CFETP 3E3X1WG Parts I and II 1 Aug 2018

# **STRUCTURAL**

Wage Grade Series 3414/3602/3603/3604/3605/3606/ 3610/3703/3806/3869/4102/4104/ 4605/4607/4749/4804/5352



### CAREER FIELD EDUCATION AND TRAINING PLAN

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RELEASABILITY: There are no releasability restrictions on this publication.

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# WAGE GRADE SERIES 3414/3602/3603/3604/3605/3606/3610/3703/3806/3869/4102/4104/4605/4607/4749/4804/5352

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OPR: Air Force Civil Engineer Functional Advisory Council Wage Grade Panel Certified by: Dave Perkins and Greg ZseDenny, Wage Grade Panel Chairs

### **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 Structural Wage Grade series. The CFETP will provide wage grade personnel with a clear career path to success and instill rigor in all aspects of our Job Series training.

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

Part I provides information necessary for overall management of the job series.

- Section A provides general information about how the CFETP will be used.
- Section B identifies job series field progression information, duties and responsibilities, training strategies, and the job series path.

Part II includes the following:

- Section A identifies the Group Series Training Standard (GSTS) to include duties, tasks, and technical references to support civilian Wage Grade training programs.
- Section B identifies available support materials.
- Section C identifies a training course index supervisors can use to determine resources available to support training. Included here are both mandatory and optional courses, and exportable courseware.

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 these wage grade series 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 must 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.

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

**Air Force Civil Engineer Center (AFCEC).** The focal point for all Civil Engineer training development. All Force Development Managers (FDM) are located at AFCEC.

**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 <a href="http://www.afit.edu/cess/index.cfm">http://www.afit.edu/cess/index.cfm</a>.

**Air Force Training Record (AFTR).** Electronic training data base to document training and access is located at the CE-VLC.

**Air Force Wage Grade Series Qualification Standard (AFWGSQS).** A comprehensive task list that describes a particular series or duty position. Used by supervisors to document task qualifications. The tasks on the AFJQS are common to all persons serving in the described duty position.

**Air Force Qualification Training Package (AFQTP).** An instructional package designed for use as a training resource 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 Development Course (CDC). Self-paced, correspondence course published to provide the information necessary to satisfy the career knowledge component of on-the-job training (OJT). These courses are developed from references identified in the CFETP correlating with mandatory knowledge items listed in the Air Force Enlisted Classification Directory (AFECD). CDCs will contain information on basic principles, techniques, and procedures common to an AFSC. They do not contain information on specific equipment or tasks unless best illustrating a procedure or technique having utility to the entire AFSC.

**CE Portal.** The one-stop for all things Civil Engineering. Contains link to CE Force Development and Civilian Development Resource Center/Wage Grade Training Assets at: <a href="https://cs2.eis.af.mil/sites/10041/Pages/default.aspx">https://cs2.eis.af.mil/sites/10041/Pages/default.aspx</a>.

**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.

**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.** Tasks identified by the workcenter supervisor as critical and common training tasks needed for the duty position and mission accomplishment.

**Enlisted Professional Military Education (EPME).** EPME provides a continuum of learning through progressive courses concentrated on developing airmanship and war-fighting skills. EPME plays a vital role in preparing Airmen for increased supervision, leadership, and management challenges. The three levels of Air Force EPME are Airman Leadership School, Noncommissioned Officer Academy and Air Force Senior Noncommissioned Officer Academy. EPME is available to Wage Grade civilians.

**Functional Advisory Council Wage Grade Panel.** The Wage Grade Panel is one of the three panels that make up the Civil Engineer Functional Advisory Council (FAC). The Wage Grade Panel charter is to work issues, develop policy, and provide recommendations to the FAC on matters related to civilian wage grade requirements. The Wage Grade Panel works through the FAC, in service to the CE Total Force community.

**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 skill.

**On-the-Job Training (OJT).** Hands-on, over-the-shoulder training conducted to certify personnel in 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.

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.

Wage Grade Series Training. A mix of formal training (technical school) and informal training (on-the-job) to maintain and enhance wage grade series specific technical skills.

**Group Series Training Standard (GSTS).** Describes skills and knowledge that Airmen in a particular job series need on the job and for future career development opportunities. It

further serves as the overall training requirements for a Wage Series taught in the resident and nonresident courses.

**Total Force.** All collective Air Force components (Active Duty, Reserve, Guard, and Civilian elements) of the United States Air Force.

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

### **SECTION A - GENERAL INFORMATION**

- **A1. Purpose:** This CFETP provides a formalized tool for supervisors and managers of civilian wage grade employees to ensure required knowledge and skill levels are achieved, documented, and maintained. The CFETP also indicates training opportunities and methods for employee to gain leadership and management experience for career development.
- A1.1. The CFETP has several purposes:
- A1.1.1. Serves as a management tool to plan, manage, conduct, and evaluate a wage grade series training program. It is used to help supervisors identify training at the appropriate point in an individual's career.
- A1.1.2. Identifies task and knowledge training requirements for this wage grade series and recommends education/training throughout each phase of an individual's career.
- A1.1.3. Lists training courses available in this wage grade series and identifies sources of training and the delivery methods. It is used as a tool for collecting and demonstrating the need for training resources.
- **A2.** Uses. Managers and supervisors may use the plan at all levels to ensure comprehensive and cohesive training programs are available for each individual in the wage grade series.
- A2.1. Wage Grade Panel of the Functional Advisory Council 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 Air Force Civil Engineer Center Force Development Division (AFCEC/COF) to develop acquisition strategies for obtaining resources needed to provide the identified training.
- A2.2. The Wage Grade Panel will ensure their training programs complement the CFETP training requirements and identify requirements that can be satisfied by OJT, resident training, contract training, or exportable courses.
- A2.3. Supervisors guide each individual through completion of training specified in this plan.
- A2.4. Each individual completes 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 Wage Grade Panel Chairs are the approval authority for the CFETP. The Wage Grade Panel will identify and coordinate on wage grade series training requirements. Using the list of courses in Part II, they will eliminate duplicate training.

### SECTION B - WAGE GRADE SERIES PROGRESSION AND INFORMATION

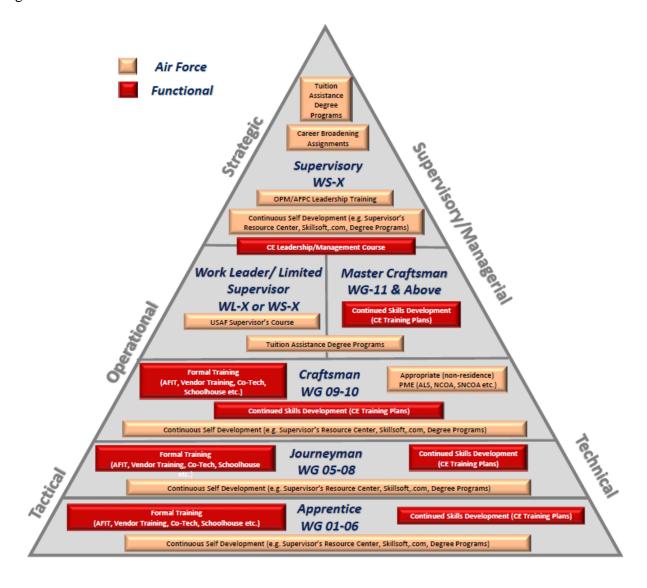
- **B1.** Series Descriptions. See each individual's Core Personnel Document for the description.
- B1.1. Wage Grade Series Summary. Manages, constructs, repairs, and modifies structural systems and wooden, masonry, metal, and concrete buildings. Fabricates and repairs components of buildings, utility systems, and real property equipment. Ensures compliance with environmental regulations. Related DoD Occupational Subgroup: 171000
- **B2. Skill and Career Progression.** Adequate training for progression from the apprentice to the mechanic level, and possibly into a supervisory position play an important role in the Air Force's ability to accomplish its mission. It is essential everyone involved in training do their part to participate in, plan, manage, and conduct effective training. The guidance provided in this part of the CFETP will identify viable training at appropriate points in an individual's career.
- B2.1. Apprentice/Helper (A/H).
- B2.1.1. Upon completion of initial skills training, an employee may work with a trainer to enhance their knowledge and skills to perform at the highest attainable level within their series.
- B2.1.2. Utilize the Career Development Course (CDC) and other exportable courses for subject and task fundamentals in the series.
- B2.1.3. Encourage apprentice/helpers to continue academic education and begin EPME by enrolling in Airman Leadership School either in-residence or by correspondence course.
- B2.2. Journeyman (J).
- B2.2.1. Journeymen may continue to advance their skills by completing additional training. Upon completing training, they may be assigned job positions such as team leader, trainer, or task certifier. Journeymen can pursue leadership training and skills in order to qualify for potential advancement to Work Leader or Work Supervisor positions.
- B2.2.1.Encourage journeyman to enroll in the Noncommissioned Officer Academy (NCOA) either in-residence or by correspondence course.
- B2.3. Craftsman (C).
- B2.3.1. Craftsmen may continue to advance their skills by completing additional training. They may be assigned job positions such as team leader, trainer, or task certifier Craftsmen are encouraged to pursue leadership training and skills in order to qualify for potential advancement to Work Leader or Work Supervisor positions.
- B2.3.2. Encourage craftsmen to continue academic education and complete Noncommissioned Officer Academy (NCOA) either in-residence or by correspondence course.
- B2.3.3. A Master Craftsman is typically graded higher than WG-10 where skills, knowledge and abilities require higher technical abilities than standard craftsmen. They are duty/location specific

and not for all job series.

