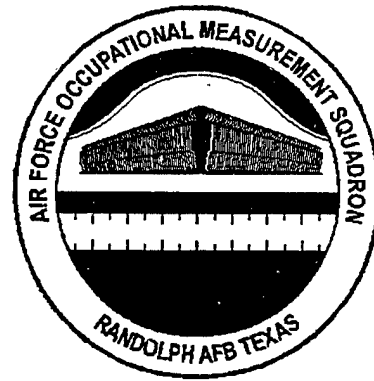


DTIC



UNITED STATES AIR FORCE

# OCCUPATIONAL SURVEY REPORT

DTIC QUALITY INSPECTED 2

STRUCTURAL

AFSC 3E3X1

AFPT 90-3E3-032

MARCH 1997

19970620 039

OCCUPATIONAL MEASUREMENT SQUADRON  
AIR FORCE OCCUPATIONAL MEASUREMENT SQUADRON  
AIR EDUCATION AND TRAINING COMMAND  
1550 5TH STREET EAST  
RANDOLPH AFB, TEXAS 78150-4449

# DISTRIBUTION FOR AFSC 3E3X1 OSR

	<u>OSR</u>	<u>ANL</u> <u>EXT</u>	<u>TNG</u> <u>EXT</u>	<u>JOB</u> <u>INV</u>
AFOMS/OMDQ	1			
AFOMS/OMYXL	10		5	10
AL/HRMM	2			
ARMY OCCUPATIONAL SURVEY BRANCH	1			
CCAF/AYX	1			
DEFENSE TECHNICAL INFORMATION CENTER	2			
HQ ACC/DPTTF	3		3	
HQ AETC/DPPEE	3		3	
HQ AFCEA/CEOT (139 BARNES DRIVE, STE 1, TYNDALL AFB FL 32403-5319, ATTENTION: CMSGT WILSON)	1		1	
HQ AFCEA/DMG	1		1	
HQ AFMC/DPUE	3		3	
HQ AFPC/CCQT	1			
HQ AFPC/DPAADI	1			
HQ AFPC/DPPAPC	1			
HQ AFSPC/DPAE	3		3	
HQ AMC/DPPET	1			
HQ PACAF/DPAET	3		3	
HQ USAFE/DPATTJ	3		3	
HQ USMC/STANDARDS BRANCH	1			
NAVMAC	1			
366 TRS/TSIF (727 MISSILE ROAD, SHEPPARD AFB TX 76311-2254, ATTENTION: MR. FOWLER)	1		1	1
DET 6, 366 TRS (5510 CBC 8TH STREET, GULFPORT MS 39501-5003, ATTENTION: MR. SCHMUCK)	1	1	1	1

## TABLE OF CONTENTS

	<b><u>PAGE NUMBER</u></b>
<b>PREFACE .....</b>	<b>vi</b>
<b>SUMMARY OF RESULTS .....</b>	<b>viii</b>
<b>INTRODUCTION .....</b>	<b>1</b>
Background.....	1
<b>SURVEY METHODOLOGY .....</b>	<b>2</b>
Inventory Development.....	2
Survey Administration .....	2
Survey Sample.....	3
Task Factor Administration.....	5
<b>CAREER LADDER STRUCTURE .....</b>	<b>5</b>
Overview of Specialty Jobs .....	6
Group Descriptions.....	8
Comparison of Military and Civilian Personnel .....	32
Comparison of Current Group Descriptions to Previous Studies .....	32
Summary.....	32
<b>ANALYSIS OF DAFSC GROUPS .....</b>	<b>35</b>
Skill-Level Descriptions.....	35
Specialty Description Analysis .....	40
<b>ANALYSIS OF CIVILIAN MEMBERS.....</b>	<b>46</b>
<b>TRAINING ANALYSIS .....</b>	<b>51</b>
First-Enlistment Personnel .....	51
Training Emphasis (TE) and Task Difficulty (TD) Data .....	51
Specialty Training Standard (STS) Analysis.....	56
Plan of Instruction (POI) Analysis .....	61
<b>JOB SATISFACTION ANALYSIS .....</b>	<b>61</b>
<b>IMPLICATIONS.....</b>	<b>65</b>

**THIS PAGE INTENTIONALLY LEFT BLANK**

**TABLE OF CONTENTS**  
(Tables, Figures, Appendices)

	<b>PAGE NUMBER</b>
<b>TABLE 1</b> MAJCOM DISTRIBUTION OF 3E3X1 MILITARY PERSONNEL.....	4
<b>TABLE 2</b> MILITARY PAYGRADE DISTRIBUTION OF SAMPLE.....	4
<b>TABLE 3</b> AVERAGE PERCENT TIME SPENT ON DUTIES BY CAREER LADDER JOBS.....	9-18
<b>TABLE 4</b> SELECTED BACKGROUND DATA FOR CAREER LADDER JOBS.....	19-22
<b>TABLE 5</b> TASKS WHICH BEST DIFFERENTIATE BETWEEN CIVILIAN AND MILITARY MEMBERS (PERCENT MEMBERS PERFORMING).....	33
<b>TABLE 6</b> JOB COMPARISONS BETWEEN CURRENT OSR AND PREVIOUS OSRs.....	34
<b>TABLE 7</b> DISTRIBUTION OF MEMBERS BY DAFSC ACROSS CAREER LADDER JOBS (PERCENT MEMBERS PERFORMING).....	36
<b>TABLE 8</b> TIME SPENT ON DUTIES BY MEMBERS OF DAFSC GROUPS (RELATIVE PERCENT OF JOB TIME).....	37
<b>TABLE 9</b> REPRESENTATIVE TASKS PERFORMED BY DAFSC 3E331 PERSONNEL.....	38
<b>TABLE 10</b> REPRESENTATIVE TASKS PERFORMED BY DAFSC 3E351 PERSONNEL.....	39
<b>TABLE 11</b> TASKS WHICH BEST DIFFERENTIATE BETWEEN DAFSC 3E331 AND DAFSC 3E351 PERSONNEL (PERCENT MEMBERS PERFORMING).....	41
<b>TABLE 12</b> REPRESENTATIVE TASKS PERFORMED BY DAFSC 3E371 PERSONNEL.....	42
<b>TABLE 13</b> TASKS WHICH BEST DIFFERENTIATE BETWEEN DAFSC 3E351 AND DAFSC 3E371 PERSONNEL (PERCENT MEMBERS PERFORMING).....	43
<b>TABLE 14</b> REPRESENTATIVE TASKS PERFORMED BY DAFSC 3E391 PERSONNEL.....	44
<b>TABLE 15</b> TASKS WHICH BEST DIFFERENTIATE BETWEEN DAFSC 3E371 AND DAFSC 3E391 PERSONNEL (PERCENT MEMBERS PERFORMING).....	45
<b>TABLE 16</b> DISTRIBUTION OF CIVILIAN MEMBERS BY OCCUPATIONAL SERIES ACROSS CAREER LADDER JOBS (PERCENT MEMBERS PERFORMING).....	47
<b>TABLE 17</b> DISTRIBUTION OF MILITARY AND CIVILIAN MEMBERS ACROSS CAREER LADDER JOBS (PERCENT MEMBERS PERFORMING).....	48
<b>TABLE 18</b> AVERAGE PERCENT TIME SPENT ON DUTIES BY CIVILIAN MEMBERS OF OCCUPATIONAL SERIES GROUPS (RELATIVE PERCENT OF JOB TIME).....	49-50
<b>TABLE 19</b> RELATIVE PERCENT OF TIME SPENT ON DUTIES BY FIRST- ENLISTMENT PERSONNEL.....	52

**TABLE OF CONTENTS (CONTINUED)**  
(Tables, Figures, Appendices)

	<b><u>PAGE NUMBER</u></b>
<b>TABLE 20</b> REPRESENTATIVE TASKS PERFORMED BY ALL FIRST-ENLISTMENT 3E3X1 PERSONNEL.....	53
<b>TABLE 21</b> EQUIPMENT USED BY FIRST-ENLISTMENT 3E3X1 PERSONNEL (PERCENT MEMBERS USING).....	54
<b>TABLE 22</b> TASKS WITH HIGHEST TRAINING EMPHASIS .....	57
<b>TABLE 23</b> TASKS WITH HIGHEST TASK DIFFICULTY.....	58
<b>TABLE 24</b> EXAMPLES OF STS ITEMS NOT SUPPORTED BY OSR DATA .....	59
<b>TABLE 25</b> EXAMPLES OF TASKS WITH HIGH TE PERFORMED BY 20 PERCENT OR MORE AFSC 3E3X1 PERSONNEL AND NOT REFERENCED TO THE STS .....	60
<b>TABLE 26</b> EXAMPLES OF POI OBJECTIVES NOT SUPPORTED BY OSR DATA (LESS THAN 30 PERCENT MEMBERS PERFORMING).....	62
<b>TABLE 27</b> EXAMPLES OF TASKS WITH HIGH TE PERFORMED BY 30 PERCENT OR MORE AFSC 3E3X1 PERSONNEL AND NOT REFERENCED TO THE POI.....	63
<b>TABLE 28</b> COMPARISON OF JOB SATISFACTION TO A COMPARATIVE SAMPLE .....	64
<b>TABLE 29</b> COMPARISON OF JOB SATISFACTION FOR CURRENT 3E3X1 PERSONNEL TO MEMBERS OF THE PREVIOUS STUDIES (PERCENT MEMBERS PERFORMING).....	66
<b>TABLE 30</b> JOB SATISFACTION ACROSS JOBS .....	67-69
 <b>FIGURE 1</b> JOBS PERFORMED BY AFSC 3E3X1 PERSONNEL .....	 7
<b>FIGURE 2</b> JOBS PERFORMED BY FIRST-ENLISTMENT AFSC 3E3X1 PERSONNEL .....	55
<b>APPENDIX A</b> SELECTED REPRESENTATIVE TASKS PERFORMED BY MEMBERS OF SPECIALTY JOBS.....	70

## PREFACE

This report presents the results of an Air Force Occupational Survey of the AFSC 3E3X1 Structural career ladder. Authority to conduct occupational surveys is contained in AFI 36-2623. Computer products used in this report are available for use by operations and training officials.

Chief Master Sergeant Herschel L. Firebaugh, Inventory Development Specialist, developed the survey instrument. Captain James A. Coleman, Occupational Analyst, analyzed the data and wrote the final report. Ms. Rebecca R. Hernandez provided computer programming support, and Mr. Richard G. Ramos provided administrative support.

Copies of this report are distributed to Air Staff sections, major commands, and other interested training and management personnel. Additional copies are available upon request to AFOMS, Attention: Chief, Occupational Analysis Flight (OMY), 1550 5th Street East, Randolph AFB Texas 78150-4449 (DSN 487-6623).

RICHARD C. OURAND, JR., Lt Col, USAF  
Commander  
Air Force Occupational Measurement Squadron

JOSEPH S. TARTELL  
Chief, Occupational Analysis Flight  
Air Force Occupational Measurement Squadron

**THIS PAGE INTENTIONALLY LEFT BLANK**



## SUMMARY OF RESULTS

1. Survey Coverage: The AFSC 3E3X1 Structural career ladder was surveyed to obtain current task and equipment data for use in examining training programs. Survey results are based on responses from 1,393 AFSC 3E3X1 military personnel (62 percent of the assigned population) and 168 civilian personnel (29 percent of the surveyed population) with Occupational Series 3603, 3606, 3703, 3806, 4605, and 4607. Skill levels and paygrades were well represented.
2. Career Ladder Structure: Structure analysis identified 4 clusters and 14 jobs: Roofing Job, Concrete Structure Job, Woodcraft Job, Tile Job, Structural Specialty Job, Roof Framing Job, Carpentry Cluster, Masonry Cluster, Metal Mechanics Cluster, Locksmith Job, Instructing/Training Job, Mobility Job, Self Help Job, Supervisory Job, Quality Assurance Job, Structural Planning Job, Simplified Acquisition of Base Engineering Requirement (SABER) Job, and the Safety Job. The Carpentry Cluster dominates the specialty, accounting for 27 percent of the respondents, followed by the Metal Mechanics Cluster with 22 percent of the sample.
3. Career Ladder Progression: Personnel in the Structural career ladder show a typical pattern of career progression. Three-skill level personnel perform essentially technical tasks. At the 5-skill level, a moderate shift towards supervisory functions occurs, with members still spending approximately 79 percent of their job time performing technical duties. Seven-skill level personnel split their time almost evenly between supervisory functions and technical tasks, while 9-skill level members focus more heavily on managerial and administrative functions (almost 90 percent of their job time). Specialty descriptions in the Career Field Education and Training Plan provide a broad and accurate overview of tasks and duties performed within the career ladder.
4. Training Analysis: The Specialty Training Standard and the Plan of Instruction for course J5ABN3E331 000 are well-supported by survey data. However, there are several tasks not matched to either document that require review for possible inclusion in the training documents.
5. Job Satisfaction Analysis: Overall, AFSC 3E3X1 respondents appear satisfied with their jobs. When compared to other nonlateral, direct support AFSCs surveyed in 1995, AFSC 3E3X1 members reported comparable ratings (AFSC members with 1-48 months TAFMS indicated higher responses than respondents in the comparative sample, while members with over 48 months TAFMS responded with equal or lower satisfaction ratings). Additionally, AFSC 3E3X1 members indicated lower job satisfaction than members of the 1991 552X0 (Structural) and 1986 552X2 (Metal Fabrication) survey samples.
7. Implications: Specialty descriptions for the AFSC 3E3X1 career ladder are accurate. No serious job satisfaction problems appear to exist within this specialty. AFSC 3E3X1 military reenlistment intentions are about the same as those of a comparative sample of similar Air Force personnel surveyed in 1995.

**THIS PAGE INTENTIONALLY LEFT BLANK**

**OCCUPATIONAL SURVEY REPORT (OSR)  
STRUCTURAL CAREER LADDER  
AFSC 3E3X1**

**INTRODUCTION**

This is a report of an occupational survey of the AFSC 3E3X1, Structural career ladder conducted by the Occupational Analysis Flight, Air Force Occupational Measurement Squadron (AFOMS). This survey will ensure current data for use in updating career ladder documents and training programs. Current AFSC 3E3X1 personnel were recently merged from two career ladders--the former Structural (AFSC 552X0) and Metal Fabrication (AFSC 552X2) AFSCs. AFSC 552X0 was last reported on in 1991, and AFSC 552X2 was reported on in 1986. The two ladders merged in 1991, and this report is the first to provide insight into the success of this newly merged Structural career ladder.

Background

According to the Specialty Description contained in Career Field Education and Training Plan 3E3X1, dated November 1995, Structural personnel survey work sites to determine job requirements; determine cost estimates for proposed work; construct and repair footings, floors, slabs, foundations, walls, roofs, steps, doors, and windows; apply mortar, concrete, stucco, and plaster; weld, braze, and solder metals; weld butt, lap, tee, and edge joints; install and maintain oversized doors, mechanical gates, hoists, and cranes; apply protective coatings; install and maintain commercially produced locking mechanisms; identify and use appropriate construction materials; and manage, inspect and evaluate work center activities.

All entry-level personnel must attend the initial skills training course J5ABN3E331 000, Structural Apprentice. This course is 85 academic days in length, and is conducted at Gulfport Naval Construction Battalion Center (NCBC) MS.

The Armed Forces Vocational Aptitude Test Battery score requirement for AFSC 3E3X1 is "Mechanical 51", and a strength factor of "K" (weight lift of 70 lbs) is required.

## SURVEY METHODOLOGY

### Inventory Development

The data collection instrument for this occupational survey was USAF Job Inventory (JI), AFPT 90-3E3-032, dated September 1994. A tentative task list was prepared after reviewing pertinent career ladder publications and directives and tasks from previous applicable OSRs. The preliminary task list was refined and validated through personal interviews with 45 subject-matter experts (SMEs) at the following locations:

<u>BASE</u>	<u>REASON FOR VISIT</u>
Sheppard AFB TX	Technical Training School
Hurlburt Field FL	RED HORSE Unit, Heavy Metal & Wood Construction
Eglin AFB FL	AFMC Base, CE Multiskilling Initiative
USAF Academy CO	Direct Reporting Unit, CE Multiskilling Initiative
Cheyenne Mtn AFB CO	AFSPC Base
Falcon AFB CO	AFSPC Base
Peterson AFB CO	AFSPC Base
F.E. Warren AFB WY	Missile Component & Structure Maintenance
Scott AFB IL	AMC Base, Civilian Representation

Others contacted included Air Force MAJCOM functional managers and the career field training manager.

The resulting JI contained a comprehensive listing of 1,272 tasks grouped under 26 duty headings, with a background section requesting such information as grade, job title, time in present job, time in service, time in career field, and job satisfaction indicators.

### Survey Administration

From December 1994 through April 1995, survey control monitors at base training offices worldwide administered the inventory to all eligible DAFSC 3E3X1 personnel. Military members eligible for the survey consisted of the total assigned 3-, 5-, 7-, and 9-skill level population, excluding the following: (1) hospitalized personnel; (2) personnel in transition for a permanent change of station; (3) personnel retiring within the time the inventories were administered to the field; and (4) personnel in their jobs less than 6 weeks. Survey booklets were

also distributed to civilians in the following Occupational Series: 3603 (Masons), 3606 (Roofers), 3703 (Welders), 3806 (Sheet Metal Workers), 4605 (Wood Crafters), or 4607 (Carpenters). Military participants were selected from a computer-generated mailing list obtained from personnel data tapes maintained by the Air Force Personnel Center, Randolph AFB TX. The Air Force Civilian Personnel Management Center provided the names and locations of the civilian participants.

Each individual who completed the inventory first filled in an identification and biographical information section and then checked each task performed in his or her current job. After checking tasks performed, each individual rated the tasks checked on a 9-point scale showing relative time spent on that task, compared to other tasks performed. The ratings ranged from 1 (very small amount time spent) to 9 (very large amount time spent).

To determine relative time spent for each task, all of the incumbent's ratings are assumed to account for 100 percent of time spent on the job and are summed. Each task rating is then divided by the total task ratings and multiplied by 100 to provide a relative percentage of time spent on each task.

#### Survey Sample

Personnel were selected to participate in this study so as to ensure an accurate representation across skill levels and paygrades. Table 1 reflects the MAJCOM distributions of assigned AFSC 3E3X1 military personnel and those members included in the survey sample. Table 2 reflects the assigned personnel and sample distributions by military paygrade groups. As shown by both tables, the survey sample accurately reflects the overall population of the career ladder.

TABLE 1

## MAJCOM DISTRIBUTION OF 3E3X1 MILITARY PERSONNEL

<u>COMMAND</u>	<u>PERCENT OF ASSIGNED*</u>	<u>PERCENT OF SAMPLE</u>
ACC	20	29
AFMC	12	16
PACAF	10	16
AMC	9	12
AETC	9	12
AFSPACECOM	5	7
USAFE	3	4
OTHER	32	4

MILITARY

Total Assigned = 2,266

Total Eligible for Survey = 2,017

Total in Survey Sample = 1,393

Percent of Assigned in Sample = 62%

Percent of Eligible in Sample = 69%

CIVILIAN

Total Surveyed = 578

Total in Survey Sample = 168

Percent of Surveyed in Sample = 29%

\*As of October 1993

TABLE 2

## MILITARY PAYGRADE DISTRIBUTION OF SAMPLE

<u>PAYGRADE</u>	<u>PERCENT OF ASSIGNED*</u>	<u>PERCENT OF SAMPLE</u>
E-1 to E-3	23	24
E-4	29	28
E-5	25	25
E-6	11	11
E-7	10	10
E-8	2	2

\*As of November 1993

### Task Factor Administration

Job descriptions alone do not provide sufficient data for making decisions about career ladder documents or training programs. Task factor information is needed for a complete analysis of the career ladder. To obtain the needed task factor data, selected senior AFSC 3E3X1 personnel also completed a second booklet for either training emphasis (TE) or task difficulty (TD). The TE and TD booklets were processed separately from the JIs. This information is used in a number of different analyses discussed in more detail within this report.

*Training Emphasis (TE).* TE is a rating of the amount of emphasis that should be placed on tasks in entry-level training. The 54 senior AFSC NCOs who completed a TE booklet were asked to select tasks they felt required some sort of structured training for entry-level personnel and then indicate how much training emphasis these tasks should receive, from 1 (extremely low emphasis) to 9 (extremely high emphasis). Structured training is defined as training provided at resident technical schools, field training detachment, mobile training teams, formal on-the-job training (OJT), or any other organized training method. There was acceptable agreement among the 54 raters. The average TE rating was 2.68, with a standard deviation of 1.49. Any task with a TE rating of 4.17 or above is considered to have high TE.

*Task Difficulty (TD).* TD is an estimate of the amount of time needed to learn how to do each task satisfactorily. The 59 senior NCOs who completed TD booklets were asked to rate the difficulty of each task using a 9-point scale (extremely low to extremely high). Interrater reliability was acceptable. Ratings were standardized so tasks have an average difficulty of 5.00 and a standard deviation of 1.00. Any task with a TD rating of 6.00 or above is considered to be difficult to learn.

When used in conjunction with the primary criterion of percent members performing, TD and TE ratings can provide insight into first-enlistment personnel training requirements. Such insights may suggest a need for lengthening or shortening portions of instruction supporting Air Force Specialty entry-level jobs.

