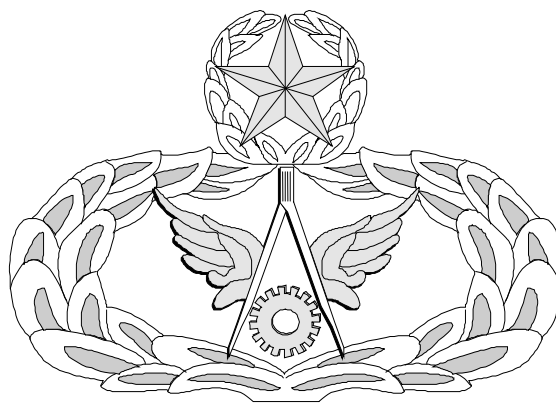


DEPARTMENT OF THE AIR FORCE
Headquarter US Air Force
Washington DC 20330-5000

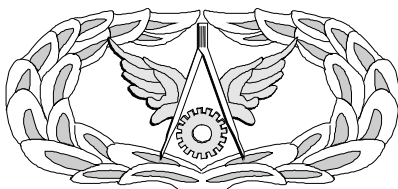
CFETP 3E3X1
Part I and II
22 Jan 2016
(Incorporating Change 2,
Dated 1 Feb 2018)

Air Force Specialty Code (AFSC) 3E3X1

STRUCTURAL



MASTER



BASIC



SENIOR

CAREER FIELD EDUCATION AND TRAINING PLAN

ACCESSIBILITY: Publications and forms are available on the e-publishing website at www.e-publishing.af.mil for downloading or ordering.

RELEASABILITY: There are no releasability restrictions on this publication.

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

TABLE OF CONTENTS

PREFACE.....	4
ABBREVIATIONS/TERMS EXPLAINED	5
PART 1.....	9
SECTION A - GENERAL INFORMATION.....	9
A1. Purpose.....	9
A2. Uses.....	10
A3. Coordination and Approval.....	10
SECTION B - CAREER FIELD PROGRESSION AND INFORMATION.....	11
B1. Specialty Descriptions.....	11
B2. Skill/Career Progression.....	13
B3. Training Decisions	15
B4. Community College of the Air Force (CCAF) Academic Programs	15
B5. CCAF Degree Completion Requirements.....	18
B6. Civil Engineer Career Field Path	21
B7. Enlisted Training Path.....	22
B8. Enlisted Professional Military Education (EPME)	24
SECTION C - SKILL LEVEL TRAINING REQUIREMENTS	25
C1. Purpose.....	25
C2. Skill Level Training Requirements	25
SECTION D - RESOURCE CONSTRAINTS	31
D1. Purpose.....	31
D2. Apprentice (3-Level) Training.....	31
D3. Journeyman (5-Level) Training.	31
D4. Craftsman (7-Level) Training	31
D5. Superintendent (9-Level) Training.....	31
SECTION E - TRANSITIONAL TRAINING GUIDE	32
PART II.....	33
SECTION A - SPECIALTY TRAINING STANDARD.....	33
A1. Implementation	33
A2. Purpose.....	33

A3. Recommendations.....	36
SECTION B - COURSE OBJECTIVE LIST (COL)	37
B1. Measurement	37
B2. Standard.....	37
B3. Proficiency Level	37
B4. Course Objective List.....	37
SECTION C - SUPPORT MATERIAL.....	38
C1. Air Force Qualification Training Packages.....	38
C2. AFQTP Assessment for Civil Engineer CDCs	38
SECTION D - EDUCATION AND TRAINING COURSE INDEX	39
D1. Purpose.....	39
D2. Air Force In-Residence Courses/Mobile Training Team (MTT) Courses.....	39
D3. Air Force Career Development Academy.....	39
D4. Exportable Courses/Information	39
D5. Courses Under Development/Revision.....	40
SECTION E - MAJCOM-UNIQUE REQUIREMENTS	41
SECTION F - HOME STATION TRAINING.....	42
F1. Purpose	42
F2. Home Station Training (HST)	42
F3. Combat Skills Training (CST).....	42
F4. Mission Essential Equipment Training (MEETS).....	42
F5. AF Expeditionary (ES) Training Requirement.....	42
F6. Training References.....	42
ATTACHMENTS	
Attachment 1 - Qualitative Requirements (Proficiency Code Key).....	44
Attachment 2 – 3E3X1 Specialty Training Standard.....	45
Attachment 3 – 3E3X1 AFQTP Documentation Record.....	64

OPR: HAF/A4C

Certified by: CMSgt John A. Wilde

Supersedes: CFETP 3E3X1, 22 Jan 2016 (Incorporating Change 1, Dated 4 Apr 2017)

Pages: 67

PREFACE

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

Note: Civilian occupying associated positions may use Part II as a guide to support duty position qualification training.

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

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

- Section A provides general information about how the CFETP will be used.
- Section B identifies career field progression information, duties and responsibilities, training strategies, and the career field path.
- Section C associates each skill-level with specialty qualifications (knowledge, education, and training).
- Section D indicates resource constraints.
- Section E identifies transition training guide requirements for SSgt through MSgt.

Part II includes the following:

- 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.
- Section B contains the course objective list and training standards supervisors will use to determine if an Airman has satisfied training requirements.
- Section C identifies available support materials.
- Section D identifies a training course index that can be used to determine resources available to support training. Included here are both mandatory and optional courses, and exportable courseware.
- Section E identifies MAJCOM-unique training requirements supervisors can use to determine additional training required for the associated qualification needs.
- Section F identifies home station training references and courses material required for this specialty in support of contingency/wartime training.

Note: At unit level, supervisors and trainers must use Part II to identify, plan, and conduct training commensurate with the overall goals of this guide.

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 the 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). Formal course that provides individuals who are qualified in one or more positions of their Air Force Specialty (AFS) with additional skills and 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 Enlisted Classification Directory (AFECD) – The Official directory for all military enlisted classification descriptions, codes, and identifiers. The specialty descriptions and codes will be used to identify each Air Force job (valid requirements) and describes the minimum mandatory qualifications of personnel to fill these jobs. The updated AFECD is available at AF Personnel Center's web site located at <http://ask.afpc.randolph.af.mil/> under the military classification menu.

Air Force Civil Engineer Center (AFCEC). Formally, Air Force Civil Engineer Support Agency (AFCESA), the focal point for all Civil Engineer training development. All individual AFSC Force Development Managers (FDM) are located at AFCEC.

Air Force Credentialing Opportunities On-Line (AF COOL) Program. AF COOL replaced the CCAF Credentialing and Education Research Tool (CERT). The AF COOL Program can be accessed through the AF Virtual Education Center (AFVEC). The site provides a research tool designed to increase an Airman's awareness of national professional credentialing and CCAF education opportunities available for all Air Force occupational specialties.

Air Force Institute of Technology (AFIT). Provides vital, relevant, and connected education that enables Airmen to be ready engineers and great leaders who know how to build sustainable installations to last while leading the change for the Civil Engineer career field. Course list can be accessed at <http://www.afit.edu/cess/index.cfm>.

Air Force Training Record (AFTR). Electronic training data base to document training and access is located at the [Civil Engineer Virtual Learning Center \(CE-VLC\)](#).

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). A required 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, in other audiovisual media formats, or all three.

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.

Chief, Civil Engineer Force Development (CCEFD). Located at HQ AFCEC, this individual is responsible for all force development education and training associated within the 3E0 to 3E6 AFSCs.

Civil Engineer Virtual Learning Center (CE-VLC). Anytime, anyplace learning within the Civil Engineer Community consisting of instructional modules and skill-level awarding course material specific to the AFSC.

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.

Core Tasks (*). Mandatory tasks which the AFCFM has identified as a minimum qualification requirement within an Air Force specialty or duty position. These tasks exemplify the essence of the career field.

Critical Tasks. 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** training/certification of these tasks. In instances where required equipment is not available for instruction, completion of the task's AFQTP is all that is required for upgrade and qualification training. Hands-on certification will be accomplished at the first opportunity when equipment is available.

Distance Learning (DL). Includes Video Tele-seminar (VTS), Video Tele-training (VTT), and 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 Tasks. The tasks assigned to an individual for the position currently held. These include as a minimum all core tasks, diamond tasks, critical tasks and any other tasks assigned by the supervisor.

Expeditionary Combat Support-Training Certification Center (ECS-TCC). Total Force training center managed by the Air Force Reserve Command.

Force Development Manager (FDM). An individual assigned to the HQ Air Force Civil Engineer Center (AFCEC) charged with the responsibility for overseeing all training and career field management aspects of a specific Air Force Civil Engineer specialty.

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. For the 3E3X1 career field, this training is provided by AETC at Naval Construction Battalion Center (NCBC) Gulfport, MS.

Just-in-Time (JIT) Training – Training required just prior to a selected deployment or tasking that delivers training necessary for mission accomplishment. It is typically predicated on hard-to-obtain contingency skills.

MAJCOM Functional Managers (MFMs). Senior leaders, designated by the appropriate functional authority (FA) who provide day-to-day management and responsibility over specific functional communities at the MAJCOM, FOA, DRU, or ARC level. While they should maintain and institutional focus in regards to resource deployment and distribution, MFMs are responsible for ensuring their specialties are equipped, developed, and sustained to meet future needs of the total Air Force mission.

Occupational Analysis Report (OAR). A detailed report showing the results of an occupational survey of tasks performed within a particular AFS. The information collected from this survey is used to make changes to upgrade training and Weighted Airman Promotion Exams.

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

Proficiency Training. Additional training, either in-residence, advanced/supplemental 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.

Regional Training Site (RTS). Total Force training centers managed by the Air National Guard.

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

Specialty Training. The total training process used to qualify airmen in their assigned specialty.

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.

Specialty Training Requirements Team (STRT) – Subject Matter Experts from each MAJCOM conduct research prior to Utilization and Training Workshop (U&TW), develops training, recommends delivery methods and determines if a full fledged U&TW is required. The team finalizes the CFETP, specialty description and develops a standard for all courses.

Subject Matter Expert (SME) – An individual with expertise in a particular subject matter, tasked to represent the subject matter to an individual or group for technical accuracy.

Supplemental Training. 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.

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

Upgrade Training (UGT). Mandatory training that leads to attainment of higher level of proficiency.

Utilization and Training Workshop (U&TW). An executive decision meeting to vote on funding for instructor authorizations, equipment and facilities needed to support any new or revised training as a result of the STRT. The workshop determines which MAJCOMs will furnish which resources, and determines commitment and delivery dates in writing. Capture in writing, any equipment or training delivery date shortfalls.

PART 1

SECTION A - GENERAL INFORMATION

A1. Purpose: This CFETP provides information necessary for the AFCFMs, MAJCOM functional managers (MFMs), commanders, education and training managers, supervisors/trainers, and certifiers to plan, develop, manage, and conduct an effective career field training program. This plan outlines the training personnel in an AFS require to develop and progress throughout their careers. It identifies initial skills, upgrade, qualification, advanced, and proficiency training.

A1.1. 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.

A1.2. Upgrade Training. Identifies the mandatory courses, task qualification requirements, and correspondence course completion requirements for award of the 5-, 7-, and 9-skill levels.

A1.3. Qualification Training. 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 training required to do the job.

A1.4. Advanced Training. A formal course for training personnel towards a technical or supervisory level in an AFS. Training is for selected career Airmen in the advanced technology of the AFSs. Graduates are not awarded a new AFSC.

A1.5. Proficiency Training. Additional training either in-residence, exportable advanced training courses, or on-the-job training, provided to people to increase their skills and knowledge beyond the minimum required for upgrade.

A1.6. The CFETP has several purposes –some are:

A1.6.1. 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.

A1.6.2. Identifies task and knowledge training requirements for each skill level in this specialty and recommends education/training throughout each phase of an individual's career.

A1.6.3. Lists training courses available in this specialty and identifies sources of training and the delivery methods.

A1.6.4. Identifies major resource constraints that impact full implementation of the desired career field training process.

A2. 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.

A2.1. AETC training personnel will develop/revise formal resident, non-resident, 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 and Air Force Civil Engineer Center Force Development Division (HQ AFCEC/COF) to develop acquisition strategies for obtaining resources needed to provide the identified training.

A2.2. MFMs will ensure their training programs complement the CFETP mandatory initial, upgrade, qualification, and proficiency training requirements and identify requirements that can be satisfied by OJT, resident training, contract training, or exportable courses. MAJCOM-developed training to support this AFS must be identified for inclusion into the plan.

A2.3. 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.

A2.4. Each individual will complete mandatory training requirements specified in this plan. The list of courses in Part II of this CFETP will be used as a reference to support training.

A3. 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

B1. Specialty Description

B1.1. 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 equipment. Ensures compliance with environmental regulations. Related DoD Occupational Subgroup: 171000

B1.2. Duties and Responsibilities for Apprentice (3E331), Journeyman (3E351), and Craftsman (3E371).

B1.2.1. Prepares and interprets working drawings and schematics for maintaining, altering, and repairing buildings and structures. Surveys proposed work sites to determine material and labor requirements, prepares cost estimates. Reviews structural work progress and coordinates changes in schedules. Constructs and repairs footings, floors, slabs, foundations, walls, roofs, steps, doors, and windows for prefabricated and permanent structures. Constructs and modifies buildings. Prepares, applies, and finishes mortar, concrete, plaster, and stucco. Fabricates, repairs, and installs metal parts and assemblies for utility systems and buildings.

B1.2.2. Erects and lays out trusses and structural steel to specific dimensions. Welds, cuts, brazes, and solders ferrous and nonferrous metals. Inspects, maintains, repairs, and installs overhead, rollup, and mechanical doors and gates. Installs forms and reinforcing material. Applies protective coatings such as primer, stain, and sealant.

B1.2.3. Troubleshoots, repairs, and installs commercially manufactured locking devices such as keyed, combination, cipher, panic hardware/exit devices, and pad locks.

B1.2.4. Erects and works from scaffolding, ladders and mobile platforms.

B1.2.5. Identifies and selects construction materials considering type and applications.

B1.2.6. Manages, inspects, and evaluates work center activities. Ensures compliance with commercial and military publications. Submits and reviews supply and equipment requisitions. Discusses inspection findings and recommends corrective action.

B1.3. Duties and Responsibilities for Superintendent (3E290).

B1.3.1. Supervises and plans construction and repair of airfield pavements, building and structural repairs, roads, streets, curbs, footings, floors, slabs, foundations, walls, roofs, steps, doors, and windows for prefabricated and permanent structures, surface mats, membranes, improved and unimproved land areas using appropriate structural, paving and surfacing procedures and equipment to include both in-garrison and specialized training requirements. Interprets construction drawings and surveys using information such as sub-grade contours and grade alignment. Inspects pavements for surface, base, and sub-base damage or defects. Identifies damaged or defective areas needing joint removal and replacement, crack sealant, surface overlays,

and seal coats. Investigates proposed work sites to determine resource requirements. Prepares cost estimates for in-service work requirements. Applies engineered performance standards in planning and estimating jobs. Coordinates measured and direct schedule work order requirements during approval, processing, and completion stages. Recommends method of accomplishment based on existing capabilities. Develops, monitors, and maintains work order priority program. Monitors work costs to ensure compliance with legal limits or support agreements and recapitalization process. Coordinates Work Order Review Board processes and provides agenda as required.

