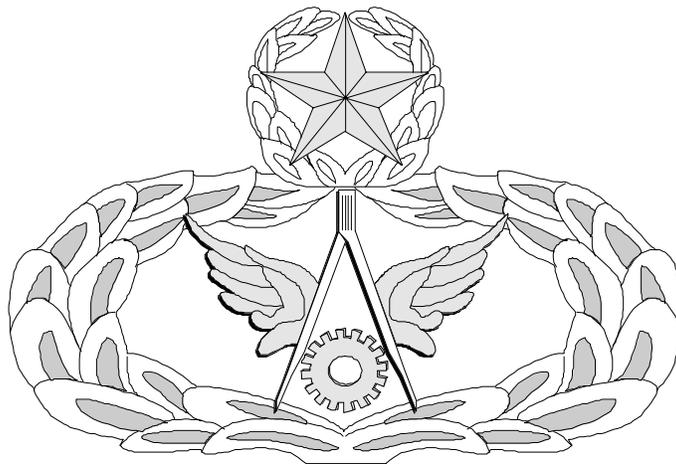
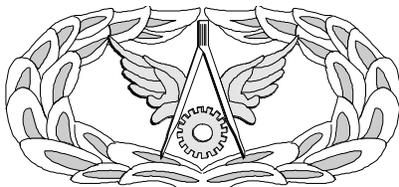


**AFSC 3E3X1**  
**STRUCTURAL**



**MASTER**



**BASIC**



**SENIOR**

**CAREER FIELD**  
**EDUCATION AND TRAINING PLAN**

**CAREER FIELD EDUCATION AND TRAINING PLAN  
STRUCTURAL SPECIALTY  
3E3X1**

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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.** Structural Apprentice, Journeyman, Craftsman, and Superintendent.

**5.1. Specialty Summary.** Manages, constructs, repairs, and modifies structural systems and wooden, masonry, metal, and concrete buildings. Fabricates and repairs components of buildings, utility systems, and real property. Ensures compliance with environmental regulations. Related DoD Occupational Subgroup: 710.

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

**5.2.1.** Prepares and interprets working drawings and schematics for maintaining, altering, and repairing buildings and structures.

**5.2.1.1.** Surveys proposed work sites to determine material and labor requirements.

**5.2.1.2.** Prepares cost estimates.

**5.2.1.3.** Reviews structural work progress and coordinates changes in schedules.

**5.2.1.4.** Constructs and repairs footings, floors, slabs, foundations, walls, roofs, steps, doors, and windows for prefabricated and permanent structures.

**5.2.1.5.** Constructs and modifies buildings.

**5.2.1.6.** Prepares, applies, and finishes mortar, concrete, plaster, and stucco.

**5.2.1.7.** Fabricates, repairs, and installs metal parts and assemblies for utility systems and buildings.

**5.2.2.** Erects and lays out trusses and structural steel to specific dimensions.

**5.2.2.1.** Welds, cuts, brazes, and solders ferrous and nonferrous metals using oxyacetylene and arc welding processes.

**5.2.2.2.** Welds butt, lap, tee, and edge joints in all working positions.

**5.2.2.3.** Inspects, maintains, repairs, and installs overhead, rollup, and mechanical doors and gates.

**5.2.2.4.** Installs forms and reinforcing material.

**5.2.2.5.** Applies protective coatings such as primer, stain, and sealant.

**5.2.3.** Troubleshoots, repairs, and installs commercially manufactured locking devices such as keyed, combination, cipher, panic hardware/exit devices, and pad locks.

**5.2.4.** Erects scaffolding and works from high reach ladders and mobile platforms.

**5.2.5.** Identifies and selects construction materials considering strength, moisture content, grade, mix, application procedures, and curing.

**5.3. Duties and Responsibilities for Superintendent.** Advises on problems associated with the installation and repair of structural systems.

**5.3.1.** Manages, inspects, and evaluates work center activities.

**5.3.2.** Ensures compliance with commercial and military publications.

**5.3.3.** Submits and reviews supply and equipment requisitions.

**5.3.4.** Discusses inspection findings and recommends corrective actions.

**5.3.5.** Solves complex maintenance problems by studying layout drawings, wiring, and schematic drawings, and analyzing construction and operating characteristics.

**5.3.6.** Develops and establishes operation and maintenance procedures to ensure maximum efficiency.

**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 Structural 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 Naval Construction Battalion Center (NCBC) Gulfport, MS in March 1999.

**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 Structural 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 Construction Technology Associates Degree (4VEB)** applies to this AFSC.

**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	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
Concrete and Asphalt Pavements	6
Building Construction	6
Heavy Equipment Operations	9
Locksmithing	3
Masonry Structures	9

Metals Fabrication	14
Soils and Materials	3
Structural Drafting	6
Surveying	3

<b>Technical Electives</b>	<b>Semester Hours</b>
AF Enlisted Professional Military Education	12
Blueprint Reading	3
Building Codes and Ordinances	3
Computer Aided Drafting	3
Computer Science	6
Construction Planning and Supervision	9
Construction Surveying	3
Drafting/Engineering Drawing	9
Electronic Surveying	3
Hazardous Materials	3
Industrial Safety	6
Labor Relations	3
Material Estimating	3
Metals Characteristics	3
Plane Surveying	3
Plans and Specifications	6
Principles of Business Management	3
Properties of Materials	3
Quality Assurance	3
Statistics	3
Technical Mathematics (College Algebra or Higher)	3
Technical Writing	3
Welding	8

**8.3.3. Leadership, Management, and Military Studies (6 Semester Hours).**

Professional military education, civilian management courses accepted in transfer, and/or by testing credit.

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

**8.3.5. 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	3
Speech	
Written Communication	3
English Composition	
Mathematics	3
An intermediate algebra or a college-level mathematics course is required. If an approved mathematics course	

is used as a Technical or Program Elective, a natural science course that meets general education requirements (GER) criteria may be applied towards the GER.

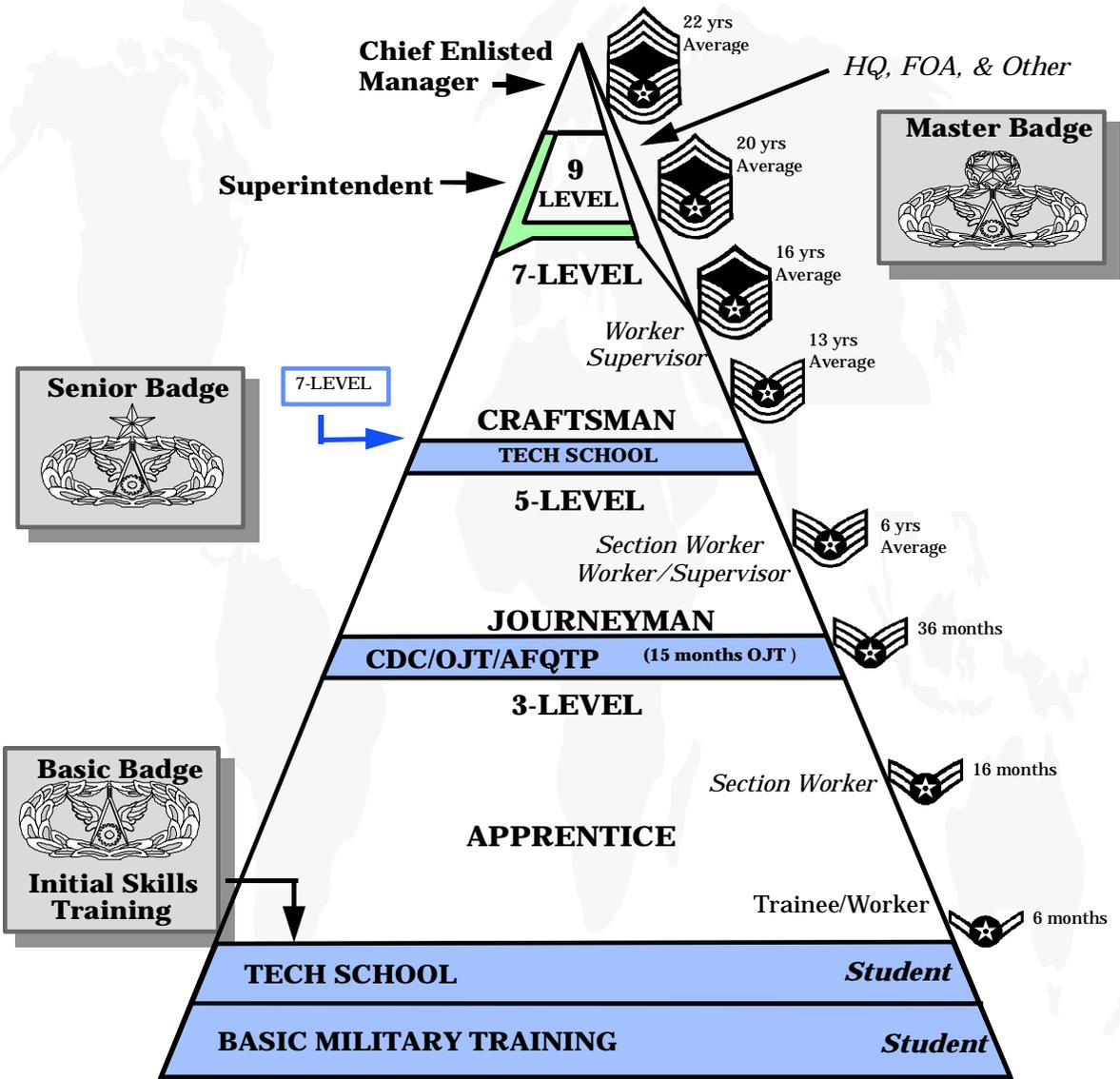
Social Science	3
Anthropology, Archaeology, Economics, Geography, Government, History, Political Science, Psychology, Sociology	
Humanities	3
Fine Arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, religion	

**8.3.6. Program Elective (15 Semester Hours).** Satisfied with applicable technical education; leadership, management, and military studies; or general education subjects/courses, including natural science courses meeting the general education requirement (GER) application criteria and foreign language credit earned at the Defense Language Institute or through the Defense Language Proficiency Test. Six semester hours of CCAF degree-applicable technical credit otherwise not applicable to this program may be applied. See the CCAF General Catalog for details regarding the Associates of Applied Science for this specialty.