- B2.4. Work Leader (WL).
- B2.4.1. A Work Leader can be expected to perform limited functions of a First Line Supervisor or act as a Team Lead.
- B2.4.2. Completion of AFIT Civilian Supervisors Course (WMGT 571) is highly encouraged.
- B2.4.3. Should pursue increased knowledge of budget, manpower, resources, and personnel management.
- B2.4.4. Recommend pursuit of additional higher education and completion of courses outside of their job series for career broadening opportunities.
- B2.4.5. Encourage Work Leader to continue academic education and complete Noncommissioned Officer Academy (NCOA) either in-residence or by correspondence course.
- B2.5. First Line Supervisor.
- B2.5.1. A supervisor can be expected to fill positions such as the Element Chief or Special Projects Supervisor.
- B2.5.2. Completion of AFIT Civilian Supervisors Course (WMGT 571) is highly encouraged.
- B2.5.3. Should pursue increased knowledge of budget, manpower, resources, and personnel management.
- B2.5.4. Recommend pursuit of additional higher education and completion of courses outside of their job series for career broadening opportunities.
- B2.5.5. Encourage supervisors to continue academic education and complete Senior Noncommissioned Officer Academy (SNCOA) by correspondence.
- **B3.** Correspondence Course Directions. Nonresident attendance for professional military education courses is accomplished through the Air Force Portal.
- B3.1. Login to the AF Portal (https://www.my.af.mil/).
- B3.2. Copy and paste the URL https://www.my.af.mil/aurepmprod/auportal/welcome.AirUniversity into your browser.
- B3.3. Create an account and/or login.
- B3.4. Once logged in, "Distance Learning" on the left hand side.
- B3.5. Select the appropriate course.

### **B4.** Wage Grade Career Field Pyramid.

Figure 1.



### **SECTION A - GROUP SERIES TRAINING STANDARD**

- **A1**. **Purpose.** The CFETP is designed to be a tool for supervisors to use in assessing the skill level of current and new employees. The CFETP may be used to document training and proficiency of the employee on associated task/s by the supervisor or certified trainer.
- A1.1. 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 Apprentice, Journeyman, Craftsman, and Supervisor level.
- A1.2. Column 2 (*Tasks and Proficiency Codes*). Identifies duty position tasks (series training requirements) with a proficiency code and indicates training requirements. It shows the proficiency to be demonstrated on the job by the employee as a result of training on the task, knowledge and the career knowledge provided by formal courses, CDC, distance learning (DL) web-based training (WBT) and AFQTPs. CDC listing maintained by the unit education and training manager for current CDC listings.
- A1.3. **Column 3** (*Certification of Training*). Used to record completion of tasks and knowledge training requirements. Task certification requires the task to be trained by a trainer designated by the supervisor. The trainer can be either civilian or military. Use the automated training record application to document individual qualifications. The training start and completion date are documented, the task is signed by the trainee and either the workcenter supervisor, a Master Sergeant (or above) or the unit training manager. This action will complete the task certification.

Note: The "trainer" signing the record MUST be the workcenter supervisor, work leader, a Master Sergeant (or above) or the Unit Training Manager. This person does not necessarily train the task, but will ensure the training is conducted by a qualified trainer prior to completing task certification.

Note: If a workcenter supervisor, work leader, a Master Sergeant (or above) or the unit training manager are not available in a shop or unit to certify a task, the Operations Flight deputy commander will designate a certifier within the flight and grant the UTM role in AFTR so as to certify training tasks in AFTR. This person does not necessarily train the task, but will ensure the training is conducted by a qualified trainer prior to completing task certification.

- A1.4. **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.
- A1.5. **Job Qualification Standard (JQS).** The Group Series Training Standard (GSTS) becomes the JQS for OJT when entries are made in the GSTS. 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:
- A1.5.1. **Documentation.** Document and certify completion of training.

- A1.6. **Transcribing from previous versions to the new CFETP.** Most items should transcribe automatically during the update of the new CFETP if AFTR is used to document training and certifications. The supervisor must conduct a review of the new GSTS to identify any new duty position tasks and add those tasks to their duty positions.
- A1.6.1. **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.
- A1.6.2. **Transcribing external training certification.** If a trainee attended a formal training course and received appropriate accreditation, select the 623 III section of the user's 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. Update MyBiz with additional training certificates through the self-certification process.
- A1.6.3. **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. AFQTPs, when available, shall be used to identify Air Force standardized procedures.
- **A2. Recommendations.** This training plan is a living document. Comments and recommended changes are welcome. Recommendations for changes must be coordinated through the FDM and Functional Advisory Council (FAC) Wage Grade Panel for adjudication.

### **SECTION B - SUPPORT MATERIAL**

### **B1.** Air Force Qualification Training Packages.

- B1.1. For a complete list of up-to-date AFQTPs applicable to the series, go to CE-VLC.
- B1.2. 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.
- B1.2.1. In addition to the paper-based AFQTPs there are web-based courses or assessments developed for certain tasks that are available on the <u>CE-VLC</u> under the Course List link and Group Series topic area.
- B1.3. CDC listings are maintained by the unit education and training manager for current CDC listings.

### SECTION C – EDUCATION AND TRAINING COURSE INDEX

**C1. Purpose.** This section of the CFETP identifies training courses available for the structural series. Refer to Education and Training Course Announcements (ETCA) web site for information on the Air Force in-residence courses. The web site address is <a href="https://etca.randolph.af.mil/">https://etca.randolph.af.mil/</a>.

JCABP3E331 - 00AC Structural Apprentice

JCAZP3E351 - 01AB Roof Installation, Maintenance, Inspection and Repair

JCAZP3E351 - 02AB Metals Layout, Fabrication and Welding

JCAZP3E351 - 03AA Contingency Maintenance Course

WENG 555 - Airfield Pavement Construction and Inspection

WMGT 422 - Project Management

WMGT 436 - Operations Support

**OFFICIAL** 

DAVID A. PERKINS, NH-04, DAF Wage Grade Panel Co-Chair GREGORY P. ZSEDENNY, WS-16, DAF Wage Grade Panel Co-Chair

- 1. Qualitative Requirements (Proficiency Code Key)
- 2. Wage Grade Group Series Training Standard (GSTS)
- 3. Locally Developed Training Supplement

Printed Name (Last, First, Middle Initial)	Initials (Written)	
Drinted	Name Of Trainer/Training Official And Written Initials	
//I	NAME OF TRAINING OFFICIAL AND WITHER HILITIANS  N/I	
<i>\\/</i> I	N/I	
N/I	N/I	
N/I	N/I	

# - This mark is used to indicate training is provided in a formal course.

	Behavioral Statement GSTS Coding System								
Code	Definition								
K	Subject Knowledge Training - The verb selection identifies the individual's ability to identify facts, state principles, analyze, or evaluate the subject.								
P	Performance Training - Identifies that the individual has performed the task to the satisfaction of the trainer/certifier; however, the individual may not be capable of meeting the field requirements for speed and accuracy.								
pk	Performance Knowledge Training - The verb selection identifies the individual's ability to relate advanced facts, procedures, operating principles, and operational theory for the task.								
-	Assumes element knowledge and/or proficiency at the higher level								

Tasks, Knowledge and Technical References	Duty Position Tasks and     Proficiency Codes			3. Certification of Training				
	A/H	J	C/WL	S	Trng	Trng	Trne	Trnr
					Strt	Com	Init	Init