B1.3.2. Determines type and application of equipment to use in various construction, maintenance, and repair operations. Manages construction equipment operation to complete a finish grade, level, slope, and compaction of construction materials. Supervises snow and ice removal operations to include chemical application and other ice control products. Prepares and interprets working drawings and schematics for maintaining, altering, and repairing buildings and structures.

B1.3.3. Inspects and manages operator maintenance on horizontal construction and snow removal equipment. Schedules and coordinates equipment repair and servicing with the vehicle maintenance activity and other servicing facilities.

B1.3.4. Performs planning activities and conducts facility surveys. Surveys proposed work to determine resource requirements. Obtains certifications, special tools, and equipment for assigned personnel. Ensures compliance with all safety and environmental regulations to include confined space programs.

B1.3.5. Manages and coordinates demolition projects, placement and detonation of explosives to include quarry demolition, clearing, and base denial operations as required. Supervises construction materials selection, water well drilling, rock crushing, and fixed and mobile concrete and asphalt batch plants operations.

B1.3.6. Coordinates, monitors, and executes contingency and Prime BEEF training requirements and associated deployment preparation programs and duties. Ensures personnel are in a constant ready state to meet deployment commitments.

B1.3.7. Coordinates, monitors, and executes contract quality assurance functions as required.

B2. Skill and Career Progression. Adequate training and timely progression from the apprentice to the superintendent level play an important role in the Air Force's ability to accomplish its mission. It is essential that everyone involved in training must 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 each individual receives viable training at appropriate points in their career.

B2.1. Apprentice (AFSC 3E331 – AB, AMN, A1C).

B2.1.1. Upon completion of initial skills training, a trainee will work with a trainer to enhance their knowledge and skills to progress to the 5-level.

B2.1.2. Utilize the CDC, Air Force Qualification Training Packages (AFQTP) and web-based courses for subject and task fundamentals in the career field.

B2.1.3. Once trained and task certified, a trainee may perform the task unsupervised.

B2.1.4. After all upgrade training requirements are completed, supervisors and Unit Training Managers (UTMs) coordinate upgrade procedures.

B2.2. Journeyman (AFSC 3E351 – SrA, SSgt).

B2.2.1. A journeyman may be assigned job positions such as team leader, shift supervisor, and task trainer.

B2.2.2. Completion of 5-level CDC's, 100% 5-level core and diamond tasks are basic prerequisites for five skill level award.

B2.2.3. Complete Civil Engineer (CE) 5-Level Core Concepts Course located on the [CE-VLC](#) prior to ordering their Career Development Courses (CDCs).

B2.2.4. Must complete, as a **minimum**, twelve months OJT before award of the 5-level (nine months for re-trainees that were awarded a five level in a previous AFSC).

B2.2.5. Must complete the appropriate Basic Enlisted Professional Military Education (EPME) and Resident EPME as outlined in Air Force Instruction 36-2301, Developmental Education).

B2.2.6. Enter into continuation training to broaden technical experience base.

B2.2.7. Use CDCs and other reference material to prepare for Weighted Airman Performance System (WAPS) testing.

B2.2.8. Continue pursuing a Community College of the Air Force (CCAF) degree.

B2.2.9. After all upgrade training requirements are completed, supervisors and UTMs coordinate upgrade procedures.

B2.3. Craftsman (AFSC 3E371 – SSgt, TSgt, and MSgt).

B2.3.1. A craftsman can expect to fill various supervisory and management positions such as shift leader, team chief, supervisor, or task certifier.

B2.3.2. Completion of CE 7-Level Common Core Concepts Course located on the [CE-VLC](#) and 100% core/diamond tasks are basic prerequisites for seven skill level award.

B2.3.3. Must complete, as a **minimum**, twelve months OJT before award of the 7-level (six months for re-trainees that were awarded a seven level in a previous AFSC).

B2.3.4. Must complete the appropriate Basic Enlisted Professional Military Education (EPME) and Resident EPME as outlined in Air Force Instruction 36-2301, Developmental Education.

B2.3.5. Should take continuation training courses to broaden technical knowledge or management of resources and personnel.

B2.3.6. Use CDCs and other reference material to prepare for Weighted Airman Performance System (WAPS) testing.

B2.3.7. Continue academic education through CCAF and higher degree programs is encouraged.

B2.3.8. After all upgrade training requirements are completed, supervisors and UTMs coordinate upgrade procedures.

B2.4. Superintendent. (AFSC 3E290 - SMSgt)

B2.4.1. A superintendent can be expected to fill positions such as Flight Chief, Section Chief, Superintendent, and various staff positions.

B2.4.2. Completion of Civil Engineer Superintendent Course (AFIT WMGT 570) is mandatory for Active Duty and Air Force Reserve SMSgt's. This course is highly encouraged for Air National Guard SMSgt's and mandatory to be promoted to CMSgt.

Note: This is not a skill level awarding course.

B2.4.3. Must complete the appropriate Basic Enlisted Professional Military Education (EPME) and Resident EPME as outlined in Air Force Instruction 36-2301, Developmental Education .

B2.4.4. Should take continuation training course to increase knowledge of budget, manpower, resources, and personnel management.

B2.4.5. Continue academic development through higher education is recommended.

B2.4.6. Must be a SMSgt for award of the 9-skill level.

B2.5. Chief Enlisted Manager (CEM) (3E000 - CMSgt).

B2.5.1. CEMs work in a variety of similar jobs and functional areas where general managerial and supervisory abilities can be most effectively used and challenged.

B2.5.2. Must be selected for CMSgt and possess qualifications in a feeder specialty (3E090, 3E290, 3E490, 3E591, or 3E691).

B2.5.3. Must complete the appropriate Basic Enlisted Professional Military Education (EPME) and Resident EPME as outlined in Air Force Instruction 36-2301, Developmental Education .

B3. 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 by a career field STRT held at Naval Construction Battalion Center (NCBC) Gulfport, MS from 22 through 26 October 2012.

B3.1. Initials Skills Training. The initial skill course was reviewed for content. Additions, deletions, and modifications were made to the course. Wartime training tasks were identified and validated.

B3.2. Five Level Upgrade Training Requirements. Existing CDCs were reviewed and updated to ensure only current material remained and new technology information was added.

B3.3. Seven Level Upgrade Training Requirements. Seven-level training requirements were reviewed and validated.

B3.4. Proficiency Training. Any additional knowledge and skill requirements that were not taught through initial skills or upgrade training are assigned as continuation training. Purpose of continuation training is to provide training exceeding minimum upgrade training requirements with emphasis on present and future duty positions. MAJCOMs must develop a continuation-training program that ensures personnel in the Structural career field receive the necessary training at the appropriate point in their careers. The training program will identify both mandatory and optional training requirements.

B3.5. 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.

B4. Community College of the Air Force (CCAF) Academic Programs. Airmen are automatically enrolled in CCAF upon completion of basic military training. CCAF is one of several federally chartered degree-granting institutions; however, it's the only 2-year institution exclusively serving military enlisted personnel. The college is regionally accredited through Air University by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) to award Associate of Applied Science (AAS) degrees designed for specific Air

Force occupational specialties and is the largest multi-campus community college in the world. Upon completion of basic military training and assignment to an AF career field, all enlisted personnel are registered in a CCAF degree program and are afforded the opportunity to obtain an AAS degree. In order to be awarded, degree requirements must be successfully completed before the Airman separates/retires from the Air Force or is commissioned as an officer. See the CCAF website at <http://www.au.af.mil/au/barnes/ccaf/> for details regarding the AAS degree programs. In addition to its Associates degree program, CCAF offers the following programs. Complete details can be found at <http://www.au.af.mil/au/barnes/ccaf/certifications.asp>. In addition to its degree program, CCAF offers the following:

B4.1. CCAF Instructor Certification (CIC) Program. The CIC is a professional credential that recognizes the instructor's extensive faculty development training, education and qualification required to teach a CCAF course, and formally acknowledges the instructor's practical teaching experience. Qualified officer, enlisted, civilian and other service instructors are eligible for this certification. Complete details for the instructor certification program can be found at <http://www.au.af.mil/au/barnes/ccaf/certifications.asp>.

B4.2. The Professional Manager Certification (PMC). This professional credential is awarded by CCAF and formally recognizes an individual's advanced level of education and experience in leadership and management, as well as professional accomplishments. The PMC is primarily designed for Air Force SNCO's. However, any enlisted Airmen who meet all program requirements may be nominated and awarded the PMC. Once an individual retires, separates or is commissioned, they are no longer eligible for the PMC. Complete details can be found at <http://www.au.af.mil/au/barnes/ccaf/certifications.asp>.

B4.3. CCAF offers the Instructional Systems Development (ISD) Certification. The ISD Certification is a professional credential that recognizes the writer's or manager's extensive training, education, qualifications and experience required to develop and manage CCAF courses. The certification also recognizes the individual's ISD qualifications and experience in planning, developing, implementing and managing instructional systems. The program is designed to broaden faculty and professional development. Complete details can be found at <http://www.au.af.mil/au/barnes/ccaf/certifications.asp>.

B4.4. Air Force Credentialing Opportunities On-Line (AF COOL) Program. AF COOL replaced the CCAF Credentialing and Education Research Tool (CERT). The AF COOL Program can be accessed at <https://afvec.langley.af.mil/afvec/Public/COOL/Default.aspx>. The site provides a research tool designed to increase an Airman's awareness of national professional credentialing and CCAF education opportunities available for all Air Force occupational specialties. The AF COOL Program also provides information on specific occupational specialties, civilian occupational equivalencies, CCAF degree programs, and AFSC-related national professional credentials available to enlisted members through credentialing agencies and professional organizations. The AF COOL Program contains a variety of information about credentialing and licensing and can be used to:

B4.4.1. Get background information about civilian licensure and certification in general and specific information on individual credentials including eligibility requirements and resources to prepare for an examination.

B4.4.2. Identify licenses and certifications relevant to an AFSC.

B4.4.3. Learn how to fill gaps between Air Force training and experience and civilian credentialing requirements.

B4.4.4. Get information on Tuition Assistance and GI Bill eligible funding opportunities to pay for credentialing examinations and associated fees.

B4.4.5. Learn about resources available to you that can help gain civilian job credentials.

B4.5. **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 three proficiency levels: Apprentice, Journeyman, Craftsman/Supervisor. All are transcribed on the CCAF transcript.

B4.6. **Air University Associate to Baccalaureate Cooperative (AU-ABC).** AU-ABC directs Airmen with associate in applied science degrees from the CCAF to a collection of accredited “military friendly” colleges and universities to consider when completing a four-year degree. The program maximizes the application of military career education and training, and provides a multitude of online academic and support services for the enlisted member.

B5. CCAF Degree Completion Requirements (64 Semester Hours). The Construction Technology Associates Degree (4VEB) applies to the 3E3X1 AFSC. Prior to completing a CCAF degree, the individual must be awarded a 5-level and the following requirements must be met:

<u>Course</u>	<u>Semester Hours</u>
Technical Education	24
Leadership, Management, and Military Studies	6
Physical Education	4
General Education	15
Oral Communication	3
Written Communication	3
Mathematics	3
Social Science	3
Humanities	3
Program Elective	15
Technical Education; Leadership, Management, and Military Studies or General Education	
Total	64

B5.1. Technical Education. (24 semester hours) A minimum of 12 semester hours of technical core subjects/courses must be applied. The remaining semester hours applied from technical core or elective subjects or courses.

<u>Technical Core Requirements</u>	<u>Maximum Semester Hours</u>
Building Construction and Design	20
Carpentry/Cabinetry	12
CCAF Internship	18
College Algebra/Trigonometry	3
Computer Aided Drafting	3
Construction Inspection/Building Codes	9
Drafting/Engineering Drawing	6
Engineering Assistant	20
Heavy Equipment Operations	20
Metals Fabrication/Characteristics	15
Pavement Construction	12
Project Management/Planning	4
Surveying	12
Welding	9

B5.2. Technical Electives

<u>Technical Electives</u>	<u>Maximum Semester Hours</u>
Blueprint Reading	3
Computer Science	6
Construction Material Estimating	3
Enlisted Professional Military Education	6
General Physics	3
Hazardous Materials	3
Industrial/Construction Safety	3
Properties and Strength of Materials	6
Soil and Foundations	3
Technical Writing	3

B5.3. Leadership, Management, and Military Studies (LMMS) (6 Semester Hours): Professional military education, civilian management courses accepted in transfer and/or by testing credit.

B5.4. Physical Education (4 Semester Hours): This requirement is satisfied by completion of Basic Military Training.

B5.5. General Education (15 Semester Hours): Applicable courses must meet the criteria for application of courses to the general education requirements and be in agreement with the definitions of applicable general education subjects/courses as provided in the *CCAF General Catalog*.

<u>General Education Subjects/Courses</u>	<u>Semester Hours</u>
Oral Communication	3
Speech	
Written Communication	3
English Composition	
Mathematics	3
Intermediate algebra or a college-level mathematics course satisfying delivering institution's mathematics graduation requirement-if an acceptable mathematics course applies as technical or program elective, you may substitute a natural science course for mathematics.	
Social Science	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, and sociology.	
Humanities	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, and religion.	

B5.6. Program Elective (15 semester hours): Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; maximum 6 semester hours of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

B5.7. Additional off-duty education is a personal choice that is encouraged for all. Individuals desiring to become an AETC Instructor should be actively pursuing an associate degree. A degreed faculty is necessary to maintain accreditation through the Southern Association of Colleges and Schools.

B6. Civil Engineer Career Field Path. The following chart depicts the 3E3X1 specialty career path:



B7. Enlisted Career Path.

ENLISTED CAREER PATH				
Education and Training Requirements	GRADE REQUIREMENTS			
	Rank	Average Sew-On	Earliest Sew-On	High Year Of Tenure (HYT)
Basic Military Training School				
<u>Upgrade To Apprentice</u> (3-Skill Level) – Complete Technical School – Complete CE 3-Level Common Core Concept web-based course	Amn A1C	6 months 16 months		
<u>Upgrade To Journeyman</u> (5-Skill Level) – Complete 5-level CDC – Complete all 5-level core/duty related tasks – Minimum 12 months OJT (9 months for retrainees)	SrA	3 years	28 months BTZ (22 Months)	8 years
<u>Trainer</u> – Must be qualified and certified to the perform tasks to be trained. – Attend AF Training Course – Recommended by the supervisor				
<u>Upgrade To Craftsman</u> (7-Skill Level) – Minimum rank of SSgt. – Complete CE 7-Level Common Core Concept web-based course – Complete all core/duty related tasks – Minimum 12 months OJT (6 months OJT for retrainees)	SSgt	5 years	3 years	15 years
<u>Certifier</u> – SSgt with 5-skill level or civilian equivalent – Attend AF Training Course – Appointed by commander – Be a person other than the trainer (for core and critical tasks only)				
<u>Upgrade To Superintendent</u> (9-Skill Level) – Minimum rank of SMSgt – CE Superintendents Course (WMGT570) (AD/AFR Only, not skill level awarding)	SMSgt	20 years	11 years	26 years
<u>Chief Enlisted Manager</u> – Chief Orientation Course (AFR Only) – CE Superintendents Course (WMGT 570) (ANG Only)	CMSgt	22 years	14 years	30 years

B7.1. 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*.

