Force Career Field Managers (AFCFMs), MAJCOM functional managers (MFMs), commanders, education and training managers, supervisors/trainer, and certifiers to plan, develop, manage, and conduct an effective career field training program. This plan outlines the training individuals require to develop and progress throughout their careers. It identifies initial skills, upgrade, qualification, advanced, and proficiency training.

**1.1. Initial skills training.** Is the AFS-specific training an individual receives upon entry into the Air Force or upon retraining into this specialty for award of the 3-skill level. Normally, this training is conducted by AETC at one of the technical training wings.

**1.2. Upgrade training.** Identifies the mandatory courses, task qualification requirements, and correspondence course completion requirements for award of the 5-, 7-, and 9-skill levels.

**1.3. Qualification training.** Is actual hands-on task performance training designed to qualify an airman in a specific duty position. This training program occurs both during and after the upgrade training process. It is designed to provide the performance skills/knowledge required to do the job.

**1.4. Advanced training.** Is a formal course that provides individuals who are qualified in one or more positions of their Air Force Specialty (AFS) with additional skills/knowledge to enhance their expertise in the career field. Training is for selected career airmen at the advanced level of the AFS.

**1.5. Proficiency training.** Is additional training, either in-residence, exportable advanced training courses, or on-the-job training, provided to personnel to increase their skills and knowledge beyond the minimum required for upgrade.

#### **2. The CFETP has several purposes:**

**2.1.** Serves as a management tool to plan, manage, conduct, and evaluate a career field training program. It is used to help supervisors identify training at the appropriate point in an individual's career.

**2.2.** Identifies task and knowledge training requirements for each skill level in the specialty and recommends education/training throughout each phase of an individual's career.

**2.3.** Lists training courses available in the specialty and identifies sources of training and training delivery methods.

**2.4.** Identifies major resource constraints that impact full implementation of the desired career field training process.

**3. Uses.** MFMs and supervisors will use the plan at all levels to ensure comprehensive and cohesive training programs are available for each individual in the specialty.

**3.1.** AETC training personnel will develop/revise formal resident, nonresident, field, and exportable training based on requirements established by the users and documented in Part II of the CFETP. They will also work with the AFCFM, Air Force Civil Engineer Support Agency Force Development Division (HQ AFCEA/CEOF) to develop acquisition strategies for obtaining resources needed to provide the identified training.

**3.2.** MFMs will ensure their training programs complement CFETP mandatory initial, upgrade, and proficiency requirements and identify requirements that can be satisfied by OJT, resident training, contract training, CerTest, or exportable courses. MAJCOM-developed training to support this AFS must be identified for inclusion into the plan.

**3.3.** Unit Education and Training managers and supervisors must ensure each individual completes the mandatory training requirements (including MAJCOM supplemental requirements) for the upgrade training specified in this plan.

**3.4.** Each individual will complete the mandatory training requirements specified in this plan. The lists of courses in Part II in this CFETP will be used as a reference to support training.

**4. Coordination and Approval.** The AFCFM is the approval authority for the CFETP. MAJCOM representatives and AETC personnel will identify and coordinate on the career field training requirements. The AETC training manager for this specialty will initiate an annual review of this document by AETC and MFMs to ensure currency and accuracy. Using the list of courses in Part II, they will eliminate duplicate training.

## **SECTION B - CAREER FIELD PROGRESSION AND INFORMATION**

**5. Specialty Descriptions.** Electrical Power Production Apprentice, Journeyman, Craftsman, and Superintendent.

**5.1.** Installs, removes, operates, maintains, and repairs electrical power generating equipment and control systems, aircraft arresting systems and associated equipment. Related DoD Occupational subgroup: 662.

### **5.2. Duties and Responsibilities for Apprentice, Journeyman, and Craftsman.**

**5.2.1.** Installs and operates Electrical Power Production systems and equipment.

**5.2.1.1.** Installs, removes, operates, maintains and repairs electrical power generating and control systems, aircraft arresting systems and associated equipment.

**5.2.1.2.** Checks equipment for serviceability.

**5.2.1.3.** Positions equipment such as gasoline and diesel engines, generators, switchgears, air compressors, and other power generating auxiliary equipment.

**5.2.1.4.** Installs, positions, rewinds, and pretensions aircraft arresting systems.

**5.2.1.5.** Certifies aircraft arresting systems as required.

**5.2.1.6.** Checks installed equipment to ensure compliance with publications, policies, and directives.

**5.2.1.7.** Inspects, tests, and services components systems such as safety, fuel, lubrication, cooling, air pressure, pumps, regulators, governors, and accessory equipment.

**5.2.1.8.** Observes and interprets instruments such as ammeters, voltmeters, frequency meters, synchroscopes, automatic temperature and pressure recorders, and engine oil, fuel, and coolant gauges.

**5.2.1.9.** Adjusts engine generator systems to maintain proper voltage, current frequency, and synchronization. Operates high and low voltage switches, circuit breakers, rheostats and other controls on switchgear and distribution panels.

**5.2.1.10.** Performs electrical power and distribution functions.

**5.2.2.** Maintains, modifies and repairs electric power generating and control systems, automatic transfer switches, aircraft arresting systems and associated equipment.

**5.2.2.1.** Performs inspections, and interprets findings to determine corrective actions.

- 5.2.2.2.** Identifies and documents engine and generator malfunctions.
  - 5.2.2.3.** Uses precision test equipment, troubleshoots malfunctions, and inspects parts for excessive wear and other conditions.
  - 5.2.2.4.** Removes, repairs, and replaces defective power generating components.
  - 5.2.2.5.** Performs corrosion control.
  - 5.2.2.6.** Inspects and replaces gauges and meters.
  - 5.2.2.7.** Maintains aircraft arresting systems, including electrical, hydraulic, rewind, and pneumatic components.
  - 5.2.2.8.** Bench checks components and subassemblies.
  - 5.2.2.9.** Tests and calibrates repaired items.
  - 5.2.2.10.** Reviews performance data and maintenance records to determine adequacy of maintenance.
  - 5.2.2.11.** Interprets data related to electrical power generating and aircraft arresting systems to ensure overall mission success.
- 5.2.3.** Reviews and advises on projects associated with electrical power generating and control systems, automatic transfer switches, aircraft arresting systems and associated equipment.
- 5.2.3.1.** Reviews layout drawings and wiring diagrams.
  - 5.2.3.2.** Ensures new construction meets proper operating characteristics of equipment.
  - 5.2.3.3.** Establishes maintenance and operating procedures to ensure maximum efficiency.
  - 5.2.3.4.** Ensures new construction meets proper operating characteristics of equipment.
- 5.2.4.** Maintains records.
- 5.2.4.1.** Posts entries on operation, inspection, and maintenance records.
  - 5.2.4.2.** Records meter reading, wear and alignment measurements, fuel consumption, and other data in performance logs.
  - 5.2.4.3.** Furnishes information for reports and recommends changes to correct defective equipment or improve operating procedures.
  - 5.2.4.4.** Applies engineered performance standards to plan and estimate jobs.

**5.2.4.5.** Coordinates plans with other civil engineer and base agencies.

**5.2.4.6.** Records meter readings, wear and alignment measurements, fuel consumption, and other data in performance logs.

**5.2.4.7.** Furnishes information for reports and recommends changes to correct defective equipment or improve operating procedures.

**5.2.4.8.** Applies engineered performance standards to plan and estimate jobs.

**5.2.4.9.** Coordinates plans with other civil engineer and base agencies.

**5.2.4.10.** Inspects work activities to ensure quality and compliance with policies, regulations, and other publications.

**5.2.4.11.** Complies with environmental policies.

**5.2.4.12.** Supervises and manages personnel and resources.

**5.2.5.** Performs inspection activities.

**5.2.5.1.** Attends site visits.

**5.2.5.2.** Performs pre-acceptance inspections of Power Production systems.

**5.3. Duties and Responsibilities for Superintendent.** Manages resources and activities devoted to installation, operation, maintenance, and repair of high and low voltage power distribution systems, electrical power generating and control systems, fire alarms, intrusion detection systems, airfield lighting systems, and aircraft arresting systems. Related DoD Occupational Subgroup: 721.

**5.3.1.** Plans and organizes electrical activities.

**5.3.1.1.** Programs and coordinates electrical power outages, maintenance, and repair requirements with users.

**5.3.1.2.** Performs planning activities and facility surveys. Determines resources requirements by conducting on-site investigations of proposed work.

**5.3.1.3.** Prepares cost estimates for in-service work requests.

**5.3.1.4.** Applies engineered performance standards in planning and estimating jobs.

**5.3.1.5.** Coordinates plans with civil engineering and other agencies as required.

**5.3.2.** Manages functions in electrical systems and power production activities.

**5.3.2.1.** Directs the installation, removal, operation, maintenance, and repair of electrical power distribution systems, above and below 600 volts and electrical power generating and control systems activities including overhead and underground distribution systems, power plant operations, fire alarms and intrusion detection systems, airfield lighting systems, and aircraft arresting systems.

**5.3.2.2.** Identifies and controls requisitioning of systems, parts, fuels, lubricants, bench stock, and technical publications.

**5.3.2.3.** Ensures productivity and work compliance.

**5.3.2.4.** Monitors electrical generating unit records and analyzes for organization, intermediate, or depot level maintenance, and preparation of maintenance forms, reports, and records.

**5.3.2.5.** Issues and logs safe clearance procedures for all crafts that maintain electrical systems and power production equipment.

**5.3.2.6.** Ensures compliance with environmental and safety regulations and practices.

**5.3.3.** Inspects and evaluates electrical systems and power production activities to ensure compliance with policies and regulations.

**5.3.3.1.** Assists in solving maintenance, supply, and personnel problems.

**5.3.3.2.** Interprets inspection findings and initiates corrective action.

**5.3.3.3.** Ensures certification of personnel as required.

**6. Skill/Career Progression.** Adequate training and timely progression from the apprentice to the superintendent skill level play an important role in the Air Force's ability to accomplish its mission. It is essential that everyone involved in training do his or her part to plan, manage, and conduct an effective training program. The guidance provided in this part of the CFETP will ensure individuals receive viable training at appropriate points in their careers.

### **6.1. Apprentice (3-Level).**

**6.1.1.** Upon completion of initial skills training, a trainee will work with a trainer to enhance their knowledge and skills.

**6.1.2.** Utilize the Career Development Course (CDC), Air Force Qualification Training Packages (AFQTPs) and other exportable courses for subject and task fundamentals in the career field. Successfully complete applicable CerTests.

**6.1.3.** Once trained and task certified, a trainee may perform the task unsupervised.

**6.1.4.** After all upgrade training requirements are completed, supervisors and Unit Education and Training Managers (UETMs) coordinate upgrade procedures.

**6.1.5.** NOTE: All trainees are automatically enrolled in the Community College of the Air Force (CCAF) when awarded their primary AFSC.

## **6.2. Journeyman (5-Level).**

**6.2.1.** Enter into continuation training to broaden experience base.

**6.2.2.** 5-Levels may be assigned job positions such as team leader and shift supervisor.

**6.2.3.** Will attend the Airman Leadership School (ALS) after serving 48 months in the Air Force (active duty only). Either the in-residence or correspondence course is required for Air Reserve Component (ARC) personnel.

**6.2.4.** Will use CDCs and other reference material to prepare for Weighted Airman Performance Systems (WAPS) testing.

**6.2.5.** Should continue pursuing a CCAF degree.

**6.2.6.** After all upgrade training requirements are complete, supervisors and UETMs coordinate upgrade procedures.

## **6.3. Craftsman (7-Level).**

**6.3.1.** Completion of Read-Ahead Material (RAM), 100% core/diamond task completion, and resident graduation from the 7-level resident course are basic prerequisites for award of the 7-level.

**6.3.2.** A craftsman may expect to fill various supervisory and management positions such as shift leader, mobility team chief, production supervisor, or task certifier.

**6.3.3.** Seven-levels should take continuation training courses or obtain additional knowledge on management of resources and personnel.

**6.3.4.** Continued academic education through CCAF and higher degree programs is encouraged.

**6.3.5.** Will attend the Noncommissioned Officer Academy (NCOA) after promotion to TSgt (active duty only). Either the in-residence or correspondence course is required for ARC personnel.

**6.3.6.** After all upgrade training requirements are complete, supervisors and UETMs coordinate upgrade procedures.

## **6.4. Superintendent (9-Level).**

**6.4.1.** Must be a SMSgt for award of the 9-skill level.

**6.4.2.** A 9-level can be expected to fill positions such as flight chief, zone superintendents, and various staff positions.

**6.4.3.** Should pursue increased knowledge of budget, manpower, resources, and personnel management.

**6.4.4.** Recommend the pursuit of additional higher education and completion of courses outside of their career AFS.

## **6.5. Civil Engineer Manager.**

**6.5.1.** Must be selected for CMSgt and possess qualifications in a feeder specialty (3E090, 3E191, 3E291, 3E391, 3E490, 3E591, or 3E691).

**6.5.2.** Will work in a variety of similar jobs and functional areas where general managerial and supervisory abilities can be most effectively used and challenged.

**6.5.3.** Resident graduation of the USAF Senior NCO Academy (SNCOA) is a prerequisite for CMSgt sew-on (active duty only). In residence or correspondence course required for ARC personnel.

**7. Training Decisions.** The CFETP uses a building block approach (simple to complex) to encompass the entire spectrum of training requirements for the Electrical Power Production career field. The spectrum includes a strategy for when, where, and how to meet the training requirements. The strategy must be apparent and affordable to reduce duplication of training and eliminate a disjointed approach to training. The following decisions were made at the career field Utilization & Training Workshop (U&TW) held at Sheppard AFB, TX in Jul 2000.

**7.1. Initial Skills Training.** The initial skills course was reviewed for content. Additions, deletions, and modifications were made to the course. Wartime training tasks were identified. Additional contingency training was also identified.

**7.2. Five-Level Upgrade Training Requirements.** Existing CDCs were reviewed and scrubbed to ensure only current material remained and new technology information was added.

**7.3. Seven-Level Upgrade Training Requirements.** Seven-level training requirements were reviewed.

## **7.4. Proficiency Training.**

**7.4.1.** Any additional knowledge and skill requirements that were not taught through initial skills or upgrade training are assigned as continuation training.

**7.4.2.** Purpose of continuation training is to provide training exceeding minimum upgrade training requirements with emphasis on present and future duty positions.

**7.4.3.** MAJCOMs must develop a continuation-training program that ensures individuals in the Electrical Power Production career field receive the necessary training at the appropriate point in their careers.

**7.4.4.** The training program will identify both mandatory and optional training requirements.

**7.5. Supplemental Training.** Subject Matter Experts (SMEs) and the Training Committee reviewed supplemental training courses for technical accuracy and identified training that was no longer required. They revalidated the remaining courses as necessary to fully support career progression in the AFS.