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

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

### Structures Enlisted Career Pyramid



## 9.1. 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><u>Trainer</u></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><u>Certifier</u></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</b> (NCOA) - 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

**9.2. 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).

**9.2.1. 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.

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

**9.2.1.2. 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.

**9.2.1.3. 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

**10. Purpose.** The various skill levels in the career field are defined in terms of tasks and knowledge requirements for the Structural 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.

### 11. Skill-Level Training Requirements.

#### 11.1. Apprentice (3-Level) Training Requirements.

##### 11.1.1. Specialty Qualifications.

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

**11.1.1.2. Education.** Completion of high school or General Education Development (GED) is mandatory for entry into this AFS. Courses in science, shop mechanics, and use of drawings are desirable.

**11.1.1.3. Training.** Completion of the Structural Apprentice courses J5AQN3E331 000 and J3ABP3E331 000 is mandatory for award of this skill level.

**11.1.1.4. Experience.** N/A

##### 11.1.1.5. Other.

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

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

**11.1.1.5.3.** Freedom from fear of height.

#### 11.1.2. Training Sources/Resources.

**11.1.2.1.** Formal training is accomplished through courses J5AQN3E331 and J3ABP3E331 000 at Naval Construction Battalion Center (NCBC) Gulfport, MS.

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

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

### **11.1.3. Implementation.**

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

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

**11.2.1. 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.

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

**11.2.1.1.1.** Building maintenance, repair, and construction, including roofing.

**11.2.1.1.2.** Nomenclature of woodworking materials and methods of material storage.

**11.2.1.1.3.** Theory of squaring by equivalent measurements.

**11.2.1.1.4.** Application of shop mathematics.

**11.2.1.1.5.** Theory of wood treatment. I.E.: Laminating, gluing, and protective coating procedures

**11.2.1.1.6.** Type and specification requirements of masonry and concrete materials.

**11.2.1.1.7.** Batching formulas.

**11.2.1.1.8.** Methods of curing concrete, mortar, plaster, stucco, tile, and lime mixtures.

**11.2.1.1.9.** Types of coating preservatives and applications.

**11.2.1.1.10.** Compatible products to be combined in composite systems.

**11.2.1.1.11.** Methods of preparing various surfaces for finishing.

**11.2.1.1.12.** Locking devices.

**11.2.1.1.13.** Composition, characteristics, and identification of common commercial grade metals.

**11.2.1.1.14.** Construction grade metal requirements.

**11.2.1.1.15.** Types and uses of metal hardware.

- 11.2.1.1.16. Methods of forming and cutting metals.
- 11.2.1.1.17. Metal fabrication and repair.
- 11.2.1.1.18. Welding processes.
- 11.2.1.1.19. Metal layout.
- 11.2.1.1.20. Shop drawings.
- 11.2.1.1.21. Metal measurement and layout.
- 11.2.1.1.22. Cutting equipment.
- 11.2.1.1.23. Gas and arc welding equipment.
- 11.2.1.1.24. Safety procedures and practices.
- 11.2.1.1.25. Environmental concerns and safety precautions required in using, storing, and disposing of hazardous materials.

**11.2.1.2. Education.** N/A

**11.2.1.3. Training**

- 11.2.1.3.1. Completion of CDCs is mandatory.
- 11.2.1.3.2. Certification of all 5-level core tasks identified with a single asterisk (\*) in the core task column of the STS is mandatory.
- 11.2.1.3.3. Completion of AFQTPs for assigned core and diamond (◆) tasks is mandatory.
- 11.2.1.3.3. Completion of CerTests for all diamond (◆) tasks with a minimum of 80% is mandatory.
- 11.2.1.3.4. Certification of duty position requirements identified by the supervisor is mandatory.

**11.2.1.4. Experience.**

- 11.2.1.4.1. Qualification in and possession of 3-skill level.
- 11.2.1.4.2. Constructing, erecting, maintaining, and repairing buildings and heavy structures.
- 11.2.1.4.3. Erecting prefabricated structures.
- 11.2.1.4.4. General carpentry.
- 11.2.1.4.5. Laying masonry units.

**11.2.1.4.6.** Mixing, applying, and finishing concrete, plaster, stucco, and mortar.

**11.2.1.4.7.** Use of protective equipment.

**11.2.1.4.8.** Fabricating, installing, and repairing metal components using gas or arc welding equipment.

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

**11.2.1.5. Other.** N/A

### **11.2.2. Training Sources/Resources.**

**11.2.2.1.** CDC 3E351 A, B, and C, Structural Journeyman.

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

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

### **11.2.3. Implementation.**

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

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

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

## **11.3. Craftsman (7-Level) Training Requirements.**

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

**11.3.1.1. Knowledge.** Knowledge is mandatory of:

**11.3.1.1.1.** Use and capacity of construction equipment.

**11.3.1.1.2.** Specifications and characteristics of reinforcing materials.

**11.3.1.1.3.** Properties of wood and wood products.

**11.3.1.1.4.** Preventing, identifying, and eradicating surface corrosion of metals.

**11.3.1.2. Education.**

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

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

**11.3.1.2.3.** 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.

### **11.3.1.3. Training.**

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

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

**11.3.1.3.3.** 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.

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

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

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

**11.3.1.3.7.** Completion of Low Slope Roof Maintenance and Repair course J3AZP3E351 001, instructed at NCBC Gulfport MS is desirable.

**11.3.1.3.8.** Completion of Fabricating Welded Pipe Joints course J3AZP3E351 003, instructed at NCBC Gulfport MS is desirable.

**11.3.1.3.9.** Completion of Bare Base Structures Erection course J4AZT3E371 001, instructed by Mobile Training Team (MTT) is optional.

### **11.3.1.4. Experience.**

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

**11.3.1.4.2.** Planning of masonry and carpentry.

**11.3.1.4.3.** Planning prefabricated structures.

**11.3.1.4.4.** Plan installation, fabrication, repairs, welding, or forging of metal components.

**11.3.1.4.5.** Plan construction, erection, maintenance and repair of buildings and heavy structural projects.

**11.3.1.4.6.** Minimum 18 months on-the-job training (12 months for re-trainees) before award of 7- skill level.

**11.3.1.5. Other.** N/A

### **11.3.2. Training Sources/Resources.**

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

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

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

**11.3.2.4.** Course Low Slope Roof Maintenance and Repair J3AZP3E351 001, instructed at NCBC Gulfport MS.

**11.3.2.5.** Course Fabricating Welded Pipe Joint J3AZP3E351 002, instructed at NCBC Gulfport MS.

**11.3.2.6.** Course Metals Layout, Fabrication, and Welding J3AZP3E351 003, instructed at NCBC Gulfport MS.

**11.3.2.7.** Course Bare Base Erection J4AZP3E371 001 (MTT course) instructed out of NCBC Gulfport MS.

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

### **11.3.3. Implementation.**

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

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

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

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

### **11.4.1. Specialty Qualification.**

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

**11.4.1.1.1.** Air Force training programs.

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

**11.4.1.1.3.** Interpretations and applications of maintenance and work force management.

**11.4.1.1.4.** General structural construction and repair methods and procedures, including use and capacity of construction equipment.

**11.4.1.1.5.** Nomenclature and use of building materials.

**11.4.1.1.6.** Carpentry, masonry, and metal fabricating techniques.

**11.4.1.2. Education.**

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

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

**11.4.1.4. Experience.**

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

**11.4.1.4.2.** Directing functions such as erecting structures or building maintenance.

**11.4.1.5. Other.** N/A

**11.4.2. Training Sources/Resources.**

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

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

**11.4.3. Implementation.**

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

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

**11.5. Civil Engineer Manager.**

**11.5.1. Specialty Qualification.**

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

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

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

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

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

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

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

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

**11.5.1.3. Training.** N/A

**11.5.1.4. Experience.**

**11.5.1.4.1.** Possess qualifications in feeder specialty (3E391) prior to award of Civil Engineer Manager code 3E000.

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

**11.5.1.5. Other.** N/A

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

**11.5.3. 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

**12. 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.

### **12.1. Equipment Constraints:**

#### **12.1.1. Constraints.**

STS item(s) 39.2.2.1.1., 39.2.2.1.2., 39.2.2.1.5., 39.2.2.1.6.,  
TEMPER Tent (3 ea)

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

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

#### **13.1. Constraints.**

**13.1.1. Impact.** Training will remain constrained until additional resources identified in paragraph 12.1.1 are received.

**13.1.2. Resources Required.** Resource constraints are identified in Paragraph 12.1.1.. The constrained course will be implemented until required resources are received.

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

**13.2. OPR/Target Completion Date.** 366 TRS/TRRT will implement revised training requirements with class beginning 25 July 02.

### **14. Journeyman (5-Level) Training.** AFQTP development for all core tasks.

#### **14.1. Constraints.** None.

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

**14.1.2. Resources Required.** None.

**14.1.3. Action Required.** None.

**14.2. Action Required.** HQ AFCESA/CEOF held workshops to develop required AFQTPs. Completed: May 2000.

### **15. Craftsman (7-Level) Training.** AFQTPs

#### **15.1. Constraints.** None.

**15.1.1. Impact.** Required training will be available upon implementation of

this CFETP.

**15.1.2. Resources Required.** None.

**15.1.3. Action Required.** None.

**15.2. Action Required.** HQ AFCESA/CEOF held workshops to develop required AFQTPs. Completed: May 2000.

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

## **SECTION E - TRANSITION TRAINING GUIDE**

**17. “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 Structural Apprentice course with class beginning 25 Jul 02 and graduating 06 Dec 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.



**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:** AFQTPs 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](http://www.afcesa.af.mil)) for most current AFQTPs.