B7.2. 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.

B7.2.1. Basic Badge. The basic badge is awarded upon successful completion of the apprentice course.



B7.2.2. Senior Badge. The senior badge adds a star to the top of the badge. Wear the senior badge after award of the 7-skill level.



B7.2.3 Master Badge. The master badge adds a wreath around the star. The Master Badge is awarded to master sergeant or above with 5 years in the specialty from award of the 7-skill level.



B8. Enlisted Professional Military Education (EPME).

B8.1. Basic EPME (Distance Learning). Basic EPME requirements are completed via distance learning (DL) courses to establish a foundation for continued development and include the Noncommissioned Officer (NCO) DL and Senior Noncommissioned Officer (SNCO) DL courses. Effective 30 June 2017, NCO DL and SNCO DL courses are prerequisites to attend resident NCO Academy and SNCO Academy, respectively.

B8.2. Resident EPME (In-residence). Resident EPME requirements include Airman Leadership School (ALS), NCOA, SNCOA and the Chief Leadership (CL) course. Resident attendance is not duplicative of the basic EPME requirements, but builds upon the competencies obtained to achieve higher proficiency levels. Resident EPME completion is required for promotion to the grades of SSgt, MSgt and CMSgt.

B8.2.1. Resident EPME Eligibility Chart.

Resident EPME Eligibility Chart		
EPME Course	Course Prerequisites	Selection Process
ALS	N/A	1. SSgts 2. SSgt-selects 3. SrA
NCOA	Complete NCO DL course prior to being scheduled	1. TSgts 2. TSgt-selects 3. Non-selects to TSgt across AFSCs, from highest WAPS score descending until class seats have been filled.
SNCOA	Complete SNCO DL course prior to being scheduled	1. SMSgts 2. SMSgt-selects 3. Non-selects to SMSgt across AFSCs from highest WAPS score descending until class seats have been filled.
CLC	Complete CLC DL course prior to being scheduled	1. CMSgts selected for promotion during 15E9 cycle or after. 2. CMSgt-selects

B8.2.2. To prevent a delay in resident NCO EPME, Airmen should enroll in NCO DL course as soon as they are selected for promotion to the grade of SSgt or upon completion of ALS. This ensures that when an Airman becomes a TSgt-select they have completed the prerequisite DL course and are eligible for immediate resident NCOA attendance.

B8.2.3. To prevent a delay in resident SNCO EPME, Airmen should enroll in SNCO DL course as soon as they are selected for promotion to the grade of MSgt or upon completion of NCOA. This ensures that when an Airman becomes a SMSgt-select they have completed the prerequisite DL course and are eligible for immediate resident SNCOA attendance.

SECTION C - SKILL LEVEL TRAINING REQUIREMENTS

C1. Purpose. The various skill levels in this career field are defined in terms of tasks and knowledge requirements for the AFS career ladder. They are stated in broad, general terms and establish the standards of performance. An all-encompassing core and diamond tasks list has been developed for this specialty because of the diversity of the missions supported and the equipment assigned to meet mission requirements. Core and diamond tasks, knowledge items, and skill requirements are identified in the STS. Completion of the mandatory 3-skill level awarding course and the mandatory completion of the common core concept courses comprise Air Force requirements.

C2. Skill Level Training Requirements.

C2.1. Apprentice (3-Level) Training Requirements. (3E331)

KNOWLEDGE	Completion of: - Structural Apprentice Qualifying I (J9AQN3E331 00NB) - Structural Apprentice Qualifying II (J9AQN3E331 01NB) - Structural Apprentice (JCABP3E331 00AC)
EDUCATION	For entry into this specialty, completion of high school with courses in mathematics, mechanical drawing and use of metal, masonry and wood working tools is desirable.
TRAINING	Completion of the Structural Apprentice course is mandatory.
EXPERIENCE	None required.
OTHER	For entry, award and retention of AFSC 3E3X1: - Normal color vision as defined in AFI 48-123, <i>Medical Examinations and Standards</i> - Must possess a valid state driver's license to operate government motor vehicles (GMV) in accordance with AFI 24-301, <i>Vehicle Operations</i> - Freedom from fear of heights - Must maintain local network access IAW AFMANs 33-115, <i>Air Force Information Technology (IT) Service Management</i>, and 33-282, <i>Computer Security</i>
IMPLEMENTATION	The 3-skill level is awarded upon graduating the apprentice course, completion of CE 3-Level Common Core Concept web-based course, and submission by the Unit Training Manager at member's unit of assignment.

*Refer to [Air Force Enlisted Classification Directory \(AFECD\)](#) Part I Section II and Attachment 4 for most current requirements.

C2.2. Journeyman (5-Level) Training Qualifications.

KNOWLEDGE	Building maintenance, repair, and construction, including roofing; nomenclature of woodworking materials and methods of material storage; theory of squaring by equivalent measurements; application of shop mathematics; theory of wood treatment; type and specification requirements of masonry products: masonry batching formulas; methods of curing masonry products; types of coating preservatives and applications; compatible products to be combined in composite systems; methods of preparing various surfaces for finishing; locking devices; composition, characteristics, and identification of common commercial grade metals; construction grade metal requirements; types and uses of metal hardware; methods of forming and cutting metals; metal layout fabrication and repair; welding processes; shop drawings; metal measurement and layout devices; cutting equipment; gas and arc welding equipment; safety procedures and practices; and environmental concerns and safety precautions required in using, storing, and disposing of hazardous materials.
EDUCATION	For entry into this specialty, completion of high school with courses in mathematics, mechanical drawing and use of metal, masonry and wood working tools is desirable. The following are strongly encouraged: - CCAF Construction Technology Associates Degree (4VEB) - JCAZP3E351 01AB Roof Installation, Maintenance, Inspection and Repair - JCAZP3E351 02AB Metals Layout, Fabrication and Welding - JCAZP3E351 03AA Contingency Maintenance Course - Higher education through a civilian institution
TRAINING	Completion of 5-level CDCs. Completion of all the paper-based AFQTPs and their associated web-based courses on the CE VLC for all core (*) and diamond (◆) tasks with a minimum passing score of 80%. Completion of the CE 5-Level Common Core Concept web-based course located on the CE-VLC is mandatory for award of this skill level. Certification of all 5-skill level core tasks identified with an asterisk (*) in the 5-skill level column of the STS. Certification of all 5-skill level diamond tasks identified with a diamond (◆) in the 5-skill level core task column of the STS if the equipment is available. Minimum requirement is the signing off tasks on the AFQTP Documentation Record. Certification of duty position requirements identified by the supervisor.

EXPERIENCE	Qualification in and possession of AFSC 3E331. Experience in functions such as constructing and repairing buildings and heavy structures; erecting prefabricated structures; laying masonry units; mixing, applying, and finishing masonry products; erecting steel; use of protective equipment; and fabricating, installing, and repairing metal components using gas or arc welding equipment. Minimum 12 months OJT (9 months for retrainees) before award of 5-skill level
OTHER	For entry, award and retention of AFSC 3E3X1: - Normal color vision as defined in AFI 48-123, <i>Medical Examinations and Standards</i> - Must possess a valid state driver's license to operate government motor vehicles (GMV) in accordance with AFI 24-301, <i>Vehicle Operations</i> - Freedom from fear of heights - Must maintain local network access IAW AFMANs 33-115, <i>Air Force Information Technology (IT) Service Management</i>, and 33-282, <i>Computer Security</i>
IMPLEMENTATION	Entry into 5-level upgrade training is initiated after the individual has completed all 3-level requirements. Qualification training is initiated any time individuals are assigned duties they are not certified to perform. AFQTPs are used concurrently to obtain necessary duty position qualifications.

*Refer to [Air Force Enlisted Classification Directory \(AFECD\)](#) Part I Section II and Attachment 4 for most current requirements.

C2.3. Craftsman (7-Level) Training Requirements. (3E371)

KNOWLEDGE	All 3-level and 5-level knowledge requirements apply to 7-level
EDUCATION	For entry into this specialty, completion of high school with courses in mathematics, mechanical drawing and use of metal, masonry and wood working tools is desirable. The following is strongly encouraged: CCAF Construction Technology Associates Degree (4VEB) Higher education through a civilian institution WENG 555-Airfield Pavement Construction and Inspection, WMGT 422-Project Management, WMGT 436-Operations Support, and WMGT 571: Civil Engineer Civilian Supervisor Course (Civilian only). These and other AFIT funded skill progression courses can be found at AFIT The Civil Engineer School.

TRAINING	Completion of all the paper-based AFQTPs and their associated web-based courses on the CE VLC for all 5- and 7- skill level core (*) and diamond (♦) tasks with a minimum passing score of 80%. Completion of the CE 7-Level Common Core Concept web-based course located on the CE-VLC is mandatory for award of this skill level. Certification of all 5-and 7- skill level core tasks identified with an asterisk (*) in the 5-skill level column of the STS. Certification of all 5-skill level diamond tasks identified with a diamond (♦) in the 5-skill level core task column of the STS if the equipment is available. Minimum requirement is the signing off tasks on the AFQTP Documentation Record. Certification of duty position requirements identified by the supervisor.
EXPERIENCE	Qualification in and possession of AFSC 3E351. Performing and supervising functions of constructing, repairing and maintaining facilities. Must be SSgt with minimum 12 months OJT (6 months for retrainees).
OTHER	For entry, award and retention of AFSC 3E3X1: - Normal color vision as defined in AFI 48-123, <i>Medical Examinations and Standards</i>. - Must possess a valid state driver's license to operate government motor vehicles (GMV) in accordance with AFI 24-301, <i>Vehicle Operations</i>. - Freedom from fear of heights. - Must maintain local network access IAW AFMANs 33-115, <i>Air Force Information Technology (IT) Service Management</i>, and 33-282, <i>Computer Security</i>.
IMPLEMENTATION	Entry into 7-level training is initiated when an individual is selected for SSgt and is fully qualified in the AFSC 5-skill level. Qualification training is initiated any time individuals are assigned duties they are not qualified to perform. Use OJT, CDCs, AFJQs, and AFQTPs concurrently to obtain the necessary qualifications.

*Refer to [Air Force Enlisted Classification Directory \(AFECD\)](#) Part I Section II and Attachment 4 for most current requirements.

C2.4. Superintendent (9-Level) Training Requirements.

KNOWLEDGE	Characteristics, capabilities, operation and maintenance of equipment used in construction and paving, soil types, properties, limitations, compaction methods, soil stabilization, drainage, erosion control, construction and maintenance of asphalt and concrete surfaces, roadbeds, structure erection, landscaping, safety and environmental concerns, and pavement and building maintenance plans
EDUCATION	For entry into this specialty, completion of high school with courses in mathematics, mechanical drawing and use of metal, masonry and wood working tools is desirable. The following is strongly encouraged: CCAF Construction Technology Associates Degree (4VEV) Higher education through a civilian institution WENG 555-Airfield Pavement Construction and Inspection, WMGT 422-Project Management, WMGT 436-Operations Support, and WMGT 571: Civil Engineer Civilian Supervisor Course (Civilian only). These and other AFIT funded skill progression courses can be found at AFIT The Civil Engineer School.
TRAINING	Completion of Civil Engineer Superintendent Course (AFIT WMGT 570) conducted at Air Force Institute of Technology, Wright-Patterson AFB, OH is mandatory for Active Duty and Air Force Reserve SMSgt's. This course is highly encouraged for Air National Guard SMSgts and mandatory to be promoted to CMSgt. Note: This is not a skill level awarding course. Certification of duty position requirements identified by the supervisor.
EXPERIENCE	For award of AFSC 3E290, qualification in and possession of AFSC 3E371 or 3E271 is mandatory. Must be a SMSgt. Management of Civil Engineer functions such as directing and managing snow and ice removal, erecting structures, building maintenance, construction equipment operations and pavements for execution of horizontal and vertical construction programs.

OTHER	For entry, award and retention of AFSC 3E290, must possess a valid state driver's license to operate government motor vehicles (GMV) in accordance with AFI 24-301, <i>Vehicle Operations</i>. Normal color vision as defined in AFI 48-123, <i>Medical Examinations and Standards</i>. Must maintain local network access IAW AFMANs 33-115, <i>Air Force Information Technology (IT) Service Management</i>, and 33-282, <i>Computer Security</i>. Freedom from fear of heights. Heavy Repair Superintendents should pursue any additional knowledge and skill requirements that were not taught through initial skills or upgrade training.
OTHER	Effective in present and future duty positions. Recommended areas of study include but are not limited to: - AFIT Training courses such as Project Management courses - Contract Management courses.
IMPLEMENTATION	Entry into 9-level training is initiated when an individual is selected for SMSgt and is a fully qualified 7-Level. Qualification training is initiated any time an individual is assigned duties they are not certified to perform.

*Refer to [Air Force Enlisted Classification Directory \(AFECD\)](#) Part I Section II and Attachment 4 for most current requirements.

C2.5. Chief Enlisted Manager.

KNOWLEDGE	Knowledge is mandatory of Air Force training programs. CE policies, practices, and procedures of base maintenance and operations, crafts, facilities, equipment, and systems. Interpretations and applications of maintenance and work force management. General construction, and repair methods and procedures, including use and capacity of construction equipment.
TRAINING	Reserve Component Chief Orientation Course (AFRC only). Certification of duty position requirements identified by the supervisor.
EXPERIENCE	Possess qualifications in feeder specialty (3E290) prior to award of Civil Engineer Manager code 3E000. Managerial ability to plan, direct, coordinate, implement, and control a wide range of work activity.
OTHER	N/A
IMPLEMENTATION	Entry into Civil Engineer Manager Code 3E000 is initiated when an individual is selected for CMSgt and possess qualifications in a feeder specialty (3E090, 3E290, 3E490, 3E591, and 3E691).

*Refer to [Air Force Enlisted Classification Directory \(AFECD\)](#) Part I Section II and Attachment 4 for most current requirements.

SECTION D - RESOURCE CONSTRAINTS

D1. Purpose. This section identifies known resource constraints, which preclude optimal and desired training from being developed or conducted, including information such as cost and manpower. Narrative explanations of each resource constraint and an impact statement describing what effect each constraint has on training are included. Also included in this section are actions required, office of primary responsibility, and target completion dates. Resource constraints will be, as a minimum, reviewed and updated annually.

D1.1. Constraints:

D1.1.2. Equipment Constraints: None.

D1.1.3. Time/Manpower/Student Man-years Constraints: None.

D2. Apprentice (3-Level) Training: None.

D2.1. Constraints.

D2.1.1 Impact.

D2.1.2. Resources Required.

D2.1.3. Action Required.

D2.2. OPR/Target Completion Date.

D3. Journeyman (5-Level) Training. None.

D3.1. Constraints.