**7.6. CerTest.** Originally, the CerTest program was developed to support transition training, and meet DoD certification requirements. Now, it is also the singular platform to launch AFQTP tests and supplement the evaluation of OJT.

**8. Community College of the Air Force (CCAF) Academic Programs.** Airmen are automatically enrolled in CCAF upon completion of basic military training. CCAF provides the opportunity to obtain an Associates in Applied Sciences Degree. In addition to its associates degree program, CCAF offers the following:

**8.1. Occupational Instructor Certification.** Upon completion of instructor qualification training (consisting of the Instructor Methods course and supervised practice teaching), CCAF instructors possessing an associates degree or higher may be nominated by their school commander/commandant for certification as an occupational instructor.

**8.2. Trade Skill Certification.** When a CCAF student separates or retires, a trade skill certification is awarded for the primary occupational specialty. The College uses a competency-based assessment process for trade skill certification at one of four proficiency levels: Apprentice, Journeyman, Craftsman/Supervisor, or Master Craftsman/Manager. All are transcribed on the CCAF transcript.

**8.3. The Mechanical and Electrical Technology Associates Degree (4VGA)** applies to AFSC 3E0X2.

**8.3.1. Degree Requirements.** Prior to completing an Associates Degree, the individual must be awarded a 5-level and the following requirements must be met:

<b>Course</b>	<b>Semester Hours</b>
Technical Education	24
Leadership, Management, and Military Studies	6
Physical Education	4
General Education	15
Program Elective	15
Technical Education; Leadership, Management, and Military Studies; or General Education	
<b>Total</b>	<b>64</b>

**8.3.2. Technical Education. (24 Semester Hours)** A minimum of 12 semester hours of Technical Core subjects/courses must be applied and the remaining semester hours applied from Technical Core/Technical Elective courses.

<b>Technical Core Requirements</b>	<b>Semester Hours</b>
CCAF Internship	16
Electrical Power Production	20
Electrical Systems	20
Heating Systems	20
Refrigeration and Air Conditioning	20

<b>Technical Electives</b>	<b>Semester Hours</b>
AF Enlisted Professional Military Education	12
Air Distribution and Filtering Systems	3
Alternate Heating and Cooling	3
Blueprint Reading/Schematic Diagrams	6
Building Codes and Ordinance	3
Computer Science	6
Control Systems/Maintenance	6
Electronics	6
Engine Principles	3
Environmental Awareness	3
Environmental Compliance	3
Industrial Management	3
Industrial Safety	3
Motor, Starter, and Control Devices	6
Quality Assurance	3
Technical Mathematics (College Algebra or Higher)	3
Technical Physics	4
Technical Writing	3
Welding and Pipefitting	3

**8.3.2. Leadership, Management, and Military Studies (6 Semester Hours).** Professional military education and civilian management courses accepted in transfer. Credit is also earned by testing.

**8.3.3. Physical Education (4 Semester Hours).** This requirement is satisfied by completion of PHE 1000- Basic Training.

**8.3.4. General Education (15 Semester Hours).** Applicable courses must meet the criteria for application of courses to the General Education Requirements (GER) and be in agreement with the definitions of applicable general education subjects/courses as provided in the CCAF General Catalog.

<b>General Education</b>	<b>Semester Hours</b>
Oral Communication Speech	3

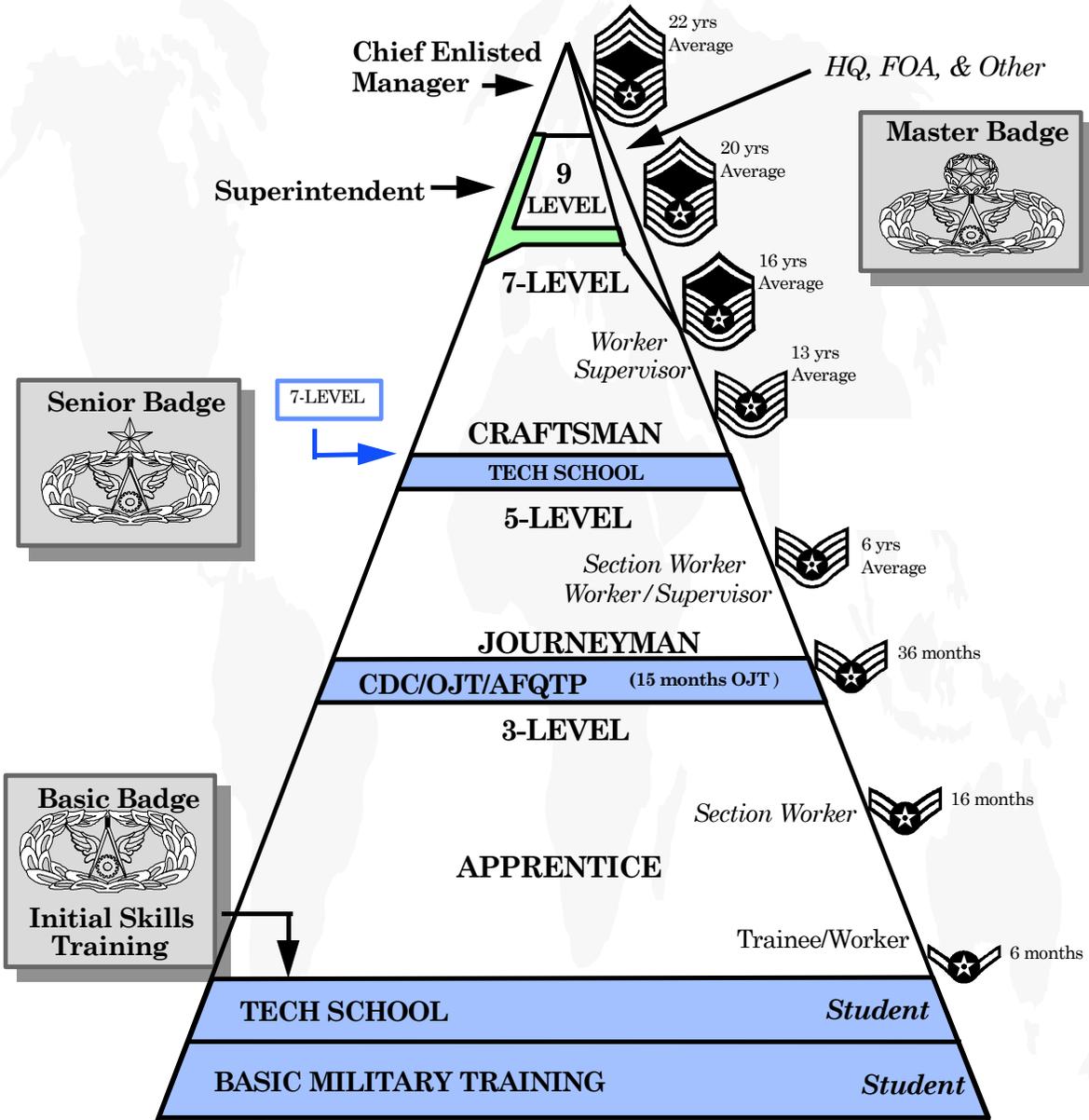
Written Communication English Composition	3
Mathematics An intermediate algebra or a college-level mathematics course that satisfies the delivering institution's mathematics requirement for graduation. If an acceptable mathematics course is applied as a Technical or Program Elective, a natural science course may be substituted for mathematics.	3
Social Science Anthropology, Archaeology, Economics, Geography, Government, History, Political Science, Psychology, Sociology	3
Humanities Fine Arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	3

**8.3.5. Program Elective (15 Semester Hours).** Courses applicable to the technical education; leadership, management, and military studies; or general education requirements. Natural science courses that meet the general education requirement (GER) application criteria. Foreign language credit earned at the Defense Language Institute or through the Defense Language Proficiency Test. A maximum of six semester hours of CCAF degree-applicable technical course credit otherwise not applicable to this program of enrollment. See the CCAF General Catalog for details regarding the Associates of Applied Science for this specialty.

**9.** Additional off-duty education is a personal choice that is encouraged for all. Individuals desiring to become an AETC Instructor should actively pursue an Associates Degree. A qualified faculty is necessary to maintain accreditation through the Southern Association of Colleges and Schools.

10. Career Field Path. The following chart depicts this specialty's career path.

## Electrical Power Production Enlisted Career Pyramid



## 10.1. Enlisted Career Path

<b>Table: Enlisted Career Path</b>				
<b>Education and Training Requirements</b>	<b>GRADE REQUIREMENTS</b>			
	Rank	Average Sew-On	Earliest Sew-On	High Year Of Tenure (HYT)
<b>Basic Military Training school</b>				
<b>Apprentice Technical School</b> (3-Skill Level)	Amn A1C	6 months 16 months		
<b>Upgrade To Journeyman</b> (5-Skill Level) - Complete all core and duty-related tasks identified in CFETP. - Minimum 15 months on-the-job training (9 months for retrainees) - Complete appropriate CDC if/when available.	SrA	3 years	28 months	10 Years
<b>Airman Leadership School (ALS)</b> - Must be a SrA with 48 months time in service or be a SSgt Selectee. - Resident graduation is a prerequisite for SSgt sew-on (Active Duty Only).	<b>Trainer</b> - Trainer must be qualified and certified on tasks to be trained. - Must attend formal AF Training Course and be appointed by Commander in writing.			
<b>Upgrade To Craftsman</b> (7-Skill Level) - Complete all core and duty-related tasks identified in CFETP - Minimum rank of SSgt - 12 months OJT - Complete appropriate CDC if/when available. - Attend 7-level Craftsman Course (may attend prior to completion of 12 months UGT) - Must complete Read-Ahead Material (RAM) prior to attending.	SSgt	6 years	3 years	20 Years
<b>Retrainee</b> - Minimum 9 months for 5-level - Minimum 12 months for 7-level UGT	<b>Certifier</b> - SSgt with 5-skill level or civilian equivalent. - Attend formal AF Certifier Course and appointed by Commander in writing. - Be a person other than the trainer (for core and critical tasks only).			
<b>Noncommissioned Officer Academy (NCOA)</b> - Must be a TSgt or TSgt Selectee - Resident graduation is a prerequisite for MSgt sew-on (Active Duty Only).	TSgt	13 years	5 years	20 Years
	MSgt	16 years	8 years	24 Years
<b>Upgrade To Superintendent</b> (9-Skill Level) - Minimum rank of SMSgt	SMSgt	20 years	11 years	26 Years
<b>Civil Engineer Manager (CEM)</b> -USAF Senior NCO Academy (SNCOA) resident graduation is a prerequisite for CMSgt sew-on (Active Duty Only)	CMSgt	22 years	14 years	30 years

**10.2. CE Occupational Badge.** The Civil Engineer badge reflects a great history and tradition. By wearing it, you will be recognized by your fellow airmen as having achieved an expected level of competence. The multitude of engineers before you established this expectation through excellent service in both peace and war. Eligibility criteria for award and wear of AF occupational badges can be found in AFI 36-2923 (Aeronautical, Duty, and Occupational Badges), on the AFEPL, Air Force Electronic Publications Library (AFEPL).

**10.2.1. CE Badge Heraldry.** The gear wheel and compass have historically been used to represent the engineering profession, in both the military and civilian sector. The gear represents the essence of engineering: applying scientific principles and technology to practical ends. To Air Force engineers, the gear symbolizes an element (representing the built environment) that meshes with other environments (weapon systems and trained personnel) to enable the Air Force to perform its mission. The compass is a precision tool historically used by engineers in designing and constructing facilities and equipment. The gear and compass together symbolize all the diverse specialties within Air Force civil engineer. Finally, the wings help to portray the fundamental linkage between the engineering and aviation components; and that the built environment is the foundation supporting Air Force mission and people.

**10.2.1.1. Basic Badge.** The basic badge is awarded upon successful completion of the apprentice course.

**10.2.1.2. Senior Badge.** The senior badge adds a star to the top of the badge. This is awarded after the member successfully completes the 7-level awarding course.

**10.2.1.3. Master Badge.** The master badge adds a wreath around the star. It's awarded to master sergeant or above with 5 years in the specialty from award of the 7-skill level.

## SECTION C – SKILL-LEVEL TRAINING REQUIREMENTS

**11. Purpose.** The various skill levels in the career field are defined in terms of tasks and knowledge requirements for the Electrical Power Production career ladder. They are stated in broad, general terms and establish the standards of performance. An all-encompassing core task list has been developed for this specialty because of the diversity of the missions supported and the equipment installed to meet mission requirements. Core tasks (and diamond tasks as applicable), knowledge items, and skill requirements for this specialty are identified in the STS. Completion of the mandatory 3-level awarding course, the mandatory completion of CDCs, the mandatory completion of applicable AFQTPs and CerTests, and the mandatory 7-level Craftsman course, comprise Air Force requirements.

### **12. Skill-Level Training Requirements.**

#### **12.1. Apprentice (3-Level) Training Requirements.**

##### **12.1.1. Specialty Qualifications.**

**12.1.1.1. Knowledge.** Completion of the Apprentice course satisfies this mandatory requirement.

**12.1.1.2. Education.** Completion of high school or general education development (GED) with courses in mathematics, general science, physics, shop mechanics, electricity, and computer fundamentals is desirable.

**12.1.1.3. Training.** Completion of the Electrical Power Production Apprentice Course, J3ABR3E032 006, is mandatory for award of this skill level

**12.1.1.4. Experience.** N/A

**12.1.1.5. Other.**

**12.1.1.5.1.** Normal color vision as defined in AFMAN 48-123, Medical Examination and Standards

**12.1.1.5.2.** Qualification to operate government vehicles according to AFMAN 24-301, Vehicle Operations.

##### **12.1.2. Training Sources/Resources.**

**12.1.2.1.** Formal training is accomplished through course, J3ABR3E032 006, at Sheppard AFB, TX

**12.1.2.2.** The COL (Part II, Section B of this CFETP) identifies all the knowledge and tasks, with their respective standards.

**12.1.2.3.** When applicable, AFQTPs and associated CerTests are mandatory for use during UGT/QT on all core tasks, critical tasks, and diamond (◆) tasks.

##### **12.1.3. Implementation.**

**12.1.3.1.** The 3-skill level is awarded upon graduating the Apprentice course.

## **12.2. Journeyman (5-Level) Training Requirements.**

**12.2.1. Specialty Qualification.** Entry into 5-level upgrade training is initiated after the individual has completed the 3-level school. All 3-level qualifications apply to 5-level requirements.

**12.2.1.1. Knowledge.** Knowledge of the following is mandatory:

**12.2.1.1.1.** Principles of electronics and electricity, including generation, conversion, transformation, distribution, and utilization.

**12.2.1.1.2.** Types, capacity, and purpose of high/low voltage circuits, circuit breakers, switches, fuses, regulators, relays, instruments, and meters associated with electric generation and distribution.