	•	•	•	•		•	
1. CE ORGANIZATION AND							
CAREER FIELD STRUCTURE							
TR: AFDD 2-4; AFIs 10-209, 10-210,							
10-211, 32-1001, 32-1022, 36-2101,							
38-101; AFMAN 36-2108; War							
Mobilization Plan (WMP)-1, Annex							
S							
<b>1.1.</b> Civil Engineer (CE) structure	K	_	-	_			
<b>1.2.</b> Progression in career ladder	K	_	_	_			
<b>1.3.</b> Duties and responsibilities	K						
<b>1.3.1.</b> Peacetime	K	-	-	-			
<b>1.3.2.</b> Contingency	K	_	-	-			
<b>1.4.</b> Functions of:	K						
<b>1.4.1.</b> Base Civil Engineer (BCE)	K	-	-	-			
<b>1.4.2.</b> Prime BEEF	K	_	-	_			
1.4.3. RED HORSE	K	_	-	_			
<b>1.4.4.</b> HQ Air National Guard (ANG)	K	-	-	-			
Air Force Reserve Command (AFRC)							
<b>1.4.5.</b> HQ Air Force Civil Engineer	K	-	-	-			
Support Agency (AFCESA)							
<b>1.4.6.</b> HQ Air Force Center For	K	-	-	-			
Environmental Excellence (AFCEE)							
<b>1.4.7.</b> Air Force Institute of Technology	K	-	-	-			
(AFIT)							
<b>1.4.8.</b> Air Force Research Laboratory	K	-	-	-			
(AFRL)							
1.5. Resources							
<b>1.5.1.</b> Assess manpower requirements			K	pk			
<b>1.5.2.</b> Identify budget requirements			K	pk			
<b>1.5.3.</b> Determine equipment			K	pk			
requirements							
<b>1.5.4.</b> Use Allowance Standards (AS)			K	pk			
<b>1.5.5.</b> Research, Development, and							
Acquisition (RD&A)							
TR: DoD 5000.1							
<b>1.5.5.1.</b> Process		K	-	pk			
<b>1.5.5.2.</b> Unit responsibilities		K	-	pk			
<b>1.5.5.3.</b> Major command		K	-	pk			
responsibilities							
<b>1.5.6.</b> Assess vehicle requirements		K	-	pk			
<b>1.5.7.</b> Requesting contract services		K	-	pk	ļ		
<b>1.5.8.</b> Requesting Simplified		K	-	pk			
Acquisition of Base Engineering					1		
Requirements (SABER) contract		***					
<b>1.5.9.</b> Geo Base technologies		K	-	pk			
<b>1.5.10.</b> Quality Assurance Personnel							
(QAP) duties							
TR: Federal Acquisition Regulation							
Part 37.6; AFI 63-124;							
AFPAM 32-1004 Vol 2							

Tasks, Knowledge and     Technical References	Duty Position Tasks and Proficiency Codes		3. (	3. Certification of Training				
	A/H	J	C/WL	S	Trng	Trng	Trne	Trnr
					Strt	Com	Init	Init
			T - T		1			
<b>1.5.10.1.</b> Evaluate contractor's		K	P	pk				
performance  1.5.10.2. Document contractor's		K	P	pk				
performance		K	1	рĸ				
<b>1.5.10.3.</b> Maintain surveillance		K	P	pk				
documents			_	P				
2 Supervision								
TR: AFIs 36-2201, 36-2406, 36-3401;								
AFMAN 36-2108								
<b>2.1.</b> Orient new personnel		K	P	pk				
<b>2.2.</b> Assign personnel to work crew		K	P	pk				
<b>2.3.</b> Coordinate work assignments		K	P	pk				
<b>2.4.</b> Schedule work assignments and		K	P	pk				
priorities				_				
2.5. Establish:			_	pk				
<b>2.5.1.</b> Work methods		K	P	pk				
2.5.2. Controls		K	P	pk				
<b>2.5.3.</b> Performance standards		K	P	pk				
<b>2.6.</b> Evaluate work performance of		K	P	pk				
subordinate personnel		K	P	1				
<b>2.7.</b> Resolve technical problems for subordinate personnel		K	P	pk				
2.8. Direct projects		K	P	pk				
3 Training		K	Г	pκ				
TR: AFIs 36-2101, 36-2201; AFPD								
36-22; AFMAN 36-2108								
<b>3.1.</b> Evaluate personnel to determine		K	P	pk				
need for training				r				
<b>3.2.</b> Enlisted specialty training								
supervision								
<b>3.2.1.</b> Prepare job qualification		K	P	pk				
standards								
<b>3.2.2.</b> Conduct training		K	P	pk				
<b>3.2.3.</b> Counsel trainees on their		K	P	pk				
progress								
<b>3.2.4.</b> Monitor training effectiveness								
of:		17	D	1				
3.2.4.1. Career knowledge		K K	P P	pk				
3.2.4.2. Job proficiency upgrade		K	P	pk pk				
3.2.4.3. Qualification 3.3. Maintain training records		K	P	pk pk				
<b>3.4.</b> Evaluate training programs		K	P	рк pk				
effectiveness		17	1	Pκ				
<b>3.5.</b> Recommend people for training		K	P	pk				
<b>3.6.</b> AETC training management		K	P	pk				
system (Training Allocation)				r				
<b>3.7.</b> Managing Certification and		K	P	pk				
Testing (CerTest)				•				
3.8. National/DoD Certification		K	P	pk				
requirements								

Tasks, Knowledge and     Technical References		2. Duty Position Tasks Proficiency Codes			3. Certification of Tra			aining
	A/H	J	C/WL	S	Trng	Trng	Trne	Trnr
	12/11		0, ,,2	~			Init	
					Strt	Com	IIIIt	Init
<b>3.9.</b> Air Force Qualification Training Package (AFQTP) Requirements		K	P	pk				
4. Environmental Awareness and Compliance TR: AFPD 32-70; AFI 32-7045; EO 12856								
<b>4.1.</b> Environmental compliance (ECAMP)	K	P	pk	-				
<b>4.2.</b> Environmental Protection Agency (EPA)	K	P	pk	-				
5. CE Management TR: AFI 32-1001, 32-1022; AFPAM 32-1098, 32-1125 Vol 1; AFMAN 23-110								
<b>5.1.</b> Customer relationships	K	P	pk	-				
<b>5.2.</b> Work identification and authorization	K	P	pk	-				
<b>5.3.</b> Plan work requirements	K	P	pk	_				
<b>5.4.</b> Plan logistics support (CEMAS, BOM)		K	P	pk				
<b>5.5.</b> Government Purchase Card (GPC)		K	P	pk				
Program		K	1	pκ				
<b>5.6.</b> Maintain Recurring Work Program (RWP)		K	P	pk				
<b>5.7.</b> Scheduling/time accounting		K	P	pk				
<b>5.8.</b> Warranty and Guarantee Program	K	P	pk	-				
<b>5.9.</b> Property accountability	K	P	pk	-				
<b>5.10.</b> Air Force Comprehensive Plan	K	P	pk	-				
<b>5.11.</b> Legal limits	K	P	pk	-				
<b>5.12.</b> Mark "As Built" drawings		K	P	pk				
<b>5.13.</b> Reimbursements procedures		K	P	pk				
<b>5.14.</b> CE Specific Automated Systems (Computer) Capability								
<b>5.14.1.</b> Perform inputs		K	P	pk				
<b>5.14.2.</b> Maintain files		K	P	pk				
<b>5.14.3.</b> Develop automated reports		K	P	pk				
<b>5.14.4.</b> Extract automated reports		K	P	рk				
<b>5.14.5.</b> Perform automated data		K	P	pk pk				
analysis		11	*	PK				
<b>5.15.</b> Host Tenant and Interservice		K	P	pk				
Agreements								
<b>5.16.</b> Civil Engineer Civilian Management		K	P	pk				
6. AF Occupational Safety and								
Health (AFOSH) Program TR: AFI 91-203								
<b>6.1.</b> Supervisory responsibilities		K	P	pk				
<b>6.2.</b> Hazardous materials waste	K	P	pk	-				
handling								

Tasks, Knowledge and     Technical References		2. Duty Position Ta Proficiency Coo			3. Certification of Training			aining
	A/H	J	C/WL	S	Trng	Trng	Trne	Trnr
					Strt	Com	Init	Init
					Siit	Com	IIIIt	IIIIt
<b>6.3.</b> Lead-based paint (LBP) hazard	K	P	pk	_				
TR: 29 CFR 1926.62; Working with	1.	1	PK					
Lead-based Paint: Facts and								
Information Applicable to Air Force								
Facilities								
<b>6.4.</b> Asbestos awareness	K	P	pk	-				
7. Publications								
TR: AFI 33-360 Vol 1								
<b>7.1.</b> Military		K	P	pk				
<b>7.2.</b> Commercial		K	P	pk				
7.3. Engineering Technical Letters		K	P	pk				
(ETL)								
8. AFOSH training/standards for								
AFS; AFI 91-203; AFOSHSTD 91-10								
<b>8.1.</b> Utilize Material Safety Data Sheet	pk	-	-	-				
(MSDS) TR: NAVEDTRA 14045 Builder Advance								
8.2. Initial Federal Hazard	m1r				-			
	pk	-	-	-				
Communication Training Program (FHCTP)								
TR: DoD 6050.5-G-1; AFI 91-203								
9. AFS SPECIFIC PUBLICATIONS								
TR: TO's 00-5-1, 00-5-2, 00-20-7;								
Technical Order Catalog (Online)								
<b>9.1.</b> AF indexes, manuals, regulations,			P	pk				
technical orders, and forms				-				
<b>9.2.</b> Locate desired information in			P	pk				
<b>9.2.1.</b> Standard publications			P	pk				
<b>9.2.2.</b> Technical orders			P	pk				
<b>9.2.3.</b> National Electrical Code (NFPA			P	pk				
70)								
<b>9.2.4.</b> Utilize technical publications to			P	pk				
perform maintenance, operations, and								
troubleshooting								
10. AFS Specific Safety NAVEDTRA								
14256 Use and Care of Hand Tools and Measuring Tools; AFPDs 91-2,								
91-3; AFIs 32-1052, 91-202, 91-204,								
91-203; AFPAM 32-7043; NIOSH 78-								
193B; TOs 32-1-101, 32-1-151, 34W4-								
1-5, 34W4-1-8								
<b>10.1.</b> AF Occupational Safety and		K	-	-				
Health Program								
10.2. Hazard abatement		K	-	-				
<b>10.3.</b> Exercise safety precautions when:								
<b>10.3.1.</b> Operating power tools and	pk	-		-				
equipment								
<b>10.3.2.</b> Using hand tools								
<b>10.3.3.</b> Working from heights	pk	-	-	-				
<b>10.3.4.</b> Lifting manually	pk	-	-	-				