D3.1.1. Impact.

D3.1.2. Resources Required.

D3.1.3. Action Required.

D3.2. OPR/Target Completion Date.

D4. Craftsman (7-Level) Training. None.

D5. Superintendent (9-Level) Training. None.

SECTION E – TRANSITIONAL TRAINING GUIDE

“There are no transition training requirements for the Structural AFS. This section is reserved.”

PART II

SECTION A - SPECIALTY TRAINING STANDARD

A1. Implementation. This STS will be used for technical training provided by AETC Navy ITRO Structural Apprentice and Air Force Unique Training courses with class beginning 22 January 2016 and graduating on or after 22 March 2016.

A2. Purpose. As prescribed in AFI 36-2201, this STS, *Air Force Training Program*, and in collaboration with the Civil Engineer, Air Force Career Field Manager (AFCFM), it is mandatory for all civil engineers, regardless of duty assignment, to use an automated training record. The automated training record currently being utilized to document upgrade and qualification training is an application located on the [CE-VLC](#).

A2.1. Column 1 (Tasks, Knowledge, and Technical References). Lists the most common tasks, knowledge, and supporting technical references (TR) necessary for Airmen to perform duties in the 3-, 5-, and 7-skill level.

A2.2. Column 2 (Core Tasks). Identifies core tasks (specialty-wide training requirements) by an asterisk (*) in the appropriate skill level sub-column. **As a minimum, trainees must complete hands-on certification on all core, critical and diamond tasks for skill level upgrade.**

A2.2.1. Wartime Tasks. All tasks in the 3-level course 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.

A2.2.2. Diamond Tasks. Tasks identified by a diamond (♦) are considered contingency/war task and are critical to the career field. Equipment shortfalls at most locations have created problems with actual hands-on certification of these tasks. In instances where required equipment is not available for instruction, completion of the corresponding task AFQTP is all that is required for upgrade training.

A2.3. Column 3 (Certification for OJT). Used to record completion of tasks and knowledge training requirements. Use the automated training record application to document individual qualifications. **Task certification of core, critical and diamond tasks** require 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.

A2.4. Column 4 (Proficiency Codes Used to Indicate Training/Information Provided). Indicates formal training and correspondence course requirements. It shows 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 formal courses, web-based training (WBT) and AFQTPs. See CADRE/AFSC/CDC listing maintained by the unit education and training manager for current CDC listings.

A2.5. Qualitative Requirements. Contains the proficiency code key used to indicate the level of training and knowledge provided by WBT, resident training and career development courses.

A2.6. Job Qualification Standard (JQS). The STS becomes the JQS for OJT when placed in automated training application and used according to AFI 36-2201. For OJT, the tasks in Column 1 are trained and qualified to the go/no go level. “Go” means the individual can perform the task without assistance and meets local requirements for accuracy, timeliness, and correct use of procedures. AFQTPs, when available, shall be used to identify Air Force standardized procedures. When used as a JQS, the following requirements apply:

A2.6.1. Documentation. Document and certify completion of training.

A2.6.1.1. Duty position. Duty position requirements will be developed and identified by the workcenter supervisor and loaded into the automated training application. Completion of core, critical and diamond tasks are mandatory for all duty positions. Ensure the correct duty position title is listed under Profile 1 section of the trainee’s automated training record.

A2.6.1.2. AFQTP Training and Documentation. AFQTP or AFQTP assessments have been created for all core (*) and diamond (♦) tasks. Completion is mandatory to fulfill task knowledge requirements for upgrade/qualification training. Each AFQTP provides step-by-step procedures for the trainee, trainer, and certifier in completing each core or diamond task and instructions how to document the training in the automated training record.

A2.6.1.2.1. Training. Documentation of the start and completion of the AFQTP in the *QTP section* located in the automated training record is required for all core and diamond tasks. The automated training record will not allow you to sign off any tasks in the JQS until the completion date has been entered. Diamond tasks require the completion of the web-based course (with the review and post-test located in the program) or completion of the AFQTP assessment located on the [CE-VLC](#) to determine if the trainee has attained the knowledge level required. Once the trainee has completed the web-based course or AFQTP assessment, the course completion certificate must be provided to the trainer/supervisor for documentation of the completion in the automated training record and completion of hands-on training, if the equipment is available.

A2.6.1.2.2. Hands-On Training. *DO NOT sign off the tasks in the JQS until the trainee has completed hands-on/certification training.* For diamond tasks, if the equipment is not available at home station, the completion of the AFQTP or AFQTP assessment is the **ONLY** requirement for upgrade. When the equipment becomes available either at home station or at a TDY location, the trainee can be signed off within the JQS section of the automated training record.

A2.6.2. Transcribing from previous versions to the new CFETP. Most items should transcribe automatically during the update of the new CFETP. The UTM and supervisor must conduct a review of the new STS to identify any new core, diamond, or non-core tasks and add those tasks to their duty positions.

A2.6.2.1. Previous training certification not listed. If previous training certification is not listed in the individual record, select the parent task to be transcribed, check the task title(s) block, and click on the transcribe button. Enter the date of the original certification and sign off the task(s). The trainee will then sign off the task(s) to finalize the transcription of previous training certification. The automated application will place an entry into the trainee 623a and must be acknowledged by the transcriber and trainee.

A2.6.2.2. Transcribing external training certification. If a trainee attended a formal training course and received appropriate accreditation, select the 623 III section of the user automated training record and locate the course title in the master task list, then enter the completion date. If the course title is not listed, contact the UTM to have it loaded from the master catalog. If it is not listed in the master catalog contact the Force Development Manager at AFCEC to have it loaded in the master catalog.

A2.6.3. Documenting Career Knowledge. When a CDC is not available, the supervisor identifies STS training references that the trainee requires for career knowledge IAW AFI 36-2201, *Air Force Training Program* and ensures, as a minimum, that trainees cover all mandatory items specified in AFI 36-2101, *Classifying Military Personnel (Officer and Enlisted)*. For two-time CDC exam failures, the unit commander will take appropriate action IAW AFI 36-2201.

Note: Career knowledge must be documented prior to submitting a CDC waiver.

A2.6.4. Decertification. When an Airman is found to be unqualified on a task, the supervisor shall identify the task in the JQS and check the box next to the task title. The supervisor shall select the Decertify button on the screen menu and enter a 623a comment explaining why the task was decertified, and then enter the Airman into qualification training. The individual is recertified using the normal certification process.

A2.6.5. Recertification. When an Airman is required to be recertified on a previous task due to annual or bi-annual requirements. The supervisor shall identify the task in the JQS and check the box next to the task title and select the Recertify button on the screen and entry the dates the recertification was completed.

A2.6.6. 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.

A2.7. Specialty Training Standard. The STS is a guide for development of promotion tests used in the Weighted Airman Promotion System (WAPS). Specialty Knowledge Tests are developed at the USAF Airman Advancement Division by senior NCOs with extensive practical experience in their career fields. 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 Enlisted Promotions References and Requirements Catalog. Individual responsibilities are in AFI 36-2605, *AF Military Testing System*. WAPS is not applicable to the Air National Guard or Air Reserve Forces.

A3. Recommendations. Comments and recommendations are invited concerning the quality of training AETC graduates receive. Reference this STS and address your correspondence regarding changes to 782 TRG/TGE 917 Missile Road, Rm 1A300, Sheppard AFB TX 76311-2268 or E-mail 782csil@us.af.mil. A 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 task/knowledge items listed in this STS. For a quick response to problems, call the CSIL at DSN: 736-2574 any time day or night.

SECTION B - COURSE OBJECTIVE LIST (COL)

B1. Measurement. Measurement of each objective is indicated as follows:

B1.1. Written Test (W) indicates task or subject knowledge that is measured using a written test.

B1.2. Performance Test (P) indicates required task performance that is measured with a performance test.

B1.3. Progress Check (PC) indicates separate measurement of both knowledge and performance elements measured with a written and/or performance progress check.

B2. 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 or performance test, and students may be required to repeat all or parts of the behavior until satisfactory performance is attained.

B3. 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.

B4. Course Objective List. These objectives are listed in the sequence taught by Blocks of Instruction. Per AETCI 36-2641, *Technical and Basic Military Training Development*, detailed listing of the initial skills course objectives may be obtained by written request through the requesting organization’s MAJCOM to HQ AETC/A3T.

SECTION C - SUPPORT MATERIAL

C1. Air Force Qualification Training Packages.

C1.1. The ***mandatory*** AFQTP's for each skill level are identified on the 3E3X1 AFQTP Documentation Record.

C1.1.1. For a complete list of up-to-date AFQTPs applicable to the 3E3X1 AFSC, go to [CE-VLC](#).

C1.2. The UTM or supervisor can download paper-based AFQTP's. Paper-based AFQTP's can be found on the [CE-VLC](#) under the Library link and then by selecting Resources.

C1.2.1. In addition to the paper-based AFQTPs there are web-based courses or assessments developed for certain tasks that are available on the [CE-VLC](#) under the Course List link and specialty topic area.

C2. AFQTP Assessment for Civil Engineer CDCs.

C2.1. FDMs have developed CDC assessments for their career field and they are located on the [CE-VLC](#) under the topic header Civil Engineer Career Development Courses (CDCs).

C2.2. The CDC assessments are for the sole purpose of providing the Unit Commander, Unit Training Manager (UTM) and the supervisor, a predictive indicator of whether the trainee has studied sufficiently to successfully pass their CDC end of course (EOC) exam.

SECTION D – EDUCATION AND TRAINING COURSE INDEX

D1. Purpose. This section of the CFETP identifies training courses available for the structural specialty. Refer to Education and Training Course Announcements (ETCA) web site for information on the Air Force in-residence courses. The web site address is <https://etca.randolph.af.mil/>.

D2. Air Force In-Residence Courses/Mobile Training Team (MTT) Courses.

<u>Course Number</u>	<u>Title</u>	<u>Location</u>
J9AQN3E331 00NB	Structural Apprentice Qualifying I	366 TRS
J9AQN3E331 01NB	Structural Apprentice Qualifying II	366 TRS
JCABP3E331 00AC	Structural Apprentice	366 TRS
JCAZP3E351 01AB	Roof Installation, Maintenance, Inspection and Repair	366 TRS
JCAZP3E351 02AB	Metals Layout, Fabrication and Welding Course	366 TRS
JCAZP3E351 03AA	Contingency Maintenance Course	366 TRS

D3. Air Force Career Development Academy (AFCDA).

<u>Course Number</u>	<u>Title</u>	<u>Edit Code (EC)</u>
CDC D3E351	Structural Journeyman	01
CDC E3E351	Structural Journeyman	01

D4. Exportable/Web-based Courses/Information.

<u>Course Number</u>	<u>Title</u>	<u>Developer</u>
Web-based	AM-2 Aluminum Mat Foreign Object Damage (FOD) Cover	AFCEC/COF
Web-based	Civil Engineer 5-Level Common Core Concepts	AFCEC/COF
Web-based	Civil Engineer 7-Level Common Core Concepts	AFCEC/COF
Web-based	Concrete Construction & Foundation Forms	AFCEC/COF
Web-based	Contingency Airfield Marking-Paint Striper	AFCEC/COF

Web-based	Dome Shelter Maintenance	AFCEC/COF
Web-based	Expedient Locksmithing	AFCEC/COF
Web-based	Fabric Shelter Maintenance and Repair	AFCEC/COF
Web-based	Fall Protection Awareness	AFCEC/COF
Web-based	Folded Fiberglass Mat FOD Cover Assembly and Maintenance	AFCEC/COF
Web-based	Medium Shelter System (MSS)	AFCEC/COF
Web-based	Revetments	AFCEC/COF
Web-based	Roll up Door	AFCEC/COF
Web-based	Small Shelter System (SSS)	AFCEC/COF

D5. Courses/CDCs Under Development/Revision

<u>Course Number</u>	<u>Title</u>	<u>Date Due</u>
Web-based	Expedient Locksmithing	Jun 2017
Web-based	Roll up Door	Jun 2017

SECTION E – MAJCOM UNIQUE REQUIREMENTS

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

SECTION F - HOME STATION TRAINING

F1. Purpose. The purpose of this section is to identify the tasks, training references, and training sources available in support of contingency/wartime training. Civil Engineer forces will train to meet the full range of tasks expected in the contingency environment. 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 10-209, *RED HORSE Program* and AFI 10-210, *Prime Base Emergency Engineer Force (BEEF) Program*.

F2. Home Station Training (HST). HST is knowledge-based and hands-on training that is conducted at the individual's home station for contingency operations. The CE Commander ensures training is provided and documented and arranges for subject matter experts to conduct training as required.

F3. Combat Skills Training (CST). CST must be institutionalized as an integral part of any HST program. Lessons learned from operations such as IRAQI FREEDOM have taught us the importance of maintaining a higher level of combat readiness. Although the inclusion of combat skills-focused training into HST does not fully prepare CE personnel to work in a high threat combat environment, the steps taken to enhance training will help elevate units to a readiness level capable of supporting safe and effective operations in low to medium risk combat environments.

F4. Mission Essential Equipment Training (MEET). Wartime or contingency environments often involve the use of specialized and unique mission-essential equipment that civil engineers do not use in their day-to-day operations. Due to the cost and complexity, mission essential contingency equipment and trainer expertise are not commonly found at CONUS installations. Personnel must be hands-on certified and the certification documented in their CFETP. AFI 10-210, Attachment 4, identifies minimum number of personnel to be trained, positions by specialty, frequencies and locations of training sites. Inadequate training on these key equipment items can negatively impact Air Force contingency operations.

F5. AF Expeditionary (ES) Training Requirement. AETC, as lead MAJCOM for AF ES training, revamped ancillary home-station and advanced (mission specific) expeditionary skills training plans to standardize and synchronize training across the force. Detailed requirements for AF ES training is available in AFI 36-2201, *Air Force Training Program*, Chapter 8.

F6. Training References.

F6.1. AFI 10-209, *RED HORSE Program*, Chapter 3 and Attachments 2-6 identify the RED HORSE recurring training requirements.

F6.2. AFI 10-210, *Prime Base Engineer Emergency Force (BEEF) Program*, Chapter 4 and Attachments 2-5 identifies the Prime BEEF recurring training requirements.

F6.3. AFI 36-2201, *Air Force Training Program*, Chapter 8 identify ES training requirements.

F6.4. Web-based Products. Web-based products are available on the CE Virtual Learning Center (VLC) website at <https://afcec.adls.af.mil>. Personnel completing these courses can receive credit

for HST. CBT products can be used in a classroom setting to train as many personnel as possible. Attendance must be documented on a sign-in roster. The sign-in roster must be maintained IAW AFI 10-210.

BY ORDER OF THE SECRETARY OF THE AIR FORCE

OFFICIAL

JOHN B. COOPER, Lieutenant General, USAF
DCS/Logistics, Installation and Mission Support

3 Attachments

1. Qualitative Requirements (Proficiency Code Key)
2. 3E3X1 Specialty Training Standard (STS)
3. 3E3X1 AFQTP Documentation record

Attachment 1 Qualitative Requirements (Proficiency Code Key)

A1. Qualitative Requirements

<i>This Block Is For Identification Purposes Only.</i>		
Name Of Trainee		
Printed Name (Last, First, Middle Initial)	Initials (Written)	SSAN (Last four)
Printed Name Of Trainer, Certifying Official And Written Initials		
N/I	N/I	
N/I	N/I	
N/I	N/I	

Note: Place a continuation sheet behind the CFETP when additional space is required.