**Note 5:** Annotate AFQTP completion on the AFQTP Documentation Record (available on the AFCESA home page) 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)-AFQTP" to denote AFQTP completion.

1. Task Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate					
		A	B	C	D	E	A		B		C	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level (1) Course	(2)	5 Skill Level (1) CDC	(2) AFQTP	7 Skill Level (1) RAM	(2) Course
<b>1. CE ORGANIZATION AND CAREER FIELD STRUCTURE</b> <b>TR: AFDD 2-4.2; AFIs 10-209, 10-210, 10-211, 32-1022, 36-2101, 38-101, 51-903; AFMAN 36-2108; AFPAMs 32-1004v.1-6: 32-1005</b>												
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) <b>TR: DoDD 5000.1</b>												
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	

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1. Task Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate					
		A	B	C	D	E	A		B		C	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level		5 Skill Level		7 Skill Level	
					(1) Course	(2)	(1) CDC	(2) AFQTP	(1) RAM	(2) Course		
1.5.7. Requesting contract services											b	2c
1.5.8. Requesting Simplified Acquisition of Base Engineering Requirements (SABER) contract											B	C
<b>2. SPECIFIC OPSEC VULNERABILITIES</b> <b>TR: AFI 10-1101</b>							A					
<b>3. PRACTICE COMPUTER SECURITY</b> <b>TR: AFSSI 5102</b>							A				A	1b
<b>4. SUPERVISION</b> <b>TR: AFMAN 36-2108; AFIs 36-2201; DoDD 5500.7</b>												
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> <b>TR: AFIs 36-2101, 36-2201; AFMAN 36-2108; AFPAM 36-2247</b>												
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

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**3E3X1**

1. Task Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate					
		A	B	C	D	E	A		B		C	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level		5 Skill Level		7 Skill Level	
					(1) Course	(2)	(1) CDC	(2) AFQTP	(1) RAM	(2) Course		
5.2.4. Monitor training effectiveness of:												
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
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; Chemicals in Your Community (EPA 550-K-93-003); EO 12856												
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; AFMAN 23-110												
7.1. Customer relationships							A		B		B	
7.2. Work identification and authorization									A		B	
7.3. Plan work requirements									a		b	2b
7.4. Plan logistics support (CEMAS, BOM)									a		b	2b
7.5. IMPAC Program											A	B
7.6. Maintain recurring work program									a		b	2b

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1. Task Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate					
		A	B	C	D	E	A		B		C	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level		5 Skill Level		7 Skill Level	
							(1) Course	(2)	(1) CDC	(2) AFQTP	(1) RAM	(2) Course
7.7. Scheduling/time accounting								a		b	2b	
7.8. Warranty and Guarantee Program								A		B		
7.9. Property Accountability								B			B	
7.10. Base Comprehensive Plan										A		
7.11. Legal limits								A				
7.12. Mark "As Built " Drawings										b	2b	
7.13. Reimbursements procedures								A		B		
7.14. CE Specific Automated Systems (Computer) Capability												
7.14.1. Perform inputs								a		b	1a	
7.14.2. Maintain files								a		b	1a	
7.14.3. Develop automated reports								a		b	1a	
7.14.4. Extract automated reports								a		b	1a	
7.14.5. Perform automated data analysis								a		b	1a	
7.15. Host Tenant and Interservice Agreements										A		
7.16. 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							A	B				
9.3. Lead-based paint (LBP) hazard TR: 29-CFR 1926.62; Working With Lead-based Paint: Facts and Information Applicable to Air Force Facilities							B					
9.4. Fire extinguisher training							A					
<b>10. PUBLICATIONS</b> <b>TR: AFI 33-360;</b> <b>AFPAMs 32-1004 v1-6; 32-1005</b>												
10.1. Military							A	B				
10.2. Commercial							A	B				
10.3. Engineering Technical Letters (ETL)							A	B				

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1. Task Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate					
		A	B	C	D	E	A		B		C	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level		5 Skill Level		7 Skill Level	
							(1) Course	(2)	(1) CDC	(2) AFQTP	(1) RAM	(2) Course
<b>11. AFOSH training/standards for AFS</b>												
11.1. Utilize Material Safety Data Sheet (MSDS)						A		b				
11.2. Initial Federal Hazard Communication Training Program (FHCTP) TR: DoD 6050.5-G-1; AFOSH 121-21; AFI 91-302						B						
<b>12. AFS SPECIFIC PUBLICATIONS TR: TO's 0-1-01, 0-1-02, 00-2-1, 00-5-1, 00-5-2, 00-20-7</b>												
12.1. Use indexes to locate numbers and titles of manuals, regulations, technical orders, and forms								B				
<b>12.2. Locate desired information in</b>												
12.2.1. Standard publications								C				
12.2.2. Technical orders								C				
12.2.3. National Electrical Code (NFPA 70)												
12.2.4. National Electrical Safety Code												
12.3. Use technical publications to perform maintenance, operations, and troubleshooting						A		C				
<b>13. AFS Specific Safety TR: AFI 91-302; AFOSHs 127-4, 127-5, 127-7, 127-9, 127-12, 127-31, 127-47, 161-4; NIOSHs 78-193B; TO's 32-1-101, 32-1-151, 34W4-1-5</b>												
13.1. AF Occupational Safety and Health Program						B		B				
<b>13.2. Hazard abatement</b>												
13.2.1. Identify safety hazards						b		b				
13.2.2. Report safety hazards						b		b				
13.2.3. Correct safety hazards						b		b				
<b>13.3. Exercise safety precautions when:</b>												
13.3.1. Operating power tools and equipment						2b		B				
13.3.2. Using hand tools						2b		B				
13.3.3. Working from heights						2b		B				
13.3.4. Lifting manually						3c		b				

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1. Task Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate					
		A	B	C	D	E	A		B		C	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level		5 Skill Level		7 Skill Level	
							(1) Course	(2)	(1) CDC	(2) AFQTP	(1) RAM	(2) Course
13.3.5. Handling compressed gas containers	*						2b		c			
13.3.6. Handling corrosive materials associated with Structural AFS							2b		b			
13.3.7. Perform Lockout/Tagout procedures							b		b			
13.4. Hazards and precautions associated with AFS							A		B			
13.5. Hazardous material												
13.5.1. Asbestos awareness							B		B			
13.5.2. Hazardous waste awareness							B		B			
13.5.3. Hazard communication							B		B			
13.5.4. Lead base paint							B		B			
13.5.5. Insulation							b		B			
<b>14. PROJECT PLANNING</b>												
14.1. Perform planning functions TR: AFI 32-1021; AFMs 67-1 (Vol 2, Part 2), 85-58; NAVEDTRA 12520, 12521, Builders 3 and 2, Vol. 1 & 2, NAVEDTRA 10653-G, Steelworker 3 and 2; <u>Modern Carpentry, Masonry and Metalworking; Welding Skills; Carpentry, 3rd Edition</u>												
14.1.1. Use estimating standards									B			
14.1.2. Special precautionary measures such as: AF Forms 103 and 592									b			
14.1.3. Sketch working drawings							1a		b			
14.2. Use construction drawings for: TR: TM 5-581B; NAVEDTRA 12520, 12521, Builders 3 and 2, Vol. 1 & 2; NAVEDTRA 10653-G, Steelworker 3 and 2; <u>Modern Carpentry, Masonry and Metalworking; Welding Skills; Carpentry, 3rd Edition</u>												
14.2.1. Carpentry	**						2b		b			
14.2.2. Masonry	**						2b		b			
14.2.3. Metal	**						2b		b			
14.2.4. Low-slope roof systems									b			

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1. Task Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate					
		A	B	C	D	E	A		B		C	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level		5 Skill Level		7 Skill Level	
							(1) Course	(2)	(1) CDC	(2) AFQTP	(1) RAM	(2) Course
14.3. Identify type of material required for: TR: NAVEDTRA 12520, 12521, Builders 3 and 2, Vol. 1 & 2; NAVEDTRA 10653-G, Steelworker; Modern Carpentry, Masonry and Sheetmetal; Welding Skills; Carpentry, 3rd Edition												
14.3.1. Carpentry	**					A		B				
14.3.2. Masonry	**					A		B				
14.3.3. Low-slope roof systems TR: AFI 32-1051; AFM 91-31								B				
14.3.4. Metal	**					A		B				
14.4. Establish quantity of material required for: TR: NAVEDTRA 12520, 12521, Builders 3 and 2, Vol. 1 & 2; Modern Carpentry, Masonry and Metalworking; Welding Skills; Carpentry, 3rd Edition												
14.4.1. Carpentry	**					2b		b				
14.4.2. Masonry	**					2b		b				
14.4.3. Low-slope roof TR: AFI 32-1051; AFM 91-31								B				
14.4.4. Metal	**					2b		b				
<b>15. TOOLS AND EQUIPMENT</b> TR: T.O.s 32-1-101, 32-1-151; NAVEDTRA 12520, 12521, Builders 3 and 2, Vol. 1 & 2, NAVEDTRA 10653-G, Steelworker 3 and 2; Modern Carpentry, Masonry and Metalworking; Welding Skills; Carpentry, 3rd Edition												
15.1. Use Handtools						2b		b				
15.2. Portable power tools												
15.2.1. Circular saw						2b		c				
15.2.2. Electric drill						2b		c				
15.2.3. Reciprocating saw						2b		c				
15.2.4. Power miter saw						2b		c				
15.2.5. Frame and trim saw						2b		c				
15.2.6. Rotary hammer						2b		c				
15.2.7. Hand grinder						2b		c				
15.2.8. Portable band saw						2b		c				
15.2.9. Shop installed equipment						2b		b				
15.2.10. Powder actuated tools TR: Modern Carpentry						2b		c				
15.2.11. Laser level								b				