**12.2.1.1.3.** Interpreting instrument and meter readings.

**12.2.1.1.4.** Wiring diagrams, schematics, drawings, and technical publications.

**12.2.1.1.5.** Techniques of operating and maintaining internal combustion engines, generators, generating plants, distribution panels, and accessories.

**12.2.1.1.6.** Repair and maintenance of aircraft arresting systems.

**12.2.1.1.7.** Use and purpose of test equipment.

**12.2.1.1.8.** Safety rules and practices.

**12.2.1.1.9.** Environmental policies.

**12.2.1.1.10.** Principles of management.

**12.2.1.1.11.** Operation and repair of electrical power production systems.

**12.2.1.2. Education.** N/A

**12.2.1.3. Training**

**12.2.1.3.1.** Completion of CDCs is mandatory.

**12.2.1.3.2.** Certification of all 5-level core tasks identified with a single asterisk (\*) in the core task column of the STS is mandatory.

**12.2.1.3.3.** Completion of AFQTPs for assigned core and diamond (◆) tasks is mandatory.

**12.2.1.3.4.** Completion of CerTests for all diamond (◆) tasks with a minimum of 80% is mandatory.

**12.2.1.3.5.** Certification of duty position requirements identified by the supervisor is mandatory.

**12.2.1.4. Experience.**

**12.2.1.4.1.** Qualification in and possession of 3-skill level.

**12.2.1.4.2.** Operation and maintenance of engines, generators, and distribution components of electric power production equipment and aircraft arresting barriers.

**12.2.1.4.3.** Minimum 15 months on-the-job training (9 months for re-trainees) before award of 5-skill level.

**12.2.1.5. Other.** N/A

**12.2.2. Training Sources/Resources.**

**12.2.2.1.** CDC 3E052 A and B, Electrical Power Production Journeyman.

**12.2.2.2.** The STS (Part II, Section A of the CFETP) identifies all core tasks required for qualification in the individual's duty position.

**12.2.2.3.** Qualified trainers provide upgrade and qualification training for duty positions, managed programs, and/or equipment to be used.

**12.2.3. Implementation.**

**12.2.3.1.** Entry into formal Journeyman upgrade training is accomplished after individuals are assigned to their first duty station.

**12.2.3.2.** Qualification training is initiated any time individuals are assigned duties they are not certified to perform.

**12.2.3.3.** AFQTPs are used concurrently to obtain necessary duty position qualifications.

**12.3. Craftsman (7-Level) Training Requirements.**

**12.3.1. Specialty Qualification.** All 5-level qualifications apply to 7-level requirements.

**12.3.1.1. Knowledge.** All 5-level knowledge requirements apply to 7-level requirements.

**12.3.1.2. Education.**

**12.3.1.2.1.** To assume the grade of SSgt, individuals must successfully complete Airman Leadership School (active duty only).

**12.3.1.2.2.** To assume the grade of MSgt, individuals must successfully complete the NCO Academy (active duty only).

**12.3.1.2.3.** For ANG/AFRC, completion of Air Force Institute for Advanced Distributive Learning (AFIADL) courses 00001 (ALS) and 00006 D&E (NCO Academy) satisfy the requirements.

### **12.3.1.3. Training.**

**12.3.1.3.1.** Completion of 7-level Read Ahead Material (RAM) for course J3ACR3E070-000 is mandatory prior to attendance at the resident course.

**12.3.1.3.2.** Completion of in-residence CE Management Craftsman Course J3ACR3E070-000 is mandatory.

**12.3.1.3.3.** Certification of all 5- and 7-skill level core tasks identified with a single asterisk (\*) and double asterisk (\*\*) in the core column of the STS is mandatory.

**12.3.1.3.4.** Completion of all AFQTPs for assigned core and diamond (◆) tasks is mandatory.

**12.3.1.3.5.** Completion of CerTests for all diamond (◆) tasks with a minimum of 80% is mandatory.

**12.3.1.3.6.** Certification of duty position requirements identified by the supervisor is mandatory.

**12.3.1.3.7.** Completion of J3AZR3E052 013, in residence course, Civil Engineering Advanced Electronics is highly desirable.

**12.3.1.3.8.** Completion of J3AZR3E072 002, in residence course, Troubleshooting Electrical Power Generating Equipment is highly desirable.

**12.3.1.3.9.** Completion of J3AZR3E072 113, in residence course, Bare Base Power Generation is highly desirable.

**12.3.1.3.10.** Completion of J4AZT3E052 003, (MTT), Aircraft Arresting Systems, BAK-9/BAK-12 is highly desirable.

**12.3.1.3.11.** Course J4AZT3E052 007, (MTT) Hook Cable Support System, BAK-14 is highly desirable.

**12.3.1.3.12.** Course J4AZT3E052 008, (MTT), Mobile Aircraft Arresting Systems, (MAAS) is highly desirable.

### **12.3.1.4. Experience.**

**12.3.1.4.1.** Qualification in and possession of a 5-level.

**12.3.1.4.2.** Performing or supervising functions of operating and repairing of electrical power production and aircraft arresting systems.

**12.3.1.4.3.** Minimum 12 months on-the-job training (12 months for re-trainees) before award of 7- skill level.

**12.3.1.5. Other.** N/A

### **12.3.2. Training Sources/Resources.**

**12.3.2.1.** Course J3ACR3E070 000 Part A, CE Management Craftsman Course Read Ahead Material (RAM).

**12.3.2.2.** Course J3ACR3E070-000, CE Management Craftsman.

**12.3.2.3.** NCO Academy Course 00006 D&E (paper-based correspondence).

**12.3.2.4.** Course J3AZR3E052 013, in residence, Civil Engineering Advanced Electronics.

**12.3.2.5.** Course J3AZR3E072 002, in residence, Troubleshooting Electrical Power Generating Equipment.

**12.3.2.6.** Course J3AZR3E072 113, in residence, Bare Base Power Generation.

**12.3.2.7.** Course J4AZT3E052 003, (MTT), Aircraft Arresting Systems BAK-9/BAK-12.

**12.3.2.8.** Course J4AZT3E052 007, (MTT) Hook Cable Support System, BAK-14.

**12.3.2.9.** Course J4AZT3E052 008, (MTT), Mobile Aircraft Arresting Systems, (MAAS).

**12.3.2.10.** The STS (Part II, Section A of this CFETP) identifies all core tasks required for qualification in the individual's duty position.

**12.3.2.11.** Qualified trainers provide upgrade and qualification training for duty positions, managed programs, and/or equipment to be used.

### **12.3.3. Implementation.**

**12.3.3.1.** Entry into 7-level training is initiated when an individual is selected for SSgt and has fulfilled all 5-level requirements.

**12.3.3.2.** Qualification training is initiated any time an individual is assigned duties that they are not qualified to perform.

**12.3.3.3.** AFQTPs are used concurrently to obtain necessary duty position qualifications.

## **12.4. Superintendent (9-Level) Training Requirements.**

### **12.4.1. Specialty Qualification.**

**12.4.1.1. Knowledge.** Knowledge of the following is mandatory:

**12.4.1.1.1.** Air Force training programs.

**12.4.1.1.2.** CE policies, practices, and procedures of base maintenance and operations, crafts, facilities, equipment, and systems.

**12.4.1.1.3.** Interpretation and application of maintenance and work force management.

**12.4.1.1.4.** Principles of electricity and electronics, electrical circuitry and distribution; interior and exterior electrical distribution systems.

**12.4.1.1.5.** Internal combustion engines and other prime movers for electrical generating systems.

**12.4.1.1.6.** Principles of fire and intrusion alarm systems, cathodic protection systems, aircraft arresting systems, and airfield lighting systems.

**12.4.1.1.7.** Safety and environmental concerns

**12.4.1.2. Education.**

**12.4.1.2.1.** ANG/AFRC must complete AFIADL course 00005 (computer-based CD-ROM) to satisfy the Senior NCO Academy requirement.

**12.4.1.3. Training.** Completion of duty position training requirements.

**12.4.1.4. Experience.**

**12.4.1.4.1.** Qualification in and possession of 7-skill level is mandatory.

**12.4.1.4.2.** Managing functions such as inspecting, operating, maintaining, and repairing electrical distribution systems, electrical generating systems, fire and intrusion detection systems, airfield lighting systems, and aircraft arresting systems.

**12.4.1.5. Other.** N/A

**12.4.2. Training Sources/Resources.**

**12.4.2.1.** In-residence SNCO Academy located at Maxwell AFB - Gunter Annex AL.

**12.4.2.2.** SNCO Academy Course 00005 (exportable computer-based CD ROM).

**12.4.3. Implementation.**

**12.4.3.1.** Entry into 9-level training is initiated when an individual is selected for SMSgt and is a fully qualified 7-level.

**12.4.3.2.** QT is initiated any time an individual is assigned duties they are not qualified to perform.

## **12.5. Civil Engineer Manager.**

### **12.5.1. Specialty Qualification.**

**12.5.1.1. Knowledge.** Knowledge of the following is mandatory:

**12.5.1.1.1.** Managing and directing personnel resource activities.

**12.5.1.1.2.** Interpreting and enforcing policy and applicable directives.

**12.5.1.1.3.** Establishing control procedures to meet work goals and standards.

**12.5.1.1.4.** Recommending or initiating actions to improve operational efficiency.

**12.5.1.1.5.** Planning and programming work commitments and schedules.

**12.5.1.1.6.** Developing plans regarding facilities, supplies, and equipment procurement and maintenance.

**12.5.1.2. Education.** Must be a resident graduate of SNCOA (active duty only).

**12.5.1.3. Training.** N/A

**12.5.1.4. Experience.**

**12.5.1.4.1.** Possess qualifications in feeder specialty (3E090) prior to award of Civil Engineer Manager code 3E000.

**12.5.1.4.2.** Managerial ability to plan, direct, coordinate, implement, and control a wide range of work activity.

**12.5.1.5. Other.** N/A

**12.5.2. Training Sources and Resources.** N/A

**12.5.3. Implementation.** Entry into Civil Engineer Manager code 3E000 is initiated when an individual is selected for CMSgt and possesses qualifications in a feeder specialty (3E090, 3E191, 3E291, 3E391, 3E490, 3E591, and 3E691).

## SECTION D - RESOURCE CONSTRAINTS

**13. Purpose.** The following paragraphs describe the resource constraints that result from publication of this CFETP. All constraints are referenced to specific STS line items shown as back slashed on the STS.

### **13.1. Equipment Constraints:**

**13.1.1. Constraints.** None.

**13.1.2. Time/Manpower/Student Man-years Constraints:** None.

### **13.2. Apprentice (3-Level) Training.**

**13.2.1. Constraints.** None.

**13.2.2. Impact.** Required training will be available upon implementation of this CFETP.

**13.2.3. Resources Required.** None.

**13.2.4. Action Required.** Complete revision of the 3-level course to meet all training requirements and proficiency codes identified in this CFETP.

**13.2.5. OPR/Target Completion Date.** 366 TRS/TRRT will implement revised training requirements with class beginning 31 May 02.

### **13.3. Journeyman (5-Level) Training.**

**13.3.1. Constraints.** AFQTP development for all core and diamond tasks.

**13.3.2. Impact.** Required training will be available upon implementation of this CFETP.

**13.3.3. Resources Required.** None.

**13.3.4. Action Required.** HQ AFCESA/CEOF held a workshop to develop required AFQTPs. Completed: Sep 2001.

### **13.4. Craftsman (7-Level) Training.**

**13.4.1. Constraints.** AFQTP development for all core and diamond tasks.

**13.4.2. Impact.** Required training will be available upon implementation of this CFETP.

**13.4.3. Resources Required.** None.

**13.4.4. Action Required.** HQ AFCESA/CEOF held a workshop to develop required AFQTPs. Completed: Sep 2001

**13.5. Superintendent (9-Level) Training. No Constraints.**

## SECTION E - TRANSITION TRAINING GUIDE

14. "There are currently no transition training requirements. This area is reserved."

## PART II

### SECTION A - SPECIALTY TRAINING STANDARD

**1. Implementation.** This STS will be used to identify technical training provided by AETC for the 3-level Electrical Power Production Apprentice course with class beginning 20 Aug 02 and graduating 8 Nov 02. Also the 7-level Civil Engineer Management Craftsman course with class beginning 23 Jul 01 and graduating 3 Aug 01.

**2. Purpose.** As prescribed in AFI 36-2201, this STS:

**2.1.** Lists in Column 1 (*Tasks, Knowledge, and Technical Reference*) the most common tasks, knowledge, and Technical References (TRs) necessary for airmen to perform duties in the 3-, 5-, and 7-skill level.

**2.2.** Column 2 (*Core Tasks*) identifies core tasks (specialty-wide training requirements) by an asterisk (\*) for 5- and 7- skill levels or a double asterisk (\*\*) for 7-skill level only. **As a minimum, trainees must complete all core and critical tasks for skill-level upgrade.**

**2.2.1.** All tasks in the 3 level column are considered wartime tasks. In response to a wartime scenario, these tasks will be taught in the 3-level course in a streamlined training environment.

**2.2.2.** Tasks identified by a diamond (◆) in column 2 are extremely important to the career field. Equipment shortfalls at most locations however, have created problems with the actual hands-on certification of these tasks. In instances where required equipment is not available for instruction, completion of the task's AFQTP and passing the corresponding CerTest is all that is required for upgrade and qualification training.

**2.3.** Provides certification for OJT. Columns 3A, B, C, D, and E are used to record completion of tasks and knowledge training requirements. If available, use automated training management systems to document technician qualifications. Task certification of core and critical tasks requires a training completion date and initials of the trainee, trainer, and certifier. All non-core tasks require training completion date and initials of the trainee and trainer only.

**2.4.** Shows formal training and correspondence course requirements. Columns 4A, B, and C show the proficiency to be demonstrated on the job by the graduate as a result of training on the task/knowledge and the career knowledge provided by the initial skills training course, correspondence course, and read-ahead material. See CADRE/AFSC/CDC listing maintained by the unit training manager for current CDC listings.

**2.5.** Identifies qualitative requirements. Attachment 1 contains the *Proficiency Code Key* used to indicate the level of training and knowledge provided by resident training and career development courses

**2.6.** Becomes a Job Qualification Standard (JQS) for on-the-job training when placed in AF Form 623, Individual Training Record, and used according to AFI 36-2201. When used as a JQS, the following requirements apply:

**2.6.1. Documentation.** Document and certify completion of training.

**2.6.1.1.** Identify current duty position requirements by circling the subparagraph number or letter next to the task statement. **Additionally, all core and diamond (◆) tasks should be circled.** Document task completion by annotating columns 3A, 3B, 3C, and 3D. **NOTE:** All entries shall be made in pencil.

**2.6.1.2.** Enter the start date of the AFQTP on the documentation record. Once completed enter the completion date. When **hands-on** training is started and completed annotate the STS accordingly.