Proficiency Code Key		
	Scale Value	Definition: The individual
Task Performance Levels	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 only help 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)
*Task Knowledge Levels	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)
**Subject Knowledge Levels	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. (Example: 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 the course columns to show that training is required but not given due to limitations in resources.
 ♦ - This symbol indicates the task is a diamond task due to equipment constraint at some units.
 Specific tasks not identified with a symbol or proficiency code key (blank) indicates that no training is provided in the course or CDC. Major commands and /or units may establish scale values and combat training as dictated by mission requirements.
Note 1: BLK #4: Columns (1) & (2) can be relabeled to meet Career Field Requirements; i.e., 2 phase 3-skill level course, 5- and 7- level AFQTP
Note 2: All tasks and knowledge items shown with a proficiency code are trained during wartime.

Attachment 2
3E3X1 Specialty Training Standard (STS)

A2. Specialty Training Standard

A2.1. Identification. In the automated training record User Profile section the UTM will assign individuals to the correct workcenter upon in processing into the unit.

A2.1.1. For new trainee the UTM will assist them in creating a training record on the [CE-VLC](#) and placing them in the correct workcenter and specialty within their unit. Additional information will need to be entered into the following areas:

A2.1.1.1. User Administrators:

A2.1.1.1.1. Individual UTM

A2.1.1.1.2. Workcenter Supervisor

A2.1.1.1.3. Immediate Supervisor

A2.1.1.2. User Training Information.

A2.1.1.2.1. Duty Position

A2.1.1.2.2. Date Entered Duty Positions

A2.1.1.2.3. Training Status Code

A2.1.1.2.4. Date Entered Upgrade Training (UGT)

A2.1.2. For all other the UTM will need to place the individual into the correct workcenter and specialty. If the individual record is not available contact the losing unit to have the record transferred. If this fails contact the [AFCEC-VLC](#) helpdesk for assisting. Additional information will need to be entered into the following areas:

A2.1.2.1. User Administrators:

A2.1.2.1.1. Individual UTM

A2.1.2.1.2. Workcenter Supervisor

A2.1.2.1.3. Immediate Supervisor

A2.1.2.2. User Training Information.

A2.1.2.2.1. Duty Position

A2.1.2.2.2. Date Entered Duty Positions

Attachment 2
3E3X1 Specialty Training Standard (STS)

A2.1.2.2.3. Training Status Code

A2.2. Specialty Tasks. The following are tasks the workcenter supervisor will use to create the duty task list for each duty position created for their workcenter.

1. Tasks, Knowledge And Technical References	2. Core Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training / Information Provided (See Explanations)					
	A	B	A	B	C	D	E	A		B		C	
	5 Level	7 Level	Tng Start	Tng Comp	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level (1) Course	3 Skill Level (2) DL	5 Skill Level (1) CDC	5 Skill Level (2) DL	7 Skill Level (1) Course	7 Skill Level (2) DL
1. CIVIL ENGINEER (CE) COMMON CORE CONCEPTS COURSES TR: CE Virtual Learning Center (CE-VLC) Note: QTP required for UGT													
1.1. Accomplish CE 5-Level Core Concepts Course Note: Must Complete WBT	*							-	-	-	B	-	-
1.2. Accomplish CE 7-Level Core Concepts Course Note: Must Complete WBT		*						-	-	-	-	-	B
1.3. CE Core Concepts Overview								A	-	-	-	-	-
2. AFS SPECIFIC SAFETY TR: NAVEDTRA 14256 Use and Care of Hand Tools and Measuring Tools; AFPDs 91-2, 91-3; AFIs 32-1052, 91-202, 91-203, 91-204, 91-301, 91-302; AFPAM 32-7043; NIOSH 78-193B; TOs 32-1-101, 32-1-151, 34W4-1-5, 34W4-1-8 Note: QTP required for UGT													
2.1. AF occupational safety and health program TR: AFI 91-203								B	-	B	-	-	-
2.2. Perform hazard abatement TR: AFI 91-203								b	-	b	-	-	-
2.3. Exercise safety precautions when:													
2.3.1. Operating power tools and equipment								2b	-	b	-	-	-
2.3.2. Using hand tools								2b	-	b	-	-	-
2.3.3. Working from heights								b	-	b	-	-	-
2.3.4. Lifting manually								2b	-	b	-	-	-
2.3.5. Handling compressed gas containers	*							b	-	b	-	-	-
2.3.6. Handling corrosive materials associated with Structural AFS								b	-	b	-	-	-
2.3.7. Perform Lockout/Tagout procedures	*							b	-	b	-	-	-
2.4. Safety Training Standards For AFS TR: AFI91-203													
2.4.1. Utilize Material Safety Data Sheet (MSDS) TR: NAVEDTRA 14045 Builder Advance								-	-	-	-	-	-
2.4.2. Initial Federal Hazard Communication Training Program (FHCTP) TR: DoD 6050.5-G-1; AFI 91-203								-	-	-	-	-	-

Attachment 2
3E3X1 Specialty Training Standard (STS)

1. Tasks, Knowledge And Technical References	2. Core Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training / Information Provided (See Explanations)					
	A	B	A	B	C	D	E	A		B		C	
	5 Level	7 Level	Tng Start	Tng Comp	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2) DL	(1) CDC	(2) DL	(1) Course	(2) DL
2.5. Fall Protection Awareness TR: Occupational Safety and Health Administration (OSHA) 29 Code of Federal Regulations (CFR) 1910 and 29 CFR 1926													
2.5.1. Purpose								-	-	-	B	-	B
2.5.2. Fall Protection Plan								-	-	-	B	-	B
2.5.3. Rescue Plan								-	-	-	B	-	B
3. PROJECT PLANNING Note: QTP required for UGT													
3.1. Perform planning functions TR: AFI 32-1001, 32-1021; AFM 67-1(Vol. 2, Part 2); AFPAM 32-1125; NAVEDTRA 14040, Blueprint Reading & Sketching; NAVEDTRA 14043, 14044, Builders 3 & 2, Vol. 1 & 2; NAVEDTRA 14045, Builder Advanced; NAVEDTRA 14250, 14251, Steelworker Vol. 1 & 2; Modern Carpentry, Masonry, Metalworking, and Welding; Welding Skills; Carpentry, 3rd Edition; Sheet Metal by Meyer; Welding Technology, 2nd Ed													
3.1.1. Use estimating standards								-	-	b	-	-	-
3.1.2. Apply special precautionary measures such as: AF Forms 103 and 592								-	-	b	-	-	-
3.1.3. Sketch working drawings TR: NAVEDTRA 14040, NAVEDTRA 14251								1a	-	b	-	-	-
3.2. Use construction drawings for: TR: NAVEDTRA 14040, Blueprint Reading & Sketching; NAVEDTRA 14043, 14044, Builders 3 & 2, Vol. 1 & 2; NAVEDTRA 14045, Builder Advanced; NAVEDTRA 14250, 14251, Steelworker Vol. 1 & 2; Modern Carpentry, Masonry and Metalworking, Welding; Welding Skills; Sheet Metal by Meyer; Carpentry, 3rd Edition; Welding Technology, 2nd Ed													
3.2.1. Carpentry		*						2b	-	b	-	-	-
3.2.2. Masonry		*						2b	-	b	-	-	-
3.2.3. Metal		*						2b	-	b	-	-	-
3.2.4. Roofing systems TR: AFI 32-1051; TM 5-617 (AFM 91-31) Roofing Construction & Estimating by Atcheson													

Attachment 2
3E3X1 Specialty Training Standard (STS)

1. Tasks, Knowledge And Technical References	2. Core Tasks		3. Certification For OJT						4. Proficiency Codes Used To Indicate Training / Information Provided (See Explanations)					
	A	B	A	B	C	D	E	A	B	C				
	5 Level	7 Level	Tng Start	Tng Comp	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level (1) Course	5 Skill Level (2) CDC	7 Skill Level (1) Course	(2) DL	(2) DL	(2) DL	(2) DL
3.3. Identify type of material required for: TR: NAVEDTRA 14040, Blueprint Reading & Sketching; NAVEDTRA 14043, 14044, Builders 3 & 2, Vol. 1 & 2; NAVEDTRA 14045, Builder Advanced; NAVEDTRA 14250, 14251, Steelworker Vol. 1 & 2; Modern Carpentry, Masonry, Metalworking, and Welding; Welding Skills; Sheet Metal by Meyer; Carpentry, 3rd Edition; Welding Technology, 2nd Ed														
3.3.1. Carpentry		*						a	-	b	-	-	-	-
3.3.2. Masonry		*						a	-	b	-	-	-	-
3.3.3. Metal		*						a	-	b	-	-	-	-
3.3.4. Roofing systems TR: AFI 32-1051; TM 5-617 (AFM 91-31) Roofing Construction & Estimating by Atcheson								a	-	b	-	-	-	-
3.4. Establish quantity of material required for: TR: NAVEDTRA 14040, Blueprint Reading & Sketching; NAVEDTRA 14043, 14044, Builders 3 & 2, Vol. 1 & 2; NAVEDTRA 14045, Builder Advanced; NAVEDTRA 14250, 14251, Steelworker Vol. 1 & 2; Modern Carpentry, Masonry, Metalworking, and Welding; Welding Skills; Sheet Metal by Meyer; Carpentry, 3rd Edition; Welding Technology, 2nd Ed														
3.4.1. Carpentry		*						2b	-	b	-	-	-	-
3.4.2. Masonry		*						2b	-	b	-	-	-	-
3.4.3. Metal		*						2b	-	b	-	-	-	-
3.4.4. Roofing systems TR: AFI 32-1051; TM 5-617 (AFM 91-31); Roofing Construction & Estimating by Atcheson								a	-	b	-	-	-	-
4. TOOLS AND EQUIPMENT TR: T.O.s 32-1-101, 32-1-151; NAVEDTRA 14043,14044, Builders 3&2 Vol 1&2; NAVEDTRA 14045, Builder Advanced; NAVEDTRA 14250, 14251, Steelworker Vol 1&2; NAVEDTRA 14256, Tools and Their Uses; Modern Carpentry, Masonry, Metalworking, and Welding; Welding Skills; Sheet Metal by Meyer; Carpentry, 3rd Edition; Welding Technology, 2nd Ed.														
4.1. Use														
4.1.1. Handtools								2b	-	b	-	-	-	-
4.1.2. Portable power tools								2b	-	b	-	-	-	-
4.1.3. Shop installed equipment								2b	-	b	-	-	-	-

Attachment 2
3E3X1 Specialty Training Standard (STS)

1. Tasks, Knowledge And Technical References	2. Core Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training / Information Provided (See Explanations)					
	A	B	A	B	C	D	E	A		B		C	
	5 Level	7 Level	Tng Start	Tng Comp	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level	5 Skill Level	7 Skill Level	3 Skill Level	5 Skill Level	7 Skill Level
								(1) Course	(2) DL	(1) CDC	(2) DL	(1) Course	(2) DL
4.1.4. Laser level								-	-	b	-	-	-
4.1.5. Powder actuated tools								-	-	b	-	-	-
4.1.6. Scaffolds and ladders								-	-	b	-	-	-
4.1.7. Mobile work platforms								-		b	-	-	-
4.2. Maintain													
4.2.1. Handtools								2b	-	b	-	-	-
4.2.2. Portable power tools								2b	-	b	-	-	-
4.2.3. Shop installed equipment								2b	-	b	-	-	-
4.2.4. Laser level								-	-	-	-	-	-
4.2.5. Powder actuated tools								-	-	b	-	-	-
4.2.6. Scaffolds and ladders								-	-	b	-	-	-
4.2.7. Mobile work platforms								-	-	b	-	-	-
5. CONCRETE STRUCTURES TR: NAVEDTRA 14043, 14044, Builders 3 & 2, Vol. 1 & 2; NAVEDTRA 14045 , Builder Advanced; NAVEDTRA 14251 Steelworker Vol. 2; Modern Carpentry and Masonry; Carpentry, 3rd Edition; Masonry & Concrete by Beall Note: QTP required for UGT													
5.1. Prepare subgrade								a	-	b	-	-	-
5.2. Concrete reinforcement													
5.2.1. Install reinforcing steel		*						b	-	b	-	-	-
5.2.2. Install wire mesh								1a	-	b	-	-	-
5.3. Construct, install and remove forms													
5.3.1. Footings								a	-	b	-	-	-
5.3.2. Piers								a	-	b	-	-	-
5.3.3. Columns								a	-	b	-	-	-
5.3.4. Slabs		*						2b	-	b	-	-	-
5.3.5. Steps								a	-	b	-	-	-
5.3.6. Ramps								a	-	b	-	-	-
5.3.7. Walls								a	-	b	-	-	-
5.3.8. Earth								a	-	b	-	-	-
5.4. Construct batter boards								2b	-	b	-	-	-
5.5. Install expansion and contraction joints								b	-	b	-	-	-
5.6. Concrete													
5.6.1. Mix ingredients to meet project specifications								2b	-	b	-	-	-
5.6.2. Use admixtures								a	-	b	-	-	-
5.7. Place concrete in forms		*						2b	-	b	-	-	-
5.8. Consolidate concrete								2b	-	b	-	-	-

Attachment 2
3E3X1 Specialty Training Standard (STS)

1. Tasks, Knowledge And Technical References	2. Core Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training / Information Provided (See Explanations)					
	A	B	A	B	C	D	E	A		B		C	
	5 Level	7 Level	Tng Start	Tng Comp	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level (1) Course	(2) DL	5 Skill Level (1) CDC	(2) DL	7 Skill Level (1) Course	(2) DL
5.9. Install anchor bolts								b	-	b	-	-	-
5.10. Finish concrete		*						2b	-	b	-	-	-
5.11. Cure concrete								b	-	b	-	-	-
5.12. Inspect concrete for defects								a	-	b	-	-	-
5.13. Repair concrete								a	-	b	-	-	-
6. STRUCTURAL LAYOUT/FRAMING COMPONENTS TR: NAVEDTRA 14043, 14044, Builders 3 & 2, Vol. 1 & 2; NAVEDTRA 14045, Builder Advanced; Modern Carpentry and Masonry; Carpentry, 3rd Edition; Commercial Metal Stud Framing by Clark Note: QTP required for UGT													
6.1. Layout , construct, and install													
6.1.1. Floors	*							2b	-	b	-	-	-
6.1.2. Stair members								1a	-	b	-	-	-
6.1.3. Walls													
6.1.3.1. Wooden Studs	*							2b	-	b	-	-	-
6.1.3.2. Metal Studs								1a	-	b	-	-	-
6.1.4. Ceilings								1a	-	b	-	-	-
6.1.5. Roofs	*							1a	-	b	-	-	-
6.1.6. Trusses								a	-	b	-	-	-
7. EXTERIOR CONSTRUCTION AND FINISHING TR: NAVEDTRA 14043, 14044, Builders 3 & 2, Vol. 1 & 2; NAVEDTRA 14045, Builder Advanced; NAVEDTRA 14250, 14251, Steelworker Vol. 1 & 2; Modern Carpentry; Carpentry, 3rd Edition; Finish Carpentry by Spence													
7.1. Install													
7.1.1. Metal siding								a	-	b	-	-	-
7.1.2. Wood siding								a	-	b	-	-	-
7.2. Repair													
7.2.1. Metal siding								a	-	b	-	-	-
7.2.2. Wood siding								a	-	b	-	-	-
7.3. Install vents								a	-	b	-	-	-
7.4. Install louvers								a	-	b	-	-	-
7.5. Install exterior trim								1a	-	b	-	-	-
7.6. Construct wooden fences								-	-	a	-	-	-
7.7. Replace screen fabric								-	-	b	-	-	-
7.8. Replace glass								-	-	b	-	-	-