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1. Task Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate					
		A	B	C	D	E	A		B		C	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level		5 Skill Level		7 Skill Level	
							(1) Course	(2)	(1) CDC	(2) AFQTP	(1) RAM	(2) Course
15.3. Maintain												
15.3.1. Handtools						2b		b				
15.3.2. Portable power tools						2b		b				
15.3.3. Shop installed equipment						2b		b				
15.3.4. Laser level								B				
15.4. Erect scaffolds and ladders TR: NAVEDTRA 12520, 12521, Builders 3 and 2, Vol. 1 & 21; <u>Modern Carpentry and Masonry</u>								b				
15.5. Operate mobile work platforms								b				
<b>16. CONCRETE STRUCTURES</b> TR: NAVEDTRA 12520, 12521, Builders 3 and 2, Vol. 1 & 2; <u>Modern Carpentry and Masonry; Carpentry, 3rd Edition</u>												
16.1. Prepare subgrade						A		b				
16.2. Concrete reinforcement												
16.2.1. Install reinforcing steel	*					1a		b				
16.2.2. Install wire mesh						1a		b				
16.3. Construct forms												
16.3.1. Footings						a		b				
16.3.2. Piers						a		b				
16.3.3. Columns						a		b				
16.3.4. Slabs	*					2b		b				
16.3.5. Steps						A		b				
16.3.6. Ramps						A		b				
16.3.7. Walls						a		b				
16.3.8. Earth						a		b				
16.4. Construct batter boards						a		b				
16.5. Install forms	*					1a		b				
16.6. Install expansion and contraction joints						a		b				
16.7. Remove forms						1a		b				
16.8. Mix concrete												
16.8.1. Mix ingredients to meet project specifications						1a		b				
16.8.2. Use admixtures								B				
16.9. Place concrete in forms	*					2b		b				
16.10. Consolidate concrete						2b		b				
16.11. Install anchor bolts						2b		b				
16.12. Finish concrete	*					2b		b				
16.13. Cure concrete						b		b				
16.14. Inspect concrete for defects						A		b				
16.15. Repair concrete						A		b				

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1. Task Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate					
		A	B	C	D	E	A		B		C	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level		5 Skill Level		7 Skill Level	
							(1) Course	(2)	(1) CDC	(2) AFQTP	(1) RAM	(2) Course
<b>17. STRUCTURAL LAYOUT/ FRAMING COMPONENTS</b> TR: NAVEDTRA 12520, 12521, Builders 3 and 2, Vol. 1 & 2; <u>Modern Carpentry and Masonry ; Carpentry, 3rd Edition</u>												
17.1. Layout , construct, and install												
17.1.1. Floors	*					2b		b				
17.1.2. Stair members						1a		b				
17.1.3. Walls												
17.1.3.1. Wooden Studs	*					2b		b				
17.1.3.2. Metal Studs						2b		b				
17.1.4. Ceilings						1a		b				
17.1.5. Roofs	*					1a		b				
17.1.6. Trusses						a		b				
17.2. Repair / Replace												
17.2.1. Floors						b		b				
17.2.2. Stair members						a		b				
17.2.3. Walls												
17.2.3.1. Wooden Studs						b		b				
17.2.3.2. Metal Studs						b		b				
17.2.4. Ceilings						a		b				
17.2.5. Roofs						a		b				
17.2.6. Trusses						a		b				
17.3. Inspect												
17.3.1. Floors								C				
17.3.2. Stair members								C				
17.3.3. Walls								C				
17.3.4. Ceilings								C				
17.3.5. Roofs								C				
17.3.6. Trusses								C				
<b>18. EXTERIOR CONSTRUCTION AND FINISHING</b> TR: NAVEDTRA 12520, 12521, Builders 3 and 2, Vol. 1 & 2; <u>Modern Carpentry, Masonry and Metalworking; Carpentry, 3rd Edition</u>												
18.1. Install												
18.1.1. Metal siding								b				
18.1.2. Wood siding						1a		b				
18.2. Repair												
18.2.1. Metal siding						1a		b				
18.2.2. Wood siding						A		b				
18.3. Install vents						B		b				
18.4. Install louvers						B		b				
18.5. Install exterior trim						1a		b				

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1. Task Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate					
		A	B	C	D	E	A		B		C	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level		5 Skill Level		7 Skill Level	
							(1) Course	(2)	(1) CDC	(2) AFQTP	(1) RAM	(2) Course
18.6. Construct wooden fences TR: Homeowner's Complete Outdoor Building Book												
18.7. Replace screen fabric								b				
18.8. Replace glass								b				
18.9. Cut glass								c				
18.10. Cut acrylic sheets								b				
<b>19. MASONRY CONSTRUCTION AND MAINTENANCE</b> TR: NAVEDTRA 12520, 12521, Builders 3 and 2, Vol. 1 & 2; <u>Modern Carpentry and Masonry; Carpentry, 3rd Edition</u>												
19.1. Mortar												
19.1.1. Determine type of mortar mix required							1a		b			
19.1.2. Mix mortar	*						2b		b			
19.2. Lay masonry units												
19.2.1. Brick									b			
19.2.2. Block	*						1a		b			
19.2.3. Structural tile									b			
19.3. Install reinforcement							a		b			
19.4. Construct control joints							B		b			
19.5. Construct window and door openings												
19.5.1. Brick									b			
19.5.2. Block							A		b			
19.5.3. Structural tile									b			
19.6. Repair masonry units									b			
<b>20. ROOFING SYSTEMS</b> TR: AFI 32-1051; AFMs 85-52, 91-31; NAVEDTRA 12520, 12521, Builders 3 and 2, Vol. 1 & 2; <u>Modern Carpentry and Metalworking ; Carpentry, 3rd Edition.</u>												
20.1. Install low slope roof systems												
20.1.1. Conventional												
20.1.1.1. Built-up roof							a		b			
20.1.1.2. Metal							a		b			
20.1.2. Non-conventional												
20.1.2.1. Elastomeric									B			
20.1.2.2. Thermoplastic									B			
20.1.2.3. Modified bitumen												
20.2. Repair low slope roof systems												
20.2.1. Conventional												

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1. Task Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate					
		A	B	C	D	E	A		B		C	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level		5 Skill Level		7 Skill Level	
							(1) Course	(2)	(1) CDC	(2) AFQTP	(1) RAM	(2) Course
20.2.1.1. Built-up roof						a		B				
20.2.1.2. Metal								B				
20.2.2. Non-conventional												
20.2.2.1. Elastomeric								B				
20.2.2.2. Thermoplastic												
20.2.2.3. Modified bitumen												
20.3. Inspect roof systems:												
20.3.1. Low slope								B				
20.3.2. Pitched								B				
20.4. Pitched roof systems:												
20.4.1. Install												
20.4.1.1. Tile												
20.4.1.2. Composition shingles						2b		b				
20.4.1.3. Composition roll roofing						a		b				
20.4.1.4. Metal						a		b				
20.4.2. Spot replace												
20.4.2.1. Tile												
20.4.2.2. Composition shingles						a		b				
20.4.2.3. Composition roll roofing						a		b				
20.4.2.4. Metal						a		b				
20.5. Gutter systems												
20.5.1. Fabricate								b				
20.5.2. Install						2b		b				
20.5.3. Repair								b				
20.6. Flashing												
20.6.1. Fabricate						2b		b				
20.6.2. Install						2b		b				
20.6.3. Repair								b				
<b>21. FINISH CARPENTRY</b>												
<b>TR: NAVEDTRA 12520, 12521, Builders 3 and 2, Vol. 1 &amp; 2; Modern Carpentry and Masonry; Carpentry, 3rd Edition</b>												
21.1. Install wall paneling						a		b				
21.2. Gypsum board												
21.2.1. Install	*					3c		c				
21.2.2. Tape and finish						3c		c				
21.2.3. Patch	*					3c		c				
21.3. Install floor coverings												
21.3.1. Asphalt/Vinyl						2b		b				
21.3.2. Wood								b				
21.3.3. Carpet								b				
21.4. Repair floor coverings												
21.4.1. Asphalt/Vinyl						b		b				
21.4.2. Wood								b				
21.4.3. Carpet								b				
21.5. Install ceiling systems												

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1. Task Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate					
		A	B	C	D	E	A		B		C	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level		5 Skill Level		7 Skill Level	
							(1) Course	(2)	(1) CDC	(2) AFQTP	(1) RAM	(2) Course
21.5.1. Acoustical						a		b				
21.5.2. Suspended ceiling						2b		b				
21.6. Repair / Replace ceiling systems												
21.6.1. Acoustical						A		b				
21.6.2. Suspended ceiling						b		b				
21.7. Raised flooring system TR: AFM 88-4												
21.7.1. Install components												
21.7.2. Repair components												
21.8. Interior trim												
21.8.1. Install						2b		b				
21.8.2. Repair						b		b				
22. PLASTER/STUCCO TR: NAVEDTRA 12520, 12521, Builders 3 and 2, Vol. 1 & 2; Modern Masonry												
22.1. Apply												
22.1.1. Plaster								A				
22.1.2. Stucco								A				
22.2. Patch												
22.2.1. Plaster								A				
22.2.2. Stucco								A				
23. MASONRY WALL/FLOOR TILE INSTALLATION AND MAINTENANCE TR: NAVEDTRA 12520, 12521, Builders 3 and 2, Vol. 1 & 2; Modern Masonry												
23.1. Prepare surface to receive adhesive						1a		b				
23.2. Lay out areas to receive tile						1a		b				
23.3. Apply adhesive method						1a		b				
23.4. Apply thin set method						a		b				
23.5. Set tile						1a		b				
23.6. Cut tile						1a		b				
23.7. Install fixtures								b				
23.8. Apply grout						1a		b				
23.9. Replace tile						A		b				