### **CAREER LADDER STRUCTURE**

The first step in the analysis process is to identify the structure of career ladders in terms of the jobs performed by the respondents. The Comprehensive Occupational Data Analysis Programs (CODAP) assists by creating an individual job description for each respondent based on the tasks performed and relative amount of time spent on these tasks. The CODAP automated job clustering program then compares all the individual job descriptions, locates the two descriptions with the most similar tasks and time spent ratings, and combines them to form a composite job description. In successive stages, CODAP either adds new members to this initial group or forms new groups based on the similarity of tasks and time spent ratings.

The basic group used in the hierarchical clustering process is the Job. When two or more jobs have a substantial degree of similarity in tasks performed and time spent on tasks, they are grouped together and identified as a Cluster. The structure of the career ladder is then defined in terms of jobs and clusters of jobs.

### Overview of Specialty Jobs

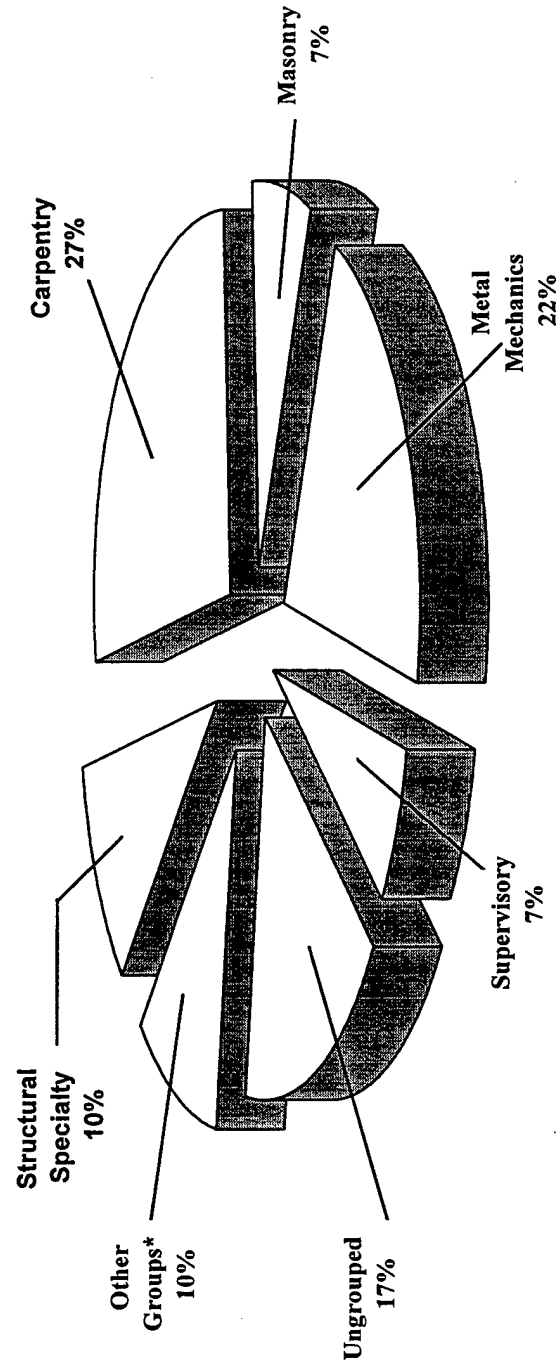
Based on the analysis of tasks performed and the amount of time spent performing each task, 14 jobs and 4 clusters were identified within the AFSC 3E3X1 survey sample. Figure 1 illustrates the jobs performed by AFSC 3E3X1 personnel.

A listing of these jobs and job clusters is provided below. The stage (STG) number shown beside each title references computer-printed information; the letter "N" represents the number of personnel in each group.

- I. ROOFING JOB (STG261, N=10)
- II. CONCRETE STRUCTURE JOB (STG267, N=6)
- III. WOODCRAFT JOB (STG328, N=13)
- IV. TILE JOB (STG305, N=5)
- V. STRUCTURAL SPECIALTY CLUSTER (STG128, N=156)
- VI. ROOF FRAMING JOB (STG309, N=5)
- VII. CARPENTRY CLUSTER (STG150, N=439)
- VIII. MASONRY CLUSTER (STG239, N=113)
- IX. METAL MECHANICS CLUSTER (STG122, N=354)
- X. LOCKSMITH JOB (STG547, N=34)
- XI. INSTRUCTING/TRAINING JOB (STG346, N=5)
- XII. MOBILITY JOB (STG82, N=34)
- XIII. SELF HELP JOB (STG277, N=20)
- XIV. SUPERVISORY JOB (STG331, N=105)



# JOBS PERFORMED BY AFSC 3E3X1 PERSONNEL



**FIGURE 1**

\*Other Groups include: Roofing, Concrete Structure, Woodcraft, Tile, Roof Framing, Locksmith, Instructing/Training, Mobility, Self Help, Quality Assurance, Structural Planning, SABER, and Safety

- XV. QUALITY ASSURANCE JOB (STG292, N=12)
- XVI. STRUCTURAL PLANNING JOB (STG293, N=9)
- XVII. SABER JOB (STG364, N=9)
- XVIII. SAFETY JOB (STG288, N=5)

The respondents forming these groups account for 83 percent of the survey sample. The remaining 17 percent were performing tasks which did not group with any of the other defined jobs. Some of the job titles given by respondents which were representative of these personnel include: Glass/Glazer Specialist, Tool Equipment Maintenance Specialist, and the Facility Assessment Team.

#### Group Descriptions

The following paragraphs contain brief descriptions of the 14 jobs and 4 clusters identified through the career ladder structure analysis. Appendix A lists representative tasks performed by identified cluster and job groups. Table 3 displays time spent on duties, while Table 4 provides demographic information for each cluster and job discussed within this report.

I. ROOFING JOB (STG261). The 10 members of this job make up 1 percent of the survey sample. Nine civilians and 1 military member make up this job and all members perform an average of 49 tasks. As seen in Table 3, 47 percent of their time is spent working in Duty K (Constructing or Maintaining Low-Slope Roofing Systems). The majority of these tasks pertain to the layout, installation, replacement, and repair of various roofing system components. Representative tasks for this job include:

- patch built-up roofing by hot or cold method
- repair splits
- lay out roof vents
- install or replace rolled roofing
- install or replace asphalt roofing shingles
- install or replace gravel guards
- install or replace roof vents
- install or replace building paper

TABLE 3

AVERAGE PERCENT TIME SPENT ON DUTIES BY CAREER LADDER JOBS

DUTIES	ROOFING JOB (SIG261)	CONCRETE STRUCTURE JOB (SIG267)	WOODCRAFT JOB (SIG328)	TILE JOB (SIG305)
A ORGANIZING AND PLANNING	1	7	5	0
B DIRECTING AND IMPLEMENTING	*	3	1	*
C INSPECTING AND EVALUATING	1	3	4	0
D TRAINING	0	3	1	0
E PERFORMING ADMINISTRATIVE AND SUPPLY ACTIVITIES	1	4	5	*
F CONSTRUCTING AND MAINTAINING FORMS FOR CONCRETE STRUCTURES	*	21	*	1
G CONSTRUCTING OR MAINTAINING CONCRETE STRUCTURES	*	42	*	16
H CONSTRUCTING, FRAMING, OR MAINTAINING BUILDINGS	8	9	2	5
I INSTALLING OR MAINTAINING BUILDING FINISHINGS	27	5	6	14
J CONSTRUCTING OR MAINTAINING BUILDING FURNISHINGS	*	*	28	6
K CONSTRUCTING OR MAINTAINING LOW-SLOPE ROOFING SYSTEMS	47	0	0	1
L PREPARING MORTAR, CONCRETE, STUCCO, OR PLASTER	0	1	0	3
M APPLYING AND MAINTAINING PLASTER OR STUCCO TO SURFACES	1	0	0	5
N CONSTRUCTING AND MAINTAINING MASONRY STRUCTURES	*	*	0	2
O SETTING AND REPLACING CERAMIC OR QUARRY TILE	2	0	0	38

\* Indicates less than 1 percent

TABLE 3 (CONTINUED)

AVERAGE PERCENT TIME SPENT ON DUTIES BY CAREER LADDER JOBS

DUTIES	ROOFING JOB (STG261)	CONCRETE STRUCTURE JOB (STG267)	WOODCRAFT JOB (STG328)	TILE JOB (STG305)
P MAINTAINING SHOP FACILITIES, HANDTOOLS, OR POWER EQUIPMENT	5	*	45	3
Q INSTALLING OR MAINTAINING LOCKING DEVICES	0	0	*	5
R MAINTAINING, ASSEMBLING, OR INSTALLING METAL COMPONENTS AND STRUCTURES	4	0	1	1
S MAINTAINING LIFTS, DOORS, GATES, OR HOISTS	*	0	0	0
T MAINTAINING KITCHEN EQUIPMENT	0	0	0	0
U MAINTAINING CIVIL ENGINEERING HEAVY EQUIPMENT	0	0	0	0
V FABRICATING SHEET METAL PARTS AND ASSEMBLIES	1	0	1	*
W PREPARING AND SETTING UP WELDING, BRAZING, AND SOLDERING PROJECTS	0	0	1	0
X SOLDERING, HEAT TREATING, FORGING, OR WELDING	0	0	*	0
Y MAINTAINING MISSILE FACILITIES	0	0	0	0
Z PERFORMING PRIME BEEF AND MOBILITY SUPPORT ACTIVITIES	1	1	*	*

\* Indicates less than 1 percent

TABLE 3 (CONTINUED)

AVERAGE PERCENT TIME SPENT ON DUTIES BY CAREER LADDER JOBS

DUTIES	STRUCTURAL SPECIALTY CLUSTER (STG128)	ROOF FRAMING JOB (STG309)	CARPENTRY CLUSTER (STG150)	MASONRY CLUSTER (STG239)
A ORGANIZING AND PLANNING	1	0	3	2
B DIRECTING AND IMPLEMENTING	1	2	2	2
C INSPECTING AND EVALUATING	1	1	2	2
D TRAINING	*	0	1	1
E PERFORMING ADMINISTRATIVE AND SUPPLY ACTIVITIES	2	1	3	2
F CONSTRUCTING AND MAINTAINING FORMS FOR CONCRETE STRUCTURES	1	2	2	8
G CONSTRUCTING OR MAINTAINING CONCRETE STRUCTURES	4	5	7	19
H CONSTRUCTING, FRAMING, OR MAINTAINING BUILDINGS	6	42	17	9
I INSTALLING OR MAINTAINING BUILDING FINISHINGS	42	16	25	10
J CONSTRUCTING OR MAINTAINING BUILDING FURNISHINGS	2	1	4	1
K CONSTRUCTING OR MAINTAINING LOW-SLOPE ROOFING SYSTEMS	2	0	2	*
L PREPARING MORTAR, CONCRETE, STUCCO, OR PLASTER	1	2	1	4
M APPLYING AND MAINTAINING PLASTER OR STUCCO TO SURFACES	1	2	1	3
N CONSTRUCTING AND MAINTAINING MASONRY STRUCTURES	1	1	2	11

\* Indicates less than 1 percent

TABLE 3 (CONTINUED)

AVERAGE PERCENT TIME SPENT ON DUTIES BY CAREER LADDER JOBS

DUTIES	STRUCTURAL SPECIALTY CLUSTER (STG128)	ROOF FRAMING JOB (STG309)	CARPENTRY CLUSTER (STG150)	MASONRY CLUSTER (STG239)
O SETTING AND REPLACING CERAMIC OR QUARRY TILE	3	2	3	5
P MAINTAINING SHOP FACILITIES, HANDTOOLS, OR POWER EQUIPMENT	9	3	8	6
Q INSTALLING OR MAINTAINING LOCKING DEVICES	3	0	2	*
R MAINTAINING, ASSEMBLING, OR INSTALLING METAL COMPONENTS AND STRUCTURES	6	3	3	3
S MAINTAINING LIFTS, DOORS, GATES, OR HOISTS	2	*	1	*
T MAINTAINING KITCHEN EQUIPMENT	*	0	*	*
U MAINTAINING CIVIL ENGINEERING HEAVY EQUIPMENT	*	*	*	*
V FABRICATING SHEET METAL PARTS AND ASSEMBLIES	3	*	1	1
W PREPARING AND SETTING UP WELDING, BRAZING, AND SOLDERING PROJECTS	1	*	1	1
X SOLDERING, HEAT TREATING, FORGING, OR WELDING	*	0	*	*
Y MAINTAINING MISSILE FACILITIES	*	0	*	0
Z PERFORMING PRIME BEEF AND MOBILITY SUPPORT ACTIVITIES	8	17	7	9

\* Indicates less than 1 percent

TABLE 3 (CONTINUED)

AVERAGE PERCENT TIME SPENT ON DUTIES BY CAREER LADDER JOBS

DUTIES	METAL MECHANICS CLUSTER (STG122)	LOCKSMITH JOB (STG547)	INSTRUCTING/ TRAINING JOB (STG346)	MOBILITY JOB (STG082)
A ORGANIZING AND PLANNING	2	4	7	9
B DIRECTING AND IMPLEMENTING	1	2	5	6
C INSPECTING AND EVALUATING	2	3	8	7
D TRAINING	1	3	64	5
E PERFORMING ADMINISTRATIVE AND SUPPLY ACTIVITIES	3	8	5	13
F CONSTRUCTING AND MAINTAINING FORMS FOR CONCRETE STRUCTURES	1	*	0	*
G CONSTRUCTING OR MAINTAINING CONCRETE STRUCTURES	3	1	0	1
H CONSTRUCTING, FRAMING, OR MAINTAINING BUILDINGS	4	1	0	3
I INSTALLING OR MAINTAINING BUILDING FINISHINGS	12	15	*	1
J CONSTRUCTING OR MAINTAINING BUILDING FURNISHINGS	1	*	*	1
K CONSTRUCTING OR MAINTAINING LOW-SLOPE ROOFING SYSTEMS	1	*	0	*
L PREPARING MORTAR, CONCRETE, STUCCO, OR PLASTER	1	*	0	*
M APPLYING AND MAINTAINING PLASTER OR STUCCO TO SURFACES	*	*	0	*
N CONSTRUCTING AND MAINTAINING MASONRY STRUCTURES	1	*	0	0

\* Indicates less than 1 percent

TABLE 3 (CONTINUED)

AVERAGE PERCENT TIME SPENT ON DUTIES BY CAREER LADDER JOBS

DUTIES	METAL MECHANICS CLUSTER (STG122)	LOCKSMITH JOB (STG347)	INSTRUCTING/ TRAINING JOB (STG346)	MOBILITY JOB (STG082)
O SETTING AND REPLACING CERAMIC OR QUARRY TILE	1	*	0	0
P MAINTAINING SHOP FACILITIES, HANDTOOLS, OR POWER EQUIPMENT	15	6	1	3
Q INSTALLING OR MAINTAINING LOCKING DEVICES	1	43	*	*
R MAINTAINING, ASSEMBLING, OR INSTALLING METAL COMPONENTS AND STRUCTURES	12	3	0	1
S MAINTAINING LIFTS, DOORS, GATES, OR HOISTS	6	*	*	*
T MAINTAINING KITCHEN EQUIPMENT	*	0	*	*
U MAINTAINING CIVIL ENGINEERING HEAVY EQUIPMENT	1	0	0	*
V FABRICATING SHEET METAL PARTS AND ASSEMBLIES	11	1	0	*
W PREPARING AND SETTING UP WELDING, BRAZING, AND SOLDERING PROJECTS	9	*	0	*
X SOLDERING, HEAT TREATING, FORGING, OR WELDING	4	1	0	0
Y MAINTAINING MISSILE FACILITIES	*	*	0	0
Z PERFORMING PRIME BEEF AND MOBILITY SUPPORT ACTIVITIES	7	10	9	49

\* Indicates less than 1 percent



TABLE 3 (CONTINUED)

AVERAGE PERCENT TIME SPENT ON DUTIES BY CAREER LADDER JOBS

DUTIES	SELF HELP JOB (SIG277)	SUPERVISORY JOB (SIG331)	QUALITY ASSURANCE JOB (SIG292)	STRUCTURAL PLANNING JOB (SIG293)
A ORGANIZING AND PLANNING	16	22	22	32
B DIRECTING AND IMPLEMENTING	9	17	18	8
C INSPECTING AND EVALUATING	12	20	24	9
D TRAINING	3	9	4	1
E PERFORMING ADMINISTRATIVE AND SUPPLY ACTIVITIES	29	18	12	16
F CONSTRUCTING AND MAINTAINING FORMS FOR CONCRETE STRUCTURES	*	*	*	0
G CONSTRUCTING OR MAINTAINING CONCRETE STRUCTURES	1	*	*	*
H CONSTRUCTING, FRAMING, OR MAINTAINING BUILDINGS	3	*	*	*
I INSTALLING OR MAINTAINING BUILDING FINISHINGS	2	1	*	0
J CONSTRUCTING OR MAINTAINING BUILDING FURNISHINGS	*	*	0	0
K CONSTRUCTING OR MAINTAINING LOW-SLOPE ROOFING SYSTEMS	*	*	*	*
L PREPARING MORTAR, CONCRETE, STUCCO, OR PLASTER	0	*	0	0
M APPLYING AND MAINTAINING PLASTER OR STUCCO TO SURFACES	*	0	*	0
N CONSTRUCTING AND MAINTAINING MASONRY STRUCTURES	*	*	0	0

\* Indicates less than 1 percent

TABLE 3 (CONTINUED)

AVERAGE PERCENT TIME SPENT ON DUTIES BY CAREER LADDER JOBS

DUTIES	SELF HELP JOB (SIG277)	SUPERVISORY JOB (SIG331)	QUALITY ASSURANCE JOB (SIG292)	STRUCTURAL PLANNING JOB (SIG293)
O SETTING AND REPLACING CERAMIC OR QUARRY TILE	*	*	0	0
P MAINTAINING SHOP FACILITIES, HANDTOOLS, OR POWER EQUIPMENT	4	1	0	*
Q INSTALLING OR MAINTAINING LOCKING DEVICES	*	*	0	0
R MAINTAINING, ASSEMBLING, OR INSTALLING METAL COMPONENTS AND STRUCTURES	1	*	*	0
S MAINTAINING LIFTS, DOORS, GATES, OR HOISTS	0	*	0	0
T MAINTAINING KITCHEN EQUIPMENT	0	*	0	0
U MAINTAINING CIVIL ENGINEERING HEAVY EQUIPMENT	0	*	0	0
V FABRICATING SHEET METAL PARTS AND ASSEMBLIES	*	*	0	0
W PREPARING AND SETTING UP WELDING, BRAZING, AND SOLDERING PROJECTS	*	*	0	0
X SOLDERING, HEAT TREATING, FORGING, OR WELDING	*	0	0	0
Y MAINTAINING MISSILE FACILITIES	0	0	0	0
Z PERFORMING PRIME BEEF AND MOBILITY SUPPORT ACTIVITIES	17	10	20	33

\* Indicates less than 1 percent

TABLE 3 (CONTINUED)

AVERAGE PERCENT TIME SPENT ON DUTIES BY CAREER LADDER JOBS

DUTIES	SABER JOB (STG364)	SAFETY JOB (STG288)
A ORGANIZING AND PLANNING	31	24
B DIRECTING AND IMPLEMENTING	8	14
C INSPECTING AND EVALUATING	22	32
D TRAINING	1	2
E PERFORMING ADMINISTRATIVE AND SUPPLY ACTIVITIES	24	15
F CONSTRUCTING AND MAINTAINING FORMS FOR CONCRETE STRUCTURES	1	0
G CONSTRUCTING OR MAINTAINING CONCRETE STRUCTURES	1	0
H CONSTRUCTING, FRAMING, OR MAINTAINING BUILDINGS	*	0
I INSTALLING OR MAINTAINING BUILDING FINISHINGS	0	0
J CONSTRUCTING OR MAINTAINING BUILDING FURNISHINGS	0	0
K CONSTRUCTING OR MAINTAINING LOW-SLOPE ROOFING SYSTEMS	2	0
L PREPARING MORTAR, CONCRETE, STUCCO, OR PLASTER	*	0
M APPLYING AND MAINTAINING PLASTER OR STUCCO TO SURFACES	*	0
N CONSTRUCTING AND MAINTAINING MASONRY STRUCTURES	1	0
O SETTING AND REPLACING CERAMIC OR QUARRY TILE	0	0

\* Indicates less than 1 percent

TABLE 3 (CONTINUED)

AVERAGE PERCENT TIME SPENT ON DUTIES BY CAREER LADDER JOBS

DUTIES	SABER JOB (STG364)	SAFETY JOB (STG288)
P MAINTAINING SHOP FACILITIES, HANDTOOLS, OR POWER EQUIPMENT	0	0
Q INSTALLING OR MAINTAINING LOCKING DEVICES	0	0
R MAINTAINING, ASSEMBLING, OR INSTALLING METAL COMPONENTS AND STRUCTURES	*	0
S MAINTAINING LIFTS, DOORS, GATES, OR HOISTS	1	0
T MAINTAINING KITCHEN EQUIPMENT	0	0
U MAINTAINING CIVIL ENGINEERING HEAVY EQUIPMENT	0	0
V FABRICATING SHEET METAL PARTS AND ASSEMBLIES	0	0
W PREPARING AND SETTING UP WELDING, BRAZING, AND SOLDERING PROJECTS	1	0
X SOLDERING, HEAT TREATING, FORGING, OR WELDING	0	0
Y MAINTAINING MISSILE FACILITIES	0	0
Z PERFORMING PRIME BEEF AND MOBILITY SUPPORT ACTIVITIES	6	13