Tasks, Knowledge and Technical References		2. Duty Position Tasks and Proficiency Codes			3. Certification of Training			
	A/H	J	C/WL	S	Trng	Trng	Trne	Trnr
					Strt	Com	Init	Init
	1			1	Sirt	Com	IIII	IIII
10.3.5. Handling compressed gas	pk	-						
containers	PΚ			_				
<b>10.3.6.</b> Handling corrosive materials	pk	-	_	_				
associated with Structural AFS	PK							
10.3.7. Perform Lockout/Tagout	pk	-	_	_				
procedures	P							
11. PROJECT PLANNING								
<b>11.1.</b> 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								
<b>11.1.1.</b> Use estimating standards	K	P	pk	-				
<b>11.1.2.</b> Special precautionary measures	K	P	pk	-				
such as: AF Forms 103 and 592								
<b>11.1.3.</b> Sketch working drawings	K	P	pk	-				
<b>11.2.</b> 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								
11.2.1. Carpentry	K	P	pk	_				
11.2.2. Masonry	K	P	pk					
11.2.3. Metal	K	P	pk	-				
11.2.4. Roofing systems	K	P	pk	-				
TR: AFI 32-1051; TM 5-617 (AFM 91-		_	r					
31); Roofing Construction &								
Estimating by Atcheson								
<b>11.3.</b> 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;								

Tasks, Knowledge and Technical References	2. Duty Position Tasks and Proficiency Codes			3.	3. Certification of Training			
	A/H	J	C/WL	S	Trng	Trng	Trne	Trnr
					Strt	Com	Init	Init
Modern Carpentry, Masonry,								
Metalworking, and Welding; Welding								
Skills; Sheet Metal by Meyer;								
Carpentry, 3rd Edition; Welding								
Technology, 2nd Ed								
11.3.1. Carpentry	K	P	pk	-				
<b>11.3.2.</b> Masonry	K	P	pk	-				
<b>11.3.3.</b> Metal	K	P	pk	-				
11.3.4. Roofing systems	K	P	pk	-				
TR: AFI 32-1051; TM 5-617 (AFM 91-								
31); Roofing Construction &								
Estimating by Atcheson								
11.4. 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								
11.4.1. Carpentry	K	P	pk					
11.4.2. Masonry	K	P	pk	_				
11.4.3. Metal	K	P	pk	_				
11.4.4. Roofing systems	K	P	pk	_				
TR: AFI 32-1051; TM 5-617 (AFM 91-	17	1	PK					
31); Roofing Construction &								
Estimating by Atcheson								
12. 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.	- D							
12.1. Use	P	pk	-	-				
12.1.1. Hand tools	P	pk 1-	-	-				
12.1.2. Portable power tools	P	pk	-	-				
12.1.3. Shop installed equipment	P	pk 1-	-	-				
12.1.4. Laser level	P	pk nls	-	-				
<b>12.1.5.</b> Powder actuated tools TR: Manufacturer's Instructions	P	pk	-	-				
ivialiuracturer 8 IIIStructions								

Tasks, Knowledge and     Technical References			uty Position Tasks and Proficiency Codes			3. Certification of Training			
	A/H	J	C/WL	S	Trng	Trng	Trne	Trnr	
					Strt	Com	Init	Init	
					Sut	Com	Ш	Ші	
12 1 ( Castfalds and laddens	р	1-	1 1		1		1		
12.1.6. Scaffolds and ladders 12.1.7. Mobile work platforms	P P	pk pk	-	-					
12.1.7. Woone work platforms	Г	рк	-	-					
12.2.1. Hand tools	pk	-	-	-					
12.2.2. Portable power tools	pk	_	_	_					
12.2.3. Shop installed equipment	pk	-	-	-	+				
12.2.4. Laser level	pk	-	_	_	+				
12.2.5. Powder actuated tools	pk	-	-	-					
12.2.6 Scaffolds and ladders	pk	-	_	-					
12.2.7 Mobile work platforms	pk	-	-	-					
13. 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									
13.1. Prepare subgrade	P	pk	-	-					
13.2. Concrete reinforcement		1							
<b>13.2.1.</b> Install reinforcing steel	P	pk	-	-					
13.2.2. Install wire mesh	P	pk	-	-					
<b>13.3.</b> Construct, install and remove forms									
<b>13.3.1.</b> Footings	P	pk	-	-					
<b>13.3.2.</b> Piers	P	pk	-	-					
<b>13.3.3.</b> Columns	P	pk	-	-					
<b>13.3.4.</b> Slabs	P	pk	-	-					
<b>13.3.5.</b> Steps	P	pk	-	-					
<b>13.3.6.</b> Ramps	P	pk	-	-					
<b>13.3.7.</b> Walls	P	pk	-	-					
<b>13.3.8.</b> Earth	P	pk	-	-					
<b>13.4.</b> Construct batter boards	P	pk	-	-					
<b>13.5.</b> Install expansion and contraction	P	pk	-	-					
joints									
13.6. Concrete									
<b>13.6.1.</b> Mix ingredients to meet project specifications	P	pk	-	-					
<b>13.6.2.</b> Use admixtures	P	pk	-	-					
<b>13.7.</b> Place concrete in forms	P	pk	-	-					
<b>13.8.</b> Consolidate concrete	P	pk	-	-					
<b>13.9.</b> Install anchor bolts	P	pk	-	-					
<b>13.10.</b> Finish concrete	P	pk	-	-					
13.11. Cure concrete	P	pk	-	-					
<b>13.12.</b> Inspect concrete for defects	P	pk	-	-					
13.13. Repair concrete	P	pk	-	-					
14. STRUCTURAL LAYOUT/ FRAMING COMPONENTS TR: NAVEDTRA 14043, 14044,									

<ol> <li>Tasks, Knowledge and Technical References</li> </ol>		•	ition Tasl ncy Code		3. Certification of Traini			aining
	A/H	J	C/WL	S	Trng	Trng	Trne	Trnr
					Strt	Com	Init	Init

Builders 3 & 2, Vol. 1 & 2;								
NAVEDTRA 14045, Builder								
Advanced; Modern Carpentry and								
Masonry; Carpentry, 3rd Edition;								
Commercial Metal Stud Framing by								
Clark								
14.1. Layout, construct and repair								
<b>14.1.1.</b> Floors	P	pk	_	_				
14.1.2. Stair members	P	pk	_	_				
14.1.3. Walls	1	рк						
<b>14.1.3.1.</b> Wooden Studs	P	pk	_					
14.1.3.1. Wooden Studs	P	pk		-				
	P		-	-				
<b>14.1.4.</b> Ceilings		pk	-	-				
<b>14.1.5.</b> Roofs	P	pk	-	-				
14.1.6. Trusses	P	pk	-	-				
15. 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								
<b>15.1.</b> Install								
<b>15.1.1.</b> Metal siding	P	pk	-	-				
<b>15.1.2.</b> Wood siding	P	pk	-	-				
<b>15.2.</b> Repair								
<b>15.2.1.</b> Metal siding	P	pk	-	-				
15.2.2. Wood siding	P	pk	-	-				
<b>15.3.</b> Install vents	P	pk	-	-				
<b>15.4.</b> Install louvers	P	pk	-	-				
<b>15.5.</b> Install exterior trim	P	pk	-	-				
<b>15.6.</b> Construct wooden fences TR:	P	pk	-	-				
Wooden Fences by Nash								
<b>15.7.</b> Replace screen fabric	P	pk	-	-				
<b>15.8.</b> Replace glass	P	pk	-	-				
<b>15.9.</b> Cut glass	P	pk	-	-				
<b>15.10.</b> Cut acrylic sheets	P	pk	-	-				
16. 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								
<b>16.1.</b> Determine and mix type of mortar	P	pk	-	-				
required		_						
<b>16.2.</b> Lay masonry units								
<b>16.2.1.</b> Brick	P	pk	-	-				
				1	•	•	•	