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1. Task Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate					
		A	B	C	D	E	A		B		C	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level		5 Skill Level		7 Skill Level	
							(1) Course	(2)	(1) CDC	(2) AFQTP	(1) RAM	(2) Course
<b>24. APPLY PROTECTIVE COATINGS</b> TR: NAVEDTRA 12520, 12521, Builders 3 and 2, Vol. 1 & 2; <u>Modern Carpentry, Masonry, Metalworking and Welding Skills; Carpentry, 3rd Edition</u>							A		b			
<b>25. PERSONNEL DOOR AND WINDOW MAINTENANCE</b> TR: AFMs 85-46, 85-59; NAVEDTRA 12520, 12521, Builders 3 and 2, Vol. 1 & 2; <u>Modern Carpentry, Masonry and Metalworking; Carpentry, 3rd Edition</u>												
25.1. Install personnel door units												
25.1.1. Wood	*					2b		b				
25.1.2. Metal	*					2b		b				
25.1.3. Glass								b				
25.2. Repair personnel door units												
25.2.1. Wood	*					b		b				
25.2.2. Metal	*					b		b				
25.2.3. Glass								b				
25.3. Install window units						b		b				
25.4. Repair window units						b		b				
25.5. Personnel door hardware												
25.5.1. Install door closures	*					b		b				
25.5.2. Adjust door closures						b		b				
25.5.3. Install locking devices												
25.5.3.1. Cylinder locks	*					2b		b				
25.5.3.2. Mortise locks								b				
25.5.3.3. Cipher locks								b				
25.5.3.4. Panic hardware/exit device	*					b		b				
25.5.3.5. Install hinges	*					3c		b				
<b>26. LOCKSMITHING</b> TR: AFMs 85-46, 85-59; NAVEDTRA 12520, 12521, Builders 3 and 2, Vol. 1 & 2; <u>Modern Carpentry; Carpentry, 3rd Edition</u>												
26.1. Implement master key system								b				
26.2. Cut keys								c				
26.3. Maintain locking devices												
26.3.1. Cylinder locks						a		c				
26.3.2. Mortise locks								b				
26.3.3. Cipher locks								b				

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1. Task Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate					
		A	B	C	D	E	A		B		C	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level		5 Skill Level		7 Skill Level	
							(1) Course	(2)	(1) CDC	(2) AFQTP	(1) RAM	(2) Course
26.3.4. Panic hardware						a		c				
26.3.5. File Cabinets								B				
26.3.6. Safes								B				
26.3.7. Vaults								B				
<b>27. WOODWORKING</b> TR: NAVEDTRA 12520, 12521, Builders 3 and 2, Vol. 1 & 2; <u>Modern Carpentry; Carpentry, 3rd Edition</u>												
27.1. Install countertops								b				
27.2. Install cabinet hardware								b				
27.3. Apply laminated plastics								b				
27.4. Install cabinets								b				
<b>28. ENERGY CONSERVING MATERIAL</b> TR: NAVEDTRA 12520, 12521, Builders 3 and 2, Vol. 1 & 2; <u>Modern Carpentry; Carpentry, 3rd Edition</u>												
28.1. Install thermal insulation						b		c				
28.2. Apply caulking compound						b		b				
28.3. Install weather-stripping						b		b				
<b>29. FABRICATE AND INSTALL METAL/FIBERGLASS COMPONENTS</b> TR: NAVEDTRA 10653-G, <u>Steelworker 3 and 2; Modern Metalworking and Welding Skills</u>												
29.1. Assemble and install metal components using appropriate fasteners						2b		c				
29.2. Lay out metal components using:												
29.2.1. Radial line development						2b		b				
29.2.2. Parallel line development	*					2b		b				
29.2.3. Triangulation development						2b		b				
29.3. Fabricate												
29.3.1. Duct systems												
29.3.1.1. Rectangular						2b		b				
29.3.1.2. Round						2b		b				
29.3.2. Stacks												
29.3.2.1. Rectangular						2b		b				
29.3.2.2. Round						2b		b				
29.4. Install												
29.4.1. Duct systems												

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1. Task Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate					
		A	B	C	D	E	A		B		C	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level		5 Skill Level		7 Skill Level	
							(1) Course	(2)	(1) CDC	(2) AFQTP	(1) RAM	(2) Course
29.4.1.1. Sheetmetal ducts	*						2b		b			
29.4.1.2. Fiberglass ductboard							A					
29.4.2. Stacks							b		b			
29.4.3. Ventilators							b		b			
29.4.4. Fixed utility equipment												
29.4.4.1. Table tops									b			
29.4.4.2. Counter tops									b			
29.4.4.3. Overhead canopies									b			
29.4.4.4. Hoods							a		b			
29.4.4.5. Doors									b			
<b>30. VEHICLE AND EQUIPMENT FACILITY DOORS</b> <b>TR: AFMs 85-46, 85-59</b>												
30.1. Inspect metal doors	**						B		b			
30.2. Install doors												
30.2.1. Overhead doors							b		b			
30.2.2. Roll-up							b		b			
30.3. Maintain structural components												
30.3.1. Overhead doors							2b		b			
30.3.2. Roll-up doors							2b		b			
30.4. Adjust door counterbalance mechanisms							A		b			
30.5. Maintain mechanical components of door operators												
30.5.1. Electric							b		b			
30.5.2. Pneumatic							b		b			
30.6. Install manual gates							A		b			
30.7. Maintain gates												
30.7.1. Manual							1a		b			
30.7.2. Mechanical							a		b			
<b>31. SOFT SOLDERING</b> <b>TR: TO's 32-1-101, 32-1-151, 34W4-1-5, 34W4-1-7; NAVEDTRA 10653-G, Steelworker 3 and 2; Welding Skills</b>												
31.1. Principles of soldering							B		B			
31.2. Select the type of solder and flux for a specific job							2b		b			
31.3. Prepare metal for soldering												
31.3.1. Mechanically							2b		c			
31.3.2. Chemically							2b		c			
31.4. Assemble and light soldering torch							2b		c			
31.5. Solder like metals												
31.5.1. Copper							2b		c			

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1. Task Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate					
		A	B	C	D	E	A		B		C	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level		5 Skill Level		7 Skill Level	
							(1) Course	(2)	(1) CDC	(2) AFQTP	(1) RAM	(2) Course
31.5.2. Galvanized						2b		c				
31.5.3. Corrosion resistant steel								b				
31.6. Solder dissimilar metals								b				
31.7. Maintain soft soldering equipment						2b		B				
<b>32. OXYACETYLENE WELDING</b> <b>TR: AFI 121-105; AFOSH 127-5;</b> <b>T.O.s 34W4-1-5; NAVEDTRA</b> <b>10653-G, Steelworker 3 and 2;</b> <b>Modern Metalworking and Welding</b> <b>Skills</b>												
32.1. Principles of oxyacetylene welding						B		B				
32.2. Select oxyacetylene welding equipment and tools						2b		b				
32.3. Perform shop tests to identify metals								b				
32.4. Assemble and test oxyacetylene equipment for gas leaks	*					3c		b				
32.5. Select the tip and filler rod for a specific job						2b		b				
32.6. Adjust pressure regulators						3c		b				
32.7. Light oxyacetylene torch and adjust flame						3c		b				
32.8. Prepare joints for welding						2b		b				
32.9. Use oxyacetylene welding equipment to weld carbon steel												
32.9.1. Butt joint positions												
32.9.1.1. Flat						2b		b				
32.9.1.2. Horizontal								b				
32.9.1.3. Vertical								b				
32.9.1.4. Overhead								b				
32.9.2. Lap joint positions												
32.9.2.1. Flat						2b		b				
32.9.2.2. Horizontal								b				
32.9.2.3. Vertical								b				
32.9.2.4. Overhead								b				
32.9.3. Tee joint positions												
32.9.3.1. Flat						2b		b				
32.9.3.2. Horizontal								b				
32.9.3.3. Vertical								b				
32.9.3.4. Overhead								b				
32.9.4. Edge joint positions												
32.9.4.1. Flat								b				
32.9.4.2. Horizontal								b				
32.9.4.3. Vertical								b				

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1. Task Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate					
		A	B	C	D	E	A		B		C	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level		5 Skill Level		7 Skill Level	
							(1) Course	(2)	(1) CDC	(2) AFQTP	(1) RAM	(2) Course
32.9.4.4. Overhead								b				
32.10. Use oxyacetylene equipment to cut metal	*					3c		b				
32.11. Use oxyacetylene welding equipment to fabricate metal components								B				
32.12. Maintain oxyacetylene welding equipment						2b		b				
<b>33. SILVER BRAZING AND BRAZE WELDING</b> TR: AFOSH 127-5; T.O.s 34W4-1-5, 34W4-1-7, 34W4-1-8; NAVEDTRA 10653-G, Steelworker 3 and 2; <b>Welding Skills</b>												
33.1. Principles of												
33.1.1. Silver brazing						A		B				
33.1.2. Braze welding						A		B				
33.2. Select the tip, rod, and flux												
33.2.1. Silver brazing						1a		b				
33.2.2. Braze welding						1a		b				
33.3. Use oxyacetylene equipment to:												
33.3.1. Silver braze												
33.3.1.1. Corrosion resistant steel						a		b				
33.3.1.2. Carbon steel								b				
33.3.1.3. Brass						1a		b				
33.3.1.4. Copper						1a		b				
33.3.1.5. Dissimilar metals								b				
33.3.2. Braze weld												
33.3.2.1. Ferrous castings						a		b				
33.3.2.2. Carbon steel								b				
<b>34. SHIELDED METAL ARC WELDING</b> TR: AFOSH 127-5; T.O. 34W4-1-5; NAVEDTRA 10653-G, Steelworker 3 and 2; <u>Modern Metalworking and Welding Skills</u>												
34.1. Principles of shielded metal arc welding						B		b				
34.2. Select arc welding equipment for specific tasks						2b		b				
34.3. Select the electrodes for specific welding jobs						2b		b				
34.4. Set up welding machine for a specific welding job	*					2b		b				
34.5. Prepare joints for welding	*					2b		b				