\* Indicates less than 1 percent

TABLE 4

## SELECTED BACKGROUND DATA FOR CAREER LADDER JOBS

	ROOFING JOB	CONCRETE STRUCTURE JOB	WOODCRAFT JOB	TILE JOB	STRUCTURAL SPECIALTY CLUSTER
NUMBER IN GROUP	10	6	13	5	156
PERCENT OF SAMPLE	1%	*	1%	*	10%
MILITARY	10%	100%	54%	40%	90%
CIVILIAN	90%	0%	46%	60%	10%
<u>DAFSC DISTRIBUTION:</u>					
3E331	0%	67%	15%	40%	53%
3E351	10%	33%	31%	0%	35%
3E371	0%	0%	8%	0%	3%
3E391	0%	0%	0%	0%	0%
<u>CIVILIAN OCCUPATIONAL SERIES</u>					
3606	60%	0%	0%	0%	1%
4605	0%	0%	23%	0%	0%
4607	0%	0%	15%	40%	6%
<u>PAYGRADE DISTRIBUTION:</u>					
E-1 to E-3	0%	33%	16%	0%	50%
E-4	0%	33%	15%	40%	28%
E-5	10%	33%	23%	0%	10%
E-6	0%	0%	0%	0%	3%
E-7	0%	0%	0%	0%	1%
E-8	0%	0%	0%	0%	0%
E-9	0%	0%	0%	0%	0%
AVERAGE NUMBER OF TASKS PERFORMED	49	54	51	73	74
AVERAGE MONTHS TAFMS	168	81	88	41	48
PERCENT IN FIRST ENLISTMENT	0%	50%	16%	40%	63%
PERCENT SUPERVISING OTHERS	10%	17%	15%	0%	10%

\* Indicates less than 1 percent

TABLE 4 (CONTINUED)

## SELECTED BACKGROUND DATA FOR CAREER LADDER JOBS

	ROOF FRAMING JOB	CARPENTRY CLUSTER	MASONRY CLUSTER	METAL MECHANICS CLUSTER	LOCKSMITH JOB
NUMBER IN GROUP	5	439	113	354	34
PERCENT OF SAMPLE	*	27%	7%	22%	2%
MILITARY	100%	75%	87%	86%	76%
CIVILIAN	0%	25%	13%	14%	24%
<u>DAFSC DISTRIBUTION:</u>					
3E331	40%	19%	27%	33%	6%
3E351	40%	48%	55%	48%	56%
3E371	20%	9%	4%	5%	15%
3E391	0%	0%	0%	0%	0%
<u>CIVILIAN OCCUPATIONAL SERIES</u>					
3603	0%	0%	6%	0%	0%
3703	0%	0%	0%	3%	3%
3806	0%	0%	0%	6%	0%
4605	0%	2%	0%	0%	0%
4607	0%	16%	0%	0%	12%
<u>PAYGRADE DISTRIBUTION:</u>					
E-1 to E-3	40%	13%	20%	26%	0%
E-4	20%	26%	27%	28%	24%
E-5	20%	26%	35%	24%	35%
E-6	20%	7%	5%	6%	15%
E-7	0%	2%	1%	1%	3%
E-8	0%	0%	0%	0%	0%
E-9	0%	0%	0%	0%	0%
AVERAGE NUMBER OF TASKS PERFORMED	151	259	203	222	103
AVERAGE MONTHS TAFMS	87	95	91	80	138
PERCENT IN FIRST ENLISTMENT	40%	22%	31%	33%	0%
PERCENT SUPERVISING OTHERS	0%	29%	33%	25%	32%

\* Indicates less than 1 percent

TABLE 4 (CONTINUED)

## SELECTED BACKGROUND DATA FOR CAREER LADDER JOBS

	INSTRUCTING/ TRAINING JOB	MOBILITY JOB	SELF HELP JOB	SUPERVISORY JOB	QUALITY ASSURANCE JOB
NUMBER IN GROUP	5	34	20	105	12
PERCENT OF SAMPLE	*	2%	1%	7%	1%
MILITARY	100%	100%	95%	97%	100%
CIVILIAN	0%	0%	5%	3%	0%
<u>DAFSC DISTRIBUTION:</u>					
3E331	20%	6%	5%	0%	0%
3E351	20%	38%	55%	10%	8%
3E371	60%	56%	35%	74%	50%
3E391	0%	0%	0%	13%	42%
<u>CIVILIAN OCCUPATIONAL SERIES</u>					
3606	0%	0%	0%	1%	0%
4605	0%	0%	0%	1%	0%
4607	0%	0%	0%	0%	0%
<u>PAYGRADE DISTRIBUTION:</u>					
E-1 to E-3	20%	6%	0%	0%	0%
E-4	0%	6%	10%	1%	0%
E-5	20%	35%	55%	4%	0%
E-6	60%	15%	20%	24%	17%
E-7	0%	35%	10%	53%	42%
E-8	0%	3%	0%	15%	33%
E-9	0%	0%	0%	0%	8%
AVERAGE NUMBER OF TASKS PERFORMED	60	79	117	106	73
AVERAGE MONTHS TAFMS	122	169	158	211	221
PERCENT IN FIRST ENLISTMENT	20%	6%	0%	0%	0%
PERCENT SUPERVISING OTHERS	20%	47%	35%	82%	67%

\* Indicates less than 1 percent

TABLE 4 (CONTINUED)

## SELECTED BACKGROUND DATA FOR CAREER LADDER JOBS

	STRUCTURAL PLANNING JOB	SABER JOB	SAFETY JOB
NUMBER IN GROUP	9	9	5
PERCENT OF SAMPLE	1%	1%	*
MILITARY	100%	100%	100%
CIVILIAN	0%	0%	0%
<u>DAFSC DISTRIBUTION:</u>			
3E331	0%	0%	0%
3E351	56%	44%	0%
3E371	44%	56%	100%
3E391	0%	0%	0%
<u>CIVILIAN OCCUPATIONAL SERIES</u>			
3606	0%	0%	0%
4605	0%	0%	0%
4607	0%	0%	0%
<u>PAYGRADE DISTRIBUTION:</u>			
E-1 to E-3	0%	0%	0%
E-4	0%	11%	0%
E-5	67%	11%	20%
E-6	0%	44%	20%
E-7	22%	33%	60%
E-8	11%	0%	0%
E-9	0%	0%	0%
AVERAGE NUMBER OF TASKS PERFORMED	36	33	36
AVERAGE MONTHS TAFMS	169	183	196
PERCENT IN FIRST ENLISTMENT	0%	0%	0%
PERCENT SUPERVISING OTHERS	11%	0%	0%

\* Indicates less than 1 percent



The one military member working in the Roofing Job has 14 years TAFMS, holds a DAFSC of 3E351, and is in paygrade E-5 (see Table 4). Civilian personnel report an average of 18 years, 4 months in their occupational series, but only 16 years, 8 months in Federal civil service. Most of the civilians have a paygrade of WG-09.

II. CONCRETE STRUCTURE JOB (STG267). The 6 members of this job make up less than 1 percent of the survey sample and all of them are in the military. They perform an average of 54 tasks. As seen in Table 3, 42 percent of their time is spent working in Duty G (Constructing or Maintaining Concrete Structures). The majority of these tasks pertain to the planning, production, and finishing of concrete. Representative tasks for this job include:

- construct slab forms
- place concrete in forms
- remove wooden or metal forms
- edge concrete
- drill holes in concrete with electric or pneumatic drills
- wet subgrade prior to placing concrete
- Finish concrete with handtools
- transport concrete by wheelbarrows

Personnel working in the Concrete Structure Job have an average of 6 years, 9 months TAFMS, and 50 percent are in their first enlistment. All 6 members hold a DAFSC of either 3E331 or 3E351 and are in paygrades E-1 through E-5 (see Table 4).

III. WOODCRAFT JOB (STG328). The 13 members of this job make up 1 percent of the survey sample. The job is almost evenly split with seven military members and six civilians. They perform an average of 51 tasks. Forty-five percent of their time is spent in Duty P (Maintaining Shop Facilities, Handtools, or Power Equipment), as shown in Table 3. The majority of these tasks pertain to inspecting and cleaning handtools, and removing and replacing parts from handtools commonly used in woodcrafting. Representative tasks for this job include:

- remove or replace parts on powered or nonpowered handtools or equipment, such as bits, belts, discs, or blades
- remove or replace blades on vertical bandsaws
- inspect handtools
- inspect sawdust hoppers and related components
- construct picture frames

- construct cabinets
- repair damaged cabinets
- cut and fit bandsaw blades

Military personnel working in the Woodcraft job have an average of 7 years, 4 months TAFMS. Table 4 shows that only 16 percent are in their first enlistment. Thirty-one percent of military members have a DAFSC of 3E351, while 15 and 8 percent have DAFSCs of 3E331 and 3E371, respectively.

Civilian personnel report an average of 13 years, 11 months in their occupational series, but only 12 years in Federal civil service. All of the civilians have a paygrade of WG-10.

IV. TILE JOB (STG305). The 5 members of this job represent less than 1 percent of the sample. Three are civilians and two are military. They perform an average of 73 tasks. Table 3 shows that 38 percent of their time is spent working in Duty O (Setting and Replacing Ceramic or Quarry Tile). The majority of these tasks pertain to cutting and shaping tile, preparing adhesives and surfaces for tile, and sealing and repairing grout. Representative tasks for this job include:

- cut and shape ceramic, mosaic, or quarry tile with handtools
- remove or replace broken ceramic, mosaic, or quarry tiles
- lay out ceramic tiles, other than mosaic ceramic tiles
- prepare epoxy adhesives
- prepare grout for ceramic tiles
- repair grout
- set quarry tiles
- apply neat coats to plaster wall for ceramic tiles

Military personnel working in the Tile Job have an average of 3 years, 5 months TAFMS, and both military members are in their first enlistment (see Table 4). They have a DAFSC of 3E331 and are in the paygrade E-4.

Civilian personnel average 14 years, 4 months in their occupational series, and 19 years in Federal civil service. They have paygrades of WG-09 or WG-10.

V. STRUCTURAL SPECIALTY CLUSTER (STG128). The 156 members of this cluster make up 10 percent of the survey sample, and 140 of them are in the military. Though they perform an average of 74 tasks, this job seems to be growing within the career ladder. These are the multi-skilled individuals who are currently being trained to work in all components

of the Structural career ladder, from carpentry to metal work to masonry. Forty-two percent of their time is spent working on tasks in Duty I (Installing or Maintaining Building Finishings), as shown in Table 3. The majority of these tasks pertain to cutting, drilling, caulking, repairing, installing, and maintaining various components of any building. Representative tasks for this job include:

- adjust door closer components
- install or replace door closers
- install or replace door hinges
- cut plexiglass
- cut studs
- drill holes in concrete with hammer drills
- repair doors or window units
- caulk windows, sinks, or bathtubs

Military personnel working in the Structural Specialty cluster average 4 years TAFMS, and 63 percent are in their first enlistment. An ever growing portion of members in this job have a DAFSC of 3E331 (53 percent), while 35 and 3 percent have DAFSCs of 3E351 and 3E371, respectively (see Table 4). The military members of this cluster have paygrades between E-2 and E-7.

The 16 civilian personnel average 12 years, 7 months in their occupational series, and 16 years, 11 months in Federal civil service. Most members have a paygrade of WG-09.

VI. ROOF FRAMING JOB (STG309). The 5 members of this job make up less than 1 percent of the survey sample, and all are in the military. They perform an average of 151 tasks. As shown in Table 3, 42 percent of their time is spent working in Duty H (Constructing, Framing, or Maintaining Buildings). The majority of their tasks pertain to the layout, construction, installation, and replacement of components for the structural frames of roofs. Representative tasks for this job include:

- lay out headers
- lay out floor joists
- lay out jack rafters
- install or replace suspended ceilings
- install or replace hip rafters
- install or replace ceiling joists
- construct headers
- drill holes in metal

Personnel working in the Roof Framing Job average 7 years, 3 months TAFMS, and 40 percent are in their first enlistment. Table 4 shows 80 percent of the members of this job work at either the 3- or 5-skill level and the remaining 20 percent work at the 7-skill level. All of the incumbents of this job are in paygrades E-2 through E-6.

VII. CARPENTRY CLUSTER (STG150). The 439 members of this cluster make up 27 percent of the survey sample, making this the largest job group. Military personnel comprise 329 of these incumbents and 110 are civilians. All members perform an average of 259 tasks, and most of their time (25 percent) is spent working on tasks from Duty I (Installing or Maintaining Building Finishings), as reflected in Table 3. Representative tasks for this job include:

- install or replace door hinges
- install or replace hollow or solid-core doors
- install or replace door jambs or stops
- install or replace door or window units
- construct door or window openings
- construct headers
- adjust locks
- adjust panic hardware

Military personnel working in the Carpentry Cluster average 8 years, 11 months TAFMS, and 22 percent are in their first enlistment. Most members (48 percent) of this job are at the 5-skill level, with another 28 percent at the 3- and 7-skill levels. Most military incumbents have paygrades of E-4 or E-5, as can be seen in Table 4.

Civilian personnel average 14 years, 9 months in their occupational series, and 15 years, 8 months in Federal civil service. Most members have a paygrade of WG-09.

VIII. MASONRY CLUSTER (STG239). The 113 members of this cluster make up 7 percent of the survey sample. There are 98 military members and 15 civilians. They perform an average of 203 tasks, and Table 3 shows that the majority of their time is spent working with concrete. Representative tasks for this job include:

- screed concrete
- edge concrete
- float concrete
- saw concrete, masonry, plaster, or tile with dry or wet saws

- construct slab forms
- apply oil to forms prior to placement of concrete
- install construction, expansion, or contraction joints
- install anchor bolts or fastening devices

As shown in Table 4, military personnel working as masons average 7 years, 7 months TAFMS, and 31 percent are in their first enlistment. Fifty-five percent of these personnel are at the 5-skill level, while 27 and 4 percent are at the 3- and 7-skill level, respectively. Most military incumbents have a paygrade of E-5.

Civilian personnel average 17 years, 8 months in their occupational series, and 20 years, 5 months in Federal civil service. All civilians have a paygrade of WG-10.

IX. METAL MECHANICS CLUSTER (STG122). The 354 members working in this cluster make up 22 percent of the survey sample. There are 304 members in the military, and 50 are civilians, but all members perform an average of 222 tasks. Representative tasks for this job include:

- cut sheet metal for parts using shop equipment
- drill holes in metal
- set up for oxyacetylene cutting
- ready metal edges for welding
- fasten parts with blind rivets
- perform leak tests on oxyacetylene equipment

Military personnel working as Metal Mechanics average 6 years, 8 months TAFMS, and 33 percent are in their first enlistment. The military members have 3-, 5-, and 7-skill level DAFSCs and most are in paygrade E-4, according to Table 4.

Civilian personnel average 16 years, 9 months in their occupational series, and 17 years, 1 month in Federal civil service. Most civilians have a paygrade of WG-10.

X. LOCKSMITH JOB (STG547). The 34 members of this job make up 2 percent of the survey sample, and 26 of them are active duty military members. All locksmiths perform an average of 103 tasks, and most of their time is spent installing and maintaining various types of locking mechanisms and devices (see Table 3). Representative tasks for this job include:

- install or replace mechanical or cipher locks
- decipher lock combinations
- master key interchangeable door locks
- design master key systems

Military personnel working the Locksmith Job average 11 years, 6 months TAFMS, and none are in their first enlistment. Table 4 shows that most (56 percent) of the military members have a DAFSC of 3E351, while 21 percent have DAFSCs of 3E331 or 3E371. All incumbents of this job are in paygrades E-4 through E-7.

The 8 civilian personnel average 13 years, 11 months in their occupational series, and 18 years, 1 month in Federal civil service. Most civilians have a paygrade of WG-09.

XI. INSTRUCTING/TRAINING JOB (STG346). The 5 members of this job make up less than 1 percent of the survey sample. They perform an average of 60 tasks, and most of their time is spent preparing, executing, and evaluating training programs, as reflected in Table 3. Representative tasks for this job include:

- evaluate training methods or techniques
- evaluate progress of trainees
- implement or direct training programs
- conduct training conference or briefings
- procure training aids, space, or equipment
- select or schedule personnel for specialized training

Personnel working in the Instructing/Training Job average 10 years, 2 months TAFMS, and 20 percent are in their first enlistment. Sixty percent of these personnel are at the 7-skill level with another 40 percent at the 3- and 5-skill levels. Most incumbents of this job are in paygrade E-6, as seen in Table 4.

XII. MOBILITY JOB (STG082). The 34 members of this job make up 2 percent of the survey sample, and all are military members. They perform an average of 79 tasks, and most of their time is spent performing tasks in Duty Z (Performing Prime BEEF and Mobility Support Activities) as shown in Table 3. Representative tasks for this job include:

- inspect mobility bags or kits
- tear down, inspect, clean, and reassemble weapons
- erect hardback tents

- palletize contingency equipment
- establish equipment or personnel requirements for mobility exercises or deployments
- develop mobility inspection checklists

Table 4 shows that personnel working the Mobility Job have an average of 14 years, 1 month TAFMS. Most (56 percent) are at the 7-skill level and 70 percent (35 percent each) have achieved the paygrades of E-5 and E-7.

XIII. SELF HELP JOB (STG277). The 20 members of this job make up 1 percent of the survey sample. This includes 19 military personnel and 1 civilian. Members perform an average of 117 tasks, which takes up the majority of their duty time with the handling of administrative requests and controlling the supply of materials and equipment (see Table 3). Representative tasks for this job include:

- store equipment, tools, or supplies
- inventory equipment, tools, or supplies, other than composite tool kits (CTKs)
- issue or log turn-ins of equipment, tools, or supplies
- evaluate completed work or work-in-progress jobs
- coordinate work requests with appropriate agencies
- coordinate material or work order status with materiel control

Table 4 shows that military personnel working the Self Help Job have an average of 13 years and 2 months TAFMS. Most (55 percent) are at the 5-skill level and 55 percent have achieved the paygrade of E-5.

XIV. SUPERVISORY JOB (STG331). The 105 members of this job make up 7 percent of the survey sample, nearly all (102) of who are military personnel. They perform an average of 106 tasks which, as Table 3 shows, mostly deal with the establishment of plans and policies, and the directing of junior NCOs. Representative tasks for this job include:

- counsel personnel on personal or military-related matters
- establish performance standards for subordinates
- establish work schedules
- assign OJT trainers or supervisors
- supervise civilians

- supervise Structural Apprentices (AFSC 3E331)
- supervise Structural Journeymen (AFSC 3E351)
- supervise Structural Craftsmen (AFSC 3E371)

Military personnel working in the Supervisor Job have an average of 17 years, 7 months TAFMS (see Table 4). Most incumbents in this job (74 percent) have a DAFSC of 3E371. Fifty-three percent have achieved the paygrade of E-7. Eighty-two percent of the members of this job supervise other personnel.

The 3 civilian personnel average 12 years, 4 months in their occupational series, and 21 years, 6 months in Federal civil service.

XV. QUALITY ASSURANCE JOB (STG292). The 12 members of this job make up 1 percent of the survey sample. They perform an average of 73 tasks, spending 24 percent of their time inspecting and evaluating programs and procedures in the AFSC 3E3X1 career ladder, as shown in Table 3. Representative tasks for this job include:

- participate in production conferences
- plan or prepare briefings
- analyze workload requirements
- initiate actions required due to substandard performance of personnel
- write inspection reports
- develop inputs to mobility, contingency, disaster preparedness, or unit emergency, or alert plans
- draft budget requirements
- establish work methods or procedures

Personnel working in the Quality Assurance Job have an average of 18 years, 5 months. Table 4 reflects that most members of this job (50 percent) are at the 7-skill level and 42 percent have a paygrade of E-7.

XVI. STRUCTURAL PLANNING JOB (STG293). The 9 members of this job make up 1 percent of the survey sample. They perform an average of 36 tasks, which deal with organizing and planning financial, time, and materiel requirements to complete structural work. Representative tasks for this job include:



- determine cost estimates for fabrications or repairs
- determine completion time estimates for fabrications or repairs
- determine man-hour estimates for fabrications or repairs
- coordinate site planning with project requesters
- establish types of materials required for carpentry, masonry, or roofing projects
- sketch working drawings
- interpret construction drawings
- review AF Forms 332 (Base Civil Engineer Work Request)

Personnel working in the Structural Planning Job have an average of 14 years, 1 month TAFMS, and none are in their first enlistment. Table 4 shows that most members of this job have a DAFSC of 3E351 and 67 percent have a paygrade of E-5.

XVII. SABER JOB (STG364). The 9 members of this job make up 1 percent of the survey sample. They perform an average of 33 tasks, which deal with the planning and management of structural contracting needs. Representative tasks for this job include:

- evaluate completed work or work-in-progress
- coordinate site planning with project requesters
- determine cost estimates for fabrications or repairs
- plan layouts of facilities
- evaluate contractor progress
- complete AF Forms 3065 (Contract Progress Report)
- compile information for records, reports, and logs
- determine man-hour estimates for fabrications or repairs

Personnel working in the SABER Job have an average of 15 years, 3 months TAFMS. Table 4 shows that most members of this job (56 percent) have a DAFSC of 3E371 and 44 percent have a paygrade of E-6.