Tasks, Knowledge and Technical References	Duty Position Tasks and     Proficiency Codes				3. Certification of Training				
	A/H	J	C/WL	S	Trng	Trng	Trne	Trnr	
					Strt	Com	Init	Init	
<b>16.2.2.</b> Block	P	pk	-	-					
<b>16.2.3.</b> Structural tile	P	pk	-	-					
<b>16.3.</b> Install reinforcement									
<b>16.3.1.</b> Prefabricated wire joint	P	pk	-	-					
reinforcement		_							
<b>16.3.2.</b> Structural reinforcing bars	P	pk	-	-					
<b>16.3.3.</b> Anchor bolts	P	pk	-	-					
<b>16.4.</b> Construct control joints	P	pk	-	-					
16.5. Construct window and door									
openings									
<b>16.5.1.</b> Brick	K	P	pk	-					
<b>16.5.2.</b> Block	K	P	pk	-					
<b>16.5.3.</b> Structural tile	K	P	pk	-					
<b>16.6.</b> Repair masonry units	K	P	pk	-					
16.7. 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									
<b>16.7.1.</b> Apply									
<b>16.7.1.</b> Appry <b>16.7.1.1.</b> Plaster	P	pk	_	_					
16.7.1.2. Stucco	P	pk							
16.7.2. Staceo	1	рк	_	-					
16.7.2.1 ach	P	pk	_	_					
16.7.2.2. Stucco	P	pk	_	_					
17. ROOFING SYSTEMS	1	рк							
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									
<b>Edition</b> ; Roofing Construction &									
Estimating by Atcheson;									
Maintenance of Membrane Roofing									
Systems by RIEI; Sheet Metal by									
Meyer; Welding Technology, 2nd Ed	D	1-							
17.1. Install low-slope roof systems	P P	pk pk	-	-					
17.1.1. Built-up roof 17.1.2. Modified bitumen	P	pk pk	-	-					
17.1.2. Modified bitumen 17.1.3. Thermosets	P	pk pk	-	-	+				
17.1.4. Thermosets	P	_ •	-	-	+				
17.1.4. Thermopiastic 17.1.5. Metal	P	pk pk	-	-	+				
17.1.6. Composition roll roofing	P	pk pk	-	-	+				
<b>17.1.0.</b> Composition for rooming <b>17.2.</b> Repair low-slope roof systems	r	рк	-	-					
17.2.1. Built-up roof	P	pk	_	-					
17.2.1. Dunt-up 1001	Г	þκ		-					

Tasks, Knowledge and Technical References			ition Tas ency Code		3. Certification of Training				
	A/H	J	C/WL	S	Trng	Trng	Trne	Trnr	
					Strt	Com	Init	Init	
		<u> </u>			Birt	Com	IIII	IIII	
17.2.2. Modified bitumen	P	pk	_	_					
17.2.3. Thermosets	P	pk	_	_					
17.2.4. Thermoplastic	P	pk	_	_					
17.2.5. Metal	P	pk	_	_					
17.2.6. Composition roll roofing	P	pk	_	_					
<b>17.3.</b> Install steep-slope roof systems:		P							
17.3.1. Tile	P	pk	_	-					
<b>17.3.2.</b> Composition shingles	P	pk	_	_					
17.3.3. Metal	P	pk	_	_					
<b>17.4.</b> Repair steep-slope roof systems:	P	pk	_	-					
<b>17.4.1.</b> Tile		P							
17.4.2. Composition shingles	P	pk	-	-					
17.4.3. Metal	P	pk	<del> </del>	-					
17.5. Inspect roof systems: TR AFI 32-		P**							
1051									
17.5.1. Low-slope	P	pk	_	-					
17.5.2. Steep-slope	P	pk	-	-					
<b>17.6.</b> Gutter systems		r							
<b>17.6.1.</b> Fabricate	P	pk	-	-					
<b>17.6.2.</b> Install	P	pk	_	_					
<b>17.6.3.</b> Repair	P	pk	_	_					
17.7. Flashing									
<b>17.7.1.</b> Fabricate	P	pk	-	-					
<b>17.7.2.</b> Install	P	pk	_	_					
<b>17.7.3.</b> Repair	P	pk	_	_					
18. 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	_								
<b>18.1.</b> Install wall paneling	P	pk	-	-					
18.2. Gypsum board									
<b>18.2.1.</b> Install	P	pk	-	-					
18.2.2. Tape and finish	P	pk	-	-					
18.2.3. Patch	n								
<b>18.3.</b> Install floor coverings	P	pk	-	-					
<b>18.3.1.</b> Asphalt/Vinyl	P	pk	-	-					
18.3.2. Wood	P	pk	-	-					
<b>18.4.</b> Repair floor coverings	P.								
18.4.1. Asphalt/Vinyl	P	pk	-	-					
18.4.2. Wood	P	pk	-	-					
<b>18.5.</b> Install ceiling systems									
<b>18.5.1.</b> Acoustical	P	pk	-	-					
18.5.2. Suspended ceiling	P	pk	-	-					
<b>18.6.</b> Repair / Replace ceiling systems									
<b>18.6.1.</b> Acoustical	P	pk	-	-					
<b>18.6.2.</b> Suspended ceiling	P	pk	-	-					

Tasks, Knowledge and Technical References		•	tion Tasl		3. Certification of Training			
	A/H J C/WL S			Trng	Trng	Trne	Trnr	
					Strt	Com	Init	Init

<b>18.7.</b> Interior trim						
<b>18.7.1.</b> Install	P	pk	-	-		
<b>18.7.2.</b> Repair	P	pk	-	-		
19. MASONRY WALL/FLOOR						
TILE INSTALLATION AND						
MAINTENANCE						
TR: NAVEDTRA 14043, 14044,						
Builders 3 & 2, Vol. 1 & 2;						
NAVEDTRA 14045, Builder						
Advanced; Modern Masonry;						
Carpentry, 3rd Edition						
<b>19.1.</b> Prepare surface to receive	P	pk	-	-		
adhesive		r				
<b>19.2.</b> Lay out areas to receive tile	P	pk	-	-		
<b>19.3.</b> Apply adhesive method	P	pk	-	-		
<b>19.4.</b> Apply thin set method	P	pk	-	-		
<b>19.5.</b> Set tile	P	pk	-	-		
<b>19.6.</b> Cut tile	P	pk	-	-		
<b>19.7.</b> Install fixtures	P	pk	-	-		
19.8. Apply grout	P	pk	-	-		
<b>19.9.</b> Replace tile	P	pk	-	-		
20. APPLY PROTECTIVE	_	F				
COATINGS TR: NAVEDTRA						
12520, 12521, Builders 3 and 2, Vol. 1						
& 2; Modern Carpentry, Masonry,						
Metalworking and Welding Skills;						
Carpentry, 3rd Edition						
<b>20.1.</b> Apply protective coating	P	pk	-	-		
21. 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						
<b>21.1.</b> Install personnel door units						
<b>21.1.1.</b> Wood	P	pk	-	-		
<b>21.1.2.</b> Metal	P	pk	-	-		
<b>21.1.3.</b> Glass	P	pk	-	-		
<b>21.2.</b> Repair personnel door units						
<b>21.2.1.</b> Wood	P	pk	-	-		
<b>21.2.2.</b> Metal	P	pk	-	-		
<b>21.2.3.</b> Glass	P	pk	-	-		
21.3. Install window units	P	pk	-	-		
<b>21.4.</b> Repair window units	P	pk	-	-		
21.5. Personnel door hardware						
<b>21.5.1.</b> Install door closures	P	pk	-	-		
21.5.2. Adjust door closures	P	pk	-	-		
<b>21.5.3.</b> Install locking devices						
21.5.3.1. Cylinder locks	P	pk	-	-		
· · · · · · · · · · · · · · · · · · ·						