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1. Task Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate					
		A	B	C	D	E	A		B		C	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level		5 Skill Level		7 Skill Level	
							(1) Course	(2)	(1) CDC	(2) AFQTP	(1) RAM	(2) Course
34.6. Use shielded metal arc welding equipment to weld carbon steel												
34.6.1. Butt joint positions												
34.6.1.1. Flat	*					2b		b				
34.6.1.2. Horizontal						2b		b				
34.6.1.3. Vertical	*					2b		b				
34.6.1.4. Overhead								b				
34.6.2. Lap joint positions												
34.6.2.1. Flat	*					2b		b				
34.6.2.2. Horizontal						2b		b				
34.6.2.3. Vertical	*					2b		b				
34.6.2.4. Overhead								b				
34.6.3. Tee joint positions												
34.6.3.1. Flat	*					2b		b				
34.6.3.2. Horizontal						2b		b				
34.6.3.3. Vertical	*					2b		b				
34.6.3.4. Overhead								b				
34.6.4. Edge joint positions												
34.6.4.1. Flat								b				
34.6.4.2. Horizontal								b				
34.6.4.3. Vertical								b				
34.6.4.4. Overhead								b				
34.7. Fusion weld casings								b				
34.8. Perform arc cutting							b		b			
34.9. Perform arc gouging									b			
34.10. Maintain shielded metal arc welding equipment							2b		b			
<b>35. RESISTANCE WELDING</b> <b>TR: AFOSH 127-5, T.O. 34W4-1-5;</b> <b>NAVEDTRA 10653-G, Steelworker 3</b> <b>and 2; <u>Modern Metalworking and</u></b> <b>Welding Skills</b>												
35.1. Principles of resistance welding							B		B			
35.2. Select resistance welding equipment							1a		b			
35.3. Adjust the resistance welder							1a		b			
35.4. Weld joints using the resistance welder							1a		b			
35.5. Maintain resistance welding equipment							1a		b			

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1. Task Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate					
		A	B	C	D	E	A		B		C	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level		5 Skill Level		7 Skill Level	
							(1) Course	(2)	(1) CDC	(2) AFQTP	(1) RAM	(2) Course
<b>36. TUNGSTEN INERT GAS WELDING (TIG)</b> TR: AFOSH 127-5; T.O. 34W4-1-5; NAVEDTRA 10653-G, Steelworker 3 and 2; <u>Metalworking and Welding Skills</u>												
36.1. Principles and purpose of tungsten inert gas welding						B		B				
36.2. Select tungsten inert gas welding equipment for specific jobs						1a		b				
36.3. Set up welding machine for specific job						2b		b				
36.4. Use tungsten inert gas welding equipment to weld carbon steel, corrosion resistant alloy, and non-ferrous alloy												
36.4.1. Butt joint positions												
36.4.1.1. Flat						b		b				
36.4.1.2. Horizontal						b		b				
36.4.1.3. Vertical						b		b				
36.4.1.4. Overhead								b				
36.4.2. Lap joint positions												
36.4.2.1. Flat						b		b				
36.4.2.2. Horizontal						b		b				
36.4.2.3. Vertical						b		b				
36.4.2.4. Overhead								b				
36.4.3. Tee joint positions												
36.4.3.1. Flat						b		b				
36.4.3.2. Horizontal						b		b				
36.4.3.3. Vertical						b		b				
36.4.3.4. Overhead								b				
36.4.4. Edge joint positions												
36.4.4.1. Flat								b				
36.4.4.2. Horizontal								b				
36.4.4.3. Vertical								b				
36.4.4.4. Overhead								b				
36.5. Maintain tungsten inert gas equipment						2b		b				
<b>37. METALLIC INERT GAS WELDING (MIG)</b> TR: AFOSH 127-5; T.O. 34W4-1-5; NAVEDTRA 10653-G, Steelworker 3 and 2; <u>Modern Metalworking and Welding Skills</u>												
37.1. Principles and purpose of metallic inert gas welding						b		B				

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1. Task Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate					
		A	B	C	D	E	A		B		C	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level		5 Skill Level		7 Skill Level	
							(1) Course	(2)	(1) CDC	(2) AFQTP	(1) RAM	(2) Course
37.2. Select metallic inert gas welding equipment for specific jobs							1a		b			
37.3. Set up welding machine for specific job							2b		b			
37.4. Use metallic inert gas welding equipment to weld carbon steel, corrosion resistant alloy and non-ferrous alloy												
37.4.1. Butt joint positions												
37.4.1.1. Flat							b		b			
37.4.1.2. Horizontal							b		b			
37.4.1.3. Vertical							b		b			
37.4.1.4. Overhead									b			
37.4.2. Lap joint positions												
37.4.2.1. Flat							b		b			
37.4.2.2. Horizontal							b		b			
37.4.2.3. Vertical							b		b			
37.4.2.4. Overhead									b			
37.4.3. Tee joint positions												
37.4.3.1. Flat							b		b			
37.4.3.2. Horizontal							b		b			
37.4.3.3. Vertical							b		b			
37.4.3.4. Overhead									b			
37.4.4. Edge joint positions												
37.4.4.1. Flat									b			
37.4.4.2. Horizontal									b			
37.4.4.3. Vertical									b			
37.4.4.4. Overhead									b			
37.5. Maintain metallic inert gas equipment							2b		b			
<b>38. PLASMA ARC SYSTEMS</b> <b>TR: Welding Skills by RT Miller</b>												
38.1. Principles of									A			
38.2. Set up									a			
38.3. Perform cutting									a			
38.4. Maintain									a			
<b>39. AFSC SPECIFIC CONTINGENCY RESPONSIBILITIES</b> <b>TR: AFIs 10-210; 10- 211; 32-1026;</b> <b>T.O.s 35E5-6-1, 35E4-132-1,</b> <b>35E4-94-1; Army TMs</b> <b>10-8340-207-14, 10-450-200-12;</b> <b>WMP-1, Annex S; (Mar 95);</b> <b>AFPAM 10-219, Vol 1, 2, 3, 4, &amp; 5</b>												

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1. <b>Task Knowledge And Technical References</b>	2. <b>Core Tasks</b>	3. <b>Certification for OJT</b>					4. <b>Proficiency Codes Used To Indicate</b>					
		A	B	C	D	E	A		B		C	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level		5 Skill Level		7 Skill Level	
							(1) Course	(2)	(1) CDC	(2) AFQTP	(1) RAM	(2) Course
39.1. Expedient Repair and Destruction TR: AFPAM 10-219, Vol 2, 3, 4 & 5; AFI 32-1051; Home Station Training (HST) Category 1 & 2												
39.1.1. Facility repairs												
39.1.1.1. Types & extent of wartime facility damage						1a		B				
39.1.1.2. Perform damage assessment / reporting						1a		B				
39.1.1.3. Repair prioritization/ philosophy						A		B				
39.1.1.4. Quick fix techniques												
39.1.1.4.1. Roof repairs	*					1a		b				
39.1.1.4.2. Exterior walls	*					1a		b				
39.1.2. Structural shoring/bracing concepts TR: Handbook of Temporary Structures in Construction						A		b				
39.1.3. Buttressing/Hardening TR: Handbook of Temporary Structures in Construction												
39.1.3.1. Earthen						A		b				
39.1.3.2. Wooden						A		b				
39.1.4. Fences TR: AFPAM 10-219, Vol 2; AFIs 31-101 Vol 1; 31-205; 34-137; AFMAN 31-224; DoD 5100.76-M												
39.1.4.1. Fabric (chain link)												
39.1.4.1.1. Installation						A		B				
39.1.4.1.2. Repair						A		B				
39.1.4.2. Wire (barbed, concertina, steel tape)												
39.1.4.2.1. Installation						A		b				
39.1.4.2.2. Recovery						A		b				
39.1.5. Repair hardened aircraft shelter doors TR: USAFE Regulation 91-9												
39.1.5.1. Door adjustment						A		B				
39.1.5.2. Roller replacement						A		B				
39.1.6. Maintain Survivable Collective Protective Shelter (SCPS) TR: T.O. 11D3-3-3-1; AFPAM 10-219, Vol 2; AFIND 11/ HST- RTP D7, DPTP D7								A				

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1. Task Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate					
		A	B	C	D	E	A		B		C	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level		5 Skill Level		7 Skill Level	
							(1) Course	(2)	(1) CDC	(2) AFQTP	(1) RAM	(2) Course
39.1.7. Perform hard-surfacing welding TR: T.O. 34W4-1-5; Welding Skills; Army SC4940-95-B14							1a		b			
39.1.8. Airfield Paint TR: AFPAM 10-219, Vol 4; TO 35E2-6-1; AFIs 32-1042, 32-1044, 13-217; AFAM 32-1076; Army FM 5-430-00-2												
39.1.8.1. Characteristics of paint used for pavement surfaces						A		B				
39.1.8.2. Conduct striping procedures												
39.1.8.2.1. Runways	◆						2b		b			
39.1.8.2.2. Taxiways							A		b			
39.1.8.2.3. Parking Aprons							A		b			
39.1.8.3. Minimum Airfield Operating Strip (MAOS) marking system							A		b			
39.2. Perform expedient field construction												
39.2.1. Tent hardbacking TR: AFPAM 10-219, Vol 5; AFH 10-222, Vol 1; TO 35E5-6-1												
39.2.1.1. Layout & install floor	*						A		b			
39.2.1.2. Layout & erect walls	*						A		b			
39.2.1.3. Layout & install rafters	*						A		b			
39.2.2. Tent erection												
39.2.2.1. TEMPER Tent TR: AFPAM 10-219, Vol 2, 5; AFH 10-222, Vol 1; T.O. 35E5-1-6												
39.2.2.1.1. Assemble	◆						2b/b					
39.2.2.1.2. Erect	◆						2b/b					
39.2.2.1.3. Inspect							A					
39.2.2.1.4. Maintain							A					
39.2.2.1.5. Disassembly	◆						2b/b					
39.2.2.1.6. Storage	◆						2b/b					
39.2.2.2. Small Shelter System (SSS) TR: T.O. 35E5-6-11												
39.2.2.2.1. Erect							1a					
39.2.2.2.2. Inspect							1a					
39.2.2.2.3. Maintain							A					
39.2.2.2.4. Electrical							A					
39.2.2.2.5. Disassemble							1a					
39.2.2.2.6. Reconstitute							1a					
39.2.2.2.7. Environmental Control Unit (ECU)							A					