XVIII. SAFETY JOB (STG288). The 5 members of this job make up less than 1 percent of the survey sample, and all are military members. They perform an average of 36 tasks, which deal with maintaining and evaluating safety programs for the 3E3X1 career ladder. Representative tasks for this job include:

- perform safety inspections of facilities or equipment
- implement safety or security programs
- inspect condition of handtools or safety equipment
- evaluate accident or incident reports
- implement work methods or inspection procedures
- develop self-inspection program checklists
- plan or prepare briefings
- evaluate job hazards or compliance with AFOSH program standards

Personnel working in the Safety Job have an average of 16 years, 4 months TAFMS. Table 4 shows that all members of this job have a DAFSC of 3E371 and 60 percent have a paygrade of E-7.

#### Comparison of Military and Civilian Personnel

The military and civilian members of AFSC 3E3X1 were compared according to tasks each group performs. Table 5 displays specific tasks which best differentiate between the two groups. Military members spend a great deal more time preparing for contingencies and supporting mobility exercises than do their civilian counterparts. At the same time, the civilian members spend more time on building finishings related to doors and gates than do the military members. However, there are far fewer civilians performing mobility tasks than there are military personnel performing specific building finishing tasks.

#### Comparison of Current Group Descriptions to Previous Studies

The results of the specialty job analysis were compared to the previous Structural and Metal Fabrication OSRs: AFSC 552X0, Structural career ladder, dated March 1991, and AFSC 552X2, Metal Fabrication career ladder, dated December 1986. Table 6 lists the major clusters and jobs identified in the current report and their equivalents from the previous reports. A comparison of the jobs identified in the current survey against those jobs identified in the formerly separate OSRs showed a very similar job structure across the three studies.

#### Summary

In summary, structure analysis reveals the Structural career ladder to be coming together into one job as it has come together from two separate fields. Half of the survey sample is identified as either carpenters or metal workers, with a growing 10 percent described as part of the unified Structural Specialty Cluster. The merger of the previous AFSCs 552X0 and 552X2 is supported by the survey data, which shows the growth of the multi-skilled Structural member.

TABLE 5

TASKS WHICH BEST DIFFERENTIATE BETWEEN CIVILIAN AND MILITARY MEMBERS  
(PERCENT MEMBERS PERFORMING)

TASKS	MILITARY MEMBERS (N=1,393)	CIVILIAN MEMBERS (N=168)	DIFFERENCE
Z1211 Maintain gas masks	54	0	54
Z1213 Maintain personal documentation, such as shot records or military ID tags	54	0	54
Z1189 Fire weapons for qualifications	53	0	53
Z1162 Assemble or tow AM-2 matting for rapid runway repairs (RRRs)	52	0	52
Z1271 Tear down, inspect, clean, and reassemble weapons	48	0	48
Z1178 Erect hardback tents	48	1	47
Z1179 Erect or dismantle tents, other than hardback tents	47	0	47
Z1175 Don or doff chemical warfare personal protective clothing	46	0	46
Z1177 Erect camouflage netting	45	0	45
Z1258 Prepare personal clothing and equipment for deployment	44	0	44
Z1191 Identify and report suspected UXO	42	0	42
Z1195 Inspect mobility bags or kits	41	0	41
H336 Construct hardback tent frames	48	11	37
C111 Write EPRs	39	4	35
I456 Construct wooden fencing	18	48	-30
I503 Install or replace residential vents or ventilators	9	39	-30
J575 Remove or replace cabinet drawers, hinges, or knobs	20	51	-31
I509 Install or replace sliding door tracks or rollers	13	44	-31
I506 Install or replace screens on metal or wood doors or window frames	23	54	-31
I457 Construct wooden gates	14	45	-31
I512 Install or replace stair treads or risers	23	55	-32
I490 Install or replace handrails or balusters	22	54	-32
I483 Install or replace double-hung windows	14	47	-33
J579 Repair damaged cabinets	17	51	-34
I493 Install or replace interior sliding doors	8	43	-35
I485 Install or replace dutch doors	14	50	-36

TABLE 6

## JOB COMPARISONS BETWEEN CURRENT OSR AND PREVIOUS OSRS

<u>CURRENT 3E3X1 OSR</u>	<u>1991 552X0 OSR</u>	<u>1986 552X2 OSR</u>
Roofing Job	<i>Not identified</i>	<i>Not identified</i>
Concrete Structure Job	Concrete and Masonry Construction Cluster	-
Woodcraft Job	Interior Finishers IJT	-
Tile Job	Concrete and Masonry Construction Cluster	<i>Not identified</i>
Structural Specialty Cluster	Interior Carpentry Cluster	<i>Not identified</i>
Roof Framing Job	Framers Cluster	<i>Not identified</i>
Carpentry Cluster	Framing and Interior Carpentry Cluster	-
Masonry Cluster	Concrete and Masonry Construction Cluster	-
Metal Mechanics Cluster	-	General Metal Fabricators Welding Personnel
Locksmith Job	Locksmith Cluster	-
Instructor/Training Job	<i>Not identified</i>	Technical Training Instructors
Mobility Job	PRIME BEEF IJT	<i>Not identified</i>
Self Help Job	<i>Not identified</i>	<i>Not identified</i>
Supervisory Job	Supervisors Cluster	Shop Foremen/NCOICs
Quality Assurance Job	<i>Not identified</i>	<i>Not identified</i>
Structural Planning Job	Planners Cluster	Structural Planners
SABER Job	<i>Not identified</i>	<i>Not identified</i>
Safety Job	<i>Not identified</i>	<i>Not identified</i>
-	Supply Cluster	<i>Not identified</i>

## ANALYSIS OF DAFSC GROUPS

An analysis of DAFSC groups, in conjunction with the analysis of the career ladder structure, is an important part of each occupational survey. DAFSC analysis examines differences in tasks performed between skill levels. This information may then be used to evaluate how well career ladder documents, such as the Specialty Descriptions, reflect what career ladder personnel are actually doing in the field.

The distribution of AFSC 3E3X1 skill-level groups across career ladder clusters and jobs is displayed in Table 7. As can be seen, the majority of members from DAFSCs 3E331 and 3E351 are performing the core jobs of the formerly separated career fields, and work as either carpenters or metal mechanics. Additionally, a significant percentage of 3E331s are working in the multi-skilled Structural Specialty Cluster. The percentage of multi-skilled members drops for 3E351s, but there is a notable increase in carpenters. As personnel progress further through the career ladder, they begin to move into traditional management and supervisory roles. This represents a typical career progression pattern.

Table 8 offers another perspective by displaying the relative percent time spent on each duty across skill-level groups. As expected, 3- and 5-skill level groups spend most of their time working on the numerous finishing details required for each building. Seven- and 9-skill level members perform more supervisory and management duties. Specific skill-level group discussions are presented below.

### Skill-Level Descriptions

DAFSC 3E331. Three-skill level members perform an average of 144 tasks and most hold the grade of E-3. Table 7 shows that 28 percent of the 421 members in this group work in the Metal Mechanics cluster. Twenty percent of their members work in the Carpentry Cluster, while another 20 percent work as multi-skilled Structural Specialists. Twenty-two percent of their job time is spent installing or maintaining building finishings (see Table 8). Table 9 lists representative tasks these members perform.

DAFSC 3E351. There are 686 members at the 5-skill level who perform an average of 178 tasks. Half of these members are E-5s. Thirty-one percent of these airmen are members of the Carpentry Cluster (see Table 7). There is a noteworthy drop (from 20 to 8 percent) in the percentage of members working in the multi-skilled Structural Specialty cluster, possibly attributable to this relatively new type of training. DAFSC 3E351 members spend 16 percent of their time installing or maintaining building finishings, only a slight decrease from the 3-skill levels (see Table 8). Table 10 lists representative tasks for these incumbents.

TABLE 7

DISTRIBUTION OF MEMBERS BY DAFSC ACROSS CAREER LADDER JOBS  
(PERCENT MEMBERS PERFORMING)

JOB	3E331 (N=421)	3E351 (N=686)	3E371 (N=260)	3E391 (N=26)
Roofing Job	0	0	0	0
Concrete Structure Job	1	0	0	0
Woodcraft Job	1	1	0	0
Tile Job	1	0	0	0
Structural Specialty Cluster	20	8	2	0
Roof Framing Job	1	0	0	0
Carpentry Cluster	20	31	15	0
Masonry Cluster	7	9	2	0
Metal Mechanics Cluster	28	25	7	0
Locksmith Job	1	3	2	0
Instructing/Training Job	0	0	1	0
Mobility Job	1	2	7	0
Self Help Job	0	2	3	0
Supervisory Job	0	2	30	54
Quality Assurance Job	0	0	2	19
Structural Planning Job	0	1	2	0
SABER Job	0	1	2	0
Safety Job	0	0	2	0
Ungrouped	19	15	23	27

TABLE 8

TIME SPENT ON DUTIES BY MEMBERS OF DAFSC GROUPS  
(RELATIVE PERCENT OF JOB TIME)

<u>DUTIES</u>	<u>3E331</u> <u>(N=421)</u>	<u>3E351</u> <u>(N=686)</u>	<u>3E371</u> <u>(N=260)</u>	<u>3E391</u> <u>(N=26)</u>
A ORGANIZING AND PLANNING	2	4	15	22
B DIRECTING AND IMPLEMENTING	1	3	11	20
C INSPECTING AND EVALUATING	1	4	13	25
D TRAINING	1	2	7	6
E PERFORMING ADMINISTRATIVE AND SUPPLY ACTIVITIES	2	5	14	15
F CONSTRUCTING AND MAINTAINING FORMS FOR CONCRETE STRUCTURES	3	2	1	0
G CONSTRUCTING OR MAINTAINING CONCRETE STRUCTURES	7	6	2	0
H CONSTRUCTING, FRAMING, OR MAINTAINING BUILDINGS	9	8	3	*
I INSTALLING OR MAINTAINING BUILDING FINISHINGS	22	16	7	*
J CONSTRUCTING OR MAINTAINING BUILDING FURNISHINGS	2	2	1	0
K CONSTRUCTING OR MAINTAINING LOW-SLOPE ROOFING SYSTEMS	1	1	*	*
L PREPARING MORTAR, CONCRETE, STUCCO, OR PLASTER	1	1	*	0
M APPLYING OR MAINTAINING PLASTER OR STUCCO TO SURFACES	1	*	*	0
N CONSTRUCTING AND MAINTAINING MASONRY STRUCTURES	2	2	*	0
O SETTING AND REPLACING CERAMIC OR QUARRY TILE	2	2	1	0
P MAINTAINING SHOP FACILITIES, HANDTOOLS, OR POWER EQUIPMENT	10	10	4	*
Q INSTALLING OR MAINTAINING LOCKING DEVICES	2	3	1	0
R MAINTAINING, ASSEMBLING, OR INSTALLING METAL COMPONENTS AND STRUCTURES	7	5	2	0
S MAINTAINING LIFTS, DOORS, GATES, OR HOISTS	3	2	1	0
T MAINTAINING KITCHEN EQUIPMENT	*	*	*	0
U MAINTAINING CIVIL ENGINEERING HEAVY EQUIPMENT	*	*	*	0
V FABRICATING SHEET METAL PARTS AND ASSEMBLIES	6	4	1	0
W PREPARING AND SETTING UP WELDING, BRAZING, AND SOLDERING PROJECTS	4	3	1	*
X SOLDERING, HEAT TREATING, FORGING, OR WELDING	1	1	*	0
Y MAINTAINING MISSILE FACILITIES	*	*	*	0
Z PERFORMING PRIME BEEF AND MOBILITY SUPPORT ACTIVITIES	8	11	14	11

\* Indicates less than 1 percent

TABLE 9

## REPRESENTATIVE TASKS PERFORMED BY DAFSC 3E331 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=421)
I442 Adjust door closer components	74
I479 Install or replace door hinges	71
R852 Drill holes in metal	70
I478 Install or replace door closers	68
P759 Clean handtools	66
I460 Cut plexiglass	66
I443 Adjust door locks	63
R862 Fasten parts with bolts or screws	62
I489 Install or replace gypsum board	61
H344 Cut studs	61
I448 Caulk windows, sinks, or bathtubs	60
V1022 Cut sheet metal for parts using handtools	60
I477 Install or replace door closer components	59
I458 Cut glass	59
I444 Adjust panic hardware	58
G297 Drill holes in concrete with hammer drills	56
I480 Install or replace door jambs or stops	56
P768 Inspect handtools	55
V1023 Cut sheet metal for parts using shop equipment	55
I545 Repair holes in gypsum board	53
P748 Adjust handtools	52
Z1162 Assemble or tow AM-2 matting for RRRs	52
H336 Construct hardback tent frames	52
R864 Grind down grooves or sharp edges	51
I529 Install Plexiglas	51
H335 Construct door or window openings	51
V1038 Form sheet metal parts using handtools	51
I513 Install or replace suspended ceilings	50
I491 Install or replace hollow or solid-core doors	50
V1021 Assemble sheet metal parts with quick-action fasteners, rivets, bolts, screws or adhesives	50
H364 Install or replace door or window units	49
Z1189 Fire weapons for qualifications	49
Z1213 Maintain personal documentation, such as shot records or military ID tags	48
I549 Replace glass in windows	47
P761 Clean shop-installed power equipment	47
Q820 Install or replace door locks, other than cipher locks	47
I551 Tape and float gypsum board surfaces	44
I445 Apply acoustical ceiling textures	43
P784 Place handtools or safety equipment in storage	43
I550 Replace or repair windows	42
I535 Maintain door locks	41



TABLE 10

## REPRESENTATIVE TASKS PERFORMED BY DAFSC 3E351 PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=686)
P759	Clean handtools	72
I442	Adjust door closer components	69
I479	Install or replace door hinges	67
R852	Drill holes in metal	64
I478	Install or replace door closers	64
P768	Inspect handtools	62
I460	Cut plexiglas	62
I443	Adjust door locks	59
I489	Install or replace gypsum board	59
Z1211	Maintain gas masks	59
H344	Cut studs	59
G297	Drill holes in concrete with hammer drills	59
Z1189	Fire weapons for qualifications	58
Z1162	Assemble or tow AM-2 matting for RRRs	58
E158	Annotate AF Forms 1800 (Operator's Inspection Guide and Trouble Report (General Purpose Vehicles))	57
Z1213	Maintain personal documentation, such as shot records or military ID tags	57
I444	Adjust panic hardware	57
I480	Install or replace door jambs or stops	57
P748	Adjust handtools	56
P761	Clean shop-installed power equipment	55
I491	Install or replace hollow or solid-core doors	55
I477	Install or replace door closer components	54
I448	Caulk windows, sinks, or bathtubs	54
Z1175	Don or doff chemical warfare personal protective clothing	53
Z1271	Tear down, inspect, clean, and reassemble weapons	53
Z1179	Erect or dismantle tents, other than hardback tents	53
Z1178	Erect hardback tents	53
H336	Construct hardback tents	53
R862	Fasten parts with bolts or screws	52
I513	Install or replace suspended ceilings	51
Z1177	Erect camouflage netting	51
V1022	Cut sheet metal for parts using handtools	49
H364	Install or replace door or window units	49
I545	Repair holes in gypsum board	48
C111	Write EPRs	47
Z1258	Prepare personal clothing and equipment for deployment	47
Q820	Install or replace door locks, other than cipher locks	47
I551	Tape and float gypsum board surfaces	47
Z1195	Inspect mobility bags or kits	46
P784	Place handtools or safety equipment in storage	44
B69	Supervise Structural Apprentices (AFSC 3E331)	43

As Tables 9 and 10 show, DAFSC 3E351 personnel perform tasks very similar to those performed by their 3-skill level counterparts. Tasks which best distinguish 5-skill level personnel from the junior 3-skill level members are presented in Table 11. As expected, the key difference between these groups is an increased emphasis on training and supervisory functions by 5-skill level members. Examples of tasks with the greatest difference in members performing include writing EPRs, conducting performance feedback worksheets evaluation sessions, and counseling trainees on training progress.

DAFSC 3E371. Seven-skill level members perform an average of 132 tasks and most hold the grade of E-7. Table 7 shows that 30 percent of the 260 members in this group are in the Supervisory Job. Fifteen percent of their job time is spent organizing and planning various policies and programs for 3E3X1 personnel (see Table 8). Table 12 lists representative tasks these members perform.

Tasks which best distinguish DAFSC 3E371 personnel from 5-skill level members are presented in Table 13. DAFSC 3E371 members show a marked increase in the amount of supervisory and management tasks performed. Examples of tasks with the greatest difference in members performing include planning or scheduling work assignments or priorities, conducting supervisory orientations of newly assigned personnel, and writing recommendations for awards and decorations.

DAFSC 3E391. There are 26 members at the 9-skill level, all of who perform an average of 79 tasks. Seventy-seven percent of these members are E-8s. Fifty-four percent of personnel are members of the Supervisory Job and 19 percent are in the Quality Assurance Job (see Table 7). DAFSC 3E391 members spend 25 percent of their time inspecting and evaluating the effectiveness of Structural policies, programs, materiel, and personnel (see Table 8). Table 14 lists representative tasks for these incumbents.

Tasks which best distinguish DAFSC 3E391 personnel from 7-skill level members are presented in Table 15. Nine-skill level members show a marked increase in the amount of implementation and evaluation tasks performed. Examples of tasks with the greatest difference in members performing include indorsing civilian performance appraisals; evaluating budget requirements; reviewing drafts of regulations, manuals, or other directives; and assigning personnel to duty positions other than mobility positions.

#### Specialty Description Analysis

Survey data were compared to the Specialty Descriptions for AFSC 3E3X1 Structural Apprentices, Journeymen, Craftsmen, Superintendents, dated November 1995. The descriptions for the 3-, 5-, 7-, and 9-skill levels and CEM members were accurate, depicting the technical

TABLE 11

TASKS WHICH BEST DIFFERENTIATE BETWEEN DAFSC 3E331 AND DAFSC 3E351 PERSONNEL  
(PERCENT MEMBERS PERFORMING)

TASKS	3E331 (N=421)	3E351 (N=686)	DIFFERENCE
Z1249 Practice communications security (COMSEC) or operations security (OPSEC) during contingency exercises or operations	10	31	-21
D146 Maintain training records, charts, graphs, or files	2	23	-21
B68 Supervise military personnel with AFSC other than 3E3X1	2	23	-21
C95 Evaluate personnel for compliance with performance standards	1	25	-24
D140 Evaluate progress of trainees	2	26	-24
A24 Establish performance standards for subordinates	4	28	-24
C113 Write recommendations for awards or decorations	1	26	-25
B63 Interpret construction drawings	12	37	-25
D123 Conduct OJT upgrade training	5	32	-27
B70 Supervise Structural Journeyman (AFSC 3E351)	2	30	-28
D127 Counsel trainees on training progress	2	31	-29
E158 Annotate AF Forms 1800 (Operator's Inspection Guide and Trouble Report (General Purpose Vehicles))	27	57	-30
C106 Inspect personnel for compliance with military standards	3	33	-30
C77 Conduct PFW evaluation sessions	2	36	-34
B46 Counsel personnel on personal or military-related matters	3	37	-34
B69 Supervise Structural Apprentices (AFSC 3E331)	6	43	-37
C111 Write EPRs	2	47	-45

TABLE 12

## REPRESENTATIVE TASKS PERFORMED BY DAFSC 3E371 PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=260)
C111	Write EPRs	75
B46	Counsel personnel on personal or military-related matters	70
A30	Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	69
E158	Annotate AF Forms 800 (Operator's Inspection Guide and Trouble Report (General Purpose Vehicles)	69
C113	Write recommendations for awards or decorations	64
C77	Conduct PFW evaluation sessions	63
A3	Conduct supervisory orientations of newly assigned personnel	63
B70	Supervise Structural Journeymen (AFSC 3E351)	61
C106	Inspect personnel for compliance with military standards	60
B68	Supervise military personnel with AFSC other than 3E3X1	59
B63	Interpret construction drawings	59
C95	Evaluate personnel for compliance with performance standards	57
A24	Establish performance standards for subordinates	57
A35	Plan or schedule work assignments or priorities	56
Z1213	Maintain personal documentation, such as shot records or military ID tags	54
E235	Review AF Forms 332 (Base Civil Engineer Work Request)	53
B69	Supervise Structural Apprentices (AFSC 3E331)	52
E177	Coordinate material or work order status with materiel control	52
A42	Sketch working drawings	51
Z1189	Fire weapons for qualifications	51
A13	Determine or establish logistics requirements, such as personnel, equipment, space, tools, or supplies	51
C83	Evaluate completed work or work-in-progress jobs	50
A8	Coordinate work requests with appropriate agencies	50
A9	Determine completion time estimates for fabrication or repairs	49
A12	Determine man-hour estimates for fabrications or repairs	49
B52	Establish types of materials required for carpentry, masonry, or roofing projects	48
Z1175	Don or doff chemical warfare personal protective clothing	48
Z1211	Maintain gas masks	48
E174	Coordinate local purchase of equipment or supplies with appropriate agencies	48
C105	Inspect condition of handtools or safety equipment	48
Z1258	Prepare personal clothing and equipment for deployment	47
C96	Evaluate personnel for promotion, demotion, reclassification, or special awards	46
A10	Determine cost-estimates for fabrications or repairs	45
A28	Establish work methods or procedures	45
B53	Establish work schedules	45
B67	Supervise civilians	43