**2.6.1.3. Transcribing from old document to CFETP.** Use the new STS to identify and certify all current and past task qualifications.

**2.6.1.3.1.** For tasks previously certified and still required in the current duty position:

**2.6.1.3.1.1.** For core and critical tasks, the trainer and certifier evaluate the airman's current qualifications and validate airman's ability to complete the task. The certifier and trainee then enter their initials and new certified date.

**2.6.1.3.1.2.** For non-core duty position tasks, the trainer evaluates the airman's current qualifications and validates the airman's ability to complete the task. The trainer and trainee then enter their initials in columns 3D and 3C respectively and the current date is entered in column 3B.

**2.6.1.3.2.** To transcribe previous certification for tasks not required in the current duty position, carry forward only the previous completion dates (not the initials of another person). If and when these tasks become a duty position requirement, re-certify with current date and certifier, trainer, and trainee's initials.

**2.6.1.4. Documenting Career Knowledge.** When a CDC is not available, the supervisor identifies STS training references that the trainee requires for career knowledge and ensures, as a minimum, that trainees cover all mandatory items specified in AFMAN 36-2108, Enlisted Classification. For two-time CDC exam failures, supervisors identify all STS items corresponding to the areas covered by the CDC. The trainee completes a study of STS references, undergoes evaluation by the task certifier, and receives certification on the STS. **NOTE:** Career knowledge must be documented prior to submitting a CDC waiver.

**2.6.1.5. De-Certification and Re-Certification.** When an airman is found to be unqualified on a task, the supervisor shall erase previous certification and enter airman into qualification training. Appropriate remarks are entered on the AF Form 623a, On-The-Job Training Record Continuation Sheet, as to the reason for de-certification. The individual is re-certified using the normal certification process.

**2.6.2. Training Standard.** Tasks are trained and certified to the “go” level. “Go” means the individual can perform the task without assistance and meets the local requirements for accuracy, timeliness, and correct use of procedures. This equates to a “3c” in the proficiency code key. AFQTPs, when available, shall be used to identify Air Force standardized procedures. Local requirements for accuracy, timeliness, and use of procedures shall be applied accordingly.

**2.7. The STS** is used as a guide for development of promotion tests in the Weighted Airman Promotion System (WAPS). Senior NCOs with extensive practical experience in their career fields develop Specialty Knowledge Tests (SKTs) at the USAF Occupational Measurement Squadron. The tests sample knowledge of STS subject matter areas judged by test development team members as most appropriate for promotion to higher grades. Questions are based upon study references listed in the WAPS catalog. Individual responsibilities are in Chapter 14 of AFI 36-2606, United States Air Force Reenlistment, Retention, and NCO Status Programs. WAPS is not applicable to the Air National Guard or Air Reserve Forces.

**3. Recommendations.** Comments and recommendations are invited concerning quality of training AETC graduates receive. Reference this STS regarding changes and address your correspondence to 782 TRG/TTS, 620 9th Avenue, Suite 3, Sheppard AFB TX 76311-2368. A 782d customer service information line (CSIL) has been installed for the supervisor’s convenience to identify graduates who may have received over or under training on tasks/knowledge items listed in this STS. For a quick response to problems, call the CSIL at DSN 736-2574 any time (day or night).

BY ORDER OF THE SECRETARY OF THE AIR FORCE

OFFICIAL

EARNEST O. ROBBINS II, Maj Gen, USAF  
The Civil Engineer  
DCS/Installations and Logistics

4 Attachments

1. Qualitative Requirements
2. 3-, 5-, and 7-level career field training requirements
3. General Contingency Requirements
4. AFQTP Documentation Record

*THIS BLOCK IS FOR IDENTIFICATION PURPOSES ONLY*

**NAME OF TRAINEE**

PRINTED NAME *(Last, First, Middle Initial)*

INITIALS *(Written)*

SSN

**PRINTED NAME OF CERTIFYING OFFICIAL AND WRITTEN INITIALS**

N/I	N/I

**QUALITATIVE REQUIREMENTS**

**PROFICIENCY CODE KEY**

	SCALE VALUE	DEFINITION: The individual
<b>TASK PERFORMANCE LEVELS</b>	1	Can do simple parts of the task. Needs to be told or shown how to do most of the task. (EXTREMELY LIMITED)
	2	Can do most parts of the task. Needs help only on hardest parts. (PARTIALLY PROFICIENT)
	3	Can do all parts of the task. Needs only a spot check of completed work. (COMPETENT)
	4	Can do the complete task quickly and accurately. Can tell or show others how to do the task. (HIGHLY PROFICIENT)
<b>*TASK KNOWLEDGE LEVELS</b>	a	Can name parts, tools, and simple facts about the task. (NOMENCLATURE)
	b	Can determine step by step procedures for doing the task. (PROCEDURES)
	c	Can identify why and when the task must be done and why each step is needed. (OPERATING PRINCIPLES)
	d	Can predict, isolate, and resolve problems about the task. (ADVANCED THEORY)
<b>**SUBJECT KNOWLEDGE LEVELS</b>	A	Can identify basic facts and terms about the subject. (FACTS)
	B	Can identify relationship of basic facts and state general principles about the subject. (PRINCIPLES)
	C	Can analyze facts and principles and draw conclusions about the subject. (ANALYSIS)
	D	Can evaluate conditions and make proper decisions about the subject. (EVALUATION)

**EXPLANATIONS**

- \* A task knowledge scale value may be used alone or with a task performance scale value to define a level of knowledge for a specific task. (Examples: b and 1b)
- \*\* A subject knowledge scale value is used alone to define a level of knowledge for a subject not directly related to any specific task, or for a subject common to several tasks.
- This mark is used alone instead of a scale value to show that no proficiency training is provided in the course or CDC.
- X This mark is used alone in course columns to show that training is required but not given due to limitations in resources.

This block is for identification purposes only.

**Name of Trainee**

<b>Printed Name(Last, First, Middle)</b>	<b>Initials (Written)</b>	<b>SSAN</b>
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**Printed Names and Written Initials of Training and Certifying Officials**

N/I	N/I	

Continuation Sheet

**Note 1:** Underlined training references are commercial publications or other publications essential for enlisted specialty training and mission accomplishment.  
**Note 2:** Task knowledge gained at Basic Military Training (BMT) will not be repeated during resident training.  
**Note 3:** Prior to attending Civil Engineer Management Craftsman resident course, all personnel must successfully complete the 7-level Read-ahead Material (RAM) for J3ACR3E070 000. Personnel must present RAM test results upon arrival.  
**Note 4:** AQTPs are provided through multiple delivery systems (paper-based, CD-ROM, or video). Completion is required for upgrade or qualification. Access AFCESA's homepage (www.afcesa.af.mil) for the most current AFQTPs.  
**Note 5:** Annotate AQTP completion on the AFQTP Documentation Record (available on the AFCESA homepage) and maintain the completed documentation form in the trainee's records.  
**Note 6:** In addition to completing the AFQTP Documentation Record, for ease of reference, you may place an "X" in column "4B(2)-QTP" to denote QTP completion.

1.  <b>Task Knowledge And Technical References</b>	2.  Core Tasks	3.  Certification for OJT					4. Proficiency Codes Used To Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) QTP	(1) RAM	(2) Course
<b>1. CE ORGANIZATION AND CAREER FIELD STRUCTURE</b> TR: AFDD 2-4.2; AFIs 10-209, 10-210, 10-211, 32-1022, 32-1031, 36-2101, 38-101, 51-903; AFMAN 36-2108; AFPAMS 32-1004v1-6: 32-1005												
1.1. Base Civil Engineer (BCE) structure						A		B				
1.2. Progression in career ladder						A		B				
1.3. Duties and responsibilities												
1.3.1. Peacetime						A						
1.3.2. Contingency						A						
1.4. Functions of:												
1.4.1. BCE						A		B		B		
1.4.2. Prime BEEF						A		B		B		
1.4.3. RED HORSE						A		B		B		
1.4.4. HQ ANG/AFRC						A		B		B		
1.5. Resources												
1.5.1. Assess manpower requirements										b	3c	
1.5.2. Identify budget requirements										b	3c	
1.5.3. Determine equipment requirements										b	3c	
1.5.4. Use Allowance Standards (AS)										b	3c	
1.5.5. Research, Development, and Acquisition (RD&A) TR: DoDD 5000.1												
1.5.5.1. Process											B	
1.5.5.2. Unit responsibilities											B	
1.5.5.3. Major command responsibilities											B	
1.5.6. Assess vehicle requirements										b	1b	
1.5.7. Requesting contract services										b	2c	

1.  <b>Task Knowledge And Technical References</b>	2.  Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) QTP	(1) RAM	(2) Course
1.5.8. Requesting Simplified Acquisition of Base Engineering Requirements (SABER) contract											B	C
<b>2. SPECIFIC OPSEC VULNERABILITIES</b> TR: AFI 10-1101							A					
<b>3. PRACTICE COMPUTER SECURITY</b> TR: AFSSI 5102							A				A	1b
<b>4. SUPERVISION</b> TR: AFMAN 36-2108; AFIs 36-2201, DoDD 5500-7												
4.1. Orient new personnel											b	
4.2. Assign personnel to work crew											b	
4.3. Coordinate work assignments											b	
4.4. Schedule work assignments and priorities											b	
4.5. Establish:												
4.5.1. Work methods											b	
4.5.2. Controls											b	
4.5.3. Performance standards											b	
4.6. Evaluate work performance of subordinate personnel											b	
4.7. Resolve technical problems for subordinate personnel											b	
4.8. Direct projects											b	2b
<b>5. TRAINING</b> TR: AFIs 36-2101, 36-2201, AFMAN 36-2108; AFPAM 36-2247												
5.1. Evaluate personnel to determine need for training									b		b	3c
5.2. Enlisted specialty training supervision												
5.2.1. Prepare job qualification standards											b	3c
5.2.2. Conduct training											b	3c
5.2.3. Counsel trainees on their progress											b	3c
5.2.4. Monitor training effectiveness												
5.2.4.1. Career knowledge									a		b	3c
5.2.4.2. Job proficiency upgrade									a		b	3c
5.2.4.3. Qualification									a		b	3c
5.3. Maintain training records									a		b	3c
5.4. Evaluate training programs effectiveness											b	3c
5.5. Recommend people for training											a	b

1.  <b>Task Knowledge And Technical References</b>	2.  Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) QTP	(1) RAM	(2) Course
5.6. AETC training management system (Training Allocation)								A		A	B	
5.7. Managing Certification and Testing (CerTest)						A		B			B	
5.8. National/DoD Certification requirements								A		A	B	
5.9. AFQTP Requirements										B		
<b>6. ENVIRONMENTAL AWARENESS AND COMPLIANCE</b> TR: AFIs 32-4002, 32-7045, 32-7061; <b>Chemicals in Your Community (EPA 550-K-93-003): EO 12856</b>												
6.1. Environmental Compliance Assessment Management Program (ECAMP)						A		B		B		
6.2. National Environmental Policy Act (NEPA)						A		B		B		
6.3. Environmental Impact Analysis Process (EIAP)						A		B		B		
6.4. Emergency Planning and Community Right to Know Act (EPCRA)						A		B		B		
<b>7. CE MANAGEMENT</b> TR: AFI 32-1001, 32-1022; AFPAMS 32-1004 V1-6, 32-1005; 32-1098; <b>AFMAN 23-110</b>												
7.1. Customer relationships						A		B		B		
7.2. Work identification and authorization								A		B		
7.3. Plan work requirements								a		b	2b	
<b>7.4. Plan logistics support</b>												
7.4.1. CEMAS & BOM								a		b	2b	
7.4.2. IMPAC Program										A	B	
7.5. Maintain recurring work program								a		b	2b	
7.6. Scheduling/time accounting								a		b	2b	
7.7. Warranty and Guarantee Program								A		B		
7.8. Property Accountability								B			B	
7.9. Base Comprehensive Plan										A		
7.10. Legal limits								A				
7.11. Mark "As Built " Drawings										b	2b	
7.12. Reimbursements procedures								A		B		
<b>7.13. CE Specific Automated Systems (Computer) Capability</b>												
7.13.1. Perform inputs								a		b	1a	
7.13.2. Maintain files								a		b	1a	
7.13.3. Develop automated reports								a		b	1a	
7.13.4. Extract automated reports								a		b	1a	

1.  <b>Task Knowledge And Technical References</b>	2.  Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) QTP	(1) RAM	(2) Course
7.13.5. Perform automated data analysis									a		b	1a
7.14. Host Tenant and Interservice Agreements											A	
7.15. Civil Engineer Civilian Management											B	C
<b>8. COMMUNICATIONS</b>												
<b>TR: AFI 33-106; AFJMAN 24-306</b>												
8.1. Use radios							b					
8.2. Use hand signals							b					
8.3. Identify airdrome signals							b					
<b>9. AF OCCUPATIONAL SAFETY AND HEALTH (AFOSH) PROGRAM</b>												
<b>TR: AFPDs 91-2, 91-3; AFI 91-302;</b>												
9.1. Supervisory responsibilities									B			
9.2. Hazardous materials waste handling TR: AFI 32-7042; AFPAM 32-7043; ALM-44- 0465-WB(E) A							A		B			
9.3. Lead-based paint (LBP) hazard TR: <u>29-CFR 1926.62; Working With Lead- based Paint: Facts and Information Applicable to Air Force Facilities</u>							B					
9.4. Fire extinguisher training							A					
<b>10. PUBLICATIONS</b>												
<b>TR: AFI 33-360; AFPAMs 32-1004 v1-6; 32- 1005</b>												
10.1. Military							A		B			
10.2. Commerical							A		B			
10.3. Engineering Technical Letters (ETL)							A		B			
<b>11. AFSC SPECIFIC SAFETY STANDARDS</b>												
<b>TR: AFPDs 91-2, 91-3; AFIs 91-302, 32-1064</b>												
11.1. AFOSH standards for AFS							A		B			
11.2. Remove victim from energized circuit							b		c			
11.3. Apply first aid procedures for shock							b		c			
11.4. Cardiopulmonary resuscitation (CPR)							3c					
11.5. Manual lifting awareness							A		B			
11.6 Initial Federal Hazard Communicatin Program (FHCTP) Ref: DOD 6050.5-G-1; OSHA 29; CFR 1910.1200; AFI 91.302							B					
<b>12. AFSC SPECIFIC PUBLICATIONS</b>												
<b>TR: TOs 0-1-01, 0-1-02, 00-2-1 00-5-1, 00-5-2, 00-20-7</b>												