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**3E3X1**

1. Task Knowledge And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate					
		A	B	C	D	E	A		B		C	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level		5 Skill Level		7 Skill Level	
							(1) Course	(2)	(1) CDC	(2) AFQTP	(1) RAM	(2) Course
39.2.2.3. Medium Shelter System (MSS) TR: T.O. 35E5-6-21							A					
39.2.2.4. General Purpose (GP) small									b			
39.2.2.5. GP medium							A		b			
39.2.2.6. GP large									b			
39.2.3. General Purpose Shelter							A		b			
39.2.4. Expandable Shelter Container (ESC)							A		b			
39.2.5. Field Latrines							A		b			
39.2.6. Timber bridge TR: AFI 10-210; Army TM 5-260K							A		a			
39.2.7. Manhole TR: NAVEDTRA 10646 & 10647; Masons and Builders Library, Vol 1							A		a			
39.2.8. Design and construct culvert TR: AFPAM 10-219, Vol 2												
39.2.8.1. Lean-to							A		a			
39.2.8.2. Log							A		a			
39.3. Bare Base Tactical shelter repair TR: T.O.s 00-5-1, 34E4 series												
39.3.1. Dome Shelters									a			
39.3.1.1. Classify shelter damage							a		b			
39.3.1.2. Repair panel assembly							a		b			
39.3.2. Aircraft Maintenance Hanger (ACH)									a			
39.3.3. Frame Supported Tension Fabric Shelter (FSTFS)									a			
39.4. Vehicle Obstacles TR: AFPAM 10-219, Vol 2; AFH 222, Vol 3; AFMAN 32-1072												
39.5. Aircraft revetment TR: AFPAM 10-219, Vol 2; AFMAN 32-1071, 2-4005; AFDD 2-4.2; AFIs 31-101, 31-209, 31-210, 10-401, 31-301												
39.5.1. Assemble kit-type revetments												
39.5.1.1. B-1	◆						a		b			
39.5.1.2. ARMCO							a		b			
39.5.1.3. Concertainer									B			
39.5.1.4. Miscellaneous support												

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**3E3X1**

1. <b>Task Knowledge And Technical References</b>	2. <b>Core Tasks</b>	3. <b>Certification for OJT</b>					4. <b>Proficiency Codes Used To Indicate</b>					
		A	B	C	D	E	A		B		C	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level		5 Skill Level		7 Skill Level	
							(1) Course	(2)	(1) CDC	(2) AFQTP	(1) RAM	(2) Course
39.6. Rapid Runway Repair (RRR) TR: AFPAM 10-219, Vol 4; AFI 10-210; TO's 35E2-3-1; 35E2-2-7; 35E2-4-1												
39.6.1. RRR Philosophy						A						
39.6.2. Repair Procedures												
39.6.3. Crater Repair/Repair Quality Criteria						A		b				
39.6.4. AM-2 Matting						A		b				
39.6.5. Fiberglass Mat												
39.6.5.1. Assembly						A		b				
39.6.5.2. Anchor						A		b				
39.6.5.3. Reanchor						A		b				
39.6.6. Spall Repair						A		b				
39.7. Special purpose vehicle/equipment TR: T.O. 36C6, 36C14, 36A9-2, 36A2 and 36C25 series; HQ USAFE/DEM RRR Guidance (Mar 88); Rapid Runway Repair Kit (SMG Machines-ABRASIFS)												
39.7.1. General purpose vehicles (up to 14,000 GVW)												
39.7.2. 7 1/2 to 10-ton tractor-trailer truck												
39.7.3. Vacuum sweeper												
39.7.4. High Mobility Multipurpose Wheeled Vehicle (HMMWV)												
39.7.5. Dump Truck												
39.8. Medical Support TR: AFPAM 10-219, Vol 5												

**STRUCTURAL**

**3E3X1**

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) AFQTP	(1) RAM	(2) Course
39.2.2.1.1. Assemble	◆						2b/b					
39.2.2.1.2. Erect	◆						2b/b					
39.2.2.1.3. Inspect							A					
39.2.2.1.4. Maintain							A					
39.2.2.1.5. Disassembly	◆						2b/b					
39.2.2.1.6. Storage	◆						2b/b					
39.2.2.2. Small Shelter System (SSS) TR: T.O. 35E5-6-11												
39.2.2.2.1. Erect							1a					
39.2.2.2.2. Inspect							1a					
39.2.2.2.3. Maintain							A					
39.2.2.2.4. Electrical							A					
39.2.2.2.5. Disassemble							1a					
39.2.2.2.6. Reconstitute							1a					
39.2.2.2.7. Environmental Control Unit (ECU)							A					
39.2.2.3. Medium Shelter System (MSS) TR: T.O. 35E5-6-21							A					
39.2.2.4. General Purpose (GP) small									b			
39.2.2.5. GP medium							A		b			
39.2.2.6. GP large									b			
39.2.3. General Purpose Shelter							A		b			
39.2.4. Expandable Shelter Container (ESC)							A		b			
39.2.5. Field Latrines							A		b			
39.2.6. Timber bridge TR: AFI 10-210; Army TM 5-260K							A		a			
39.2.7. Manhole TR: NAVEDTRA 10646 & 10647; Masons and Builders Library, Vol 1							A		a			
39.2.8. Design and construct culvert TR: AFPAM 10-219, Vol 2												
39.2.8.1. Lean-to							A		a			
39.2.8.2. Log							A		a			
39.3. Bare Base Tactical shelter repair TR: T.O.s 00-5-1, 34E4 series												
39.3.1. Dome Shelters									a			
39.3.1.1. Classify shelter damage							a		b			
39.3.1.2. Repair panel assembly							a		b			
39.3.2. Aircraft Maintenance Hanger (ACH)									a			

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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) AFQTP	(1) RAM	(2) Course
39.3.3. Frame Supported Tension Fabric Shelter (FSTFS)									a			
39.4. Vehicle Obstacles TR: AFPAM 10-219, Vol 2; AFH 222, Vol 3; AFMAN 32-1072												
39.5. Aircraft revetment TR: AFPAM 10-219, Vol 2; AFMAN 32-1071, 2-4005; AFDD 2-4.2; AFIs 31-101, 31-209, 31-210, 10-401, 31-301												
39.5.1. Assemble kit-type revetments												
39.5.1.1. B-1	◆						a		b			
39.5.1.2. ARMCO							a		b			
39.5.1.3. Concertainer									B			
39.5.1.4. Miscellaneous support												
39.6. Rapid Runway Repair (RRR) TR: AFPAM 10-219, Vol 4; AFI 10-210; TO's 35E2-3-1; 35E2-2-7; 35E2-4-1												
39.6.1. RRR Philosophy							A					
39.6.2. Repair Procedures												
39.6.3. Crater Repair/Repair Quality Criteria							A		b			
39.6.4. AM-2 Matting							A		b			
39.6.5. Fiberglass Mat												
39.6.5.1. Assembly							A		b			
39.6.5.2. Anchor							A		b			
39.6.5.3. Reanchor							A		b			
39.6.6. Spall Repair							A		b			
39.7. Special purpose vehicle/equipment TR: T.O. 36C6, 36C14, 36A9-2, 36A2 and 36C25 series; HQ USAFE/DEM RRR Guidance (Mar 88); Rapid Runway Repair Kit (SMG Machines-ABRASIFS)												
39.7.1. General purpose vehicles (up to 14,000 GVW)												
39.7.2. 7 1/2 to 10-ton tractor-trailer truck												
39.7.3. Vacuum sweeper												

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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) AFQTP	(1) RAM	(2) Course
39.7.4. High Mobility Multipurpose Wheeled Vehicle (HMMWV)												
39.7.5. Dump Truck												
39.8. Medical Support TR: AFPAM 10-219, Vol 5												



**GENERAL CONTINGENCY**

1.  <b>Tasks, 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) SC/QTP	(1) CDC	(2) Course
40.2.3. Basic lifesaving steps												
40.2.4. Move and transport injured personnel												
<b>40.3. Field Sanitation &amp; Hygiene Measures</b> TR: AFIs 48-110, 10-210; AFDD 35; <b>ARMY FM 21-10</b>												
40.3.1. Personal hygiene measures												
40.3.2. Countermeasures												
40.3.2.1. Disease and pestilence												
40.3.2.2. Communicable diseases												
40.3.3. Sanitation requirements												
40.3.3.1. Field												
40.3.3.2. Kitchen & Mess												
<b>40.4. Self Protection from Extreme Weather</b> TR: A77; AFPAM 10-219, Vol 5; Army FM 21-76												
40.4.1. Hot weather survival techniques												
40.4.2. Cold weather survival methods												
<b>40.5. 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												
40.5.1. 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												
40.5.1.1. Combat skills												
40.5.1.2. Defensive tactics												
40.5.1.2.1. Cover and concealment												
40.5.1.2.2. Individual movement												
40.5.1.2.3. Weapons fire control												
40.5.1.2.4. Communications												
40.5.1.2.5. Field fortifications												
40.5.1.2.6. Guard placement/perimeter defense												

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**GENERAL CONTINGENCY**

1.  <b>Tasks, 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) SC/QTP	(1) CDC	(2) Course
40.5.1.2.7. Recognition code system												
40.5.2. Air Base Defense (ABD) Interface TR: AFIs 31-301, 31-702												
40.5.2.1. Ground threats												
40.5.2.2. ABD concept												
40.5.2.3. Defensive tactics												
40.5.2.4. Force movement												
40.5.2.5. Weapons and fire control												
40.5.2.6. Tactical barriers												
40.5.2.7. Fighting/Protective Positions												
40.5.3. 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												
40.5.3.1. Convoy principles												
40.5.3.1.1. Organization												
40.5.3.1.2. Command and control												
40.5.3.1.3. Vehicle preparation												
40.5.3.1.4. Security Forces interface												
40.5.3.1.5. Counter ambush techniques												
40.5.3.1.6. Defensive ambush measures												
40.5.4. 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												
40.5.4.1. Hardening/splinter protection												
40.5.4.2. Aircraft revetment TR: AFPAM 10-219, Vol 2; AFMAN 10-401 Vol 1 & 2; 32- 1071 Vols 1-3; AFDD 2-4.2; AFM 32-4005; AFIs 31-101, 31-210, 31-301												
40.5.4.2.1. Assemble kit-type revetments												
40.5.4.2.2. Impoverished revetments												
40.5.4.3. Resource dispersal												
40.5.4.4. Camouflage, Concealment, and Deception (CCD) Techniques TR: AFPAM 10-219, Vol 2 & 3												