TABLE 13

TASKS WHICH BEST DIFFERENTIATE BETWEEN DAFSC 3E351 AND DAFSC 3E371 PERSONNEL  
(PERCENT MEMBERS PERFORMING)

TASKS	3E351 (N=686)	3E371 (N=260)	DIFFERENCE
I442 Adjust door closer components	69	29	40
R852 Drill holes in metal	64	25	39
P759 Clean handtools	72	34	38
I479 Install or replace door hinges	67	30	37
I478 Install or replace door closers	64	29	35
H344 Cut studs	59	24	35
R862 Fasten parts with bolts or screws	52	18	34
I460 Cut plexiglass	62	28	34
G297 Drill holes in concrete with hammer drills	59	25	34
V1022 Cut sheet metal for parts using handtools	48	15	33
I443 Adjust door locks	59	27	32
I480 Install or replace door jambs or stops	57	25	32
I444 Adjust panic hardware	57	25	32
B71 Supervise Structural Craftsmen (AFSC 3E371)	5	36	-31
C83 Evaluate complete work or work-in-progress jobs	19	50	-31
B67 Supervise civilians	12	43	-31
B70 Supervise Structural Journeymen (AFSC 3E351)	30	61	-31
C95 Evaluate personnel for compliance with performance standards	25	57	-32
A2 Assign sponsors for incoming personnel	13	45	-32
A35 Plan or schedule work assignments or priorities	24	56	-32
B46 Counsel personnel on personal or military-related matters	37	70	-33
D117 Assign OJT trainers or supervisors	10	44	-34
B68 Supervise military personnel with AFSC other than 3E3X1	23	59	-36
C113 Write recommendations for awards or decorations	26	64	-38
A30 Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	31	69	-38

TABLE 14

## REPRESENTATIVE TASKS PERFORMED BY DAFSC 3E391 PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=26)
A30	Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	88
B46	Counsel personnel on personal or military-related matters	85
C104	Indorse EPRs	81
C113	Write recommendations for awards or decorations	77
A8	Coordinate work requests with appropriate agencies	77
A43	Write job or position descriptions	77
B68	Supervise military personnel with AFSC other than 3E3X1	73
C83	Evaluate completed work or work-in-progress jobs	73
A35	Plan or schedule work assignments or priorities	73
B64	Interpret policies, directives, or procedures for subordinates	73
C111	Write EPRs	73
C95	Evaluate personnel for compliance with performance standards	73
A1	Assign personnel to duty positions other than mobility positions	73
B67	Supervise civilians	69
C77	Conduct PFW evaluation sessions	69
A3	Conduct supervisory orientations of newly assigned personnel	69
A41	Schedule personnel for TDY assignments, leaves, or passes	65
C106	Inspect personnel for compliance with military standards	65
B63	Interpret construction drawings	65
A24	Establish performance standards for subordinates	65
C78	Conduct self-inspections	65
B53	Establish work schedules	65
B60	Initiate actions required due to substandard performance of personnel	65
A2	Assign sponsors for incoming personnel	65
B71	Supervise Structural Craftsmen (AFSC 3E371)	62
E235	Review AF Forms 332 (Base Civil Engineer Work Request)	62
C110	Write civilian performance appraisals	62
C96	Evaluate personnel for promotion, demotion, reclassification, or special awards	62
B44	Annotate time cards for civilian employees	62
B56	Implement safety or security programs	62
C81	Evaluate budget requirements	62
A9	Determine completion time estimates for fabrications or repairs	62
C103	Indorse civilian performance appraisals	58
E158	Annotate AF Forms 1800 (Operator's Inspection Guide and Trouble Report (General Purpose Vehicles))	58
B57	Implement self-inspection programs	58
A13	Determine or establish logistics requirements, such as personnel, equipment, space, tools, or supplies	54
E195	Initiate electronic mail (E-mail)	42

TABLE 15

TASKS WHICH BEST DIFFERENTIATE BETWEEN DAFSC 3E371 AND DAFSC 3E391 PERSONNEL  
(PERCENT MEMBERS PERFORMING)

TASKS	3E371 (N=260)	3E391 (N=26)	DIFFERENCE
P759 Clean handtools	34	0	34
Z1271 Tear down, inspect, clean, and reassemble weapons	42	12	30
I479 Install or replace door hinges	30	0	30
P768 Inspect handtools	34	4	30
I442 Adjust door closer components	29	0	29
I478 Install or replace door closers	28	0	28
Z1189 Fire weapons for qualifications	51	23	28
I460 Cut plexiglas	28	0	28
I489 Install or replace gypsum board	28	0	28
Z1243 Perform or practice first-aid lifesaving techniques	35	8	27
Z1179 Erect or dismantle tents, other than hardback tents	42	15	27
P748 Adjust handtools	27	0	27
D123 Conduct OJT upgrade training	38	12	26
E161 Complete AF Forms 1278 (Time and Attendance Form)	15	46	-31
B64 Interpret policies, directives, or procedures for subordinates	42	73	-31
A20 Develop self-inspection program checklists	29	62	-33
C76 Conduct hiring interviews	13	46	-33
A31 Participate in production conferences	20	54	-34
A40 Review drafts of regulations, manuals, or other directives	23	58	-35
C110 Write civilian performance appraisals	25	62	-37
A1 Assign personnel to duty positions other than mobility positions	36	73	-37
C81 Evaluate budget requirements	22	62	-40
C100 Evaluate suggestions	16	58	-42
C104 Indorse EPRs	39	81	-42
A43 Write job or position descriptions	35	77	-42
C103 Indorse civilian performance appraisals	14	58	-44

aspects of the job, as well as the supervisory responsibilities previously described in the DAFSC analysis. The descriptions also capture the primary responsibilities of AFSC 3E3X1 members in the applicable clusters and jobs identified by the job structure analysis process.

## ANALYSIS OF CIVILIAN MEMBERS

An analysis of civilian groups is also an important part of each occupational survey. Civilian analysis examines differences in tasks performed between occupational series. This information may then be used to evaluate how well career ladder documents, such as position descriptions, reflect what career ladder personnel are actually doing in the field.

The civilian occupational series associated with the Structural career ladder are 3603 (Masons), 3606 (Roofers), 3703 (Welders), 3806 (Sheet Metal Workers), 4605 (Wood Crafters), and 4607 (Carpenters). The distribution of these groups across career ladder clusters and jobs is displayed in Table 16. As can be seen, the majority of members in each series are performing the core jobs of that series, with the exception of occupational series 4605. Civilian woodcrafters report spending more time performing carpentry tasks than woodcrafting tasks. Additionally, a portion of civilians are working in the multi-skilled Structural Specialty Cluster. One roofer and approximately 10 carpenters reported being a part of this diversified cluster. Diversification can be seen in all of these occupational series in smaller percentages of members working on non-core jobs and clusters. For example, while 88 percent of Sheet Metal Workers work within the Metal Mechanics Cluster, 4 percent work in the Carpentry Cluster, another 4 percent work in the Masonry Cluster, and the other 4 percent hold Supervisory jobs.

When compared with military members (see Table 17), a similarity can be seen in the percentage of members performing technical jobs. The Carpentry Cluster boasts the largest portions of the military and civilian samples, followed by the Metal Mechanics Cluster and the small but new Structural Specialty Cluster. The greatest disparity occurs in the Supervisory Job, where 7 percent of the military sample works with just 1 percent of the civilian sample.

Table 18 offers another perspective by displaying the relative percent time spent on each duty across civilian occupational series groups. As expected, each occupational series group spends most of the time working in the area of expertise, but there are smaller percentages of members working in several other areas as well.



TABLE 16

DISTRIBUTION OF CIVILIAN MEMBERS BY OCCUPATIONAL SERIES ACROSS CAREER LADDER JOBS  
(PERCENT MEMBERS PERFORMING)

JOB	OCC. SERIES 3603 (N=9)	OCC. SERIES 3606 (N=10)	OCC. SERIES 3703 (N=16)	OCC. SERIES 3806 (N=24)	OCC. SERIES 4605 (N=15)	OCC. SERIES 4607 (N=94)
Roofing Job (N=10)	0	60	0	0	0	0
Concrete Structure Job (N=6)	0	0	0	0	0	0
Woodcraft Job (N=13)	0	0	0	0	20	2
Tile Job (N=5)	0	0	0	0	0	2
Structural Specialty Cluster (N=156)	0	10	0	0	0	11
Roof Framing Job (N=5)	0	0	0	0	0	0
Carpentry Cluster (N=439)	22	20	6	4	53	73
Masonry Cluster (N=113)	78	0	0	4	0	0
Metal Mechanics Cluster (N=354)	0	0	75	88	0	0
Locksmith Job (N=34)	0	0	6	0	0	4
Instructing/Training Job (N=5)	0	0	0	0	0	0
Mobility Job (N=34)	0	0	0	0	0	0
Self Help Job (N=20)	0	0	0	0	0	0
Supervisory Job (N=105)	0	0	0	4	7	0
Quality Assurance Job (N=12)	0	0	0	0	0	0
Structural Planning Job (N=9)	0	0	0	0	0	0
SABER Job (N=9)	0	0	0	0	0	0
Safety Job (N=5)	0	0	0	0	0	0
Ungrouped	0	10	13	0	20	8

TABLE 17

DISTRIBUTION OF MILITARY AND CIVILIAN MEMBERS ACROSS CAREER LADDER JOBS  
(PERCENT MEMBERS PERFORMING)

JOB	MILITARY MEMBERS (N=1,393)	CIVILIAN MEMBERS (N=168)
Roofing Job (N=10)	*	4
Concrete Structure Job (N=6)	*	0
Woodcraft Job (N=13)	*	3
Tile Job (N=5)	*	1
Structural Specialty Cluster (N=156)	10	6
Roof Framing Job (N=5)	*	0
Carpentry Cluster (N=439)	24	49
Masonry Cluster (N=113)	7	5
Metal Mechanics Cluster (N=354)	22	20
Locksmith Job (N=34)	2	3
Instructing/Training Job (N=5)	*	0
Mobility Job (N=34)	2	0
Self Help Job (N=20)	1	0
Supervisory Job (N=105)	7	1
Quality Assurance Job (N=12)	1	0
Structural Planning Job (N=9)	1	0
SABER Job (N=9)	1	0
Safety Job (N=5)	*	0
Ungrouped (N=293)	20	8

\* Indicates less than 1 percent

TABLE 18

AVERAGE PERCENT TIME SPENT ON DUTIES BY CIVILIAN MEMBERS OF  
OCCUPATIONAL SERIES GROUPS (RELATIVE PERCENT OF JOB TIME)

<u>DUTIES</u>	OCC. SERIES 3603 (N=9)	OCC. SERIES 3606 (N=10)	OCC. SERIES 3703 (N=16)
A ORGANIZING AND PLANNING	2	1	2
B DIRECTING AND IMPLEMENTING	1	1	1
C INSPECTING AND EVALUATING	*	*	1
D TRAINING	*	0	*
E PERFORMING ADMINISTRATIVE AND SUPPLY ACTIVITIES	1	*	3
F CONSTRUCTING AND MAINTAINING FORMS FOR CONCRETE STRUCTURES	6	1	1
G CONSTRUCTING OR MAINTAINING CONCRETE STRUCTURES	16	3	1
H CONSTRUCTING, FRAMING, OR MAINTAINING BUILDINGS	14	14	4
I INSTALLING OR MAINTAINING BUILDING FINISHINGS	10	31	7
J CONSTRUCTING OR MAINTAINING BUILDING FURNISHINGS	1	1	*
K CONSTRUCTING OR MAINTAINING LOW-SLOPE ROOFING SYSTEMS	*	32	*
L PREPARING MORTAR, CONCRETE, STUCCO, OR PLASTER	8	*	*
M APPLYING OR MAINTAINING PLASTER OR STUCCO TO SURFACES	10	1	0
N CONSTRUCTING AND MAINTAINING MASONRY STRUCTURES	14	*	*
O SETTING AND REPLACING CERAMIC OR QUARRY TILE	12	4	*
P MAINTAINING SHOP FACILITIES, HANDTOOLS, OR POWER EQUIPMENT	3	4	16
Q INSTALLING OR MAINTAINING LOCKING DEVICES	0	1	5
R MAINTAINING, ASSEMBLING, OR INSTALLING METAL COMPONENTS AND STRUCTURES	1	3	14
S MAINTAINING LIFTS, DOORS, GATES, OR HOISTS	*	*	8
T MAINTAINING KITCHEN EQUIPMENT	*	0	*
U MAINTAINING CIVIL ENGINEERING HEAVY EQUIPMENT	0	0	4
V FABRICATING SHEET METAL PARTS AND ASSEMBLIES	0	2	5
W PREPARING AND SETTING UP WELDING, BRAZING, AND SOLDERING PROJECTS	0	0	14
X SOLDERING, HEAT TREATING, FORGING, OR WELDING	*	0	11
Y MAINTAINING MISSILE FACILITIES	0	0	2
Z PERFORMING PRIME BEEF AND MOBILITY SUPPORT ACTIVITIES	*	0	0

\* Indicates less than 1 percent

TABLE 18 (CONTINUED)

AVERAGE PERCENT TIME SPENT ON DUTIES BY CIVILIAN MEMBERS OF  
OCCUPATIONAL SERIES GROUPS (RELATIVE PERCENT OF JOB TIME)

<u>DUTIES</u>	OCC. SERIES 3806 (N=24)	OCC. SERIES 4605 (N=15)	OCC. SERIES 4607 (N=94)
A ORGANIZING AND PLANNING	2	4	2
B DIRECTING AND IMPLEMENTING	1	3	1
C INSPECTING AND EVALUATING	2	3	1
D TRAINING	*	1	*
E PERFORMING ADMINISTRATIVE AND SUPPLY ACTIVITIES	3	4	2
F CONSTRUCTING AND MAINTAINING FORMS FOR CONCRETE STRUCTURES	1	*	2
G CONSTRUCTING OR MAINTAINING CONCRETE STRUCTURES	3	1	5
H CONSTRUCTING, FRAMING, OR MAINTAINING BUILDINGS	4	11	18
I INSTALLING OR MAINTAINING BUILDING FINISHINGS	12	23	35
J CONSTRUCTING OR MAINTAINING BUILDING FURNISHINGS	1	25	6
K CONSTRUCTING OR MAINTAINING LOW-SLOPE ROOFING SYSTEMS	1	*	3
L PREPARING MORTAR, CONCRETE, STUCCO, OR PLASTER	1	*	1
M APPLYING OR MAINTAINING PLASTER OR STUCCO TO SURFACES	1	*	1
N CONSTRUCTING AND MAINTAINING MASONRY STRUCTURES	2	*	1
O SETTING AND REPLACING CERAMIC OR QUARRY TILE	1	*	4
P MAINTAINING SHOP FACILITIES, HANDTOOLS, OR POWER EQUIPMENT	15	18	7
Q INSTALLING OR MAINTAINING LOCKING DEVICES	*	3	4
R MAINTAINING, ASSEMBLING, OR INSTALLING METAL COMPONENTS AND STRUCTURES	16	2	3
S MAINTAINING LIFTS, DOORS, GATES, OR HOISTS	9	*	1
T MAINTAINING KITCHEN EQUIPMENT	*	0	0
U MAINTAINING CIVIL ENGINEERING HEAVY EQUIPMENT	2	*	*
V FABRICATING SHEET METAL PARTS AND ASSEMBLIES	14	1	1
W PREPARING AND SETTING UP WELDING, BRAZING, AND SOLDERING PROJECTS	6	*	*
X SOLDERING, HEAT TREATING, FORGING, OR WELDING	4	*	*
Y MAINTAINING MISSILE FACILITIES	*	0	*
Z PERFORMING PRIME BEEF AND MOBILITY SUPPORT ACTIVITIES	*	0	*

\* Indicates less than 1 percent

## TRAINING ANALYSIS

Occupational surveys provide information which can be useful in the development and revision of relevant training programs. Factors used to evaluate entry-level AFSC 3E3X1 training include duties being performed by first-enlistment (1-48 months TAFMS) personnel across career ladder jobs, percentages of members performing specific tasks, ratings of how much training emphasis tasks should receive in formal training, and relative TD ratings.

### First-Enlistment Personnel

In this study, there are 456 AFSC 3E3X1 members in their first enlistment, representing 28 percent of the total survey sample. Table 19 shows that the time spent on duties focuses primarily on the installation and maintenance of building finishings, and the maintenance of facilities, tools, and equipment. Table 20 displays representative tasks performed by all AFSC 3E3X1 personnel with 1-48 months TAFMS. Table 21 shows some of the equipment commonly used by personnel in their first 48 months of service, and Figure 2 shows the percent of first-enlistment members performing each job.

### Training Emphasis (TE) and Task Difficulty (TD) Data

TE and TD data are secondary task factors that can help training development personnel decide which tasks to emphasize for entry-level training. These ratings, based on the judgments of senior career ladder NCOs, provide a rank-ordering of those tasks considered important for airmen with 1-48 months TAFMS (TE) and a measure of the relative difficulty of those tasks (TD). When combined with data on the percentages of entry-level personnel performing tasks, comparisons can be made to determine if training adjustments are necessary. For example, tasks receiving high ratings on both task factors (TE and TD), accompanied by moderate to high percentages for performance, may warrant resident training. Those tasks receiving high task factor ratings, but low percentages for performance, may be more appropriately planned for OJT programs within the career ladder. Low task factor ratings may highlight tasks best omitted from training for new personnel. These decisions must be weighed against percentages of personnel performing the tasks, command concerns, and criticality of the tasks.

To assist training development personnel, AFOMS developed a computer program that uses these task factors and the percentage of 1-48 months TAFMS personnel performing tasks to produce Automated Training Indicators (ATI). ATIs correspond to training decisions listed and defined in the Training Decision Logic Table found in Attachment 2, AETC Instruction 36-2601. ATIs allow training developers to quickly focus attention on those tasks which are most likely to qualify for resident course consideration.