Attachment 2
3E3X1 Specialty Training Standard (STS)

1. Tasks, Knowledge And Technical References	2. Core Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training / Information Provided (See Explanations)					
	A	B	A	B	C	D	E	A		B		C	
	5 Level	7 Level	Tng Start	Tng Comp	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2) DL	(1) CDC	(2) DL	(1) Course	(2) DL
7.9. Cut glass								-	-	b	-	-	-
7.10. Cut acrylic sheets								-	-	b	-	-	-
8. MASONRY CONSTRUCTION AND MAINTENANCE TR: NAVEDTRA 14043, 14044, Builders 3 & 2, Vol. 1 & 2; NAVEDTRA 14045, Builder Advanced; Modern Carpentry and Masonry; Carpentry, 3rd Edition; Building with Masonry by Kreh Note: QTP required for UGT													
8.1. Determine and mix type of mortar required	*							b		b	-	-	-
8.2. Lay masonry units													
8.2.1. Brick								-	-	b	-	-	-
8.2.2. Block	*							1a	-	b	-	-	-
8.3. Install reinforcement													
8.3.1. Prefabricated wire joint reinforcement								a	-	b	-	-	-
8.3.2. Structural reinforcing bars								a	-	b	-	-	-
8.3.3. Anchor bolts								a	-	b	-	-	-
8.4. Construct control joints								a	-	b	-	-	-
8.5. Construct window and door openings													
8.5.1. Brick								-	-	b	-	-	-
8.5.2. Block								a	-	b	-	-	-
8.6. Repair masonry units								a	-	b	-	-	-
8.7. PLASTER/STUCCO TR: NAVEDTRA 14043, 14044, Builders 3&2, Vol. 1&2; NAVEDTRA 14045, Builder Advanced Modern Masonry; Carpentry, 3rd Edition; Portland Cement Plaster (Stucco) Manual by Portland Cement Assoc. 1996													
8.7.1. Apply													
8.7.1.1. Plaster								-	-	a	-	-	-
8.7.1.2. Stucco								-	-	a	-	-	-
8.7.2. Patch													
8.7.2.1. Plaster								-	-	a	-	-	-
8.7.2.2. Stucco								-	-	a	-	-	-

Attachment 2
3E3X1 Specialty Training Standard (STS)

1. Tasks, Knowledge And Technical References	2. Core Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training / Information Provided (See Explanations)					
	A	B	A	B	C	D	E	A		B		C	
	5 Level	7 Level	Tng Start	Tng Comp	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level (1) Course	(2) DL	5 Skill Level (1) CDC	(2) DL	7 Skill Level (1) Course	(2) DL
9. ROOFING SYSTEMS TR: TMs 5-617 (AFM 91-31), 5-805-14; NAVEDTRA 14043, 14044, Builders 3 &2, Vol. 1 & 2; NAVEDTRA 14045, Builder Advanced; NAVEDTRA 14250, 14251, Steelworker Vol. 1 & 2; Modern Carpentry and Metalworking; Carpentry, 3rd Edition; Roofing Construction & Estimating by Atcheson; Maintenance of Membrane Roofing Systems by RIEI; Sheet Metal by Meyer; Welding Technology, 2nd Ed													
9.1. Install low-slope roof systems:													
9.1.1. Built-up roof								-	-	b	-	-	-
9.1.2. Modified bitumen								-	-	b	-	-	-
9.1.3. Thermosets								-	-	b	-	-	-
9.1.4. Thermoplastic								-	-	b	-	-	-
9.1.5. Metal								a	-	b	-	-	-
9.1.6. Composition roll roofing								a	-	b	-	-	-
9.2. Repair low-slope roof systems:													
9.2.1. Built-up roof								-	-	b	-	-	-
9.2.2. Modified bitumen								-	-	b	-	-	-
9.2.3. Thermosets								-	-	b	-	-	-
9.2.4. Thermoplastic								-	-	b	-	-	-
9.2.5. Metal								a	-	b	-	-	-
9.2.6. Composition roll roofing								a	-	b	-	-	-
9.3. Install steep-slope roof systems:													
9.3.1. Tile								-	-	-	-	-	-
9.3.2. Composition shingles								2b	-	b	-	-	-
9.3.3. Metal								a	-	b	-	-	-
9.4. Repair steep-slope roof systems:													
9.4.1. Tile								-	-	b	-	-	-
9.4.2. Composition shingles								a	-	b	-	-	-
9.4.3. Metal								a	-	b	-	-	-
9.5. Inspect roof systems: TR: AFI 32-1051													
9.5.1. Low-slope								-	-	b	-	-	-
9.5.2. Steep-slope								-	-	-	-	-	-
9.6. Gutter systems													
9.6.1. Fabricate								-	-	-	-	-	-
9.6.2. Install								-	-	b	-	-	-
9.6.3. Repair								-	-	b	-	-	-
9.7. Flashing													

Attachment 2
3E3X1 Specialty Training Standard (STS)

1. Tasks, Knowledge And Technical References	2. Core Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training / Information Provided (See Explanations)					
	A	B	A	B	C	D	E	A		B		C	
	5 Level	7 Level	Tng Start	Tng Comp	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level (1) Course	(2) DL	5 Skill Level (1) CDC	(2) DL	7 Skill Level (1) Course	(2) DL
9.7.1. Fabricate								1a	-	-	-	-	-
9.7.2. Install								1a	-	b			
9.7.3. Repair								-	-	b			
9.8. Manage roofing program								-	-	-	-	-	-
10. FINISH CARPENTRY TR: NAVEDTRA 14043, 14044, Builders 3 & 2, Vol. 1 & 2; NAVEDTRA 14045, Builder Advanced; Modern Carpentry; Carpentry, 3rd Edition; Finish Carpentry by Spence; Drywall by Ferguson Note: QTP required for UGT													
10.1. Install wall paneling								-	-	b	-	-	-
10.2. Gypsum board													
10.2.1. Install	*							2b	-	b	-	-	-
10.2.2. Tape and finish	*							2b	-	b	-	-	-
10.2.3. Patch	*							2b	-	b	-	-	-
10.3. Install floor coverings													
10.3.1. Asphalt/Vinyl								2b	-	b	-	-	-
10.3.2. Wood								-	-	-	-	-	-
10.4. Repair floor coverings													
10.4.1. Asphalt/Vinyl								b	-	b	-	-	-
10.4.2. Wood									-	-	-	-	-
10.5. Install ceiling systems													
10.5.1. Acoustical Tile								-	-	-	-	-	-
10.5.2. Suspended ceiling								2b	-	b			
10.6. Repair / Replace ceiling systems									-				
10.6.1. Acoustical Tile								-	-	-	-	-	-
10.6.2. Suspended ceiling								b	-	b	-	-	-
10.7. Interior trim									-				
10.7.1. Install								1a	-	b	-	-	-
10.7.2. Repair								a	-	-	-	-	-
11. MASONRY WALL/FLOOR TILE INSTALLATION AND MAINTENANCE INSTALLATION AND MAINTENANCE TR: NAVEDTRA 14043, 14044, Builders 3 & 2, Vol. 1 & 2; NAVEDTRA 14045, Builder Advanced; Modern Masonry; Carpentry, 3rd Edition													
11.1. Prepare surface to receive adhesive								1a	-	b	-	-	-
11.2. Lay out areas to receive tile								1a	-	b	-	-	-
11.3. Apply adhesive method								1a	-	b	-	-	-
11.4. Apply thin set method								a	-	b	-	-	-

Attachment 2
3E3X1 Specialty Training Standard (STS)

1. Tasks, Knowledge And Technical References	2. Core Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training / Information Provided (See Explanations)					
	A	B	A	B	C	D	E	A		B		C	
	5 Level	7 Level	Tng Start	Tng Comp	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level (1) Course	(2) DL	5 Skill Level (1) CDC	(2) DL	7 Skill Level (1) Course	(2) DL
11.5. Set tile								1a	-	b	-	-	-
11.6. Cut tile								1a	-	b	-	-	-
11.7. Install fixtures								-	-	b	-	-	-
11.8. Apply grout								1a	-	b	-	-	-
11.9. Replace tile								a	-	b	-	-	-
12. PROTECTIVE COATINGS TR: NAVEDTRA 12520, 12521,Builders 3 and 2, Vol. 1 & 2; Modern Carpentry, Masonry,Metalworking and Welding Skills; Carpentry, 3rd Edition													
12.1. Apply protective coating								a	-	b	-	-	-
13. PERSONNEL DOOR AND WINDOW MAINTENANCE TR: TM 5-805-8; NAVEDTRA 14043, 14044, Builders 3 & 2, Vol. 1 & 2; NAVEDTRA 14045, Builder Advanced; Modern Carpentry, Masonry, Metalworking and Welding; Carpentry, 3rd Edition Note: QTP required for UGT													
13.1. Install personnel door units													
13.1.1. Wood	*							1a	-	b	-	-	-
13.1.2. Metal	*							a	-	b	-	-	-
13.1.3. Glass								-	-	-	-	-	-
13.2. Repair personnel door units													
13.2.1. Wood								a	-	b	-	-	-
13.2.2. Metal								a	-	b	-	-	-
13.2.3. Glass								-	-	-	-	-	-
13.3. Install window units								1a	-	b	-	-	-
13.4. Repair window units								a	-	b	-	-	-
13.5. Personnel door hardware													
13.5.1. Install door closures	*							b	-	b	-	-	-
13.5.2. Adjust door closures								b	-	b	-	-	-
13.5.3. Install locking devices													
13.5.3.1. Cylinder locks	*							2b	-	b	-	-	-
13.5.3.2. Mortise locks								-	-	b	-	-	-
13.5.3.3. Cipher locks								-	-	b	-	-	-
13.5.3.4. Panic hardware/exit device	*							a	-	b	-	-	-
14. LOCKSMITHING TR: The Complete Book of Locks and Locksmithing by Phillips; Carpentry 3rd Edition													
14.1. Implement master key system								-	-	-	-	-	-
14.2. Cut keys								-	-	-	-	-	-

Attachment 2
3E3X1 Specialty Training Standard (STS)

1. Tasks, Knowledge And Technical References	2. Core Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training / Information Provided (See Explanations)					
	A	B	A	B	C	D	E	A Skill Level		B Skill Level		C Skill Level	
	5 Level	7 Level	Tng Start	Tng Comp	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2) DL	(1) CDC	(2) DL	(1) Course	(2) DL
14.3. Maintain locking devices													
14.3.1. Cylinder locks								a	-	b	-	-	-
14.3.2. Mortise locks								-	-	b	-	-	-
14.3.3. Cipher locks								-	-	b	-	-	-
14.3.4. Panic hardware								a	-	b	-	-	-
14.3.5. GSA Container								-	-	-	-	-	-
14.3.6. Safes								-	-	-	-	-	-
14.3.7. Vaults								-	-	-	-	-	-
15. WOODWORKING TR: NAVEDTRA 14043, 14044, Builders 3 & 2, Vol. 1 & 2; NAVEDTRA 14045, Builder Advanced; Carpentry, 3rd Edition; Furniture & Cabinet Construction by Rae													
15.1. Install countertops								-	-	b	-	-	-
15.2. Install cabinet hardware								-	-	b	-	-	-
15.3. Apply laminated plastics								-	-	b	-	-	-
15.4. Install cabinets								-	-	b	-	-	-
16. ENERGY CONSERVING MATERIAL TR: TM 5-805-6; NAVEDTRA 14043, 14044, Builders 3 & 2, Vol. 1 & 2; Modern Masonry; Carpentry, 3rd Edition; Energy Efficient Building by Fine Home Building Editors													
16.1. Install thermal insulation								a	-	b	-	-	-
16.2. Apply caulking compound								a	-	b	-	-	-
16.3. Install weather-stripping								a	-	b	-	-	-
17. FABRICATE AND INSTALL METAL/FIBERGLASS COMPONENTS TR: NAVEDTRA 14250, 14251, Steelworker Vol. 1 & 2; Modern Metalworking; Sheet Metal by Meyer T.O.s 34W4-1-5; AFI 91-203; Modern Welding by Bowditch Note: QTP required for UGT													
17.1. Lay out metal components using:													
17.1.1. Parallel line development	*							2b	-	b	-	-	-
17.1.2. Radial line development								2b	-	b	-	-	-
17.1.3. Triangulation development								2b	-	b	-	-	-
17.2. Fabricate Metal Components													
17.2.1. Rectangular								2b	-	b	-	-	-
17.2.2. Round								2b	-	b	-	-	-
17.3. Assemble and install metal components using appropriate fasteners								1a	-	b	-	-	-
17.4. Install Duct systems													
17.4.1. Sheet metal ducts	*							a	-	b	-	-	-

Attachment 2
3E3X1 Specialty Training Standard (STS)

1. Tasks, Knowledge And Technical References	2. Core Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training / Information Provided (See Explanations)					
	A	B	A	B	C	D	E	A		B		C	
	5 Level	7 Level	Tng Start	Tng Comp	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level (1) Course	(2) DL	5 Skill Level (1) CDC	(2) DL	7 Skill Level (1) Course	(2) DL
17.4.2. Flex Duct								a	-	b	-	-	-
17.4.3. Stacks								a	-	b	-	-	-
17.4.4. Ventilators								a	-	b	-	-	-
17.5. Install fixed utility equipment													
17.5.1. Table tops								-	-	-	-	-	-
17.5.2. Counter tops								-	-	-	-	-	-
17.5.3. Overhead canopies								-	-	-	-	-	-
17.5.4. Hoods								-	-	a	-	-	-
17.5.5. Doors								-	-	-	-	-	-
17.6. Repair fiberglass duct board								-	-	a	-	-	-
18. VEHICLE AND EQUIPMENT FACILITY DOORS AND GATES TR: Manufacturer’s Instructions Note: QTP required for UGT													
18.1. Inspect roll-up/overhead metal doors	*							b	-	b	-	-	-
18.2. Install													
18.2.1. Overhead doors								b	-	b	-	-	-
18.2.2. Roll-up								b	-	b	-	-	-
18.2.3. Door operators								b	-	b	-	-	-
18.2.4. Manual gates								-	-	-	-	-	-
18.2.5. Mechanical gates								-	-	-	-	-	-
18.3. Maintain													
18.3.1. Overhead doors	*							2b	-	b	-	-	-
18.3.2. Roll-up	*							2b	-	b	-	-	-
18.3.3. Door operators								b	-	b	-	-	-
18.3.4. Manual gates								-	-	-	-	-	-
18.3.5. Mechanical gates								-	-	-	-	-	-
19. OXYACETYLENE WELDING TR: T.O.s 34W4-1-5, 34W4-1-8; AFI 91-203; NAVEDTRA 14250, 14251, Steelworker Vol. 1 & 2; Modern Welding by Bowditch; Oxyfuel Gas Welding by Bowditch; Welding Skills; Welding Technology, 2nd Ed Note: QTP required for UGT													
19.1. Principles of oxyacetylene welding								B	-	B	-	-	-
19.2. Set up oxyacetylene torch for specific welding jobs	*							2b	-	b	-	-	-
19.3. Perform shop tests to identify metals								-	-	b	-	-	-
19.4. Prepare joints for welding								2b	-	b	-	-	-
19.5. Use oxyacetylene welding equipment to weld carbon steel								2b	-	b	-	-	-
19.6. Use oxyacetylene equipment to cut metal	*							2b	-	b	-	-	-