1.  <b>Task Knowledge And Technical References</b>	2.  Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) QTP	(1) RAM	(2) Course
12.1. Technical Order system							A		B			
12.2. Use technical orders	*						2b		c			
12.3. Technical order improvement reporting							A		B			
<b>13. ELECTRICAL POWER PRODUCTION TOOLS AND TEST EQUIPMENT TR: AFIs 32-1031; 32-1044; TOs 32, 33, 34, 35 Series</b>												
13.1. Use general mechanics hand tools							2b					
13.2. Special engine overhaul tools									B			
13.3. Use precision measurement equipment:												
13.3.1. Torque handle							1a		b			
13.3.2. Micrometer									b			
13.3.3. Depth gauge									b			
13.4. Use engine performance test devices:												
13.4.1. Hand-held tachometer									b			
13.4.2. Compression tester									b			
13.4.3. Injector tester									b			
13.4.4. Vacuum tester									b			
13.5. Use electrical test equipment:												
13.5.1. Multimeter	*						2b		c			
13.5.2. Vibroground							1b		c			
13.5.3. Clamp-on ammeter							1b		c			
13.5.4. Megohmmeter							b		c			
13.5.5. Battery load tester							b		c			
13.5.6. Phase sequence indicator							2b		c			
<b>14. GENERAL POWER PRODUCTION TASKS TR: AFI 32-1062; TOs 32, 33, 34, 35 series; applicable manufacturer's manuals</b>												
14.1. Perform corrosion control							b		c			
14.2. Engine pre-heating devices												
14.2.1. Coolant heater												
14.2.1.1. External							A		B			
14.2.1.2. Internal							A		B			
14.2.2. Lube oil heater							A		B			
14.2.3. Glowplugs							A		B			
14.3. Engine starting aids							A		B			
14.4. Load Banks												
14.4.1. Components and theory of operation							A		B			
14.4.2. Connect cables							1b		c			

1.  <b>Task Knowledge And Technical References</b>	2.  Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) QTP	(1) RAM	(2) Course
14.4.3. Configure for proper voltage							b		c			
14.4.4. Troubleshoot									b			
14.4.5. Inspect							b		c			
14.4.6. Replace components									b			
14.4.7. Operate							1b		c			
<b>14.5. Battery Chargers</b>												
14.5.1. Components and theory of operation							A		B			
14.5.2. Troubleshoot	*								b			
14.5.3. Inspect							1b		c			
14.5.4. Replace components									b			
14.5.5. Adjust							1b		c			
<b>15. ELECTRICAL FUNDAMENTALS TR: TO 31-1-141 Series; Applicable manufacturer's manuals</b>												
15.1. Basic electrical concepts and terms							B		C			
15.2. Principles of DC Circuits							B		C			
15.3. Fundamentals of alternating current							B		C			
15.4. Principles of AC Circuits							B		C			
15.5. Electrical components and symbols							A		B			
<b>15.6. Test electrical components:</b>												
15.6.1. Inductors							b		c			
15.6.2. Capacitors							b		c			
15.6.3. Resistors							b		c			
15.7. Electronic components and symbols							A		B			
<b>15.8. Principles of operation of:</b>												
15.8.1. Diodes							A		B			
15.8.2. Zener diodes							A		B			
15.8.3. SCRs							A		B			
<b>15.9. Test:</b>												
15.9.1. Diodes	*						b		c			
15.9.2. Zener diodes							b		c			
15.9.3. SCRs							b		c			
15.10. Interpret wiring diagrams	*						2b		c			
15.11. Troubleshoot electrical circuits	**						2b		c			
<b>16. GENERATOR SET GROUNDING FUNDAMENTALS TR: AFI 32-1065</b>												
<b>16.1. Grounding principles</b>												
16.1.1. Static							B		C			
16.1.2. Equipment							B		C			

1.  <b>Task Knowledge And Technical References</b>	2.  Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) QTP	(1) RAM	(2) Course
16.2. Install equipment grounds	*						b		c			
16.3. Test grounds using Vibroground							1b		c			
16.4. Troubleshoot grounds							b		c			
<b>17. ENGINE MAINTENANCE FUNDAMENTALS</b>												
<b>TR: AFJMAN 32-1080; TOs 35, 38 Series</b>												
17.1. Gasoline engines												
17.1.1. Components and theory of operation							A		B			
17.1.2. Troubleshoot engine malfunctions	**								b			
17.1.3. Perform gasoline engine tune-up	*						1b		c			
17.2. Diesel engines												
17.2.1. Components and theory of operation:												
17.2.1.1 Two cycle							A		B			
17.2.1.2. Four cycle							B		C			
17.2.2. Troubleshoot diesel engine internal malfunctions									b			
17.2.3. Inspect:												
17.2.3.1. Camshaft									b			
17.2.3.2. Vibration damper									b			
17.2.3.3. Timing gears									b			
17.2.3.4. Cylinder head									b			
17.2.3.5. Intake and exhaust valves									b			
17.2.3.6. Engine block									b			
17.2.4. Replace:												
17.2.4.1. Camshaft									b			
17.2.4.2. Vibration damper									b			
17.2.4.3. Timing gears									b			
17.2.4.4. Intake and exhaust valves									b			
17.2.4.5. Valve spring assemblies									b			
17.2.4.6. Cylinder head									b			
17.2.4.7. Engine seals/gaskets									b			
17.2.5. Adjust:												
17.2.5.1. Intake and exhaust valves									b			
17.2.5.2. Camshaft timing									b			
<b>18. ENGINE DC ELECTRICAL SYSTEM</b>												
<b>TR: AFJMAN 32-1080; TO 35 Series</b>												
18.1. Components and theory of operation							A		B			
18.2. Troubleshoot	**								c			
18.3. Inspect:												

1.  <b>Task Knowledge And Technical References</b>	2.  Core Tasks	3.  Certification for OJT					4. Proficiency Codes Used To Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) QTP	(1) RAM	(2) Course
18.3.1. Battery charging alternator							b		c			
18.3.2. Starter motor							b		c			
18.3.3. Starter solenoid							b		c			
18.4. Replace:												
18.4.1. Battery charging alternator	*						b		c			
18.4.2. Starter motor	*						1b		c			
18.4.3. Starter solenoid							b		c			
18.5. Batteries												
18.5.1. Types							A		B			
18.5.2. Service							1b		c			
18.5.3. Replace	*						1b		c			
<b>19. ENGINE LUBRICATION SYSTEM TR: AFJMAN 32-1080; TOs 32, 33, 34, 35 Series</b>												
19.1. Components and theory of operation							A		B			
19.2. Troubleshoot	**								c			
19.3. Inspect							b		c			
19.4. Replace components:												
19.4.1. Oil pump									b			
19.4.2. Oil cooler									b			
19.4.3. Filter body									b			
19.4.4. Sending units									b			
19.4.5. Protective devices									b			
19.5. Service engine lubrication system	*						1b		c			
19.6. Test lube oil							1b		c			
<b>20. FUEL SYSTEMS TR: AFJMAN 32-1046, 32-1080; TOs 32, 33, 34, 35 Series</b>												
20.1. Gasoline												
20.1.1. Components and theory of operation							B		C			
20.1.2. Troubleshoot									c			
20.1.3. Inspect gasoline fuel system components:												
20.1.3.1. Fuel pump							b		c			
20.1.3.2. Filters/strainers							b		c			
20.1.3.3. Carburetors							b		c			
20.1.4. Replace components:												
20.1.4.1. Fuel pump									b			
20.1.4.2. Filters/strainers	*								b			
20.1.4.3. Carburetors									b			

1.  <b>Task Knowledge And Technical References</b>	2.  Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) QTP	(1) RAM	(2) Course
20.1.5. Adjust carburetor	*						1b		c			
20.1.6. Test fuel for water content									b			
<b>20.2. Diesel</b>												
20.2.1. Types, components and theory of operation							B		C			
20.2.2. Troubleshoot	**								c			
<b>20.2.3. Inspect:</b>												
20.2.3.1. Fuel transfer pumps							b		c			
20.2.3.2. Fuel injection pumps							b		c			
20.2.3.3. Strainers							b		c			
<b>20.2.4. Replace components:</b>												
20.2.4.1. Fuel transfer pumps									b			
20.2.4.2. Fuel injection pumps									b			
20.2.4.3. Filters/strainers	*						1b		c			
20.2.4.4. Injectors									b			
20.2.4.5. Sending units									b			
20.2.4.6. Protective devices									b			
<b>20.2.5. Test components:</b>												
20.2.5.1. Fuel injection pumps									b			
20.2.5.2. Injectors									b			
20.2.6. Calibrate injectors									b			
20.2.7. Time fuel injection pumps									b			
20.2.8. Test fuel for water content							1b		c			
<b>21. ENGINE COOLING SYSTEM</b>												
<b>TR: AFI 32-1062; TO 35 Series</b>												
21.1. Components and theory of operation							A		B			
21.2. Troubleshoot	**								c			
<b>21.3. Inspect components:</b>												
21.3.1. Water pump							b		c			
21.3.2. Radiator							b		c			
21.3.3. Hoses							b		c			
21.3.4. Drive belts							b		c			
<b>21.4. Replace components:</b>												
21.4.1. Water pump									b			
21.4.2. Thermostat							b		c			
21.4.3. Radiator									b			
21.4.4. Hoses									b			
21.4.5. Drive belts	*								b			
<b>21.4.6. Heater</b>												
21.4.6.1. External									b			
21.4.6.2. Internal									b			

1.  <b>Task Knowledge And Technical References</b>	2.  Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) QTP	(1) RAM	(2) Course
21.4.7. Sending units								b				
21.4.8. Protective devices								b				
21.4.9. Filters						b		c				
21.5. Service	*					1b		c				
21.6. Flush						b		c				
21.7. Test antifreeze						1b		c				
<b>22. ENGINE GOVERNOR SYSTEMS</b>												
<b>TR: AFI 32-1062; TO 35 Series</b>												
22.1. Hydraulic governors												
22.1.1. Components and theory of operation						A		B				
22.1.2. Troubleshoot								b				
22.1.3. Inspect						b		c				
22.1.4. Replace								b				
22.1.5. Test overspeed trip device								b				
22.1.6. Adjust:												
22.1.6.1. Linkage								b				
22.1.6.2. Controls								b				
22.1.6.3. Overspeed trip device								b				
22.1.7. Perform compensation adjustments								b				
22.2. Electronic Governors												
22.2.1. Components and theory of operation						B		C				
22.2.2. Troubleshoot	**							b				
22.2.3. Inspect:												
22.2.3.1. Control module						b		c				
22.2.3.2. Actuator						b		c				
22.2.3.3. Magnetic pickup						b		c				
22.2.4. Replace:												
22.2.4.1. Control module						b		c				
22.2.4.2. Actuator						b		c				
22.2.4.3. Magnetic pickup						b		c				
22.2.5. Test overspeed trip device								b				
22.2.6. Adjust:												
22.2.6.1. Droop	**					1b		c				
22.2.6.2. Gain	**					b		c				
22.2.6.3. Idle	**					b		c				
22.2.6.4. Run	**					b		c				
<b>23. INTAKE AND EXHAUST SYSTEMS</b>												
<b>TR: AFI 32-1062; TO Series; applicable manufacturer's manuals</b>												

1.  <b>Task Knowledge And Technical References</b>	2.  Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) QTP	(1) RAM	(2) Course
23.1. Components and theory of operation							A		B			
23.2. Troubleshoot	**								b			
23.3. Inspect components:												
23.3.1. Air cleaner/filter							b		c			
23.3.2. Turbocharger							b		c			
23.3.3. Intercooler							b		c			
23.3.4. Intake manifold							b		c			
23.3.5. Exhaust manifold							b		c			
23.3.6. Expansion joint							b		c			
23.3.7. Muffler							b		c			
23.4. Replace components:												
23.4.1. Air cleaner/filter							1b		c			
23.4.2. Turbocharger									b			
23.4.3. Intercooler									b			
23.4.5. Intake manifold									b			
23.4.6. Exhaust manifold									b			
23.4.7. Expansion joint									b			
23.4.4. Muffler									b			
23.5. Service							b		c			
<b>24. AC GENERATING SYSTEM</b> <b>TR: AFJMAN 32-1082; AFI 32-1062; TO 35</b> <b>Series; applicable manufacturer's manuals</b>												
24.1. Alternator												
24.1.1. Components and theory of operation							A		B			
24.1.2. Troubleshoot	**								b			
24.1.3. Inspect:												
24.1.3.1. Rectifier assembly							b		c			
24.1.3.2. Surge suppressor							b		c			
24.1.3.3. Windings							b		c			
24.1.4. Replace:												
24.1.4.1. Rectifier assembly									b			
24.1.4.2. Surge suppressor									b			
24.1.4.3. Alternator assembly									b			
24.2. Controls												
24.2.1. Components and theory of operation							A		B			
24.2.2. Troubleshoot	**								b			
24.2.3. Inspect:												
24.2.3.1. Voltage regulator												
24.2.3.1.1. Self exciting							b		c			
24.2.3.1.2. Permanent magnet							b		c			
24.2.3.2. Exciter									b			

1.  <b>Task Knowledge And Technical References</b>	2.  Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) QTP	(1) RAM	(2) Course
24.2.3.3. Transformers								b				
24.2.3.4. Control panel components						b		c				
24.2.4. Replace:												
24.2.4.1. Voltage regulator								b				
24.2.4.2. Exciter								b				
24.2.4.3. Transformers								b				
24.2.4.4. Control panel components						b		c				
24.3. Protective devices												
24.3.1. Components and theory of operation						A		B				
24.3.2. Troubleshoot	**							b				
24.3.3. Inspect:												
24.3.3.1. Circuit breakers								b				
24.3.3.2. Relays								b				
24.3.4. Replace:												
24.3.4.1. Circuit breakers								b				
24.3.4.2. Relays								b				
24.3.4.3. Fuses	*					1b		c				
24.3.5. Test fuses						1b		c				
<b>25. FIXED EMERGENCY STANDBY GENERATOR SET OPERATION</b> <b>TR: Applicable manufacturer's manuals</b>												
25.1. Perform:												
25.1.1. Pre-operational inspection	*					2b		c				
25.1.2. During operation inspection	*					2b		c				
25.1.3. Post-operational inspection	*					2b		c				
25.1.4. Single unit operation	*					2b		c				
25.1.5. Periodic inspections:												
25.1.5.1. Weekly								b				
25.1.5.2. Monthly								b				
25.1.5.3. Semi-annual								b				
25.1.5.4. Annual								b				
25.1.6. Emergency shutdown procedures						b		c				
25.2. Annotate generator set maintenance/operating record						b		c				
<b>26. AUTOMATIC TRANSFER SWITCHES</b> <b>TR: TO 35CA6 Series; applicable manufacturer's manuals</b>												
26.1. Components and theory of operation						A		B				
26.2. Troubleshoot								b				
26.3. Determine compatibility between transfer switch, generator, and electrical service	**					B		C				