TABLE 19

## RELATIVE PERCENT OF TIME SPENT ON DUTIES BY FIRST-ENLISTMENT PERSONNEL

DUTIES	PERCENT TIME SPENT (N=456)
A ORGANIZING AND PLANNING	2
B DIRECTING AND IMPLEMENTING	1
C INSPECTING AND EVALUATING	1
D TRAINING	1
E PERFORMING ADMINISTRATIVE AND SUPPLY ACTIVITIES	2
F CONSTRUCTING AND MAINTAINING FORMS FOR CONCRETE STRUCTURES	3
G CONSTRUCTING OR MAINTAINING CONCRETE STRUCTURES	8
H CONSTRUCTING, FRAMING, OR MAINTAINING BUILDINGS	9
I INSTALLING OR MAINTAINING BUILDING FINISHINGS	23
J CONSTRUCTING OR MAINTAINING BUILDING FURNISHINGS	2
K CONSTRUCTING OR MAINTAINING LOW-SLOPE ROOFING SYSTEMS	1
L PREPARING MORTAR, CONCRETE, STUCCO, OR PLASTER	1
M APPLYING AND MAINTAINING PLASTER OR STUCCO TO SURFACES	1
N CONSTRUCTING AND MAINTAINING MASONRY STRUCTURES	2
O SETTING AND REPLACING CERAMIC OR QUARRY TILE	3
P MAINTAINING SHOP FACILITIES, HANDTOOLS, OR POWER EQUIPMENT	10
Q INSTALLING OR MAINTAINING LOCKING DEVICES	2
R MAINTAINING, ASSEMBLING, OR INSTALLING METAL COMPONENTS AND STRUCTURES	7
S MAINTAINING LIFTS, DOORS, GATES, OR HOISTS	2
T MAINTAINING KITCHEN EQUIPMENT	*
U MAINTAINING CIVIL ENGINEERING HEAVY EQUIPMENT	*
V FABRICATING SHEET METAL PARTS AND ASSEMBLIES	6
W PREPARING AND SETTING UP WELDING, BRAZING, AND SOLDERING PROJECTS	4
X SOLDERING, HEAT TREATING, FORGING, OR WELDING	1
Y MAINTAINING MISSILE FACILITIES	*
Z PERFORMING PRIME BEEF AND MOBILITY SUPPORT ACTIVITIES	8

\* Indicates less than 1 percent

TABLE 20

## REPRESENTATIVE TASKS PERFORMED BY ALL FIRST-ENLISTMENT 3E3X1 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=456)
I442 Adjust door closer components	74
I479 Install or replace door hinges	74
R852 Drill holes in metal	72
I478 Install or replace door closers	70
P759 Clean handtools	67
I460 Cut plexiglass	67
I489 Install or replace gypsum board	64
I443 Adjust door locks	63
H344 Cut studs	63
I448 Caulk windows, sinks, or bathtubs	62
I458 Cut glass	62
I477 Install or replace door closer components	61
R862 Fasten parts with bolts or screws	61
I480 Install or replace door jambs or stops	60
I444 Adjust panic hardware	59
V1022 Cut sheet metal for parts using handtools	58
G297 Drill holes in concrete with hammer drills	57
I545 Repair holes in gypsum board	56
P768 Inspect handtools	56
V1023 Cut sheet metal for parts using shop equipment	54
P748 Adjust handtools	54
I529 Install plexiglass	54
H335 Construct door or window openings	53
I491 Install or replace hollow or solid-core doors	52
Z1162 Assemble or tow AM-2 matting for RRRs	52
H336 Construct hardback tent frames	52
H364 Install or replace door or window units	51
H381 Install or replace studs	51
I513 Install or replace suspended ceilings	51
V1021 Assemble sheet metal parts with quick-action fasteners, rivets, bolts, screws or adhesives	50

TABLE 21  
EQUIPMENT USED BY FIRST-ENLISTMENT 3E3X1 PERSONNEL  
(PERCENT MEMBERS USING)

<u>EQUIPMENT</u>	<u>1ST JOB (N=230)</u>	<u>1ST ENLISTMENT (N=456)</u>
Power hand drill	87	89
Aviation snip	86	81
Table saw	84	84
Belt sander	83	83
Radial arm saw	82	83
Bulldog snip	82	76
Drill press, other than magnetic portable	81	83
Bench grinder	78	82
Portable circular saw	78	79
Upright bandsaw	77	81
Bandsaw	76	80
Disc sander	74	76
Jigsaw	74	77
Vise	74	77
Router	69	73
Box and pan brake	66	65
Oxyacetylene welding equipment	65	62
Powder-actuated tool (HILTI)	61	68
Powder-actuated fastener, such as Ramset, HILTI, or Remington	61	65
Glass and plastic cutter	60	65
Scaffolding	58	67
Horizontal bandsaw	57	61
Floor tile cutter	57	62
Metallic arc stationary welding equipment	57	55
Air compressor	56	63
Vibrating sander	56	61
Metallic arc portable welding equipment	56	57
Duckbill grip	53	51
Pittsburg forming machine	53	52
Reciprocating portable saw	53	61
Bolt cutter	52	57
Surface planer	52	53
Ceramic tile cutter	51	58



# JOBS PERFORMED BY FIRST-ENLISTMENT AFSC 3E3X1 PERSONNEL

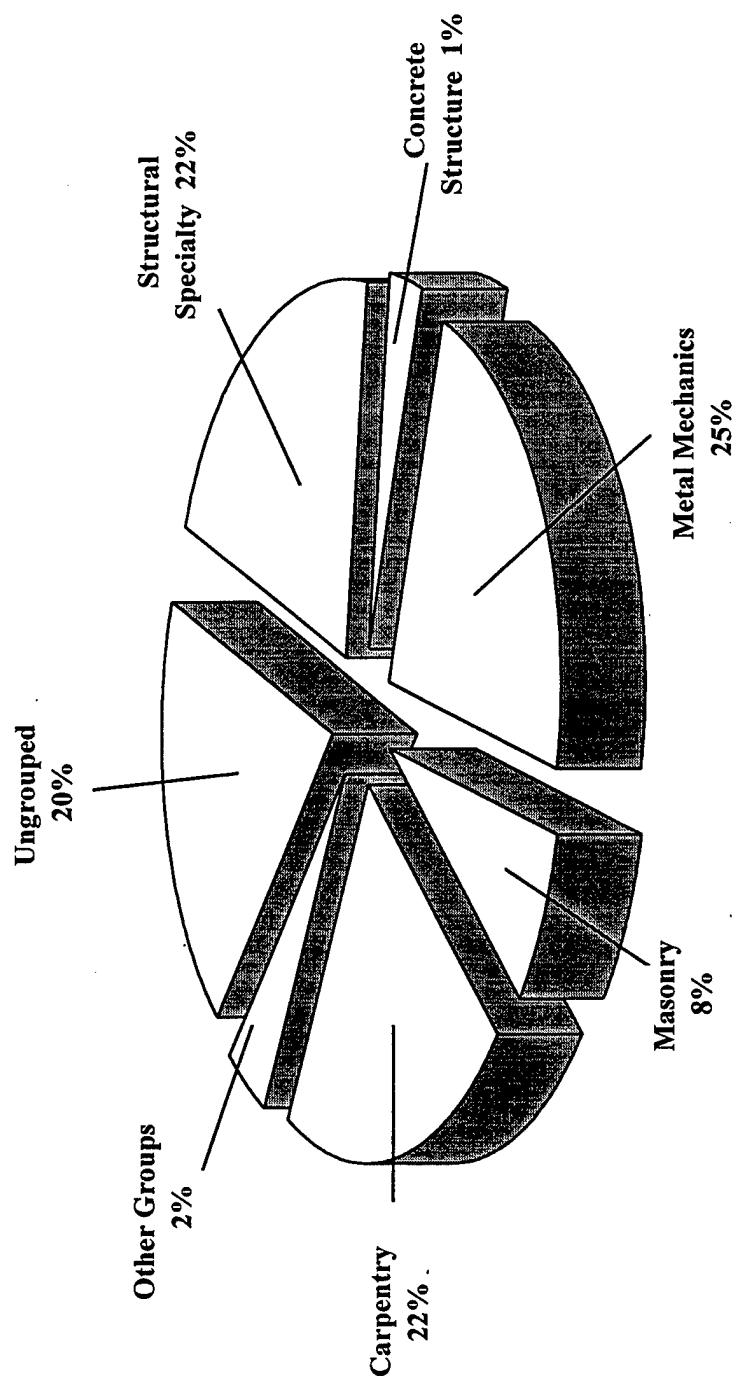


FIGURE 2

\*Other Groups include: Woodcraft, Tile, Roof Framing, Instructing/Training, and Mobility

Tasks having the highest TE ratings for AFSC 3E3X1 personnel with 1-48 months TAFMS are listed in Table 22. Included for each task are the percentage of personnel in their first job (1-24 months TAFMS), as well as those in their first enlistment, and the TD rating. Tasks with the highest TE ratings deal with the completion of numerous tasks which finish a building. Many of these tasks are performed by high percentages of 1-48 months TAFMS personnel.

Table 23 lists the tasks having the highest TD ratings. The percentages of AFSC 3E3X1 personnel performing these tasks are included for those respondents in their first job, first enlistment, and 3-, 5-, 7-, and 9-skill levels, and their TE ratings. Most tasks with high TD ratings deal with constructing metal structures and locksmithing, and have low TE ratings and are performed by relatively low percentages of personnel.

Various lists of tasks, accompanied by TE and TD ratings, are contained in the TRAINING EXTRACT package and should be reviewed in detail by technical school personnel. For a more detailed explanation of TE and TD ratings, see Task Factor Administration in the SURVEY METHODOLOGY section of this report.

#### Specialty Training Standard (STS) Analysis

A comprehensive review of the AFSC 3E3X1 STS, dated November 1995, was made by comparing survey data to STS elements. To assist in the examination of the STS, technical school SMEs from Gulfport NCBC matched JI tasks to appropriate sections and subsections of the STS. Elements with performance objectives were reviewed in terms of TE, TD, and percent members performing information, using the guidance provided in AFI 36-2623 and AETC Instruction 36-2601. Typically, tasks performed by 20 percent or more of personnel in appropriate experience or skill-level groups, such as entry-level respondents (1-48 months TAFMS), and 5- and 7-skill level groups, should be considered for inclusion in the STS. Likewise, tasks with less than 20 percent performing in all of these groups should be considered for deletion. STS paragraphs containing general knowledge information, mandatory entries, or basic supervisory responsibilities were not examined.

Survey data indicate the STS is well-constructed and provides comprehensive coverage of the work performed by personnel in this career ladder. Most of the essential paragraphs and subparagraphs were adequately supported.

Examples of unsupported STS items with accompanying JI tasks and survey data are listed in Table 24. Training personnel and SMEs should review these items, as well as accompanying training documents, to determine if inclusion in future revisions is warranted.

Tasks not matched to any element of the STS are listed at the end of the computer listing located in associated training documents. These were reviewed to determine if any tasks concentrate around particular functions or jobs. Many of the unreferenced tasks deal with working with concrete, and handling some of the finishing jobs. These tasks are listed in Table 25.

TABLE 22

## TASKS WITH HIGHEST TRAINING EMPHASIS

TASKS	TE	PERCENT MEMBERS PERFORMING		TD
		1ST JOB (N=230)	1ST ENL (N=456)	
I513	Install or replace suspended ceilings	6.17	44	5.23
H364	Install or replace door or window units	6.11	47	5.14
Z1175	Don or doff chemical warfare personal protective clothing	6.07	24	4.52
I442	Adjust door closer components	6.04	68	3.78
I444	Adjust panic hardware	6.02	51	5.22
I489	Install or replace gypsum board	5.98	61	3.93
H335	Construct door or window openings	5.89	43	4.99
I491	Install or replace hollow or solid-core doors	5.85	45	4.83
I443	Adjust door locks	5.80	57	4.50
H427	Lay out studs	5.80	30	4.65
H338	Construct interior partitions	5.76	30	4.29
Z1243	Perform or practice first-aid lifesaving techniques	5.76	12	4.94
I545	Repair holes in gypsum board	5.74	53	3.94
I479	Install or replace door hinges	5.70	68	3.82
G300	Finish concrete with handtools	5.63	33	4.45
I458	Cut glass	5.61	56	3.49
H381	Install or replace studs	5.61	46	4.00
H336	Construct hardback tent frames	5.59	38	5.37
I480	Install or replace door jambs or stops	5.57	50	4.51
P768	Inspect handtools	5.54	52	2.85
I461	Erect or disassemble metal scaffolding	5.52	36	3.27
I549	Replace glass in windows	5.48	41	3.86
I478	Install or replace door closers	5.46	67	4.20
F265	Construct slab forms	5.44	27	3.95
H347	Erect interior partitions	5.44	31	4.33
I460	Cut plexiglass	5.43	58	3.18
H403	Lay out door or window openings	5.43	21	5.38
G302	Float concrete	5.41	28	4.40
H344	Cut studs	5.41	57	2.58
P777	Perform leak tests on oxyacetylene equipment	5.41	31	3.34
P759	Clean handtools	5.41	64	2.28
G310	Place concrete in forms	5.39	30	3.53
I519	Install or replace trim moldings, such as baseboards, wainscoting, or door or window casings	5.39	33	4.56

TE MEAN = 2.68; S.D. = 1.49 (HIGH = 4.17)

TD MEAN = 5.00; S.D. = 1.00 (HIGH = 6.00)

TABLE 23

## TASKS WITH HIGHEST TASK DIFFICULTY

TASKS	TD	PERCENT MEMBERS PERFORMING							TE
		1ST	1ST	DAFSC	DAFSC	DAFSC	DAFSC		
		JOB (N=230)	ENL (N=456)	3E331 (N=421)	3E351 (N=686)	3E371 (N=260)	3E391 (N=26)		
R912	8.41	0	1	1	1	1	0	1.39	
R913	8.17	5	5	8	7	4	0	2.19	
R908	7.85	0	1	1	1	2	0	1.09	
D129	7.84	1	2	2	1	4	8	.50	
R911	7.84	4	5	7	6	3	0	2.19	
Q810	7.83	2	3	3	7	5	0	1.50	
Q829	7.78	0	2	2	6	2	0	1.70	
R909	7.77	1	2	2	3	2	0	1.98	
A21	7.68	1	1	1	4	24	50	.33	
A29	7.65	1	2	2	3	8	23	.31	
Q813	7.64	5	5	6	8	5	0	1.8	
C115	7.43	1	1	0	2	12	27	.50	
R914	7.37	0	1	1	1	1	0	1.57	
Y1124	7.32	0	0	0	0	1	0	.61	
Q825	7.28	1	2	1	4	3	0	1.74	
B51	7.23	0	0	0	1	7	19	.15	

TD MEAN = 5.00; S.D. = 1.00 (HIGH = 6.00)

TE MEAN = 2.68; S.D. = 1.49 (HIGH = 4.17)

TABLE 24

## EXAMPLES OF STS ITEMS NOT SUPPORTED BY OSR DATA

STS REFERENCE/TASKS		3-LVL COURSE PROF CODE	TNG EMP	PERCENT MEMBERS PERFORMING					TSK DIFF
				1ST JOB (N=230)	1ST ENL (N=456)	DAFSC 3E351 (N=686)	DAFSC 3E371 (N=260)		
0151	14.02.01. Handtools	2b							
E188	Evaluate serviceability of equipment or supplies		1.96	3	4	12	17	4.34	
0176	15.08.01. Mix ingredients to meet project specifications	-							
L627	Mix concrete with concrete mixers for hot weather placement		3.13	10	11	12	5	4.76	
0187	16.01.01. Floors	-							
H428	Lay out subfloors		4.50	10	14	17	7	5.06	
0308	22.02.01. Lay out areas to receive tile	-							
O732	Lay out quarry tiles		4.19	11	17	19	8	5.21	
0358	28.03. Fabricate	-							
V1028	Fabricate government-lock seams		4.17	15	16	11	4	5.17	
0378	29.02.01. Overhead doors	b/x							
S939	Install overhead doors		4.61	11	15	17	7	6.76	
0411	31.03. Perform shop tests to identify metals	2b/X							
W1049	Identify metals by using tests, such as magnet, spark, chip, or chemical		4.07	5	12	18	5	5.56	
0617	38.03.01.02. Repair panel assembly	a							
R873	Install metal patches or reinforcements		3.11	12	15	18	7	4.16	
0705	39.09.02. RRR Procedures	-							
Z1236	Perform crater damage repairs		3.35	8	14	17	11	5.44	

TD MEAN = 5.00; S.D. = 1.00 (HIGH = 6.00)

TE MEAN = 2.68; S.D. = 1.49 (HIGH = 4.17)

TABLE 25

EXAMPLES OF TASKS WITH HIGH TE PERFORMED BY 20 PERCENT OR MORE AFSC 3E3X1 PERSONNEL  
AND NOT REFERENCED TO THE STS

TASKS	PERCENT MEMBERS PERFORMING						TSK DIFF
	1ST	1ST	DAFSC	DAFSC	TNG	EMP	
	JOB (N=230)	ENL (N=456)	3E351 (N=686)	3E371 (N=260)			
B63	9	13	37	59	5.02	5.50	
C105	19	20	40	48	4.33	3.95	
F268	23	33	41	13	4.89	2.79	
G297	43	57	59	25	4.87	3.00	
G277	20	30	35	13	4.33	3.09	
G296	37	44	46	22	4.28	3.17	
G326	29	39	41	14	4.19	2.56	
I550	38	42	36	18	5.28	4.41	
I548	36	39	38	19	4.67	4.70	
I490	15	24	26	12	4.22	4.50	
I529	46	54	48	23	4.19	3.53	
P761	43	48	55	25	4.94	2.92	

TD MEAN = 5.00; S.D. = 1.00 (HIGH = 6.00)

TE MEAN = 2.68; S.D. = 1.49 (HIGH = 4.17)

### Plan of Instruction (POI) Analysis

Technical school SMEs matched JI tasks to the training objectives in the Air Force-only POI in this career ladder: J5ABN3E331 000. The draft POI is tentatively dated 1 January 1996. Training objectives were evaluated in a method similar to the STS analysis, as percent members performing data for entry-level personnel, TE, and TD ratings were examined.

POI blocks, units of instruction, and criterion objectives were compared against guidance provided by AETC Instruction 36-2601 (30 percent or more entry-level personnel performing trained tasks). In accordance with this guidance, tasks trained in the course not meeting these criteria should be considered for elimination from formal course training if not justified on some other acceptable basis. Examples of unsupported POI objectives are listed in Table 26. These objectives deal with metal work ranging from sheet metal fabrication to brazing and welding.

Several technical tasks performed by over 30 percent of entry-level personnel were not matched to the POI. Examples of these tasks with survey data are listed in Table 27. Training personnel and SMEs should review these and other unreferenced tasks to determine if these areas should be incorporated into the formal course.

### **JOB SATISFACTION ANALYSIS**

An examination of job satisfaction indicators can be very useful for career ladder managers as they attempt to determine possible factors affecting job performance of career ladder airmen. Job satisfaction data can be expanded to provide indications of general attitudes within specific DAFSC groups.

With this in mind, job satisfaction responses for AFSC 3E3X1 personnel were analyzed and provide a comparison across TAFMS groups of the AFSC 3E3X1 career ladder, and a comparative sample of other nonlateral logistics personnel surveyed in 1995.

Table 28 shows this comparison of TAFMS group data of AFSC 3E3X1 personnel to the comparative sample surveyed in 1995. These data give a relative measure of how AFSC 3E3X1 personnel job satisfaction responses compare with similar Air Force specialties. Overall, job satisfaction stays fairly constant as time-in-service increases across the TAFMS groups. Satisfaction tends to drop slightly during the second enlistment (49-96 months TAFMS), but increases again for those members with over 96 months. AFSC 3E3X1 members with 1-48 months TAFMS indicated somewhat higher levels of satisfaction than those of the comparative sample in most categories. Members with 49-96 or 97+ months TAFMS showed equal or lower job satisfaction than the comparative sample, except for a high intention to reenlist by 3E3X1 members in their second enlistment.

TABLE 26

EXAMPLES OF POI OBJECTIVES NOT SUPPORTED BY OSR DATA  
(LESS THAN 30 PERCENT MEMBERS PERFORMING)

POI OBJECTIVES/TASKS	TNG EMP	PERCENT MEMBERS PERFORMING			TSK DIFF
		IST (N=230)	JOB (N=456)	ENL (N=456)	
0007 I 3a. Given geometric problems related to laying out structural components and selected layout tools, graphically solve the problems to within $\pm$ 3/16 inch. Meas: PC, W					
V1041 Lay out sheet metal for parts fabrication using radial-line method	4.81	21	24	11	6.67
0044 II 3d. Given metal specimens, resistance welding equipment, and utilizing health and safety equipment, adjust and weld two lap joints. One of the two welds must conform to weld specifications. Meas: PC, W					
R850 Assemble sheet metal parts using spot welding equipment	4.00	19	20	7	4.78
0107 IV 3g. Given oxyacetylene equipment and metal specimens, select the correct tip, rod and flux for braze welding castings with 70 percent accuracy. Meas: PC, W.					
W1076 Stop drill cracks in metals	4.15	7	12	7	4.44
0134 VI 2a. Given inert gas welding equipment, set up the welding machine to within $\pm$ 5 amps for welding on carbon steel. Meas: PC, W					
W1063 Set up for (TIG) welding	4.59	26	27	11	5.49
0160 VII 4a. Without reference, identify facts pertaining to types and extent of wartime facility damage and repair prioritization, with 70 percent accuracy. Meas: PC, W					
Z1266 Repair structural bomb damages	4.59	8	11	11	5.74
0173 VII 8a. Without reference, identify facts pertaining to the design and construction of culverts, with 70 percent accuracy. Meas: PC, W					
Z1169 Construct field fortification	4.26	12	20	11	5.29

TE MEAN = 2.68; S.D. = 1.49 (HIGH = 4.17)

TD MEAN = 5.00; S.D. = 1.00 (HIGH = 6.00)



TABLE 27

EXAMPLES OF TASKS WITH HIGH TE PERFORMED BY 30 PERCENT OR MORE AFSC 3E3X1 PERSONNEL  
AND NOT REFERENCED TO THE POI

TASKS	TNG EMP	PERCENT MEMBERS PERFORMING			ATI	TSK DIFF
		1ST	JOB	ENL		
		(N=230)	(N=456)			
G300	5.63	33	42	12	4.45	
H335	5.89	43	53	18	4.99	
H381	5.61	46	51	18	4.00	
H347	5.44	31	37	12	4.33	
H344	5.41	57	63	13	2.58	
H337	5.33	34	41	12	4.07	
I513	6.17	44	51	18	5.23	
I489	5.98	61	64	13	3.93	
I491	5.85	45	52	18	4.83	
I545	5.74	53	56	13	3.94	
I479	5.70	68	74	13	3.82	
I458	5.61	56	62	13	3.49	
I480	5.57	50	60	18	4.51	
I478	5.46	67	70	18	4.20	
I460	5.43	58	67	13	3.18	
I477	5.31	57	61	18	4.10	
Z1211	5.35	40	49	10	3.88	

TD MEAN = 5.00; S.D. = 1.00 (HIGH = 6.00)

TE MEAN = 2.68; S.D. = 1.49 (HIGH = 4.17)

TABLE 28

## COMPARISON OF JOB SATISFACTION TO A COMPARATIVE SAMPLE

	1-48 MONTHS TAFMS		49-96 MONTHS TAFMS		97+ MONTHS TAFMS	
	3E3X1 (N=456)	COMP SAMPLE (N=5,049)	3E3X1 (N=252)	COMP SAMPLE (N=3,150)	3E3X1 (N=677)	COMP SAMPLE (N=6,337)
<u>EXPRESSED JOB INTEREST</u>						
INTERESTING	68	58	66	65	70	73
SO-SO	18	22	19	19	19	17
DULL	13	20	14	16	10	10
<u>PERCEIVED USE OF TALENTS</u>						
FAIRLY WELL TO PERFECT	77	66	68	74	76	80
NONE TO VERY LITTLE	22	34	31	26	24	20
<u>PERCEIVED USE OF TRAINING</u>						
FAIRLY WELL TO PERFECT	76	77	67	73	69	72
NONE TO VERY LITTLE	23	23	32	27	30	28
<u>SENSE OF ACCOMPLISHMENT FROM JOB</u>						
SATISFIED	72	57	70	74	69	73
NEUTRAL	15	42	12	26	10	9
DISSATISFIED	13	1	17	0	19	18
<u>REENLISTMENT INTENTIONS</u>						
YES OR PROBABLY YES	57	63	80	67	73	72
NO OR PROBABLY NO	42	16	19	12	11	10
WILL RETIRE	0	21	0	21	15	18

NOTE: Comparative data are from AFSCs 2S0X1 (Supply Management), 2T1X1 (Vehicle Operations), 3C0X1 (Communication-Computer Systems Operator), 3C0X2 (Communication-Computer Systems Programmer), 3E0X1 (Electrical Systems), 3E2X1 (Pavements & Construction Equipment), 3E3X1 (Structural), 3E4X1 (Utilities Systems), and 3V0X3 (Visual Information Production-Documentation). They were all surveyed in 1995.