Attachment 2
3E3X1 Specialty Training Standard (STS)

1. Tasks, Knowledge And Technical References	2. Core Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training / Information Provided (See Explanations)					
	A	B	A	B	C	D	E	A Skill Level		B Skill Level		C Skill Level	
	5 Level	7 Level	Tng Start	Tng Comp	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2) DL	(1) CDC	(2) DL	(1) Course	(2) DL
19.7. Use oxyacetylene welding equipment to form metal components								-	-	b	-	-	-
19.8. Maintain oxyacetylene welding equipment								2b	-	b	-	-	-
19.9. Principles of silver brazing								-	-	B	-	-	-
19.10. Principles of braze welding								-	-	B	-	-	-
20. SHIELDED METAL ARC WELDING TR: T.O.s 34W4-1-5; AFOSHSTD 91-5; NAVEDTRA 14250, 14251, Steelworker Vol. 1 & 2; Modern Welding by Bowditch; Shielded Metal Arc Welding by Hobart; Welding Skills; Welding Technology, 2nd Ed Note: QTP required for UGT													
20.1. Principles of shielded metal arc welding								B	-	B	-	-	-
20.2. Select arc welding equipment for specific tasks								2b	-	b	-	-	-
20.3. Select the electrodes for specific welding jobs								2b	-	b	-	-	-
20.4. Set up welding machine for a specific welding job	*							2b	-	b	-	-	-
20.5. Prepare joints for welding	*							2b	-	b	-	-	-
20.6. Use shielded metal arc welding equipment to weld carbon steel													
20.6.1. Butt joint positions													
20.6.1.1. Flat	*							2b	-	b	-	-	-
20.6.1.2. Horizontal								b	-	b	-	-	-
20.6.1.3. Vertical								b	-	b	-	-	-
20.6.1.4. Overhead								b	-	b	-	-	-
20.6.2. Lap joint positions													
20.6.2.1. Flat								b	-	b	-	-	-
20.6.2.2. Horizontal	*							2b	-	b	-	-	-
20.6.2.3. Vertical								b	-	b	-	-	-
20.6.2.4. Overhead								b	-	b	-	-	-
20.6.3. Tee joint positions													
20.6.3.1. Flat								b	-	b	-	-	-
20.6.3.2. Horizontal								b	-	b	-	-	-
20.6.3.3. Vertical	*							2b	-	b	-	-	-
20.6.3.4. Overhead								b	-	b	-	-	-
20.6.4. Edge joint positions													
20.6.4.1. Flat								-	-	b	-	-	-
20.6.4.2. Horizontal								-	-	b	-	-	-
20.6.4.3. Vertical								-	-	b	-	-	-

Attachment 2
3E3X1 Specialty Training Standard (STS)

1. Tasks, Knowledge And Technical References	2. Core Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training / Information Provided (See Explanations)					
	A	B	A	B	C	D	E	A		B		C	
	5 Level	7 Level	Tng Start	Tng Comp	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level (1) Course	(2) DL	5 Skill Level (1) CDC	(2) DL	7 Skill Level (1) Course	(2) DL
20.6.4.4. Overhead								-	-	b	-	-	-
20.7. Perform arc cutting								a	-	b	-	-	-
20.8. Perform arc gouging								-	-	-	-	-	-
20.9. Maintain shielded metal arc welding equipment								2b	-	b	-	-	-
20.10. Perform hard-surfacing welding TR: T.O. 34W4-1-5; Welding Skills;Army SC4940-95-B14; Modern Welding; Welding Technology, 2nd Ed								a	-	b	-	-	-
21. TUNGSTEN INERT GAS WELDING (TIG) TR: T.O.s 34W4-1-5; AFI 91-203; NAVEDTRA 14250, 14251, Steelworker Vol. 1 & 2; Modern Welding by Bowditch; Gas Tungsten Arc Welding by Hobart; Welding Skills; Welding Technology, 2nd Ed													
21.1. Principles and purpose of tungsten inert gas welding								B	-	B	-	-	-
21.2. Select tungsten inert gas welding equipment for specific jobs								-	-	b	-	-	-
21.3. Set up welding machine for specific job								-	-	b	-	-	-
21.4. Use tungsten inert gas welding equipment to weld carbon steel													
21.4.1. Butt joint positions													
21.4.1.1. Flat								-	-	b	-	-	-
21.4.1.2. Horizontal								-	-	b	-	-	-
21.4.1.3. Vertical								-	-	b	-	-	-
21.4.1.4. Overhead								-	-	b	-	-	-
21.4.2. Lap joint positions													
21.4.2.1. Flat								-	-	b	-	-	-
21.4.2.2. Horizontal								-	-	b	-	-	-
21.4.2.3. Vertical								-	-	b	-	-	-
21.4.2.4. Overhead								-	-	b	-	-	-
21.4.3. Tee joint positions													
21.4.3.1. Flat								-	-	b	-	-	-
21.4.3.2. Horizontal								-	-	b	-	-	-
21.4.3.3. Vertical								-	-	b	-	-	-
21.4.3.4. Overhead								-	-	b	-	-	-
21.4.4. Edge joint positions													
21.4.4.1. Flat								-	-	b	-	-	-
21.4.4.2. Horizontal								-	-	b	-	-	-
21.4.4.3. Vertical								-	-	b	-	-	-

Attachment 2
3E3X1 Specialty Training Standard (STS)

1. Tasks, Knowledge And Technical References	2. Core Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training / Information Provided (See Explanations)					
	A	B	A	B	C	D	E	A		B		C	
	3 Skill Level	5 Skill Level	7 Skill Level	5 Skill Level	7 Skill Level	5 Skill Level	7 Skill Level	(1) Course	(2) DL	(1) CDC	(2) DL	(1) Course	(2) DL
	5 Level	7 Level	Tng Start	Tng Comp	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2) DL	(1) CDC	(2) DL	(1) Course	(2) DL
21.4.4.4. Overhead								-	-	b	-	-	-
21.5. Use tungsten inert gas welding equipment to weld corrosion resistant alloy								-	-	b	-	-	-
21.6. Use tungsten inert gas welding equipment to weld non-ferrous alloy								-	-	b	-	-	-
21.7. Maintain tungsten inert gas equipment								-	-	b	-	-	-
22. METALLIC INERT GAS WELDING (MIG) TR: T.O.s 34W4-1-5; AFI 91-203; NAVEDTRA 14250, 14251, Steelworker Vol. 1 & 2; Modern Welding by Bowditch; Gas Metal Arc Welding by Hobart; Welding Skills; Welding Technology, 2nd Ed Note: QTP required for UGT													
22.1. Principles and purpose of metallic inert gas welding								B	-	B	-	-	-
22.2. Select metallic inert gas welding equipment for specific jobs								2b	-	b	-	-	-
22.3. Set up welding machine for specific job	*							2b	-	b	-	-	-
22.4. Use metallic inert gas welding equipment to weld carbon steel													
22.4.1. Butt joint positions													
22.4.1.1. Flat								b	-	b	-	-	-
22.4.1.2. Horizontal	*							2b	-	b	-	-	-
22.4.1.3. Vertical								b	-	b	-	-	-
22.4.1.4. Overhead								b	-	b	-	-	-
22.4.2. Lap joint positions													
22.4.2.1. Flat								b	-	b	-	-	-
22.4.2.2. Horizontal								b	-	b	-	-	-
22.4.2.3. Vertical	*							2b	-	b	-	-	-
22.4.2.4. Overhead								b	-	b	-	-	-
22.4.3. Tee joint positions													
22.4.3.1. Flat	*							2b	-	b	-	-	-
22.4.3.2. Horizontal								b	-	b	-	-	-
22.4.3.3. Vertical								b	-	b	-	-	-
22.4.3.4. Overhead								b	-	b	-	-	-
22.4.4. Edge joint positions													
22.4.4.1. Flat								-	-	b	-	-	-
22.4.4.2. Horizontal								-	-	b	-	-	-
22.4.4.3. Vertical								-	-	b	-	-	-
22.4.4.4. Overhead								-	-	b	-	-	-

Attachment 2
3E3X1 Specialty Training Standard (STS)

1. Tasks, Knowledge And Technical References	2. Core Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training / Information Provided (See Explanations)					
	A	B	A	B	C	D	E	A		B		C	
	5 Level	7 Level	Tng Start	Tng Comp	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level (1) Course	(2) DL	5 Skill Level (1) CDC	(2) DL	7 Skill Level (1) Course	(2) DL
22.5. Use metallic inert gas welding equipment to weld corrosion resistant alloy								b	-	b	-	-	-
22.6. Use metallic inert gas welding equipment to weld non-ferrous alloy								b	-	b	-	-	-
22.7. Maintain metallic inert gas equipment								2b	-	b	-	-	-
23. PLASMA ARC SYSTEMS TR: AFI 91-203; Modern Welding by Bowditch; Welding Technology, 2nd Ed Note: QTP required for UGT													
23.1. Principles								B	-	B	-	-	-
23.2. Set up	*							-	-	b	-	-	-
23.3. Perform cutting	*							-	-	b	-	-	-
23.4. Maintain								-	-	b	-	-	-
24. AFSC SPECIFIC CONTINGENCY RESPONSIBILITIES TR: AFIs 10-210; 10- 211; 32-1026; T.O.s 35E5-6-1, 35E4-132-1, 35E4-94-1; Army TMs 10-8340-207-14, 10-450-200-12; WMP-1, Annex S; (Mar 95); AFPAM 10-219, Vol 1, 2, 3, 4, & 5 Note: QTP required for UGT													
24.1. Expedient Repair and Destruction TR: AFPAM 10-219, Vol 2, 3, 4 & 5; AFI 32-1051; Home Station Training (HST)													
24.1.1. Facility repairs													
24.1.1.1. Types & extent of wartime facility damage								A	-	B	-	-	-
24.1.1.2. Damage assessment / reporting								A	-	B	-	-	-
24.1.1.3. Repair prioritization/ philosophy								A	-	B	-	-	-
24.1.1.4. Quick fix techniques													
24.1.1.4.1. Repair roof								a	-	b	-	-	-
24.1.1.4.2. Repair exterior walls								a	-	b	-	-	-
24.1.2. Structural shoring/bracing concepts TR: Handbook of Temporary Structures in Construction								A	-	B	-	-	-
24.1.3. Buttrressing/Hardening TR: Handbook of Temporary Structures in Construction													
24.1.3.1. Earthen								A	-	B	-	-	-
24.1.3.2. Wooden								A	-	B	-	-	-
24.1.4. Repair hardened aircraft shelter doors TR: USAFE Instruction 32-1004													
24.1.4.1. Door adjustment								-	-	b	-	-	-

Attachment 2
3E3X1 Specialty Training Standard (STS)

1. Tasks, Knowledge And Technical References	2. Core Tasks		3. Certification For OJT						4. Proficiency Codes Used To Indicate Training / Information Provided (See Explanations)					
	A	B	A	B	C	D	E	A		B		C		
	5 Level	7 Level	Tng Start	Tng Comp	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level (1) Course	(2) DL	5 Skill Level (1) CDC	(2) DL	7 Skill Level (1) Course	(2) DL	
24.1.4.2. Roller replacement								-	-	b	-	-	-	
24.2. Airfield Paint TR: AFPAM 10-219, Vol 4; TO 35E2-6-1; AFIs 32-1042, 32-1044, 13-217; AFMAN 32-1076; Modern Welding; Welding Technology, 2nd Ed														
24.2.1. Characteristics of paint used for pavement surfaces								A	-	B	-	-	-	
24.2.2. Conduct striping procedures														
24.2.2.1. Runways	♦							a	-	b	-	-	-	
24.2.2.2. Taxiways									-	-	-	-	-	
24.2.2.3. Parking Aprons									-	-	-	-	-	
24.2.3. Minimum Airfield Operating Strip (MAOS) marking system								A	-	B	-	-	-	
24.3. Maintain Basic Expeditionary Airfield Resource (BEAR) Base Tactical Shelters TR: T.O.s 00-5-1, 35E4 series, 35E5 series														
24.3.1. Hardback Tent TR: AFPAM 10-219, Vol 5; AFH 10-222, Vol 1; TO 35E5-6-1								-	-	-	-	-	-	
24.3.2. General Purpose (GP) Small Tent TR: TO 35E5-1-101								-	-	-	-	-	-	
24.3.3. GP Medium Tent TR: TO 35E5-1-101								-	-	-	-	-	-	
24.3.4. GP Large Tent TR: TO 35E5-1-101								-	-	-	-	-	-	
24.3.5. Dome Shelter TR: 35E4-216-1														
24.3.5.1. Purpose								A	-	B	-	-	-	
24.3.5.2. Set up								-	-	-	-	-	-	
24.3.5.3. Maintain	♦							-	-	-	-	-	-	
24.3.6. Aircraft Maintenance Hangar (ACH) TR: T.O. 35E4-133-1														
24.3.6.1. Purpose								-	-	-	-	-	-	
24.3.6.2. Set up								-	-	-	-	-	-	
24.3.6.3. Maintain								-	-	-	-	-	-	
24.3.7. Frame Supported Tension Fabric Shelter (FSTFS)														
24.3.7.1. Purpose								-	-	-	-	-	-	
24.3.7.2. Set up								-	-	-	-	-	-	
24.3.7.3. Maintain								-	-	-	-	-	-	
24.3.8. Large Area Maintenance Shelter (LAMS)														

Attachment 2
3E3X1 Specialty Training Standard (STS)