1.  <b>Task Knowledge And Technical References</b>	2.  Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) QTP	(1) RAM	(2) Course
26.4. Install								b				
26.5. Inspect						b		c				
26.6. Replace components								b				
26.7. Test						1b		c				
26.8. Adjust								b				
<b>27. AIRCRAFT ARRESTING BARRIERS</b>												
<b>TR: TO 35E8-2 Series; AFI 32-1043</b>												
27.1. MA-1A Barrier; Components, theory of operation, and configuration							A		B			
27.2. BAK-9 Aircraft Arresting Gear; Components, theory of operation, and configuration							A		B			
<b>27.3. BAK-12 Aircraft Arresting System</b>												
27.3.1. Components, theory of operation and configuration							B		C			
<b>27.3.2. Troubleshoot:</b>												
27.3.2.1. Brake assembly									b			
27.3.2.2. Rewind system									b			
27.3.2.3. Hydraulic system									b			
<b>27.3.3. Perform periodic inspection and preventive maintenance</b>												
27.3.3.1. Daily							1b		c			
27.3.3.2. Weekly							1b		c			
27.3.3.3. Monthly							1b		c			
27.3.3.4. Quarterly							b		c			
27.3.3.5. Semi-annual							b		c			
27.3.3.6. After-arrestment							1b		c			
<b>27.3.4. Replace components of:</b>												
27.3.4.1. Brake assembly									b			
27.3.4.2. Rewind system									b			
27.3.4.3. Hydraulic system									b			
27.4. BAK-13 Aircraft Arrestment System; Components, theory of operation and configuration							A		B			
27.5. BAK-14 Support System; Components, theory of operation and configuration							A		B			
27.6. BAK-15 Aircraft Arresting System; Components, theory of operation and configuration							A		B			
27.7. E-5 Aircraft Arresting System; Components, theory of operation and configuration							A		B			

1.  <b>Task Knowledge And Technical References</b>	2.  Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) QTP	(1) RAM	(2) Course
27.8. Textile Brake Aircraft Arresting System; Components, theory of operation and configuration							A		B			
<b>28. AFSC SPECIFIC CONTINGENCY RESPONSIBILITIES</b> TR: AFIs 10-210, 10-211, 32-1026; TOs 35E-56-1, 35E4-132-1, 35E4-94-1; Army TMs 10-8340-207-14, 10-450-200-12; WMP-1, Annex S, (Mar 95); AFPAM 10-219, Vol 2, 3, 4, & 5												
28.1. Mobile Generators												
28.1.1. 200 KW or less												
28.1.1.1. Set up generator for connection to load												
28.1.1.1.1. Position generator							b		c			
28.1.1.1.2. Install ground	*						b		c			
28.1.1.1.3. Connect generator to ground							1b		c			
28.1.1.1.4. Configure for proper voltage	*						1b		c			
28.1.1.1.5. Cables												
28.1.1.1.5.1. Selection							B		C			
28.1.1.1.5.2. Phase Identification							B		C			
28.1.1.1.5.3. Connect	*						1b		c			
28.1.1.1.6. Check phase rotation	*						1b		c			
28.1.1.2. Perform:												
28.1.1.2.1. Pre-operational inspection	*						2b		c			
28.1.1.2.2. During operation inspection	*						2b		c			
28.1.1.2.3. Post-operational inspection	*						2b		c			
28.1.1.2.4. Scheduled inspections									c			
28.1.1.2.5. Single unit operation	*						2b		c			
28.1.1.2.6. Parallel unit operation	*						1b		c			
28.1.1.2.7. Emergency (battle override) operation							B		C			
28.1.1.3. Test generator set using load bank							1b		c			
28.1.1.4. Disconnect and remove generator from load							1b		c			
28.1.1.5. Determine fuel requirement for extended generator operation							1b		c			
28.1.1.6. Calculate:												
28.1.1.6.1. kW load							1b		c			
28.1.1.6.2. Amperage load							1b		c			
28.1.2. MEP-012 generators												
28.1.2.1. High voltage safety							B		C			
28.1.2.2. Installation:												
28.1.2.2.1. Site selection							B		C			

1.  <b>Task Knowledge And Technical References</b>	2.  Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) QTP	(1) RAM	(2) Course
28.1.2.2.2. Position	◆						b		c			
28.1.2.2.3. Ground	◆						b		c			
28.1.2.3. Set up fuel storage area							b		c			
28.1.2.4. Connect fuel supply							1b		c			
28.1.2.5. Connect deenergized load cables							B		C			
28.1.2.6. Operate:												
28.1.2.6.1. Conduct prestart procedures	◆						2b		c			
28.1.2.6.2. Conduct starting procedures	◆						2b		c			
28.1.2.6.3. Perform single unit operation	◆						2b		c			
28.1.2.6.4. Perform parallel unit operation	◆						2b		c			
28.1.2.6.5. Perform remote operation	◆						2b		c			
28.1.2.6.6. Conduct shutdown procedures							2b		c			
28.1.2.7. Perform scheduled inspections	◆								b			
28.1.2.8. Troubleshoot:												
28.1.2.8.1. Engine systems	◆								b			
28.1.2.8.2. Electrical systems												
28.1.2.8.2.1. High voltage	◆								b			
28.1.2.8.2.2. Low voltage	◆								b			
28.1.3. Equipment operation in extreme conditions												
28.1.3.1. Heat							A		B			
28.1.3.2. Cold							A		B			
28.1.3.3. Dust							A		B			
28.1.3.4. Sand							A		B			
28.1.3.5. Effects of hard water							A		B			
28.1.3.6. Emergency (battle override) operation							A		B			
28.1.4. Emergency evacuation procedures (demolition)							A		B			
28.2. Mobile Aircraft Arresting System (MAAS) TR: TOs 35E8-2-10-3; 35E8-2-5-4; 35E8-2-10-1S-1; 35E8-2-11-1; 35E8-2-11-2; AFPAM 10-219, Vol 3, 4, & 5; AFI 13-217												
28.2.1. Components, theory of operation and configuration							B		C			
28.2.2. Perform unidirectional installation												
28.2.2.1. Site selection							A		B			
28.2.2.2. Position trailers	◆						1b		c			
28.2.2.3. Concrete							2b					
28.2.2.3.1. Install anchor plates	◆								c			
28.2.2.3.2. Install turnbuckles	◆								c			

1.  <b>Task Knowledge And Technical References</b>	2.  Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) QTP	(1) RAM	(2) Course
28.2.2.4. Soil							2b					
28.2.2.4.1. Install												
28.2.2.4.1.1. Trailer stakes	◆								c			
28.2.2.4.1.2. Turnbuckles	◆								c			
28.2.2.4.1.3. KM stakelines	◆								c			
28.2.2.4.2. Attach KM stakeline to turnbuckle	◆								c			
28.2.2.5. Asphalt over soil - Remove required asphalt for KM stakelines							b		c			
28.2.2.6. Install moil points for asphalt exceeding one inch thickness over concrete							b		c			
28.2.3. Perform bidirectional installation												
28.2.3.1. Soil							b		c			
28.2.3.2. Concrete							b		c			
28.2.4. Lightweight fairlead beam												
28.2.4.1. Installation												
28.2.4.1.1. Site selection							B		C			
28.2.4.1.2. Position	◆						b		c			
28.2.4.1.3. Reave tape through fairlead beam							b		c			
28.2.4.1.4. Install outboard anchoring system	◆						b		c			
28.2.4.1.5. Perform final alignment	◆								b			
28.2.4.2. Perform periodic inspection:												
28.2.4.2.1. Daily							b		c			
28.2.4.2.2. Monthly							b		c			
28.2.4.3. Troubleshoot									b			
28.2.5. Attach hook cable	◆						2b		c			
28.2.6. Tension hook cable	◆						2b		c			
28.2.7. Proofload installation	◆						b		c			
28.2.8. Reconstitute MAAS							1b		c			
28.2.9. Perform MAAS periodic inspection and preventive maintenance:												
28.2.9.1. Daily	◆						1b		c			
28.2.9.2. Weekly	◆						1b		c			
28.2.9.3. Monthly	◆						1b		c			
28.2.9.4. Quarterly	◆						b		c			
28.2.9.5. Semi-annual	◆						b		c			
28.2.9.6. After-arrestment	◆						1b		c			
28.2.10. Troubleshoot MAAS:												
28.2.10.1. Brake assembly	◆								b			
28.2.10.2. Rewind assembly	◆								b			
28.2.10.3. Hydraulic system	◆								b			

1.  <b>Task Knowledge And Technical References</b>	2.  Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) QTP	(1) RAM	(2) Course
28.2.10.4. Trailer hydraulic system	◆								b			
28.2.11. Replace components of MAAS:												
28.2.11.1. Brake assembly									b			
28.2.11.2. Rewind assembly									b			
28.2.11.3. Hydraulic system									b			
28.2.11.4. Trailer hydraulic system									b			
28.2.12. Determine tape replacement using Regime Chart							1b		c			
28.3. Emergency Airfield Lighting System (EALS) TR: AFPAM 10-291, Vol 3, 4, & 5							A		B			
28.4. Expedient beddown methods TR: AFPAM 10-219, Vol 2 & 5												
28.4.1 Harvest Eagle (HE) assets												
28.4.1.1. Tent lighting installation TR: AFPAM 10-219, Vol 2							A		B			
28.4.1.2. Electrical distribution system installation TR: TOs 00-105K-2, 40W4-9-1C, 40W4-13-1, 50D-1-3-1, 35E4-169-1; AFPAM 10-219, Vol 2, 3, 4 & 5							A		B			
28.4.2. Harvest Falcon (HF) assets TR: AFI 25-101, AFPAM 10-219, Vol 2, 3 & 5												
28.4.2.1. Remote Area Lighting (RAL) set installation TR: AFPAM 10-219, Vol 5; TO 00-105-12							A		B			
28.4.2.2. Telescopic floodlight set TR: TO 35F5-5-16-1p; AFPAM 10-219, Vol 5; <i>L-6 light set reference</i>												
28.4.2.2.1. Install							1b		c			
28.4.2.2.2. Inspect							1b		c			
28.4.2.2.3. Operate							1b		c			
28.4.2.2.4. Troubleshoot									b			
28.4.2.2.5. Maintenance												
28.4.2.3. HF electrical distribution system TR: TO 35C6-9-1; AFI 32-1065; AFPAM 10- 219, Vol 3, 4 & 5												
28.4.2.3.1. Installation												
28.4.2.3.1.1. Primary distribution system							A		B			
28.4.2.3.1.2. Secondary distribution system							A		B			
28.4.2.3.2. Connect generator to SDC	◆						b		c			
28.4.2.4. Initial Deployable Kitchen (IDK) generator							A		B			

1.  <b>Task Knowledge And Technical References</b>	2.  Core Tasks	3.  Certification for OJT					4. Proficiency Codes Used To Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) QTP	(1) RAM	(2) Course
28.4.2.5. CHAMPS generator and transfer panel							A		B			
28.5. Foreign electrical systems TR: AFI 32-1062; AFI 32-1065; TOs 00-105A, 35C2-3, 35C6 series									A			
28.6. Special purpose vehicles/equipment TR: AFIs 10-210, 23-101, 24-301, 91-207; AFD 25-1; AFOSHSTD 91-46; AFPAM 10-219, Vol 4; TA 12; TOs 36A12, 36C12 series												
28.6.1. HMMVW												
28.6.2. Front end loader/ w/forklift attachment												
28.6.3. Dump truck												
28.6.4. Electric line truck												



**GENERAL CONTINGENCY**

1. Tasks, Knowledge, And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) SC/QTP	(1) CDC	(2) Course
29.2.3. Basic lifesaving steps												
29.2.4. Move and transport injured personnel												
<b>29.3. Field Sanitation &amp; Hygiene Measures</b> TR: AFIs 48-110, 10-210; AFDD 35; ARMY FM 21-10												
29.3.1. Personal hygiene measures												
29.3.2. Countermeasures												
29.3.2.1. Disease and pestilence												
29.3.2.2. Communicable diseases												
29.3.3. Sanitation requirements												
29.3.3.1. Field												
29.3.3.2. Kitchen & Mess												
<b>29.4. Self Protection from Extreme Weather</b> TR: A77; AFPAM 10-219, Vol 5; Army FM 21-76												
29.4.1. Hot weather survival techniques												
29.4.2. Cold weather survival methods												
<b>29.5. Force Protection</b> TR: Joint Pub 1-02; AFH 32-4014, Vol 4; AFH 10-222, Vol 3; AFPAM 10-219 Vol 2; DoD 0-2000.12-H; Joint Services Guide 5260												
29.5.1. Personal / Work Party Security TR: AFIs 36-2226, 36-2209, A88, 31-301, 10-403, 10-404, 31-207, 10-215; AFPAM 10-219, Vol 3 ; Army FMs 21-75; 7-8												
29.5.1.1. Combat skills												
29.5.1.2. Defensive tactics												
29.5.1.2.1. Cover and concealment												
29.5.1.2.2. Individual movement												
29.5.1.2.3. Weapons fire control												
29.5.1.2.4. Communications												
29.5.1.2.5. Field fortifications												
29.5.1.2.6. Guard placement/perimeter defense												
29.5.1.2.7. Recognition code system												

**GENERAL CONTINGENCY**

1. Tasks, Knowledge, And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) SC/QTP	(1) CDC	(2) Course
29.5.2. Air Base Defense (ABD) Interface TR: AFIs 31-301, 31-702												
29.5.2.1. Ground threats												
29.5.2.2. ABD concept												
29.5.2.3. Defensive tactics												
29.5.2.4. Force movement												
29.5.2.5. Weapons and fire control												
29.5.2.6. Tactical barriers												
29.5.2.7. Fighting/Protective Positions												
29.5.3. Convoy Techniques TR: AFIs 36-2209, 31-301, 10-211, 36-2225, 31-101; AFPAM 10-219, Vol 3; Army FMs 7-8, 7-10, 55-30												
29.5.3.1. Convoy principles												
29.5.3.1.1. Organization												
29.5.3.1.2. Command and control												
29.5.3.1.3. Vehicle preparation												
29.5.3.1.4. Security Forces interface												
29.5.3.1.5. Counter ambush techniques												
29.5.3.1.6. Defensive ambush measures												
29.5.4. Passive Defense Techniques TR: AFPAM 10-219, Vol 2 & 5; AFIs 10-210, 10-11, 10-212, 32-4001, 31-101, 31-210, 10-401 Vol 1 & 2, 31-301; TM 5-1080-200-13/P; AFH 31-302; AFMAN 32-4005; AFPDs 31-1, 71-1; AFMD 39; AFDD 2-4.2												
29.5.4.1. Hardening/splinter protection												
29.5.4.2. Aircraft revetment TR: AFPAM 10-219, Vol 2; AFMAN 10-401 Vol 1 & 2; 1071 Vols 1-3; AFDD 2-4.2; AFM 32-4005; AFIs 31-101, 31-210, 31-301	32-											
29.5.4.2.1. Assemble kit-type revetments												
29.5.4.2.2. Impoverished revetments												
29.5.4.3. Resource dispersal												
29.5.4.4. Camouflage, Concealment, and Deception (CCD) Techniques TR: AFPAM 10-219, Vol 2 & 3												