Table 29 shows a comparison of job satisfaction for members of the current study to the satisfaction of the members in the pre-merged career ladders of the previous studies. Overall, job satisfaction was significantly higher in the previous studies than in the current one, except for the reenlistment intentions. These percentages are currently higher than they were in each of the previous studies.

In addition, job satisfaction data for identified job groups and clusters are provided in Table 30. Again, members across most identified groups provided generally positive job satisfaction responses. Roof framers, however, reported much lower responses when referring to the expressed interest in their job when compared to other job groups and clusters. Roof framers also reported lower responses for their sense of accomplishment than did the other job groups. Low responses were also reported for the perceived use of talents by Structural Specialty personnel, roof framers, training instructors, and mobility personnel; and the safety personnel, roof framers, and supervisors most strongly indicated that some of their members would retire. Also, the safety personnel and roof framers indicated that many did not feel that they were using their training.

## IMPLICATIONS

As explained in the **INTRODUCTION**, this survey was conducted primarily to ensure a current data base for the Structural career ladder (AFSC 3E3X1). Data compiled from this survey supports the successful merger of what was formerly two career ladders, Structural and Metal Fabrication. Furthermore, the Specialty Descriptions for the AFSC 3E3X1 career ladder accurately portray the clusters and jobs identified in this study. The majority of personnel perform technical tasks, but 3-skill level members are increasingly involved with the multi-skilled Structural Specialty Cluster. A portion of the more experienced people also work on all three areas.

Most of the STS and the POI are supported by survey data, but there are still several areas which are performed by a minimal percentage of personnel. Conversely, there are several tasks not matched in either document that require review for possible inclusion in the training documents.

Roof framing personnel consistently report much lower job satisfaction than members of the other job groups. In general, they have a reduced interest in the job, a lower sense of accomplishment, a lowered perception of the use of their training, and most do not plan to reenlist. When measured against a comparative sample of nonlateral, direct support AFSCs, 3E3X1 personnel in their first enlistment show greater job satisfaction, while second enlistment and career members have equal or lower satisfaction. Current 3E3X1 personnel are less satisfied with their jobs than was reported by members of the previous survey samples of 552X0 and 552X2, although current reenlistment intentions are stronger.

TABLE 29

COMPARISON OF JOB SATISFACTION FOR CURRENT 3E3X1 PERSONNEL TO MEMBERS OF THE PREVIOUS STUDIES  
(PERCENT MEMBERS PERFORMING)

	1-48 MONTHS TAFMS			49-96 MONTHS TAFMS			97+ MONTHS TAFMS		
	1995	1991	1986	1995	1991	1986	1995	1991	1986
	3E3X1	552X0	552X2	3E3X1	552X0	552X2	3E3X1	552X0	552X2
	(N=456)	(N=502)	(N=285)	(N=252)	(N=370)	(N=150)	(N=677)	(N=630)	(N=192)
<u>EXPRESSED JOB INTEREST</u>									
INTERESTING	68	75	84	66	78	78	70	67	83
SO-SO	18	14	11	19	17	13	19	15	8
DULL	13	11	4	14	6	8	10	8	7
<u>PERCEIVED USE OF TALENTS</u>									
FAIRLY WELL TO PERFECT	77	83	89	68	85	85	76	80	89
NONE TO VERY LITTLE	22	17	10	31	15	15	24	20	11
<u>PERCEIVED USE OF TRAINING</u>									
FAIRLY WELL TO PERFECT	76	82	90	67	80	82	69	83	85
NONE TO VERY LITTLE	23	18	10	32	20	18	30	22	14
<u>SENSE OF ACCOMPLISHMENT FROM JOB</u>									
SATISFIED	72	78	82	70	81	71	69	76	77
NEUTRAL	15	8	9	12	8	8	10	8	7
DISSATISFIED	13	14	8	17	11	21	19	16	14
<u>REENLISTMENT INTENTIONS</u>									
YES OR PROBABLY YES	57	54	58	80	79	75	73	15	78
NO OR PROBABLY NO	42	45	40	19	20	24	11	7	9
WILL RETIRE	0	1	2	0	0	1	15	77	13

TABLE 30

## JOB SATISFACTION ACROSS JOBS

	ROOFING JOB (STG261)	CONCRETE STRUCTURE JOB (STG267)	WOODCRAFT JOB (STG328)	TILE JOB (STG305)	STRUCTURAL SPECIALTY CLUSTER (STG128)	ROOF FRAMING JOB (STG309)
<u>EXPRESSED JOB INTEREST</u>						
INTERESTING	90	100	85	60	53	40
SO-SO	10	0	0	40	26	60
DULL	0	0	8	0	21	0
<u>PERCEIVED USE OF TALENTS</u>						
FAIRLY WELL TO PERFECT	90	100	84	100	57	60
NONE TO VERY LITTLE	10	0	8	0	42	40
<u>PERCEIVED USE OF TRAINING</u>						
FAIRLY WELL TO PERFECT	80	84	77	60	61	40
NONE TO VERY LITTLE	20	16	15	40	38	60
<u>SENSE OF ACCOMPLISHMENT FROM JOB</u>						
SATISFIED	90	100	77	60	61	40
NEUTRAL	10	0	8	40	12	0
DISSATISFIED	0	0	8	0	26	60
<u>REENLISTMENT INTENTIONS</u>						
YES OR PROBABLY YES	10	67	46	20	53	20
NO OR PROBABLY NO	0	17	8	20	31	60
WILL RETIRE	0	0	0	0	3	20

TABLE 30 (CONTINUED)

## JOB SATISFACTION ACROSS JOBS

	CARPENTRY CLUSTER (STG150)	MASONRY CLUSTER (STG239)	METAL MECHANICS CLUSTER (STG122)	LOCKSMITH JOB (STG547)	INSTRUCTING/ TRAINING JOB (STG346)	MOBILITY JOB (STG082)
<u>EXPRESSED JOB INTEREST</u>						
INTERESTING	67	79	75	100	80	62
SO-SO	21	13	16	0	0	24
DULL	11	7	8	0	20	9
<u>PERCEIVED USE OF TALENTS</u>						
FAIRLY WELL TO PERFECT	76	86	79	97	60	62
NONE TO VERY LITTLE	22	13	19	3	40	32
<u>PERCEIVED USE OF TRAINING</u>						
FAIRLY WELL TO PERFECT	69	84	81	85	60	50
NONE TO VERY LITTLE	30	15	18	15	40	44
<u>SENSE OF ACCOMPLISHMENT FROM JOB</u>						
SATISFIED	70	77	71	97	80	62
NEUTRAL	13	12	14	3	0	15
DISSATISFIED	15	10	14	0	20	18
<u>REENLISTMENT INTENTIONS</u>						
YES OR PROBABLY YES	56	60	60	59	100	74
NO OR PROBABLY NO	15	22	24	6	0	12
WILL RETIRE	4	4	2	12	0	9

TABLE 30 (CONTINUED)

## JOB SATISFACTION ACROSS JOBS

	SELF HELP JOB (STG277)	SUPERVISORY JOB (STG331)	QUALITY ASSURANCE JOB (STG292)	STRUCTURAL PLANNING JOB (STG293)	SABER JOB (STG364)	SAFETY JOB (STG288)
<u>EXPRESSED JOB INTEREST</u>						
INTERESTING	80	79	92	78	100	100
SO-SO	5	13	8	22	0	0
DULL	15	8	0	0	0	0
<u>PERCEIVED USE OF TALENTS</u>						
FAIRLY WELL TO PERFECT	85	84	83	89	88	80
NONE TO VERY LITTLE	15	15	17	11	11	20
<u>PERCEIVED USE OF TRAINING</u>						
FAIRLY WELL TO PERFECT	70	78	67	89	67	20
NONE TO VERY LITTLE	30	22	33	11	33	80
<u>SENSE OF ACCOMPLISHMENT FROM JOB</u>						
SATISFIED	85	74	75	78	89	100
NEUTRAL	5	8	8	11	0	0
DISSATISFIED	10	18	17	11	11	0
<u>REENLISTMENT INTENTIONS</u>						
YES OR PROBABLY YES	70	65	75	78	44	60
NO OR PROBABLY NO	15	11	8	11	44	20
WILL RETIRE	15	21	17	11	11	20

**APPENDIX A**

**SELECTED REPRESENTATIVE TASKS PERFORMED BY  
MEMBERS OF SPECIALTY JOBS**



**THIS PAGE INTENTIONALLY LEFT BLANK**

TABLE A1  
ROOFING JOB (STG261)

TASKS		PERCENT MEMBERS PERFORMING (N=10)
K611	Patch built-up roofing by hot or cold method	100
I539	Overlay asphalt roofing shingles	100
K614	Repair splits	90
I540	Overlay rolled roofing	90
I505	Install or replace rolled roofing	90
K589	Install or replace cold-process roofing materials	90
K587	Install or replace built-up system roofing membranes	90
K595	Install or replace latex-coated roofing	90
K583	Inspect built-up roofing systems	70
I468	Install or replace asphalt roofing shingles	70
K612	Perform operator maintenance on tar kettles	70
K584	Install built-up roofing systems	70
K594	Install or replace impermeable coatings	70
K590	Install or replace deckings	70
I507	Install or replace sheathing on exterior walls or roofs	70
K582	Calculate materials for built-up roofs	60
K593	Install or replace gravel guards	60
I476	Install or replace corrugated metal or fiberglass roofing	60
K588	Install or replace cant strips	60
K596	Install or replace metal flashings, other than in drip caps or gravel guards	60
I527	Install or replace wooden roof shingles	60
I473	Install or replace clay tile shingles	50
K597	Install or replace modified bituminous systems	50
K602	Install or replace roof vents	50
K586	Install or replace bituminous emulsions	50
K581	Apply liquid or paste coatings	50
K604	Install or replace surfacing materials	50
P759	Clean handtools	40
K609	Operate tar kettle pumps	40
K610	Operate tar kettles	40
K608	Lay out roof vents	40
I471	Install or replace building paper	40
P761	Clean shop-installed power equipment	30

TABLE A2  
CONCRETE STRUCTURE JOB (STG267)

TASKS		PERCENT MEMBERS PERFORMING (N=6)
F273	Remove wooden or metal forms	100
G310	Place concrete in forms	100
G319	Screed concrete	100
F268	Cut reinforcing steel	83
F265	Construct slab forms	83
G286	Compact subgrades with mechanical tampers	83
G312	Place reinforcing wire in slabs	83
G300	Finish concrete with handtools	83
F249	Apply oil to forms prior to placement of concrete	83
G311	Place reinforcing steel in columns, forms, or walls	83
H335	Construct door to window openings	83
G299	Edge concrete	83
G327	Wet subgrade prior to placing concrete	83
G326	Transport concrete by wheelbarrows	83
G294	Cure concrete	83
A42	Sketch working drawings	67
G277	Bend reinforcing steel	67
F252	Clean or store wood or metal forms	67
G320	Tie reinforcing steel	67
F259	Construct footing forms, other than keyway joint footing forms	67
F251	Calculate form requirements for size, shape, strength, or placement	67
G302	Float concrete	67
G276	Backfill concrete foundations	67
G285	Compact subgrades with hand tampers	67
G297	Drill holes in concrete with hammer drills	50
F250	Assemble metal footing forms	50
G289	Consolidate concrete with internal or external vibrators	50
F257	Construct earthen forms	50
G280	Break concrete with pneumatic jackhammers or electric hammers	50
F272	Install snap or wire ties	50
F274	Saw concrete, masonry, plaster, or tile with dry or wet saws	50
G296	Drill holes in concrete with electric or pneumatic drills	50
G325	Transport concrete by transit trucks	50
G303	Inspect concrete for defects, such as cracks, scaling, spalls, popouts, honeycombs, or settlement	50
G301	Finish concrete with power trowels	50
A9	Determine completion time estimates for fabrications or repairs	33
A12	Determine man-hour estimates for fabrications or repairs	33
F269	Drill snap tie holes	33

TABLE A3  
WOODCRAFT JOB (STG328)

TASKS		PERCENT MEMBERS PERFORMING (N=13)
P797	Remove or replace parts on powered or nonpowered handtools or equipment, such as bits, belts, discs, or blades	100
J557	Construct picture frames	92
P772	Inspect shop-installed power equipment	92
P796	Remove or replace parts on portable electric or pneumatic power equipment, such as bits, belts, discs, or blades	92
P759	Clean handtools	92
P761	Clean shop-installed power equipment	85
P748	Adjust handtools	85
P768	Inspect handtools	85
P753	Adjust shop-installed power equipment	85
P798	Remove or replace parts on shop-installed nonpowered equipment, such as bits, belts, discs, or blades	85
P799	Remove or replace parts on shop-installed power equipment, such as bits, belts, discs, or blades	85
P769	Inspect portable electric or pneumatic power tools	85
P749	Adjust portable electric or pneumatic power tools	85
J554	Construct cabinets	77
P788	Remove or replace blades on vertical bandsaws	77
J556	Construct desk or wall plaques	69
J558	Construct storage bins	69
P770	Inspect sawdust hoppers and related components	69
P760	Clean portable electric or pneumatic power tools	69
I460	Cut plexiglass	69
J564	Install or replace cabinets	62
J559	Construct tables	62
P763	Cut and fit bandsaw blades	62
J563	Install or replace cabinet doors	54
J579	Repair damaged cabinets	54
J569	Install or replace laminated plastics on furnishings, such as countertops or splashboards	46
J575	Remove or replace cabinet drawers, hinges, or knobs	46
C105	Inspect condition of handtools or safety equipment	38
J552	Construct aircraft wood furnishings	38

TABLE A4  
TILE JOB (STG305)

<u>TASKS</u>	PERCENT MEMBERS PERFORMING (N=5)
O740 Repair grout	100
O716 Apply grout to ceramic, mosaic, or quarry tiles	100
O717 Apply neat coats to plaster walls for ceramic tiles	100
O722 Cut and shape ceramic, mosaic, or quarry tiles with power equipment	100
O721 Cut and shape ceramic, mosaic, or quarry tiles with handtools	100
O737 Prepare surfaces for ceramic, mosaic, or quarry tiles	100
O735 Prepare grout for ceramic tiles	100
O738 Remove or replace broken ceramic, mosaic, or quarry tiles	100
O730 Lay out ceramic tiles, other than mosaic ceramic tiles	100
O742 Set ceramic tiles, other than mosaic ceramic tiles	100
O724 Float ceramic or quarry tiles	100
O733 Mix additives to thin set mortars and grout	100
O714 Apply adhesive mastics to gypsum board	100
O734 Prepare epoxy adhesives	100
O741 Seal tile grout	80
G297 Drill holes in concrete with hammer drills	80
G305 Install anchor bolts or fastening devices	80
O736 Prepare grout for quarry or mosaic tiles	80
I467 Install or replace asphalt or vinyl floor tiles	80
O715 Apply float coats for quarry tiles	80
O744 Set quarry tiles	80
I448 Caulk windows, sinks, or bathtubs	60
I443 Adjust door locks	60
Q820 Install or replace door locks, other than cipher locks	60
I442 Adjust door closer components	60
O727 Install or replace fixtures, such as soap holders or towel bars	60
G296 Drill holes in concrete with electric or pneumatic drills	60
O723 Fabricate conventional shower pans	60
O725 Install or remove conventional shower pans	60
O726 Install or remove precast shower pans	60
P759 Clean handtools	60
G310 Place concrete in forms	60
G298 Drill holes in concrete with star bits	60
O718 Apply thin sets to masonry	60
O731 Lay out mosaic ceramic tiles	60
O732 Lay out quarry tiles	60
G303 Inspect concrete for defects, such as cracks, scaling, spalls, popouts, honeycombs, or settlement	60
G315 Remove broken concrete	60
G326 Remove concrete by wheelbarrows	60

TABLE A5

## STRUCTURAL SPECIALTY CLUSTER (STG128)

TASKS		PERCENT MEMBERS PERFORMING (N=156)
I442	Adjust door closer components	98
I478	Install or replace door closers	94
I479	Install or replace door hinges	89
I444	Adjust panic hardware	81
I477	Install or replace door closer components	81
I443	Adjust door locks	79
I460	Cut plexiglass	79
I448	Caulk windows, sinks, or bathtubs	75
I489	Install or replace gypsum board	72
I458	Cut glass	71
R852	Drill holes in metal	69
I545	Repair holes in gypsum board	69
I529	Install plexiglass	65
I549	Replace glass in windows	64
P759	Clean handtools	63
I491	Install or replace hollow or solid-core doors	60
I480	Install or replace door jambs or stops	59
Q820	Install or replace door locks, other than cipher locks	58
I467	Install or replace asphalt or vinyl floor tiles	57
I550	Replace or repair windows	54
I535	Maintain door locks	53
I513	Install or replace suspended ceilings	52
R862	Fasten parts with bolts or screws	51
G297	Drill holes in concrete with hammer drills	49
I543	Repair doors or window units	49
I517	Install or replace thresholds	48
I548	Replace door lock knobs, cylinders, or cylinder housings	47
H344	Cut studs	47
P748	Adjust handtools	46
I523	Install or replace weather strippings	45
Q823	Install or replace panic hardware	45
H364	Install or replace door or window units	45
I521	Install or replace wall or ceiling acoustical materials	44
P768	Inspect handtools	44
I551	Tape and float gypsum board surfaces	43
Z1211	Maintain gas masks	40
G296	Drill holes in concrete with electric or pneumatic drills	39
I446	Apply interior or exterior protective coatings to exposed wood surfaces, such as varnishes, paints, or stains	38
Z1213	Maintain personal documentation, such as shot records or military ID tags	38
Z1162	Assemble or tow AM-2 matting for RRRs	37

TABLE A6

## ROOF FRAMING JOB (STG309)

TASKS	PERCENT MEMBERS PERFORMING (N=5)	
Z1211	Maintain gas masks	100
Z1189	Fire weapons for qualifications	100
I489	Install or replace gypsum board	100
I513	Install or replace suspended ceilings	100
H336	Construct hardback tent frames	100
H409	Lay out headers	100
H410	Lay out hip rafters	100
H407	Lay out floor joists	100
H411	Lay out jack rafters	100
H384	Install or replace top plates	100
H403	Lay out door or window openings	100
Z1271	Tear down, inspect, clean, and reassemble weapons	100
H402	Lay out cripples	100
H398	Lay out ceiling joists	100
H373	Install or replace jack rafters	100
H371	Install or replace hip rafters	100
H387	Install or replace valley rafters	100
R852	Drill holes in metal	100
H344	Cut studs	100
H337	Construct headers	100
H375	Install or replace ridgeboards	100
H400	Lay out common rafters	100
H370	Install or replace headers	100
I460	Cut plexiglass	80
P768	Inspect handtools	80
Z1168	Construct facilities to support field activities	80
H386	Install or replace trusses	80
Z1178	Erect hardback tents	80
H359	Install or replace ceiling joists	80
H408	Lay out floor trusses	80
I480	Install or replace door jambs or stops	80
Z1162	Assemble or tow AM-2 matting for RRRs	80
H414	Lay out pony or knee walls	80
Z1191	Identify and report suspected UXO	80
H379	Install or replace stairway or stairway landings	80
H352	Install knee walls	80
H361	Install or replace common rafters	80
Z1190	Identify and report suspected ordnance, other than UXO	80
H381	Install or replace studs	80
H405	Lay out double-top plates	80
H365	Install or replace double-top plates	80

TABLE A7  
CARPENTRY CLUSTER (STG150)

TASKS		PERCENT MEMBERS PERFORMING (N=439)
I479	Install or replace door hinges	95
I491	Install or replace hollow or solid-core doors	92
I460	Cut plexiglass	92
I480	Install or replace door jambs or stops	91
I489	Install or replace gypsum board	90
H344	Cut studs	90
I442	Adjust door closer components	89
I478	Install or replace door closers	89
H381	Install or replace studs	87
H335	Construct door or window openings	86
I513	Install or replace suspended ceilings	85
I443	Adjust door locks	85
I448	Caulk windows, sinks, or bathtubs	85
H364	Install or replace door or window units	85
I529	Install plexiglass	85
I545	Repair holes in gypsum board	84
I467	Install or replace asphalt or vinyl floor tiles	84
I458	Cut glass	83
P759	Clean handtools	81
I519	Install or replace trim moldings, such as baseboards, wainscoting, or door or window casings	81
I477	Install or replace door closer components	80
G297	Drill holes in concrete with hammer drills	80
H337	Construct headers	80
I517	Install or replace thresholds	79
I521	Install or replace wall or ceiling acoustical materials	78
I551	Tape and float gypsum board surfaces	78
I444	Adjust panic hardware	78
H427	Lay out studs	78
H338	Construct interior partitions	77
I549	Replace glass in windows	76
I523	Install or replace weather strippings	76
I482	Install or replace door or window closures	75
P768	Inspect handtools	74
I446	Apply interior or exterior protective coatings to exposed wood surfaces, such as varnishes, paints, or stains	74
H347	Erect interior partitions	74
H403	Lay out door or window openings	73
I543	Repair door or window units	72
Q820	Install or replace door locks, other than cipher locks	71