1. Tasks, Knowledge And Technical References	2. Core Tasks		3. Certification For OJT						4. Proficiency Codes Used To Indicate Training / Information Provided (See Explanations)					
	A	B	A	B	C	D	E	A		B		C		
	5 Level	7 Level	Tng Start	Tng Comp	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level (1) Course	(2) DL	5 Skill Level (1) CDC	(2) DL	7 Skill Level (1) Course	(2) DL	
24.3.8.1. Purpose								A	-	B	-	-	-	
24.3.8.2. Set up								-	-	-	-	-	-	
24.3.8.3. Maintain								-	-	-	-	-	-	
24.3.9. TEMPER Tent TR: AFPAM 10-219, Vol 2, 5; AFH 10-222, Vols 1 & 6; T.O. 35E5-1-6; TO 35E5-6-1, 35E5-6-2, and 35E5-6-3														
24.3.9.1. Purpose								-	-	-	-	-	-	
24.3.9.2. Set up								-	-	-	-	-	-	
24.3.9.3. Maintain								-	-	-	-	-	-	
24.3.9.4. Disassemble/Store								-	-	-	-	-	-	
24.3.10. Small Shelter System (SSS) TR: T.O. 35E5-6-11														
24.3.10.1. Purpose								A	-	B	-	-	-	
24.3.10.2. Set up	◆							2b	-	b	-	-	-	
24.3.10.3. Maintain	◆							b	-	b	-	-	-	
24.3.10.4. Disassemble/Store	◆							2b	-	b	-	-	-	
24.3.11. Medium Shelter System (MSS) TR: T.O. 35E5-6-21; 35E5-1-101														
24.3.11.1. Purpose								A	-	B	-	-	-	
24.3.11.2. Set up	◆							a	-	b	-	-	-	
24.3.11.3. Maintain	◆							a	-	b	-	-	-	
24.3.11.4. Disassemble/Store	◆							a	-	b	-	-	-	
24.3.12. General Purpose Shelter TR: AFH 10-222 Vol 6 and T.O. 35-E4-132-1								-	-	-	-	-	-	
24.3.13. Expandable Shelter Container (ESC) TR: TO 35E4-94-1								-	-	-	-	-	-	
24.4. Construct Field Latrines TR: FM 21-10; TO 35E35-5-1								a	-	b	-	-	-	
24.5. Assemble Revetment TR: AFPAM 10-219, Vol 2; AFMAN 32-1071; AFIs 31-101, 31-209, 31-210, 10-401, 31-301; TO 35E4-170-2; AFH 10-222 Vol. 14														
24.5.1. B-1								-	-	-	-	-	-	
24.5.2. Expandable Bin Type								-	-	b	-	-	-	
24.6. Airfield Damage Repair (ADR) TR: AFPAM 10-219, Vol 4; AFI 10-210; T.O.s 35E2-3-1, 35E2-2-7, 35E2-4-1, UFC 3-270-07														
24.6.1. ADR Philosophy								-	-	A	-	-	-	
24.6.2. Repair Procedures								-	-	a	-	-	-	
24.6.3. Repair crater								-	-	a	-	-	-	
24.6.4. Assemble AM-2 Matting								a	-	b	-	-	-	

Attachment 2
3E3X1 Specialty Training Standard (STS)

1. Tasks, Knowledge And Technical References	2. Core Tasks		3. Certification For OJT					4. Proficiency Codes Used To Indicate Training / Information Provided (See Explanations)					
	A	B	A	B	C	D	E	A		B		C	
	5 Level	7 Level	Tng Start	Tng Comp	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level (1) Course	(2) DL	5 Skill Level (1) CDC	(2) DL	7 Skill Level (1) Course	(2) DL
24.6.5. Fiberglass Mat TR: T.O.s 35E2-3-1; 35E2-2-7; 35E2-4-1; UFC 3-270-07													
24.6.5.1. Assemble								b	-	b	-	-	-
24.6.5.2. Anchor								b	-	b	-	-	-
24.6.5.3. Re-anchor								b	-	b	-	-	-
24.6.6. Complete spall repair								-	-	b	-	-	-
24.7. Expedient Locksmithing													
24.7.1. Security containers with combination locks								-	-	-	-	-	B
24.7.2. Principles of dial combination locks								-	-	-	-	-	B
24.7.3. Open combination locks								-	-	-	-	-	b
24.7.4. Force entry of combination locks								-	-	-	-	-	b
24.7.5. Inspect and perform preventative maintenance								-	-	-	-	-	b
25. AFS SPECIFIC PUBLICATIONS TR: TO's 00-5-1, 00-5-2, 00-20-7; Technical Order Catalog (Online)													
25.1. AF indexes, manuals, regulations, technical orders, and forms								-	-	-	-	-	-
25.2. Locate desired information in:													
25.2.1. Standard publications								-	-	-	-	-	-
25.2.2. Technical orders								-	-	-	-	-	-
25.2.3. National Electrical Code (NFPA 70)								-	-	-	-	-	-
25.2.4. National Electrical Safety Code								-	-	-	-	-	-
25.3. Utilize technical publications to perform maintenance, operations, and troubleshooting								-	-	-	-	-	-

Attachment 3

3E3X1 Air Force Qualification Training Package (AFQTP) Documentation Record

A3. AFQTP Documentation Record.

A3.1. To ensure each Structural trainee is trained to the correct standard an AF Qualification Training Plan (AFQTP) has been developed for each core and diamond tasks identified in their STS. These AFQTPs **are mandated** to be used by the trainee, trainer, and certifier in their on-the-job-training program for upgrade to the 5- or 7-level.

A3.2. These AFQTPs ensures all aspects of the task is covered sufficiently and provide additional task knowledge in preparation for hands-on training. AFQTPs summarize procedures on a task performance checklist for use by trainers, certifiers, and trainees.

A3.2.1. The UTM or supervisor can download paper-based AFQTP's. Paper-based AFQTP's can be found on the [CE-VLC](#) under the Library link and then by selecting Resources.

A3.2.2. In additional to the paper-based AFQTPs there are web-based courses or assessments developed for certain tasks that are available on the [CE-VLC](#) under the specialty topic area.

A3.3. **Documentation.** Before a core or diamond task can be signed off in the JQS section of the individual automated training record the task must be signed off in the QTP section first.

A3.3.1. **Core/Diamond Tasks.** To document the completion the supervisor or trainer opens the individual automated training record, navigates to the QTP section, enter the start and completed date with signatures.

A3.3.2. **Diamond (♦) Tasks.** Supervisors/Trainers **DO NOT** sign off the corresponding JQS task until the trainee has completed hands-on training. If the required equipment is not available at your location, completion of the task's AFQTP web-based course or assessment with a passing score of 80% is all that required for upgrade training. Hands-on certification shall be accomplished at the first opportunity when equipment is available and then can be signed off on the JQS.

A3.4. 3E3X1 AFQTP's for Core and Diamond Tasks Requirements.

Task Number	Tasks, Knowledge and Technical References	Core/Diamond Tasks		Certification of AFQTPs			
		5 Level	7 Level	Tng Start	Tng Complete	Trainee Initials	Trainer Initials
1.	CIVIL ENGINEER (CE) COMMON CORE CONCEPTS COURSES Accomplish the following web-based courses: CE 5-Level Core Concepts Course CE 7 Level Core Concepts Course						
1.1.	Accomplish CE 5-Level Core Concepts Course	*					
1.2.	Accomplish CE 7-Level Core Concepts Course		*				
2.	AFS SPECIFIC SAFETY Accomplish the AFQTP paper-based: AFS SPECIFIC SAFETY						

Attachment 3

3E3X1 Air Force Qualification Training Package (AFQTP) Documentation Record

Task Number	Tasks, Knowledge and Technical References	Core/Diamond Tasks		Certification of AFQTPs			
		5 Level	7 Level	Tng Start	Tng Complete	Trainee Initials	Trainer Initials
2.3.	Exercise safety precautions when:						
2.3.5.	Handling compressed gas containers	*					
2.3.7.	Perform Lockout/Tagout procedures	*					
3.	PROJECT PLANNING Accomplish the AFQTP paper-based: PROJECT PLANNING						
3.2.	Use construction drawings for:						
3.2.1.	Carpentry		*				
3.2.2.	Masonry		*				
3.2.3.	Metal		*				
3.3.	Identify type of material required for:						
3.3.1.	Carpentry		*				
3.3.2.	Masonry		*				
3.3.3.	Metal		*				
3.4.	Establish quantity of material required for:						
3.4.1.	Carpentry		*				
3.4.2.	Masonry		*				
3.4.3.	Metal		*				
5.	CONCRETE STRUCTURES Accomplish the following AFQTP's: Paper-based: CONCRETE STRUCTURES Web-based: Concrete Construction and Foundation Forms						
5.2.	Concrete reinforcement						
5.2.1.	Install reinforcing steel		*				
5.3.	Construct, install and remove forms						
5.3.4.	Slabs		*				
5.7.	Place concrete in forms		*				
5.10.	Finish concrete		*				
6.	STRUCTURAL LAYOUT/FRAMING COMPONENTS Accomplish the AFQTP paper-based: STRUCTURAL LAYOUT/FRAMING COMPONENTS						
6.1.	Layout , construct, and install						
6.1.1.	Floors	*					
6.1.3.	Walls						
6.1.3.1.	Wooden Studs	*					
6.1.5.	Roofs	*					
8.	MASONRY CONSTRUCTION AND MAINTENANCE Accomplish the AFQTP paper-based: MASONRY CONSTRUCTION AND MAINTENANCE						
8.1.	Determine and mix type of mortar required	*					
8.2.	Lay masonry units						
8.2.2	Block	*					
10.	FINISH CARPENTRY Accomplish the AFQTP paper-based: FINISH CARPENTRY						
10.2.	Gypsum board						
10.2.1.	Install	*					
10.2.2.	Tape and finish	*					
10.2.3.	Patch	*					
13.	PERSONNEL DOOR AND WINDOW MAINTENANCE Accomplish the AFQTP paper-based: PERSONNEL DOOR AND WINDOW MAINTENANCE						
13.1.	Install personnel door units						

Attachment 3

3E3X1 Air Force Qualification Training Package (AFQTP) Documentation Record

Task Number	Tasks, Knowledge and Technical References	Core/Diamond Tasks		Certification of AFQTPs			
		5 Level	7 Level	Tng Start	Tng Complete	Trainee Initials	Trainer Initials
13.1.1.	Wood	*					
13.1.2.	Metal	*					
13.5.	Personnel door hardware						
13.5.1.	Install door closures	*					
13.5.3.	Install locking devices						
13.5.3.1.	Cylinder locks	*					
13.5.3.4.	Panic hardware/exit device	*					
17.	FABRICATE AND INSTALL METAL/FIBERGLASS COMPONENTS Accomplish the AFQTP paper-based: FABRICATE AND INSTALL METAL/FIBERGLASS COMPONENTS						
17.1.	Lay out metal components using:						
17.1.1.	Parallel line development	*					
17.4.	Install Duct systems						
17.4.1.	Sheet metal ducts	*					
18.	VEHICLE AND EQUIPMENT FACILITY DOORS AND GATES Accomplish the following AFQTP's: Paper-based: VEHICLE AND EQUIPMENT FACILITY DOORS AND GATES Web-based: ROLL-UP DOOR						
18.1.	Inspect roll-up/overhead metal doors	*					
18.3.	Maintain						
18.3.1	Overhead doors	*					
18.3.2.	Roll-up doors	*					
19.	OXYACETYLENE WELDING Accomplish the AFQTP paper-based: OXYACETYLENE WELDING						
19.2.	Set up oxyacetylene torch for specific welding jobs	*					
19.6.	Use oxyacetylene equipment to cut metal	*					
20.	SHIELDED METAL ARC WELDING Accomplish the AFQTP paper-based: SHIELDED METAL ARC WELDING						
20.4.	Set up welding machine for a specific welding job	*					
20.5.	Prepare joints for welding	*					
20.6.	Use shielded metal arc welding equipment to weld carbon steel						
20.6.1.	Butt joint positions						
20.6.1.1.	Flat	*					
20.6.2.	Lap joint positions						
20.6.2.2.	Horizontal	*					
20.6.3.	Tee joint positions						
20.6.3.3.	Vertical	*					
22.	METALLIC INERT GAS WELDING (TIG) Accomplish the AFQTP paper-based: METALLIC INERT GAS WELDING (TIG)						
22.3.	Set up welding machine for specific welding job	*					
22.4.	Use metallic inert gas welding equipment to weld carbon steel						
22.4.1.	Butt joint positions						
22.4.1.2.	Horizontal	*					
22.4.2.	Lap joint positions						
22.4.2.3.	Vertical	*					
22.4.3.	Tee joint positions						

Attachment 3

3E3X1 Air Force Qualification Training Package (AFQTP) Documentation Record

Task Number	Tasks, Knowledge and Technical References	Core/Diamond Tasks		Certification of AFQTPs			
		5 Level	7 Level	Tng Start	Tng Complete	Trainee Initials	Trainer Initials
22.4.3.1.	Flat	*					
23.	PLASMA ARC SYSTEMS Accomplish the AFQTP paper-based: PLASMA ARC SYSTEMS						
23.2.	Set up of plasma arc equipment	*					
23.3.	Perform plasma arc cutting	*					
24.	AFSC SPECIFIC CONTINGENCY RESPONSIBILITIES Accomplish the following AFQTP's: Paper-based: AFSC SPECIFIC CONTINGENCY RESPONSIBILITIES Web-based: CONTINGENCY AIRFIELD MARKING PAINT STRIPER Web-based: DOME SHELTER MAINTENANCE Web-based: MEDIUM SHELTER SYSTEM (MSS) Web-based: SMALL SHELTER SYSTEM (SSS) Web-based: FABRIC SHELTER MAINTENANCE AND REPAIR						
24.2.	Airfield Paint						
24.2.2.	Conduct striping procedures						
24.2.2.1.	Runways	♦					
24.3.	Maintain Basic Expeditionary Airfield Resource (BEAR) Base Tactical Shelters						
24.3.5.	Dome Shelter						
24.3.5.3.	Maintain	♦					
24.3.10	Small Shelter System (SSS)						
24.3.10.2.	Set up	♦					
24.3.10.3.	Maintain	♦					
24.3.10.4.	Disassemble/Store	♦					
24.3.11.	Medium Shelter System (MSS)						
24.3.11.2.	Set up	♦					
24.3.11.3.	Maintain	♦					
24.3.11.4.	Disassemble/Store	♦					

DEPARTMENT OF THE AIR FORCE
Headquarters US Air Force
Washington DC 20330-1030

CFETP 3E3X1
Change 1
4 Apr 2017

ACCESSIBILITY: Publications and forms are available on the e-publishing website at:
www.e-publishing.af.mil for downloading or ordering.

RELEASABILITY: There are no releasability restrictions on this publication.

AFSC 3E3X1
STRUCTURAL
CAREER FIELD EDUCATION AND TRAINING PLAN

Compliance with AFI 36-2201, other training policies/documentation, and publication policies is required. CFETP 3E3X1, 22 January 2016, is changed as follows:

1. Replace the following pages in Part I: 13, 25, and 26.
2. Replace the following pages in Part II: 39, 40, 44, 46 thru 63.
3. After necessary actions, file this change in the back of the CFETP.

BY ORDER OF THE SECRETARY OF THE AIR FORCE

OFFICIAL

JOHN B COOPER, Lieutenant General, USAF
DCS/Logistics, Installation and Mission Support