**GENERAL CONTINGENCY**

1. Tasks, Knowledge, And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) SC/QTP	(1) CDC	(2) Course
29.5.4.5. Terrorism TR: AFI 31-210, AFPAM 10-219, Vol 2; Joint Pub 1-02												
29.5.4.5.1. Awareness												
29.5.4.5.2. Countermeasures												
29.5.4.6. Chemical warfare protection TR: AFMAN 32-4005; AFIs 10-210, 13-218, 21-101, 32-4001; AFPAM 10-219 Vol 3 & 4; AFH 32-4014 Vol 2; AFMAN 32-4005, AFVA 32-4012			<b>For Reference Only</b>									
29.5.4.6.1. Individual protective equipment			<b>Document General Contingency Training IAW AFI 10-210</b>									
29.5.4.6.2. Wartime threat / protective actions / procedures			<b>IAW AFI 10-210</b>									
29.5.4.6.3. Decontaminating vehicle / equipment												
29.5.4.6.4. Decontaminate shelter entry point												
29.5.4.6.5. USAF standard alarm signals TR: AFPAM 10-219 Vol 2; AFVA 32-4011												
29.5.4.6.6. Protective shelters												
<b>29.6. Base Denial</b> TR: AFIs 10-210, 10-211; AFPAM 10-219, Vol 3; Army FM 5-250; TO 11A-1-66; WMP-1, Annex S			<b>For Reference Only</b>									
29.6.1. Base denial concept			<b>Document General Contingency Training IAW AFI 10-210</b>									
29.6.2. Denial methods			<b>IAW AFI 10-210</b>									
<b>29.7. Multi-Contingency/Warskills Training Requirements</b> TR: AFI 10-210; WMP-1, Annex S			<b>For Reference Only</b>									
29.7.1. Multi-warskilling concept			<b>Document General Contingency Training IAW AFI 10-210</b>									
29.7.2. Vehicle Qualifications TR: AFI 10-210; AFPAM 10-219, Vol. 3, 4, 8; AFD 25-1; AFMAN 24-309; AFI 23-101; 25-101; AS 12; T.O.s 36A2 series, 36M2 series, 36A12 series; War & Mobilization Plan (WMP), Vol. I, Annex S; HST/RTP												
29.7.2.2. Obtain government driver's license												

**GENERAL CONTINGENCY**

1. Tasks, Knowledge, And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) SC/QTP	(1) CDC	(2) Course
29.7.2.3. Qualify on contingency vehicles												
29.7.2.4. General purpose vehicles (up to 14,000 GVW)												
<b>29.8. Explosive Ordnance Reconnaissance (EOR)</b> TR: AFI 10-210; AFPAM 10-219, Vol 3 & 4; Army FMs 21-16, 21-75		<b>For Reference Only</b>										
29.8.1. Potential ordnance		<b>Document General Contingency Training</b>										
29.8.2. Marking procedures												
29.8.3. Reporting procedures												
29.8.4. Mass ordnance clearance												
<b>29.9. Beddown shelters</b> TR: T.O.s 35E-5-6-1, 35E4-132-1, 35E4-94-1; TM 10-4500-200-13; AFI 10-219, Vol 2, 3 & 5		<b>IAW AFI 10-210</b>										
29.9.1. Bare base concept												
29.9.2. Beddown package assets												
29.9.2.1. Harvest Eagle												
29.9.2.2. Harvest Falcon												
29.9.2.3. TEMPER Tent TR: AFPAM 10-219, Vol 2, 5; AFH 10-222, Vol 1; T.O. 35E5-6-1		<b>For Reference Only</b>										
29.9.2.4. Small Shelter System (SSS) TR: T.O. 35E5-6-11												
<b>29.10. Rapid Runway Repair (RRR)</b> TR: AFIs 10-210, 10-211, 10-212; T.O.s 35E2-3-1, 35E2-2-7, 35E2-5-1; AFPAM 10-219, Vol 4		<b>Document General Contingency Training</b>										
29.10.1. Base Recovery concepts		<b>IAW AFI 10-210</b>										
29.10.2. Damage assessment												
29.10.3. Damage reporting												
29.10.4. Rapid Runway Repair (RRR) concept												
29.10.4.1. RRR Philosophy												
29.10.4.2. AM-2 Matting												
29.10.4.3. Fiberglass Mat												
29.10.5. Spall Repair												

## AFQTP Documentation Record For AFSC 3E0X2

- Download applicable AFQTPs at <http://www.afcesa.af.mil/Directorate/CEO/Training/Enlisted/enlisted.htm>
- Trainers/Certifiers enter their name and initials in the identification block at beginning of the STS
- Upon administering AFQTPs, enter start date in column 4 of this record
- Upon completion of each unit, document columns 5, 6, and 7
- Upon completion of applicable CerTests, trainer will place the completion date in column 8
- Transcribe by entering current date in columns 5 and 8, Trainees & Trainers Initials in columns 6 & 7

1	2	3	4	5	6	7
TASK NUMBER	TASKS, KNOWLEDGE, AND TECHNICAL REFERENCES	◆ * 5 LEVEL ** 7 LEVEL SEE NOTE 1	START DATE	COMPLETE DATE	TRAINEE'S INITIALS	TRAINER'S INITIALS
12.	<b>AFS SPECIFIC PUBLICATIONS</b> Ref: AFQTP Module 12 – AFS SPECIFIC PUBLICATIONS					
12.2.	Use technical orders	*				
13.	<b>ELECTRICAL POWER PRODUCTION TOOLS AND TEST EQUIPMENT</b> Ref: AFQTP Module 13 – ELECTRICAL POWER PRODUCTION TOOLS AND TEST EQUIPMENT					
13.5.1.	Multimeter (Use electrical test equipment)	*				
14.	<b>GENERAL POWER PRODUCTION TASKS</b> Ref: AFQTP Module 14 – GENERAL POWER PRODUCTION TASKS					
14.5.2.	Troubleshoot (Battery Chargers)	*				
15.	<b>ELECTRICAL FUNDAMENTALS</b> Ref: AFQTP Module 15 – ELECTRICAL FUNDAMENTALS					
15.9.1.	Diodes (Test)	*				
15.10.	Interpret wiring diagrams	*				
15.11.	Troubleshoot electrical circuits	**				

1	2	3	4	5	6	7
TASK NUMBER	TASKS, KNOWLEDGE, AND TECHNICAL REFERENCES	◆ * 5 LEVEL * 7 LEVEL SEE NOTE 1	START DATE	COMPLETE DATE	TRAINEE'S INITIALS	TRAINER'S INITIALS
<b>16.</b>	<b>GENERATOR SET GROUNDING FUNDAMENTALS</b> Ref: AFQTP Module 16 – GENERATOR SET GROUNDING FUNDAMENTALS					
16.2.	Install equipment grounds	*				
<b>17.</b>	<b>ENGINE MAINTENANCE FUNDAMENTALS</b> Ref: AFQTP Module 17 – ENGINE MAINTENANCE FUNDAMENTALS					
17.1.2.	Troubleshoot engine malfunctions (Gasoline engines)	**				
17.1.3.	Perform gasoline engine tune-up	*				
<b>18.</b>	<b>ENGINE DC ELECTRICAL SYSTEM</b> Ref: AFQTP Module 18 – ENGINE DC ELECTRICAL SYSTEM					
18.2.	Troubleshoot	**				
18.4.1.	Battery charging alternator (Replace)	*				
18.4.2.	Starter motor (Replace)	*				
18.4.3.	Replace (Batteries)	*				
<b>19.</b>	<b>ENGINE LUBRICATION SYSTEM</b> Ref: AFQTP Module 19 – ENGINE LUBRICATION SYSTEM					
19.2.	Troubleshoot	**				
19.5.	Service engine lubrication system	*				

1 TASK NUMBER	2 TASKS, KNOWLEDGE, AND TECHNICAL REFERENCES	3 ◆ * 5 LEVEL * * 7 LEVEL SEE NOTE 1	4 START DATE	5 COMPLETE DATE	6 TRAINEE'S INITIALS	7 TRAINER'S INITIALS
<b>20. FUEL SYSTEMS</b> Ref: AFQTP Module 20 – FUEL SYSTEMS						
20.1.4.2.	Filters/strainers (Replace components (Gasoline))	*				
20.1.5.	Adjust carburetor (Gasoline)	*				
20.2.2.	Troubleshoot (Diesel)	**				
20.2.4.3.	Filters/strainers (Replace components (Diesel))	*				
<b>21. ENGINE COOLING SYSTEMS</b> Ref: AFQTP Module 21 – ENGINE COOLING SYSTEMS						
21.2.	Troubleshoot	**				
21.4.5.	Drive belts (Replace components)	*				
21.5.	Service	*				
<b>22. ENGINE GOVERNOR SYSTEMS</b> Ref: AFQTP Module 22 – ENGINE GOVERNOR SYSTEMS						
22.2.2.	Troubleshoot (Electronic governors)	**				
22.2.6.1.	Droop (Adjust (Electronic governors))	**				
22.2.6.2.	Gain (Adjust (Electronic governors))	**				
22.2.6.3.	Idle (Adjust (Electronic governors))	**				
22.2.6.4.	Run (Adjust (Electronic governors))	**				

1	2	3	4	5	6	7
TASK NUMBER	TASKS, KNOWLEDGE, AND TECHNICAL REFERENCES	◆ * 5 LEVEL * 7 LEVEL SEE NOTE 1	START DATE	COMPLETE DATE	TRAINEE'S INITIALS	TRAINER'S INITIALS
<b>23.</b>	<b>INTAKE AND EXHAUST SYSTEMS</b> Ref: AFQTP Module 23 – INTAKE AND EXHAUST SYSTEMS					
23.2.	Troubleshoot	**				
<b>24.</b>	<b>AC GENERATING SYSTEM</b> Ref: AFQTP Module 24 – AC GENERATING SYSTEM					
24.1.2.	Troubleshoot (Alternator)	**				
24.2.2.	Troubleshoot (Controls)	**				
24.3.2.	Troubleshoot (Protective devices)	**				
24.3.4.3.	Fuses (Replace)	*				
<b>25.</b>	<b>FIXED EMERGENCY STANDBY GENERATOR SET OPERATION</b> Ref: AFQTP Module 25 – FIXED EMERGENCY STANDBY GENERATOR SET OPERATION					
25.1.1.	Pre-operational inspection (Perform)	*				
25.1.2.	During operation inspection (Perform)	*				
25.1.3.	Post-operational inspection (Perform)	*				
25.1.4.	Single unit operation (Perform)	*				
<b>26.</b>	<b>AUTOMATIC TRANSFER SWITCHES</b> Ref: AFQTP Module 26 – AUTOMATIC TRANSFER SWITCHES					
26.3.	Determine compatibility between transfer switch, generator, and electrical service	**				

**NOTE 1:** ♦Diamond tasks are extremely important to the career field. Diamond tasks are the same as core tasks with one exception--equipment shortfalls at most locations have created problems with the actual hands-on certification of these tasks. In instances where required equipment is not available for instruction, completion of the task's AFQTP and passing the corresponding CerTest is all that is required for upgrade and qualification training. Hands-on certification should be accomplished at the first opportunity when equipment is available. In locations where the equipment is available for hands-on certification, CerTest completion is still a mandatory requirement.

1	2	3	4	5	6	7
TASK NUMBER	TASKS, KNOWLEDGE, AND TECHNICAL REFERENCES	♦ * * * 5 LEVEL 7 LEVEL SEE NOTE 1	START DATE	COMPLETE DATE	TRAINEE'S INITIALS	TRAINER'S INITIALS
<b>28. AFSC SPECIFIC CONTINGENCY RESPONSIBILITIES</b> Ref: AFQTP Module 28 – AFSC SPECIFIC CONTINGENCY RESPONSIBILITIES						
28.1.1.1.2.	Install ground (200 KW or less))	*				
28.1.1.1.4.	Configure for proper voltage (200 KW or less))	*				
28.1.1.1.5.3	Connect (Cables (200KW or less))	*				
28.1.1.1.6.	Check phase rotation (200KW or less))	*				
28.1.1.2.1.	Pre-operational inspection (Perform (200KW or less))	*				
28.1.1.2.2.	During operation inspection (Perform (200KW or less))	*				
28.1.1.2.3.	Post-operational inspection (Perform (200KW or less))	*				
28.1.1.2.5.	Single unit operation (Perform (200KW or less))	*				
28.1.1.2.6.	Parallel unit operation (Perform (200KW or less))	*				

1	2	3	4	5	6	7	8
TASK NUMBER	TASKS, KNOWLEDGE, AND TECHNICAL REFERENCES	◆ ** 5 LEVEL * 7 LEVEL SEE NOTE 1	START DATE	COMPLETE DATE	TRAINEE'S INITIALS	TRAINER'S INITIALS	CerTest COMP DATE
28.	<b>AFSC SPECIFIC CONTINGENCY RESPONSIBILITIES</b> REF: AFQTP MODULE 28 – AFSC SPECIFIC CONTINGENCY RESPONSIBILITIES (1 APR 02)						
28.1.2.2.2.	Position (Installation MEP-12 Generators) <i>CerTest # 8024</i>	◆					
28.1.2.2.3.	Ground (Installation MEP-12 Generators) <i>CerTest # 8024</i>	◆					
28.1.2.6.1.	Conduct pre-start procedures (Operate MEP-12 Generators) <i>CerTest # 8025</i>	◆					
28.1.2.6.2.	Conduct starting procedures (Operate MEP-12 Generators) <i>CerTest # 8025</i>	◆					
28.1.2.6.3.	Perform single unit operation (Operate MEP-12 Generators) <i>CerTest # 8025</i>	◆					
28.1.2.6.4.	Perform parallel unit operation (Operate MEP-12 Generators) <i>CerTest # 8025</i>	◆					
28.1.2.6.5.	Perform remote operation (Operate MEP-12 Generators) <i>CerTest under development</i>	◆					
28.1.2.7.	Perform scheduled inspections (MEP-12 Generators) <i>CerTest # 8026</i>	◆					
28.1.2.8.1.	Engine systems (Troubleshoot MEP-12 Generators) <i>CerTest # 8027</i>	◆					
28.1.2.8.2.1	High voltage (Troubleshoot Electrical Systems MEP-12 Generators) <i>CerTest # 8027</i>	◆					
28.1.2.8.2.2	Low voltage (Troubleshoot Electrical Systems MEP-12 Generators) <i>CerTest # 8027</i>	◆					