TABLE A8  
MASONRY CLUSTER (STG239)

<u>TASKS</u>	<u>PERCENT MEMBERS PERFORMING (N=113)</u>
G319    Screed concrete	96
G300    Finish concrete with handtools	95
G299    Edge concrete	94
G302    Float concrete	94
G310    Place concrete in forms	93
F273    Remove wooden or metal forms	92
F274    Saw concrete, masonry, plaster, or tile with dry or wet saws	89
G277    Bend reinforcing steel	89
F268    Cut reinforcing steel	88
G311    Place reinforcing steel in columns, forms, or walls	87
F265    Construct slab forms	86
G312    Place reinforcing wire in slabs	86
G326    Transport concrete by wheelbarrows	86
G327    Wet subgrade prior to placing concrete	85
G320    Tie reinforcing steel	84
F249    Apply oil to forms prior to placement of concrete	81
G297    Drill holes in concrete with hammer drills	81
N712    Spread mortar for blocks, bricks, or structural tiles	81
G289    Consolidate concrete with internal or external vibrators	80
G306    Install construction, expansion, or contraction joints	79
P759    Clean handtools	77
G305    Install anchor bolts or fastening devices	77
G294    Cure concrete	76
N701    Perform level checks of blocks, bricks, or structural tile construction with levels	75
N682    Cut blocks, bricks, or structural tiles with masonry saws	75
H344    Cut studs	75
N713    Strike lines for laying blocks, bricks, or structural tiles	74
I489    Install or replace gypsum board	74
N696    Lay block, brick, or structural tile walls	73
G296    Drill holes in concrete with electric or pneumatic drills	73
N694    Install rebar in load-bearing block walls	73
G314    Place vapor barriers on subgrade prior to rebar or concrete placement	73
I461    Erect or disassemble metal scaffolding	73
N702    Perform level check of blocks, bricks, or structural tile construction with strings	72
L631    Mix mortar by mortar mixers	71
L630    Mix mortar by hand	71
G280    Break concrete with pneumatic jackhammers or electric hammers	71
F257    Construct earthen forms	69

TABLE A9

## METAL MECHANICS CLUSTER (STG122)

TASKS	PERCENT MEMBERS PERFORMING (N=354)
V1023 Cut sheet metal for parts using shop equipment	96
V1022 Cut sheet metal for parts using handtools	96
R852 Drill holes in metal	94
V1038 Form sheet metal parts using handtools	94
V1039 Form sheet metal parts using shop equipment	93
V1021 Assemble sheet metal parts with quick-action fasteners, rivets, bolts, screws, or adhesives	90
W1071 Set up for oxyacetylene cutting	90
W1055 Ready metal for welding butt joints	90
P758 Change oxygen or acetylene bottles	90
R862 Fasten parts with bolts or screws	89
P759 Clean handtools	86
W1053 Ready metal edges for welding	86
R864 Grind down grooves or sharp edges	85
W1066 Set up for flat position welding	85
W1057 Ready metal for welding lap joints	85
R861 Fasten parts with blind rivets	84
P755 Assemble or disassemble oxyacetylene equipment	84
V1030 Fabricate Pittsburg-lock seams	83
V1040 Lay out sheet metal for parts fabrication using parallel-line method	83
P747 Adjust brakes for metal thickness	83
V1033 Fabricate S-and drive slips	81
R856 Fabricate or erect duct work	81
P768 Inspect handtools	80
W1058 Ready metal for welding tee joints	80
V1043 Seal sheet metal parts using caulking compounds	80
V1024 Design sheet metal assemblies or parts	79
W1056 Ready metal for welding corner or edge joints	79
V1044 Seal sheet metal parts using lead tape, aluminum tape, or duct tape	79
P745 Adjust bench grinder tool rests	79
R900 Remove rivets	79
R903 Tap holes in metal	79
I442 Adjust door closer components	78
W1068 Set up for horizontal position welding	78
I479 Install or replace door hinges	77
R888 Remove or replace duct work	77
P748 Adjust handtools	77
P780 Perform operator maintenance on oxyacetylene equipment	77
W1075 Set up for vertical position welding	77
X1089 Cut carbon steels using oxyacetylene equipment	76
P777 Perform leak tests on oxyacetylene equipment	76

TABLE A10  
LOCKSMITH JOB (STG547)

TASKS	PERCENT MEMBERS PERFORMING (N=34)
Q843 Repin interchangeable core locks	100
Q820 Install or replace door locks, other than cipher locks	100
Q830 Master key interchangeable core locks	100
Q822 Install or replace mechanical or cipher locks	100
Q823 Install or replace panic hardware	100
Q816 Duplicate keys with key duplicating machines	97
Q818 Implement master key systems	97
Q837 Pick locks	97
Q814 Duplicate keys with code key machines	94
Q810 Design master key systems	94
Q832 Modify locking device parts	94
Q836 Perform preventive maintenance on code key machines or key duplicating machines	94
Q827 Maintain master keying system records	91
I443 Adjust door locks	91
I444 Adjust panic hardware	91
Q844 Repin regular pin locks	91
Q831 Master key regular pin locks	91
Q809 Decipher lock combinations	91
I534 Maintain cipher locks	88
Q824 Install or replace safe locks	85
Q845 Replace combination wheel packs	85
Q819 Install or replace cabinet or desk locks	85
Q817 File keys by hand	85
I535 Maintain door locks	82
I463 Extract broken keys from locks	82
I450 Clean locks	82
Q838 Realign or replace safe dial assemblies	82
Q834 Perform maintenance checks on safes	82
Q835 Perform periodic maintenance on safe locks	82
I442 Adjust door closer components	82
Q847 Replace safe-lock springs, screws, wheels, or pins	82
Q841 Remove or replace padlock locking cylinders, other than high-security padlocks	79
Q815 Duplicate keys with impression methods	76
Q830 Realign or replace safe drawer tracks or rollers	68
Q829 Manipulate safe combinations	65
Q842 Repair drilled holes in safe doors or drawers	65
E158 Annotate AF Forms 1800 (Operator's Inspection Guide and Trouble Report (General Purpose Vehicles))	62
Q812 Drill open high-security padlocks	62

TABLE A11

## INSTRUCTING/TRAINING JOB (STG346)

TASKS	PERCENT MEMBERS PERFORMING (N=5)
D141 Evaluate training methods or techniques	100
D140 Evaluate progress of trainees	100
D147 Plan or schedule training, such as OJT, proficiency training, or orientation training	100
D127 Counsel trainees on training progress	100
D119 Brief organizational personnel on training programs or matters	100
D116 Administer or score training tests	100
D142 Evaluate training requirements for instructors	100
D136 Evaluate effectiveness of training programs	100
D139 Evaluate personnel for training needs	100
D143 Implement or direct training programs	80
D153 Select or schedule personnel for specialized training	80
D128 Determine OJT upgrade or resident course training requirements	80
D138 Evaluate or inspect training materials or aids for operation or suitability	80
D152 Schedule advanced or special training	80
D125 Conduct training conferences or briefings	80
D137 Evaluate effectiveness of training, such as career knowledge upgrade, job proficiency upgrade, or qualification training	80
D117 Assign OJT trainers or supervisors	80
D146 Maintain training records, charts, graphs, or files	80
A38 Prepare agenda for general meetings, such as staff meeting, conferences, workshops, or briefings	80
D121 Conduct computer training	80
D151 Procure training aids, space, or equipment	80
D154 Verify CDC enrollment of personnel	60
D135 Establish or maintain study reference files	60
D123 Conduct OJT upgrade training	60
D130 Develop equipment training programs	60
D150 Prepare student withdrawal or entry forms	40

TABLE A12  
MOBILITY JOB (STG082)

<u>TASKS</u>	PERCENT MEMBERS PERFORMING (N=34)
Z1189 Fire weapons for qualifications	97
Z1195 Inspect mobility bags or kits	85
Z1258 Prepare personal clothing and equipment for deployment	82
Z1177 Erect camouflage netting	82
Z1271 Tear down, inspect, clean, and reassemble weapons	79
Z1225 Pack contingency or mobility equipment	76
Z1175 Don or doff chemical warfare personal protective clothing	76
Z1179 Erect or dismantle tents, other than hardback tents	76
Z1213 Maintain personal documentation, such as shot records or military ID tags	74
Z1178 Erect hardback tents	74
Z1211 Maintain gas masks	71
Z1226 Pack or unpack camouflage netting	71
Z1249 Practice COMSEC or OPSEC during contingency exercises or operations	68
Z1243 Perform or practice first-aid lifesaving techniques	68
Z1191 Identify and report suspected UXO	68
Z1228 Palletize contingency equipment	62
Z1229 Participate in mobility exercise planning meetings	62
Z1168 Construct facilities to support field activities	62
Z1223 Operate tent heaters	62
Z1272 Transport mobility equipment to or from deployed locations	59
Z1242 Perform operator maintenance of government vehicles	59
Z1230 Perform camouflaging procedures for personnel or equipment	59
Z1221 Operate portable field radios	56
Z1196 Inspect packed or palletized mobility equipment prior to transport	56
Z1183 Establish equipment or personnel requirements for mobility exercises or deployments	56
Z1193 Identify chemical warfare agents	53
Z1162 Assemble or tow AM-2 matting for RRRs	53
Z1165 Conduct mobility exercise or deployment site surveys	53
Z1214 Monitor mobility deployments kits	53
Z1250 Practice convoy defense techniques	53
D122 Conduct mobility training	50
C111 Write EPRs	50
E246 Store equipment, tools, or supplies	47
Z1206 Lay AM-2 matting for surfaces, other than runways or aircraft parking	47
A30 Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	44
Z1237 Perform decontamination procedures for chemical warfare agents	44
Z1232 Perform cargo build-ups for airlift	44
Z1174 Develop mobility inspection checklists	44
Z1190 Identify and report suspected ordnance, other than UXO	44

TABLE A13  
SELF HELP JOB (STG277)

<u>TASKS</u>	<u>PERCENT MEMBERS PERFORMING (N=20)</u>
E246 Store equipment, tools, or supplies	100
E235 Review AF Forms 332 (Base Civil Engineer Work Request)	95
E199 Inventory equipment, tools, or supplies, other than CTKs	95
A42 Sketch working drawing	95
E158 Annotate AF Forms 1800 (Operator's Inspection Guide and Trouble Report (General Purpose Vehicles))	90
A30 Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	90
C82 Evaluate completed special projects, such as self-help work orders	85
E201 Issue or log turn-ins of equipment, tools, or supplies	85
E177 Coordinate material or work order status with materiel control	85
A8 Coordinate work requests with appropriate agencies	85
C105 Inspect condition of handtools or safety equipment	85
A25 Establish procedures for accountability of equipment, tools, or supplies	80
A6 Coordinate site planning with project requesters	80
C83 Evaluate completed work or work-in-progress jobs	75
E215 Maintain work order files	75
E216 Monitor shop stock levels	75
A13 Determine or establish logistics requirements, such as personnel, equipment, space, tools, or supplies	75
E222 Prepare requisitions for local purchase of equipment, tools, or supplies	75
E195 Initiate E-mail	75
B52 Establish types of materials required for carpentry, masonry, or roofing projects	70
E200 Issue nonaccountable supplies	70
B63 Interpret construction drawings	70
E176 Coordinate maintenance or supply matters with appropriate agencies	70
E174 Coordinate local purchase of equipment or supplies with appropriate agencies	70
E178 Coordinate procurement of parts or materials with base supply	70
A28 Establish work methods or procedures	65
B59 Implement work methods or inspection procedures	65
E221 Prepare requisitions for equipment, tools, or supplies, other than for local purchase	65
P768 Inspect handtools	65
Z1213 Maintain personal documentation, such as shot records or military ID tags	65
Z1189 Fire weapons for qualifications	65
Z1211 Maintain gas masks	65
E169 Complete AF Forms 327 (Base Civil Engineer Work Order)	60
A10 Determine cost-estimates for fabrications or repairs	60
C92 Evaluate maintenance of equipment, tools, supplies, or workspace	60

TABLE A14  
SUPERVISORY JOB (STG331)

TASKS		PERCENT MEMBERS PERFORMING (N=105)
B46	Counsel personnel on personal or military-related matters	97
C111	Write EPRs	95
C113	Write recommendations for awards or decorations	91
A3	Conduct supervisory orientations of newly assigned personnel	90
A30	Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	89
C77	Conduct PFW evaluation sessions	89
B70	Supervise Structural Journeymen (AFSC 3E351)	88
A24	Establish performance standards for subordinates	88
C106	Inspect personnel for compliance with military standards	87
B68	Supervise military personnel with AFSC other than 3E3X1	86
B53	Establish work schedules	84
C95	Evaluate personnel for compliance with performance standards	84
E158	Annotate AF Forms 1800 (Operator's Inspection Guide and Trouble Report (General Purpose Vehicles))	84
A35	Plan or schedule work assignments or priorities	81
C83	Evaluate completed work or work-in-progress jobs	80
A13	Determine or establish logistics requirements, such as personnel, equipment, space, tools, or supplies	80
C96	Evaluate personnel for promotion, demotion, reclassification, or special awards	80
B67	Supervise civilians	78
B63	Interpret construction drawings	77
A2	Assign sponsors for incoming personnel	77
E174	Coordinate local purchase of equipment or supplies with appropriate agencies	76
B69	Supervise Structural Apprentices (AFSC 3E331)	75
E177	Coordinate material or work order status with materiel control	75
A8	Coordinate work requests with appropriate agencies	75
A9	Determine completion time estimates for fabrications or repairs	75
E235	Review AF Forms 332 (Base Civil Engineer Work Request)	73
A12	Determine man-hour estimates for fabrications or repairs	73
D117	Assign OJT trainers or supervisors	72
A10	Determine cost-estimates for fabrications or repairs	71
C78	Conduct self-inspections	71
B52	Establish types of materials required for carpentry, masonry, or roofing projects	70
C104	Indorse EPRs	70
B64	Interpret policies, directives, or procedures for subordinates	70
A25	Establish procedures for accountability of equipment, tools, or supplies	69
A28	Establish work methods or procedures	68

TABLE A15  
QUALITY ASSURANCE JOB (STG292)

TASKS		PERCENT MEMBERS PERFORMING (N=12)
A30	Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	100
C95	Evaluate personnel for compliance with performance standards	100
B68	Supervise military personnel with AFSC other than 3E3X1	92
C104	Indorse EPRs	92
B46	Counsel personnel on personal or military-related matters	92
B66	Plan or prepare briefings	83
C74	Analyze work load requirements	83
E235	Review AF Forms 332 (Base Civil Engineer Work Request)	83
B64	Interpret policies, directives, or procedures for subordinates	83
C77	Conduct PFW evaluation sessions	83
C111	Write EPRs	83
A31	Participate in production conferences	75
C81	Evaluate budget requirements	75
C98	Evaluate requirements for personnel or equipment	75
A8	Coordinate work request with appropriate agencies	75
Z1213	Maintain personal documentation, such as shot records or military ID tags	75
C113	Write recommendations for awards or decorations	75
A23	Establish organizational policies, such as operating instructions (OIs) or standard operating procedures (SOPs)	75
B60	Initiate actions required due to substandard performance of personnel	75
A24	Establish performance standards for subordinates	67
C112	Write inspection reports	67
B45	Conduct general staff meetings or briefings	67
A28	Establish work methods or procedures	67
B59	Implement work methods or inspection procedures	67
C96	Evaluate personnel for promotion, demotion, reclassification, or special awards	67
C78	Conduct self-inspections	67
Z1175	Don or doff chemical warfare personal protective clothing	67
A43	Write job or position descriptions	67
A3	Conduct supervisory orientations of newly assigned personnel	67
E195	Initiate E-mail	58
A17	Develop inputs to mobility, contingency, disaster preparedness, or unit emergency, or alert plans	58
A39	Prepare tables, graphs, or diagrams for technical reports	58
C110	Write civilian performance appraisals	58
A38	Prepare agenda for general meetings, such as staff meetings, conferences, workshops, or briefings	58
C103	Indorse civilian performance appraisals	58
A21	Draft budget requirements	58



TABLE A16  
STRUCTURAL PLANNING JOB (STG293)

<u>TASKS</u>	PERCENT MEMBERS PERFORMING (N=9)
A10 Determine cost-estimates for fabrications or repairs	89
A8 Coordinate work requests with appropriate agencies	89
Z1178 Erect hardback tents	89
Z1177 Erect camouflage netting	89
Z1211 Maintain gas masks	89
E235 Review AF Forms 332 (Base Civil Engineer Work Request)	78
A30 Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	78
Z1213 Maintain personal documentation, such as shot records or military ID tags	78
Z1175 Don or doff chemical warfare personal protective clothing	78
Z1162 Assemble or tow AM-2 matting for RRRs	78
A9 Determine completion time estimates for fabrications or repairs	67
A12 Determine man-hour estimates for fabrications or repairs	67
E158 Annotate AF Forms 1800 (Operator's Inspection Guide and Trouble Report (General Purpose Vehicles))	67
Z1179 Erect or dismantle tents, other than hardback tents	67
Z1189 Fire weapons for qualifications	67
Z1168 Construct facilities to support field activities	67
E169 Complete AF Forms 327 (Base Civil Engineer Work Order)	56
A42 Sketch working drawings	56
A13 Determine or establish logistics requirements, such as personnel, equipment, space, tools, or supplies	44
C85 Evaluate contractor progress	44
A6 Coordinate site planning with project requesters	44
B52 Establish types of materials required for carpentry, masonry, or roofing projects	44
C83 Evaluate complete work or work-in-progress jobs	33
B63 Interpret construction drawings	33
B46 Counsel personnel on personal or military-related matters	33
E177 Coordinate material or work order status with mater	

TABLE A17  
SABER JOB (STG364)

TASKS		PERCENT MEMBERS PERFORMING (N=9)
C83	Evaluate complete work or work-in-progress	89
B63	Interpret construction drawings	89
A6	Coordinate site planning with project requesters	89
A42	Sketch working drawings	89
A10	Determine cost-estimates for fabrications or repairs	78
A30	Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	78
A34	Plan layouts of facilities	78
E191	Initiate AF Forms 103 (Base Civil Engineering Work Clearance Request)	78
E158	Annotate AF Forms 1800 (Operator's Inspection Guide and Trouble Report (General Purpose Vehicles))	78
C85	Evaluate contractor progress	67
E160	Compile information for records, reports, or logs	67
E168	Complete AF Forms 3065 (Contract Progress Report)	67
A12	Determine man-hour estimates for fabrications or repairs	67
C91	Evaluate layouts of facilities	67
E235	Review AF Forms 332 (Base Civil Engineer Work Request)	67
E196	Initiate messages	67
A9	Determine completion time estimates for fabrications or repairs	56
C112	Write inspection reports	56
E203	Maintain administrative files	56
E195	Initiate E-mail	56
C88	Evaluate inspection report findings	44
A8	Coordinate work request with appropriate agencies	33
B52	Establish types of materials required for carpentry, masonry, or roofing projects	33
E215	Maintain work order files	33
C89	Evaluate job hazards or compliance with AFOSH Program standards	33
B66	Plan or prepare briefings	33
C84	Evaluate contingency procedures	22

TABLE A18  
SAFETY JOB (STG288)

<u>TASKS</u>	<u>PERCENT MEMBERS PERFORMING (N=5)</u>
C108 Perform safety inspections of facilities or equipment	100
C99 Evaluate safety or security programs	100
C89 Evaluate job hazards or compliance with AFOSH program standards	100
B56 Implement safety or security programs	100
A30 Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	100
C105 Inspect condition of handtools or safety equipment	80
A37 Plan safety or security programs	80
B66 Plan or prepare briefings	80
A14 Determine or establish publications requirements	80
E160 Compile information for records, reports, or logs	80
A20 Develop self-inspection program checklists	80
E195 Initiate E-mail	80
C80 Evaluate accident or incident reports	60
A38 Prepare agenda for general meetings, such as staff meetings, conferences, workshops, or briefings	60
C114 Write replies to inspection reports	60
C112 Write inspection reports	60
B59 Implement work methods or inspection procedures	60
Z1213 Maintain personal documentation, such as shot records or military ID tags	60
A22 Establish administrative files	60
A23 Establish organizational policies, such as OIs or SOPs	60
C78 Conduct self-inspections	60
A39 Prepare tables, graphs, or diagrams for technical reports	40
Z1188 Evaluate mobility exercise or deployment after-action report inputs	40
E203 Maintain administrative files	40
Z1211 Maintain gas masks	40
Z1217 Operate chemical warfare personnel protective equipment	40
B45 Conduct general staff meetings or briefings	40
Z1175 Don or doff chemical warfare personal protective clothing	40