A/H   J   C/WL   S   Tmg   Tme   Tmr	Tasks, Knowledge and Technical References			ition Tas ncy Cod		3.	3. Certification of Training			
21.5.3.2. Mortise locks		A/H	J	C/WL	S	Trng	Trng	Trne	Trnr	
Description   Per   Pe						Strt	Com	Init	Init	
21.5.3.3. Cipher locks			l			Birt	Com	IIII	IIII	
21.5.3.3. Cipher locks	21 5 3 2. Mortise locks	р	nk		_ [			1		
21.5.3.4. Panic hardware/exit device   P   pk   -   -			-							
22. LOCKSMITHING   TR: The Complete Book of Locks and Locksmithing by Phillips;   Carpentry 3rd Edition   22.1. Implement master key system   P   pk   -   -			_							
TR: The Complete Book of Locks and Locksmithing by Phillips;   Carpentry 3rd Edition   P		-	- PK							
Author   Carpentry 3rd Edition   Carpentry 3rd Edition										
Carpentry 3rd Edition										
22.2. Cut keys										
22.3.   Maintain locking devices	22.1. Implement master key system	P	pk	-	-					
22.3.1. Cylinder locks	<b>22.2.</b> Cut keys	P	pk	-	-					
22.3.2. Mortise locks	<b>22.3.</b> Maintain locking devices									
22.3.3. Cipher locks	<b>22.3.1.</b> Cylinder locks		pk	-	-					
22.3.4. Panic hardware	22.3.2. Mortise locks		pk	-	-					
22.3.5. GSA Container	*		pk	-	-					
22.3.6. Safes			pk	-	-					
22.3.7. Vaults			pk	-	-					
23. WOODWORKING TR: NAVEDTRA 14043, 14044, Builders 3 & 2, Vol. 1 & 2; NAVEDTRA 14045, Builder Advanced; Carpentry, 3rd Edition; Furniture & Cabinet Construction by Rae  23.1. Install countertops Ppk 23.2. Install cabinet hardware Ppk 23.3. Apply laminated plastics Ppk 23.4. Install cabinets Ppk 24. 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 24.1. Install thermal insulation Ppk 24.2. Apply Caulking compound Ppk 24.3. Install weather-stripping Ppk 25. METAL/FIBERGLASS COMPONENTS TR: NAVEDTRA 14250, 14251, Steelworker Vol. 1 & 2; Modern Metalworking; Sheet Metal by Meyer, T.O.s 34W4-1-5; 25.1. Lay out metal component using: 25.1.1. Parallel line development KPpk 25.1.2. Radial line development KPpk 25.2. Fabricate Metal Components				-	-					
TR: NAVEDTRA 14043, 14044, Builders 3 & 2, Vol. 1 & 2; NAVEDTRA 14045, Builder Advanced; Carpentry, 3rd Edition; Furniture & Cabinet Construction by Rae  23.1. Install countertops Ppk 23.2. Install cabinet hardware Ppk 23.3. Apply laminated plastics Ppk 23.4. Install cabinets Ppk 24. 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 24.1. Install thermal insulation Ppk 24.2. Apply Caulking compound 24.3. Install weather-stripping Ppk 25. METAL/FIBERGLASS COMPONENTS TR: NAVEDTRA 14250, 14251, Steelworker Vol. 1 & 2; Modern Metalworking; Sheet Metal by Meyer, T.O.s 34W4-1-5; 25.1. Lay out metal components using: 25.1.1. Parallel line development Ppk - 25.1.2. Radial line development Kppk - 25.2. Eabricate Metal Components Kppk - 25.2. Eabricate Metal Components		P	pk	-	-					
Builders 3 & 2, Vol. 1 & 2; NAVEDTRA 14045, Builder Advanced; Carpentry, 3rd Edition; Furniture & Cabinet Construction by Rae  23.1. Install countertops  23.2. Install cabinet hardware  23.3. Apply laminated plastics  23.4. Install cabinets  P pk  -  23.4. Install cabinets  P pk  -  24. 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  24.1. Install thermal insulation  P pk  -  24.2. Apply Caulking compound  P pk  -  24.3. Install weather-stripping  P pk  -  25. METAL/FIBERGLASS  COMPONENTS  TR: NAVEDTRA 14250, 14251, Steelworker Vol. 1 & 2; Modern Metalworking; Sheet Metal by Meyer, T.O.s 34W4-1-5;  25.1.1. Parallel line development  P pk  -  25.1.2. Radial line development  K P pk  -  25.2. Fabricate Metal Components										
NAVEDTRA 14045, Builder Advanced; Carpentry, 3rd Edition; Furniture & Cabinet Construction by Rae  23.1. Install countertops P pk 23.2. Install cabinet hardware P pk 23.3. Apply laminated plastics P pk 23.4. Install cabinets P pk 24. 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  24.1. Install thermal insulation P pk 24.2. Apply Caulking compound P pk 25. METAL/FIBERGLASS COMPONENTS TR: NAVEDTRA 14250, 14251, Steelworker Vol. 1 & 2; Modern Metalworking; Sheet Metal by Meyer, T.O.s 34W4-1-5; 25.1. Lay out metal components using: 25.1.1. Parallel line development P pk 25.1.2. Radial line development K P pk - 25.2. Fabricate Metal Components										
Advanced; Carpentry, 3rd Edition; Furniture & Cabinet Construction by Rae  23.1. Install countertops P pk  23.2. Install cabinet hardware P pk  23.3. Apply laminated plastics P pk  23.4. Install cabinets P pk  24. 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 24.1. Install thermal insulation P pk  24.2. Apply Caulking compound P pk  25. METAL/FIBERGLASS COMPONENTS TR: NA VEDTRA 14250, 14251, Steelworker Vol. 1 & 2; Modern Metalworking; Sheet Metal by Meyer, T.O.s 34W4-1-5; 25.1. Lay out metal components using: 25.1.1. Parallel line development P pk  25.1.2. Radial line development K P pk  25.1.3. Triangulation development K P pk  25.2. Fabricate Metal Components										
Section   Part   Part										
Description										
23.1. Install countertops										
23.2. Install cabinet hardware		p	nk	_	_					
23.3. Apply laminated plastics				_	_					
23.4. Install cabinets P pk				_	_					
24. 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  24.1. Install thermal insulation P pk - 24.2. Apply Caulking compound P pk - 24.3. Install weather-stripping P pk - 25. METAL/FIBERGLASS COMPONENTS TR: NAVEDTRA 14250, 14251, Steelworker Vol. 1 & 2; Modern Metalworking; Sheet Metal by Meyer, T.O.s 34W4-1-5; 25.1. Lay out metal components using: 25.1.1. Parallel line development P Pk - 25.1.2. Radial line development K P pk - 25.1.3. Triangulation development K P pk - 25.2. Fabricate Metal Components				_	_					
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         24.1. Install thermal insulation         P           24.2. Apply Caulking compound         P         pk           24.3. Install weather-stripping         P         pk           25. METAL/FIBERGLASS         COMPONENTS           TR: NAVEDTRA 14250, 14251,         Steelworker Vol. 1 & 2; Modern           Metalworking; Sheet Metal by         Meyer, T.O.s 34W4-1-5;           25.1. Lay out metal components using:         25.1.1. Parallel line development         P           25.1.2. Radial line development         P         Pk           25.1.3. Triangulation development         K         P         pk           25.2. Fabricate Metal Components         K         P         pk										
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  24.1. Install thermal insulation Ppk										
14044, Builders 3 & 2, Vol. 1 & 2; Modern Masonry; Carpentry, 3rd Edition; Energy Efficient Building by Fine Home Building Editors  24.1. Install thermal insulation Ppk 24.2. Apply Caulking compound Ppk 24.3. Install weather-stripping Ppk 25. METAL/FIBERGLASS COMPONENTS TR: NAVEDTRA 14250, 14251, Steelworker Vol. 1 & 2; Modern Metalworking; Sheet Metal by Meyer, T.O.s 34W4-1-5; 25.1. Lay out metal components using: 25.1.1. Parallel line development Ppk 25.1.2. Radial line development K Ppk 25.1.3. Triangulation development K Ppk 25.2. Fabricate Metal Components										
Modern Masonry; Carpentry, 3rd Edition; Energy Efficient Building by Fine Home Building Editors  24.1. Install thermal insulation Ppk	14043,									
Edition; Energy Efficient Building by Fine Home Building Editors  24.1. Install thermal insulation Ppk										
Fine Home Building Editors  24.1. Install thermal insulation P pk										
24.1. Install thermal insulation P pk										
24.2. Apply Caulking compound P pk  24.3. Install weather-stripping P pk  25. METAL/FIBERGLASS COMPONENTS TR: NAVEDTRA 14250, 14251, Steelworker Vol. 1 & 2; Modern Metalworking; Sheet Metal by Meyer, T.O.s 34W4-1-5;  25.1. Lay out metal components using: 25.1.1. Parallel line development P Pk  25.1.2. Radial line development K P pk -  25.1.3. Triangulation development K P pk -  25.2. Fabricate Metal Components		-								
24.3. Install weather-stripping P pk				-	-					
25. METAL/FIBERGLASS           COMPONENTS           TR: NAVEDTRA 14250, 14251,           Steelworker Vol. 1 & 2; Modern           Metalworking; Sheet Metal by           Meyer, T.O.s 34W4-1-5;           25.1. Lay out metal components using:           25.1.1. Parallel line development         P           25.1.2. Radial line development         K           P         pk           -         -           25.1.3. Triangulation development         K           P         pk           -         -           25.1.3. Triangulation development         K           P         pk           -         -           25.2. Fabricate Metal Components         -				-	-					
COMPONENTS         TR: NAVEDTRA 14250, 14251,           Steelworker Vol. 1 & 2; Modern         Metalworking; Sheet Metal by           Meyer, T.O.s 34W4-1-5;         25.1. Lay out metal components using:           25.1.1. Parallel line development         P           25.1.2. Radial line development         K           25.1.3. Triangulation development         K           25.2. Fabricate Metal Components         F		Р	рк	-	-					
TR: NAVEDTRA 14250, 14251,       Steelworker Vol. 1 & 2; Modern         Metalworking; Sheet Metal by       Meyer, T.O.s 34W4-1-5;         25.1. Lay out metal components using:       -         25.1.1. Parallel line development       P       Pk       -         25.1.2. Radial line development       K       P       pk       -         25.1.3. Triangulation development       K       P       pk       -         25.2. Fabricate Metal Components       F       F       F										
Steelworker Vol. 1 & 2; Modern         Metalworking; Sheet Metal by           Meyer, T.O.s 34W4-1-5;         25.1. Lay out metal components using:           25.1.1. Parallel line development         P           25.1.2. Radial line development         K           P         pk           25.1.3. Triangulation development         K           P         pk           -         25.2. Fabricate Metal Components										
Metalworking; Sheet Metal by       Meyer, T.O.s 34W4-1-5;         25.1. Lay out metal components using:       25.1.1. Parallel line development         25.1.2. Radial line development       P         25.1.3. Triangulation development       K         P       pk         -       -         25.1.3. Triangulation development       K         P       pk         -       -         25.2. Fabricate Metal Components       -										
Meyer, T.O.s 34W4-1-5;       25.1. Lay out metal components using:         25.1.1. Parallel line development       P       Pk       -         25.1.2. Radial line development       K       P       pk       -         25.1.3. Triangulation development       K       P       pk       -         25.2. Fabricate Metal Components       D       -       -										
25.1. Lay out metal components using:  25.1.1. Parallel line development  P Pk  25.1.2. Radial line development  K P pk -  25.1.3. Triangulation development  K P pk -  25.2. Fabricate Metal Components										
25.1.1. Parallel line development     P     Pk     -     -       25.1.2. Radial line development     K     P     pk     -       25.1.3. Triangulation development     K     P     pk     -       25.2. Fabricate Metal Components     D     -     -										
25.1.2. Radial line development K P pk - 25.1.3. Triangulation development K P pk - 25.2. Fabricate Metal Components		P	Pk	-	-					
25.1.3. Triangulation development K P pk - 25.2. Fabricate Metal Components				pk	-					
25.2. Fabricate Metal Components	_	K	P		-					
25.2.1. Rectangular K P pk -										
	25.2.1. Rectangular	K	P	pk	-					