1 TASK NUMBER	2 TASKS, KNOWLEDGE, AND TECHNICAL REFERENCES	3 ◆ * 5 LEVEL * 7 LEVEL SEE NOTE 1	4 START DATE	5 COMPLETE DATE	6 TRAINEE'S INITIALS	7 TRAINER'S INITIALS	8 CerTest COMP DATE
28.2.2.2.	Position trailers (Perform unidirectional installation (MAAS)) <i>CerTest # 8011</i>	◆					
28.2.2.3.1.	Install anchor plates (Concrete (MAAS)) <i>CerTest # 8012</i>	◆					
28.2.2.3.2.	Install turnbuckles (Concrete (MAAS)) <i>CerTest # 8012</i>	◆					
28.2.2.4.1.1	Trailer stakes (Soil Install (MAAS)) <i>CerTest # 8013</i>	◆					
28.2.2.4.1.2	Turnbuckles (Soil Install (MAAS)) <i>CerTest # 8013</i>	◆					
28.2.2.4.1.3	KM stakelines (Soil Install (MAAS)) <i>CerTest # 8013</i>	◆					
28.2.2.4.2.	Attach KM stakeline to turnbuckle (Soil Install (MAAS)) <i>CerTest #8013</i>	◆					
28.2.4.1.2.	Position (Installation lightweight fairlead beam (MAAS)) <i>CerTest # 8107</i>	◆					
28.2.4.1.4.	Install outboard anchoring system (Installation lightweight fairlead beam (MAAS)) <i>CerTest # 8107</i>	◆					
28.2.4.1.5.	Perform final alignment (Installation lightweight fairlead beam (MAAS)) <i>CerTest # 8107</i>	◆					
28.2.5.	Attach hook cable (Perform unidirectional installation (MAAS)) <i>CerTest # 8012</i>	◆					
28.2.6.	Tension hook cable (Perform unidirectional installation (MAAS)) <i>CerTest # 8012</i>	◆					
28.2.7.	Proofload installation (Perform unidirectional installation (MAAS)) <i>CerTest # 8012</i>	◆					

1 TASK NUMBER	2 TASKS, KNOWLEDGE, AND TECHNICAL REFERENCES	3 ◆ * 5 LEVEL * 7 LEVEL SEE NOTE 1	4 START DATE	5 COMPLETE DATE	6 TRAINEE'S INITIALS	7 TRAINER'S INITIALS	8 CerTest COMP DATE
28.2.9.1.	Daily (Perform MAAS periodic inspection and preventive maintenance) <i>CerTest # 8016</i>	◆					
28.2.9.2.	Weekly (Perform MAAS periodic inspection and preventive maintenance) <i>CerTest # 8016</i>	◆					
28.2.9.3.	Monthly (Perform MAAS periodic inspection and preventive maintenance) <i>CerTest # 8016</i>	◆					
28.2.9.4.	Quarterly (Perform MAAS periodic inspection and preventive maintenance) <i>CerTest # 8016</i>	◆					
28.2.9.5.	Semi-annual (Perform MAAS periodic inspection and preventive maintenance) <i>CerTest # 8016</i>	◆					
28.2.9.6.	After-arrestment (Perform MAAS periodic inspection and preventive maintenance) <i>CerTest # 8016</i>	◆					
28.2.10.1.	Brake assembly (Troubleshoot MAAS) <i>CerTest # 8018</i>	◆					
28.2.10.2.	Rewind assembly (Troubleshoot MAAS) <i>CerTest # 8018</i>	◆					
28.2.10.3.	Hydraulic system (Troubleshoot MAAS) <i>CerTest # 8018</i>	◆					
28.2.10.4.	Trailer hydraulic (Troubleshoot MAAS) <i>CerTest # 8018</i>	◆					
28.4.2.3.2.	Connect generator to SDC (HF electrical distribution system) <i>CerTest under development</i>	◆					

**SECTION B - COURSE OBJECTIVE LIST (COL)**  
(This section used when developing lesson plans)

**4. Measurement.** Measurement of each objective is indicated as follows:

**4.1. Written Test (W)** - used to sample each knowledge objective and the knowledge components of performance objectives.

**4.2. Performance Test (P)** - used under specified conditions in a formal testing mode to measure student accomplishment of performance objectives after the teaching-learning activity has been completed.

**4.3. Progress Checks (PC)** - administered by the instructor during classroom or laboratory instruction time to assess the student's accomplishment of knowledge or performance objectives.

**5. Standard.** The standard is 70% on written examinations. Standards for performance measurement are indicated in the objectives and delineated on the individual progress checklist. Instructor assistance is provided as needed during the progress check, and students may be required to repeat all or parts of the behavior until satisfactory performance is attained.

**6. Proficiency Level.** Most task performance is taught to the "2b" proficiency level which means the student can do most parts of the task, but does need assistance on the hardest parts of the task (partially proficient). The student can also determine step-by-step procedures for doing the task.

**7. Course Objective List.** These objectives are listed in the sequence taught by Block of Instruction.

**7.1. Initial Skills Course.** A detailed listing of the initial skills course objectives may be obtained by written request to 366 TRS/DO, 727 Missile Road, Sheppard AFB TX 76311-2254.

**7.2. 7-Skill Level Course.** A detailed listing of the CE Craftsman Management course objectives may be obtained by written request to 366 TRS/DO, 727 Missile Road, Sheppard AFB TX 76311-2254.

## SECTION C - SUPPORT MATERIALS

### 8. CerTest.

**8.1.** CerTest is a program that uses computer-based evaluation to ensure skilled craftsmen are available to meet the Air Force's changing needs. It enhances upgrade and qualification training by testing and evaluating an individual's knowledge of the principles and procedures in each specialty.

**8.1.1.** The program contains tests used evaluate task knowledge received through different media such as paper products (text), videotapes, and computer-based programs.

**8.1.2.** The CerTest program contains **mandatory** tests, required for upgrade. All **diamond** (◆) coded tasks on the STS have a corresponding **mandatory** test.

**8.1.3.** CerTest is also a powerful training management tool. It can be used to find the strengths and weaknesses in an individual's training and experience. CerTest automatically records and updates all test results. The training manager can copy records to a disk so that an individual can bring current, accurate training information to a new unit; thereby helping the gaining supervisor evaluate the trainee's knowledge and experience.

**8.2.** CerTest also enables unit personnel to develop site-specific tests. These custom-made tests standardize testing on tasks unique to a specific duty station and/or assignment. The program contains a graphics library that may be used along with a menu-driven test editor to develop these site-specific tests.

**8.3.** CerTest also contains **optional** CDC pre-evaluation tools. Volume review exercises are available for progress checks after each volume is completed. After all volumes are completed in a set, the trainee may take the course review exercise before taking the final End of Course exam at the base training office. Commanders are encouraged to integrate these tools in their unit's OJT program.

**8.4.** CerTest has been adopted as the Air Force platform for future electronic CDC testing. The Air Force Institute for Distributive Learning (AFIADL) began using CerTest on 1 June 2000. Currently, all CE AFSCs are allowed to use AFIADL's CerTest on installations where Base Test Control Facilities (TCFs) are equipped. See your UETM for further information.

**8.5.** The **mandatory** CerTests for each AFSC are identified, by number, with its corresponding AFQTP on the 3E0X2 AFQTP Documentation Record.

**8.6.** For a complete list of up-to-date AFQTPs applicable to the 3E0X2 AFSC see our web page at: <http://www.afcesa.af.mil/Directorate/CEO/Training/Enlisted/QTPs/3E0X2.htm>.

## SECTION D - TRAINING COURSE INDEX

**9. Purpose.** This section of the CFETP identifies training courses available for the specialty. Refer to the Education and Training Course Announcements (ETCA) web site, <http://etca.randolph.af.mil/> for complete information on Air Force in-residence courses.

### 10. Air Force In-Residence/Mobile Training Team (MTT) Courses.

Course Number	Title	Developer
J3AZR3E052 013	CE Advanced Electronics	366 TRS
J3AZR3E072 113	Bare Base Power Generation	366 TRS
J3AZR3E072 002	Troubleshooting Electrical Power Equip	366 TRS
J4AZT3E052 003	Aircraft Arresting Systems BAK-9/BAK-12 (MTT)	366 TRS
J4AZT3E052 007	Hook Cable Support BAK-14 (MTT)	366 TRS
J4AZT3E052 008	Mobile Aircraft Arresting Systems (MAAS) (MTT)	366 TRS
J3ACR3E070 000	Civil Engineer Management Craftsman Course	366 TRS

### 11. Air Force Institute for Advanced Distributed Learning (AFIADL) Courses.

Course Number	Title	Date
CDC 3E052A	Electrical Power Production Journeyman	Jun 02
CDC 3E052B	Electrical Power Production Journeyman	Jun 02

### 12. Exportable Courses/Information.

Course Number	Title	Date
	Civil Engineer Management Craftsman Read-Ahead-Material (RAM) version 2.1	Jul 01

### 13. Courses Under Development/Revision

Course Number	Course Title
J3AZR3E052 015	Contingency Power Gen Equipment
J4AZT3E052 009	Aircraft Arresting Systems BAK-9
J4AZT3E052 010	Aircraft Arresting Systems BAK-12

## **SECTION E – MAJCOM-UNIQUE REQUIREMENTS**

**14. “There are currently no MAJCOM unique requirements. This area is reserved.”**

## SECTION F - HOME STATION TRAINING

**15. Purpose.** The purpose of this section is to identify the tasks, training references, and training sources available in support of contingency/wartime training. Training ranges from knowledge-type training conducted in a classroom to task-oriented (hands-on) training conducted in the field. These training requirements, frequencies, and sources are listed in AFI 10-210, Prime Base Emergency Engineer Force (BEEF) Program.

**15.1. Home Station Training (HST).** HST is training that is conducted at the individual's home station for contingency operations.

**15.1.1.** Category I (CAT-I) training consists of knowledge-level training such as Prime BEEF orientation, field sanitation, and expedient methods. CAT-I training is normally accomplished through briefings and the use of videos and other training aids. These various training aids are listed in AFI 10-210, Attachment 2 under the "Optional Source for Training Material" column.

**15.1.1.1.** The "General Contingency Responsibilities" (GCR), CD-ROM Training Package may be used for Category I contingency training. Successful completion of the lessons in the GCR CD-ROM will satisfy those SORTS requirements indicated in AFI 10-210, Chapter 4 and Attachment 2. It can be used for training and evaluation and is based on successful completion of one or more lessons completed in any order. One, some or all lessons may be completed at a given time. At the end of each lesson, the trainee will successfully complete the Lesson Review Exercise (LRE) and receive a certificate of training generated by the CD-ROM. The trainee must present the certificate or certificates to the Readiness Training Monitor to receive credit for the training.

**15.1.1.2.** Also available are various volumes of Home Station Training CD-ROM packages. These disks contain up to five presentations covering various CAT I topics. These are an additional method of providing required recurring training and topics covered are indicated in the training material column of Attachment 2 by the letters "PBCD".

**15.1.1.3.** For personnel assigned to a unit with a Prime BEEF mission for the first time, the 3-Level General Contingency Responsibilities CD-ROM is to be completed within the first 90 days of assignment. This product contains 17 lessons covering CAT I training topics. CAT I credit can be given for completion of these lessons for the same areas as the previously mentioned General Contingency Responsibilities product as indicated in AFI 10-210. Completion certificates should be presented to the Readiness Training Monitor for documentation of training.

**15.1.1.4.** The Unit should develop procedures to use these products to suit their needs. Remember these are tools to assist you in fulfilling CAT I training requirements. Document this training as outlined in AFI 10-210.

**15.1.2.** Category II (CAT-II) training is primarily task-oriented training such as weapons training, hard-back tent construction, and convoy security and the hands-on portion of various CAT I topics. This training is listed in AFI 10-210, Attachment 3 can be conducted during regularly required field training exercises.

## 15.2. Training References.

### 15.2.1. AFI 10-210, Prime Base Engineer Emergency Force (BEEF) Program.

Chapter four of AFI 10-210 identifies the Prime BEEF recurring training requirements. You can review this document by going to the Air Force publications web site. Attachment 2 is a list of HST CAT-I training requirements and Attachment 3 lists CAT-II training requirements.

### 15.2.2. Prime BEEF Contingency and Wartime Tasks - AFPAM 10-219, Vol 10.

The Contingency Training Guide and Task Standards (AFPAM 10-219, Vol 10) lists basic wartime skills, knowledge, and the major common contingency/wartime tasks that Prime BEEF teams will be required to perform. The Contingency Training Guide and Task Standards identify the AFSs associated with each task, required resources to accomplish the task, and the maximum time (under optimum conditions) expected to complete the task. The document also identifies the lead AFS on each task. This document is located on the Air Force Publications Web site.

**15.2.3. AFPAM 10-219 Series.** These documents assist in home station training and contingency responses. They replaced the AFP 93-12 series of planning documents and are available on the Air Force Electronic Publications Library (AFEPL).

### 15.2.4. Air Force Education and Training Course Announcements (ETCA).

Superseded AFCAT 36-2223. It is located at the following URL:

<http://etca.randolph.af.mil/> lists additional training/educational opportunities available for civil engineer personnel. This catalog contains information on formal education and training courses. The catalog is updated quarterly.

**15.2.5. Readiness Training Package (RTP).** RTPs are lesson plans for HST lessons. The RTPs are intended for those personnel who teach any area of HST. The index and RTPs are located on the Air Force Civil Engineer Support Agency (AFCESA) home page. The internet address for this information is <https://wwwmil.afcesa.af.mil>.

**15.2.6. Other Documents.** AFH 10-222, Bare Base Development, Bare Base Facility Erection, Force Protection, Mechanical Systems, Bare Base Assets, Bare Base Generators and other volumes in the AFH 10-222 series are used for contingency training and operations. The AFH series are pocket guides providing information on bare base systems for all AFSs. AFH 10-222, Vol 4, Air Force Environmental Handbook for Contingency Operations, was developed to assist the environmental career field (3E4X3) on environmental quality issues during contingency and training operations. The handbook can be used by any AFS who works closely with environmental issues. Visit the Air Force Publications web site to download this information.

**15.2.7. AFCESA/CEX.** Maintains a comprehensive listing of audiovisual products that support the contingency training program. To view this listing as well as gain information on how to order specific audiovisual products, please consult the AFCESA Contingency Support page.

### **15.3. Ancillary Training.**

**15.3.1. Team Exercise Sites (CAT III).** All CE personnel who fill critical Unit Type Code (UTC) positions will receive team training at Silver Flag Exercise Sites (SFES) with the exception of members on headquarters staff augmentation UTCs, pavement evaluation UTCs, and generator repair and maintenance UTCs. There are currently three active SFES in the world today. They are located at Tyndall AFB, FL; Ramstein AB, Germany; and Kadena AB, Japan. Active duty personnel in critical UTC positions will be qualified at least every 30 months on the elements listed in table 4.3 of AFI 10-210. The Air Reserve Components (ARC) will be qualified at least every 45 months.

**15.3.2. AEF/Spin-up Training.** The AFCESA home page has the worldwide locator for the different types of training, locations, and Points Of Contact (POC) for equipment items that maybe encountered during contingency operations.