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**GENERAL CONTINGENCY**

1.  <b>Tasks, 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) SC/QTP	(1) CDC	(2) Course	
40.5.4.5. Terrorism TR: AFI 31-210, AFPAM 10-219, Vol 2; Joint Pub 1-02													
40.5.4.5.1. Awareness													
40.5.4.5.2. Countermeasures													
40.5.4.6. 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													
40.5.4.6.1. Individual protective equipment													
40.5.4.6.2. Wartime threat / protective actions / procedures													
40.5.4.6.3. Decontaminating vehicle / equipment													
40.5.4.6.4. Decontaminate shelter entry point													
40.5.4.6.5. USAF standard alarm signals TR: AFPAM 10-219 Vol 2; AFVA 32-4011													
40.5.4.6.6. Protective shelters													
<b>40.6. 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													
40.6.1. Base denial concept													
40.6.2. Denial methods													
<b>40.7. Multi-Contingency/Warskills Training Requirements</b> TR: AFI 10-210; WMP-1, Annex S													
40.7.1. Multi-warskilling concept													
40.7.2. 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													
40.7.2.1. Contingency vehicles and equipment responsibilities													

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**GENERAL CONTINGENCY**

1.  <b>Tasks, 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) SC/QTP	(1) CDC	(2) Course
40.7.2.2. Obtain government driver's license												
40.7.2.3. Qualify on contingency vehicles												
40.7.2.4. General purpose vehicles (up to 14,000 GVW)												
<b>40.8. 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>										
40.8.1. Potential ordnance		<b>Document General Contingency Training</b>										
40.8.2. Marking procedures												
40.8.3. Reporting procedures												
40.8.4. Mass ordnance clearance												
<b>40.9. Beddown shelters</b> TR: T.O.s 35E5-6-1, 35E4-132-1, 35E4-94-1; TM 10-4500-200-13; AFI 10-219, Vol 2, 3 & 5		<b>IAW AFI 10-210</b>										
40.9.1. Bare base concept		<b>For Reference Only</b>										
40.9.2. Beddown package assets												
40.9.2.1. Harvest Eagle												
40.9.2.2. Harvest Falcon												
40.9.2.3. TEMPER Tent TR: AFPAM 10-219, Vol 2, 5; AFH 10-222, Vol 1; T.O. 35E5-6-1												
40.9.2.4. Small Shelter System (SSS) TR: TO 35E5-6-11												
<b>40.10. 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>										
40.10.1. Base Recovery concepts		<b>IAW AFI 10-210</b>										
40.10.2. Damage assessment												
40.10.3. Damage reporting												
40.10.4. Rapid Runway Repair (RRR) concept												
40.10.4.1. RRR Philosophy												
40.10.4.2. AM-2 Matting												
40.10.4.3. Fiberglass Mat												
40.10.5. Spall Repair												

## AFQTP Documentation Record For AFSC 3E3X1

- 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
<b>13.</b>	<b>AFS SPECIFIC SAFETY</b> Ref: AFQTP Module 13 – AFS SPECIFIC SAFETY					
13.3.5	Handling compressed gas containers	*				
<b>14.</b>	<b>PROJECT PLANNING</b> Ref: AFQTP Module 14 – PROJECT PLANNING					
14.2.1.	Use Construction drawings for: Carpentry	**				
14.2.2.	Use Construction drawings for: Masonry	**				
14.2.3.	Use Construction drawings for: Metal	**				
14.3.1.	Identify type of material required for: Carpentry	**				
14.3.2.	Identify type of material required for: Masonry	**				
14.3.4.	Identify type of material required for: Metal	**				
14.4.1.	Establish quantity of material required for: Carpentry	**				
14.4.2.	Establish quantity of material required for: Masonry	**				

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
14.4.4.	Establish quantity of material required for: Metal	*				
<b>16.</b>	<b>CONCRETE STRUCTURES</b> Ref: AFQTP MODULE 16 – CONCRETE STRUCTURES					
16.2.1.	Concrete reinforcement: Install reinforcing steel	*				
16.3.4.	Construct forms: Slabs	*				
16.5	Construct forms: Install forms	*				
16.9.	Place concrete in forms	*				
16.12.	Finish concrete	*				
<b>17.</b>	<b>STRUCTURAL LAYOUT/ FRAMING COMPONENTS</b> Ref: AFQTP MODULE 17 – STRUCTURAL LAYOUT/FRAMING COMPONENTS					
17.1.1.	Layout, construct, and install: Floors	*				
17.1.3.1.	Layout, construct, and install: Wooden Studs)	*				
17.1.5.	Layout, construct, and install: Roofs	*				
<b>19.</b>	<b>MASONRY CONSTRUCTION AND MAINTENANCE</b> Ref: AFQTP Module 19 – MASONRY CONSTRUCTION AND MAINTENANCE					
19.1.2.	Mix Mortar	*				
19.2.2.	Lay masonry units: Block	*				
<b>21.</b>	<b>FINISH CARPENTRY</b> Ref: AFQTP Module 21 – FINISH CARPENTRY					



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
30.1	Inspect metal doors	**				
<b>32. OXYACETYLENE WELDING</b> <b>Ref: AFQTP Module 32 – OXYACETYLENE WELDING</b>						
32.4.	Assemble and test oxyacetylene equipment for gas leaks	*				
32.10.	Use oxyacetylene equipment to cut metal	*				
<b>34. SHIELDED METAL ARC WELDING</b> <b>Ref: AFQTP Module 34 - SHIELDED METAL ARC WELDING</b>						
34.4.	Set up welding machine for a specific welding job	*				
34.5.	Prepare joints for welding	*				
34.6.1.1.	Butt joint positions: Flat	*				
34.6.1.3.	Butt joint positions: Vertical	*				
34.6.2.1.	Lap joint positions: Flat	*				
34.6.2.3.	Lap joint positions: Vertical	*				
34.6.3.1.	Tee joint positions: Flat	*				
34.6.3.3.	Tee joint positions: Vertical	*				

**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	8
TASK NUMBER	TASKS, KNOWLEDGE, AND TECHNICAL REFERENCES	♦ SEE NOTE 1 * 5 LEVEL ** 7 LEVEL	START DATE	COMPLETE DATE	TRAINEE'S INITIALS	TRAINER'S INITIALS	CerTest COMP DATE
39.	<b>AFSC SPECIFIC CONTINGENCY RESPONSIBILITIES</b> Ref: AFQTP MODULE 39 – AFSC SPECIFIC CONTINGENCY RESPONSIBILITIES; Contingency Airfield Marking Procedures (CD-ROM) Version 1.0 May 99; TEMPER Tent (CD-ROM) Version 1 3E3X1-37.2.2.1C; Revetments (CD-ROM) Version 1.0 Mar 99						
39.1.1.4.1.	(Quick fix techniques): Roof repairs	*					
39.1.1.4.2.	(Quick fix techniques): Exterior walls	*					
39.1.8.2.1.	(Conduct Striping Procedures) Runways  CerTest # 8091 CerTest # 8092 CerTest # 8093 CerTest # 8094 CerTest # 8095 CerTest # 8096 CerTest # 8097 CerTest # 8098	♦					
39.2.1.1.	Tent hardbacking: Layout & install floor	*					
39.2.1.2.	Tent hardbacking: Layout & erect walls	*					
39.2.1.3.	Tent hardbacking: Layout & install rafters	*					
39.2.2.1.1.	TEMPER Tent: Assemble  CerTest # 8070	♦					

1	2	3	4	5	6	7	8
TASK NUMBER	TASKS, KNOWLEDGE, AND TECHNICAL REFERENCES	◆ SEE NOTE 1 * 5 LEVEL * * 7 LEVEL	START DATE	COMPLETE DATE	TRAINEE'S INITIALS	TRAINER'S INITIALS	CerTest COMP DATE
39.2.2.1.2.	TEMPER Tent: Erect CerTest # 8071	◆					
39.2.2.1.5.	TEMPER Tent: Disassembly CerTest # 8072	◆					
39.2.2.1.6.	TEMPER Tent: Storage CerTest # 8073	◆					
39.5.1.1.	Assemble kit-type revetments: B-1 CerTest # 8171	◆					

## **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 3E3X1 AFQTP Documentation Record.

**8.6.** For a complete list of up-to-date AFQTPs applicable to the 3E3X1 AFSC see our web page at: <http://www.afcesa.af.mil/Directorate/CEO/Training/Enlisted/QTPs/3E3X1.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
J5AQN3E331 000	Structural Apprentice Course (Part 1)	366 TRS
J3ABP3E331 000	Structural Apprentice Course (Part 2)	366 TRS
J3AZP3E351 001	Low Slope Roof Maintenance and Repair Course	366 TRS
J3AZP3E351 002	Fabricating Welded Pipe Joints Course	366 TRS
J3AZP3E351 003	Metals Layout, Fabrication and Welding Course	366 TRS
J4AZP3E371 001	Bare Base Structural Erection Course	366 TRS
J3ACR3E070 000	Civil Engineer Management Craftsman Course	336 TRS

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

Course Number	Title	Date
CDC 3E351A	Structural Journeyman	Apr 02
CDC 3E351B	Structural Journeyman	May 97
CDC 3E351C	Structural Journeyman	Jul 97

### 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	Date Due
CDC 3E351 B	Structural Journeyman	Aug 02
CDC 3E351 C	Structural Journeyman	Apr 03

## **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 down load 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.