Tasks, Knowledge and Technical References	Duty Position Tasks and     Proficiency Codes				3. Certification of Training				
	A/H	J	C/WL	S	Trng	Trng	Trne	Trnr	
					Strt	Com	Init	Init	
			•		•		•		
<b>25.2.2.</b> Round	K	P	pk	_					
<b>25.3.</b> Assemble and install metal	P	pk	-	_					
components using appropriate fasteners		1							
<b>25.4.</b> Resistance welding (spot									
welding)									
<b>25.4.1.</b> Principles of resistance welding	P	pk	-	-					
<b>25.4.2.</b> Select resistance welding	P	pk	-	-					
equipment									
<b>25.4.3.</b> Adjust the resistance welder	P	pk	-	-					
<b>25.4.4.</b> Weld joints using the resistance	P	pk	-	-					
welder									
<b>25.4.5.</b> Maintain resistance welding	P	pk	-	-					
equipment									
<b>25.5.</b> Install duct systems									
<b>25.5.1.</b> Sheet metal ducts	P	pk	-	-					
<b>25.5.2.</b> Flex Duct	P	pk	-	-					
<b>25.5.3.</b> Stacks	P	pk	-	-					
<b>25.5.4.</b> Ventilators	P	pk	-	-					
<b>25.6.</b> Install fixed utility equipment									
<b>25.6.1.</b> Table tops	P	pk	-	-					
<b>25.6.2.</b> Counter tops	P	pk	-	-					
<b>25.6.3.</b> Overhead canopies	P	pk	-	-					
<b>25.6.4.</b> Hoods	K	P	pk	-					
<b>25.6.5.</b> Doors	K	P	pk	-					
<b>25.7.</b> Repair fiberglass duct board	P	pk	-	-					
26. VEHICLE AND EQUIPMENT									
FACILITY DOORS AND GATES									
TR: Manufacturer's Instructions	<b>D</b>	1							
<b>26.1.</b> Inspect roll-up/overhead metal	P	pk	-	-					
doors									
26.2. Install	V	D	1-						
26.2.1. Overhead doors	K K	P P	pk	-					
26.2.2. Roll-up doors	K	P	pk	-					
26.2.3. Door operators 26.2.4. Manual Gates	K	P	pk	_					
<b>26.2.5.</b> Mechanical Gates	K	P	pk pk						
26.3. Maintain	IX.	r	PΚ	-					
26.3.1. Overhead doors	P	pk	_	_					
<b>26.3.2.</b> Roll-up doors	P	pk pk	-	-					
<b>26.3.3.</b> Door operators	P	pk pk	_	-					
<b>26.3.4.</b> Manual Gates	P	pk pk	-						
26.3.5. Mechanical Gates	P	pk pk	-						
27. SOFT SOLDERING	1	рĸ	-	-					
TR: T.O. 34W4-1-5, 34W4-1-8; AFI									
91-203; NAVEDTRA 14250, 14251,									
Steelworker Vol. 1 & 2; Welding									
Skills; Modern Welding by									
Bowditch; Welding Technology, 2nd									
Ed									
<b>27.1.</b> Principles of soldering	P	pk	-	-					
<u> </u>					1	I			

Tasks, Knowledge and Technical References			ition Tas ncy Code		3. Certification of Training			
	A/H	J	C/WL	S	Trng	Trng	Trne	Trnr
					Strt	Com	Init	Init
	l							
<b>27.2.</b> Prepare metal for soldering	P	pk	_	-				
<b>27.3.</b> Soldering techniques	P	pk	-	-				
28. OXYACETYLENE APPLICATIONS TR: T.O.s 34W4- 1-5, 34W4-1-8; AFOSHSTD 91-5;								
NAVEDTRA 14250, 14251,								
Steelworker Vol. 1 & 2; Modern								
Welding by Bowditch; Oxy-fuel Gas Welding by Bowditch; Welding								
Skills; Welding Technology, 2nd Ed								
<b>28.1.</b> Principles of oxyacetylene	P	pk	_	_				
welding	_	F						
<b>28.2.</b> Select oxyacetylene welding equipment and tools	P	pk	-	-				
<b>28.3.</b> Perform shop tests to identify	P	pk	_	_				
metals	1	PIL						
<b>28.4.</b> Assemble and test oxyacetylene	P	pk	-	-				
equipment for gas leaks								
<b>28.5.</b> Select the tip and filler rod for a specific job	P	pk	-	-				
<b>28.6.</b> Adjust pressure regulators	P	pk	_	_				
<b>28.7.</b> Light oxyacetylene torch and	P	pk pk	_	_				
adjust flame	•	PIL						
<b>28.8.</b> Prepare joints for welding	P	pk	-	-				
<b>28.9.</b> Use oxyacetylene welding	P	pk	-	-				
equipment to weld carbon steel	_							
<b>28.10.</b> Use oxyacetylene equipment to cut metal	P	pk	-	-				
<b>28.11.</b> Use oxyacetylene welding	P	pk	_	_				
equipment to form metal components	•	PK						
<b>28.12.</b> Maintain oxyacetylene welding	P	pk	-	-				
equipment		-						
<b>28.13.</b> Principles of Silver brazing	K	-	-	-				
<b>28.14.</b> Principles of Braze welding	K	-	-	-				
29. 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,								
<ul><li>2nd Ed</li><li>29.1. Principles of shielded metal arc</li></ul>	K	_	_	_				
welding	17	-		_				
<b>29.2.</b> Select arc welding equipment for	P	pk	-	-				
specific tasks	-							
<b>29.3.</b> Select the electrodes for specific welding jobs	P	pk	-	-				
<b>29.4.</b> Set up welding machine for a	P	pk	-	-				
specific welding job								

Tasks, Knowledge and Technical References	Duty Position Tasks and     Proficiency Codes				3.	3. Certification of Training			
	A/H	J	C/WL	S	Trng	Trng	Trne	Trnr	
					Strt	Com	Init	Init	
	l .	l .			2010	00111	11110	11110	
<b>29.5.</b> Prepare joints for welding	P	pk	_ [	_					
<b>29.6.</b> Use shielded metal arc welding	1	PIL							
equipment to weld carbon steel									
<b>29.6.1.</b> Butt joint positions	P	pk	_	_					
<b>29.6.1.1.</b> Flat	P	pk	_	_					
<b>29.6.1.2.</b> Horizontal	P	pk	_	_					
<b>29.6.1.3.</b> Vertical	P	pk	-	-					
<b>29.6.1.4.</b> Overhead	P	pk	_	_					
<b>29.6.2.</b> Lap joint positions	P	pk	-	-					
<b>29.6.2.1.</b> Flat	P	pk	-	-					
<b>29.6.2.2.</b> Horizontal	P	pk	-	-					
<b>29.6.2.3.</b> Vertical	P	pk	-	-					
<b>29.6.2.4.</b> Overhead	P	pk	-	-					
<b>29.6.3.</b> Tee joint positions		<u> </u>							
<b>29.6.3.1.</b> Flat	P	pk	-	-					
<b>29.6.3.2.</b> Horizontal	P	pk	-	-					
<b>29.6.3.3.</b> Vertical	P	pk	_	_					
<b>29.6.3.4.</b> Overhead	P	pk	_	_					
<b>29.6.4.</b> Edge joint positions	P	pk	_	_					
<b>29.6.4.1.</b> Flat	-								
<b>29.6.4.2.</b> Horizontal	P	pk	_	_					
<b>29.6.4.3.</b> Vertical	P	pk	_	_					
<b>29.6.4.4.</b> Overhead	P	pk	_	_					
<b>29.7.</b> Perform arc cutting	P	pk	_	_					
<b>29.8.</b> Perform arc gouging	P	pk	_	_					
<b>29.9.</b> Maintain shielded metal arc	pk	-	_	_					
welding equipment	r								
<b>29.10.</b> Perform hard-surfacing welding	K	P	pk	-					
TR: T.O. 34W4-1-5; Welding Skills;			1						
Army SC4940-95-B14; Modern									
Welding; Welding Technology, 2nd Ed									
30. TUNGSTEN INERT GAS									
WELDING (TIG)									
TR: T.O.s 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	**								
<b>30.1.</b> Principles and purpose of	K	-	-	-					
tungsten inert gas welding	17								
<b>30.2.</b> Select tungsten inert gas welding	K	-	-	-					
equipment for specific jobs	IZ.	D	1						
<b>30.3.</b> Set up welding machine for	K	P	pk	-					
specific job									
<b>30.4.</b> Use tungsten inert gas welding equipment to weld carbon steel									
<b>30.4.1.</b> Butt joint positions									
<b>30.4.1.1.</b> Flat	P	nl.		_					
<b>30.4.1.2.</b> Horizontal	P	pk pk	-						
JV-7-1-2- 11011Z011ta1	Г	pk	-	-					

Tasks, Knowledge and Technical References	Duty Position Tasks and     Proficiency Codes				3. Certification of Training				
	A/H	J	C/WL	S	Trng	Trng	Trne	Trnr	
					Strt	Com	Init	Init	
			, ,						
<b>30.4.1.3.</b> Vertical	P	pk	-	-					
<b>30.4.1.4.</b> Overhead	P	pk	-	-					
<b>30.4.2.</b> Lap joint positions									
<b>30.4.2.1.</b> Flat	P	pk	-	-					
<b>30.4.2.2.</b> Horizontal	P	pk	-	-					
<b>30.4.2.3.</b> Vertical	P	pk	-	-					
<b>30.4.2.4.</b> Overhead	P	pk	-	-					
<b>30.4.3.</b> Tee joint positions									
<b>30.4.3.1.</b> Flat	P	pk	-	-					
<b>30.4.3.2.</b> Horizontal	P	pk	-	-					
<b>30.4.3.3.</b> Vertical	P	pk	-	-					
<b>30.4.3.4.</b> Overhead	P	pk	-	-					
<b>30.4.4.</b> Edge joint positions									
<b>30.4.4.1.</b> Flat	P	pk	-	-					
<b>30.4.4.2.</b> Horizontal	P	pk	-	-					
<b>30.4.4.3.</b> Vertical	P	pk	-	-					
<b>30.4.4.4.</b> Overhead	P	pk	-	-					
<b>30.5.</b> Use tungsten inert gas welding	P	pk	-	-					
equipment to weld corrosion resistant									
alloy									
<b>30.6.</b> Use tungsten inert gas welding	P	pk	-	-					
equipment to weld non-ferrous alloy									
<b>30.7.</b> Maintain tungsten inert gas	pk	-	-	-					
equipment									
31. METALLIC INERT GAS									
WELDING (MIG)									
TR: T.O.s 34W4-1-5; AFOSHSTD									
91-5; NAVEDTRA 14250, 14251, Steelworker Vol. 1 & 2; Modern									
Welding by Bowditch; Gas Metal									
Arc Welding by Hobart; Welding									
Skills; Welding Technology, 2nd Ed									
<b>31.1.</b> Principles and purpose of metallic	K	-	_	-					
inert gas welding	11								
31.2. Select metallic inert gas welding	K	_	_	_					
equipment for specific jobs									
<b>31.3.</b> Set up welding machine for	P	pk	_	-					
specific job		F							
<b>31.4.</b> Use metallic inert gas welding									
equipment to weld carbon steel									
<b>31.4.1.</b> Butt joint positions									
<b>31.4.1.1.</b> Flat	P	pk	-	-					
<b>31.4.1.2.</b> Horizontal	P	pk	-	-					
<b>31.4.1.3.</b> Vertical	P	pk	-	-					
<b>31.4.1.4.</b> Overhead	P	pk	-	-					
<b>31.4.2.</b> Lap joint positions									
<b>31.4.2.1.</b> Flat	P	pk	-	-					
<b>31.4.2.2.</b> Horizontal	P	pk	-	-					
<b>31.4.2.3.</b> Vertical	P	pk	-	-					
<b>31.4.2.4.</b> Overhead	P	pk	-	-					

Tasks, Knowledge and     Technical References			ition Tas		3.	Certificat	tion of Tr	raining
	A/H	J	C/WL	S	Trng	Trng	Trne	Trnr
					Strt	Com	Init	Init
					Sit	Com	IIIIt	IIII
<b>31.4.3.</b> Tee joint positions								
31.4.3.1. Flat	P	pk	_	_				
31.4.3.2. Horizontal	P	pk	_					
31.4.3.3. Vertical	P	pk	_					
31.4.3.4. Overhead	P	pk	-	_				
31.4.4. Edge joint positions	Г	рк	-	-				
31.4.4.1. Flat	P	nle	_	_				
31.4.4.2. Horizontal	P	pk pk	-	-				
	P	pk	-	-				
31.4.4.3. Vertical 31.4.4.4. Overhead	P	pk	-	-				
	P	pk	-	-				
31.5. Use metallic inert gas welding	Р	pk	-	-				
equipment to weld corrosion resistant								
alloy	P	m1r						
31.6. Use metallic inert gas welding	Р	pk	-	-				
equipment to weld non-ferrous alloy	1.							
<b>31.7.</b> Maintain metallic inert gas	pk	-	-	-				
equipment  32. PLASMA ARC SYSTEMS								
TR: AFI 91-203; Modern Welding by								
Bowditch; Welding Technology, 2nd Ed								
<b>32.1.</b> Principles of	K	-	-	-				
<b>32.2.</b> Set up	P	pk	-	-				
<b>32.3.</b> Perform cutting	P	pk	-	-				
<b>32.4.</b> Maintain	pk	-	-	-				
33. AFSC SPECIFIC								
EXPEDITIONARY								
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;								
CCB								
Online  33.1. Expedient Repair and Destruction								
TR: AFPAM 10-219, Vol 2, 3, 4 & 5;								
AFI 32-1051; Home Station Training								
(HST) Category 1 & 2								
33.1.1. Facility repairs								
33.1.1. Types & extent of wartime	K	P	pk	_				
facility damage	IX.	1	Pκ	-				
33.1.1.2. Damage assessment /	K	P	pk	_				
reporting	17	r	Pκ	-				
33.1.1.3. Repair prioritization/	K	P	pk	-				
philosophy	IX.	1	Pκ	-				
<b>33.1.1.4.</b> Quick fix techniques								
<b>33.1.1.4.1.</b> Roof repairs	K	P	pk	_				
22.1.1.T.1. ROUI Topalls	17	1	ρĸ	-				

pk

K

**33.1.1.4.2.** Exterior walls

Tasks, Knowledge and     Technical References			ition Tasl		3. (	3. Certification of Training			
	A/H	J	C/WL	S	Trng	Trng	Trne	Trnr	
					Strt	Com	Init	Init	
			I						
<b>33.1.2.</b> Structural shoring/bracing	K	P	pk	-					
concepts									
TR: Handbook of Temporary									
Structures in Construction									
<b>33.1.4.</b> Repair hardened aircraft shelter									
doors TR: USAFE Instruction 32-1004									
33.1.4.1. Door adjustment	P	pk	-	-					
33.1.4.2. Roller replacement	P	pk	-	-					
33.2. 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									
<b>33.2.1</b> Characteristics of paint used for	K	P	pk	-					
pavement surfaces									
<b>33.2.2</b> Conduct striping procedures									
<b>33.2.2.1</b> . Runways	K	P	pk	-					
<b>33.2.2.2.</b> Taxiways	K	P	pk	-					
<b>33.2.2.3.</b> Parking Aprons	K	P	pk	-					
<b>33.2.3.</b> Minimum Airfield Operating	K	P	pk	-					
Strip (MAOS) marking system									
34. CIVILIAN SUPERVISION									
REQUIREMENTS									
<b>34.1.</b> Civilian Supervisor Course				X					
<b>34.2.</b> WMGT 571 Course				X					
ANY ADDITIONAL									
REQUIREMENTS CAN BE									
ADDED HERE									

# Locally Developed Training Supplement