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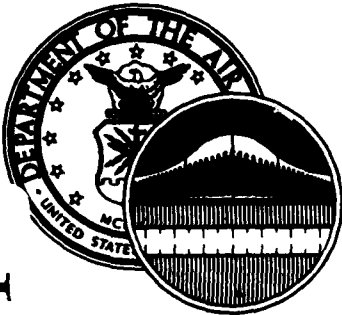
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PAVEMENTS MAINTENANCE SPECIALIST (AFSC 551X0) AND CONSTRUCTION --ETC(U)
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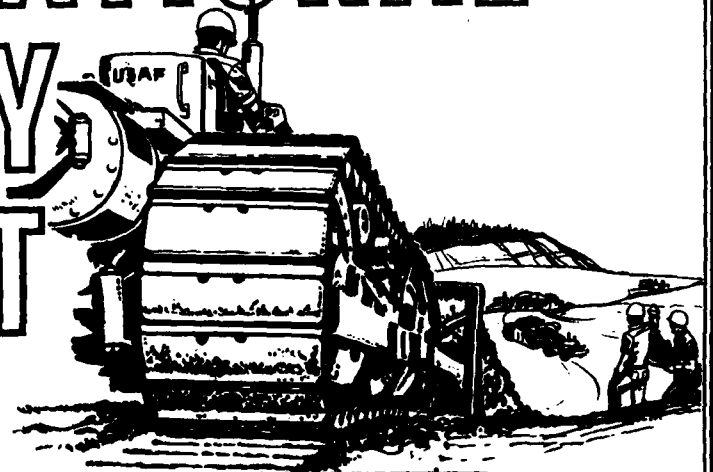
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UNITED STATES AIR FORCE

AD A119301

OCCUPATIONAL SURVEY REPORT



PAVEMENTS MAINTENANCE SPECIALIST (AFSC 551X0)
AND

CONSTRUCTION EQUIPMENT OPERATOR (AFSC 551X1)

CAREER LADDERS

AFPT 90-551-443

AUGUST 1982

SEP 16 1982

**OCCUPATIONAL ANALYSIS PROGRAM
USAF OCCUPATIONAL MEASUREMENT CENTER
AIR TRAINING COMMAND
RANDOLPH AFB, TEXAS 78150**

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AFHRL/LRT	1	1	1m	1m/1h
AFHRL/MODS	2	6	1m	1m
AFMEA/MEMD	1	1	1h	1
AFMPC/MPCHS	1	1		
AFMPC/MPCRPO	2			
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HQ ESC/DPTE	3	3		3
HQ MAC/DPAT	3	3		3
HQ PACAF/DPAL	1	1		1
HQ PACAF/DPAT	3	3		3
HQ SAC/DPAT	3	3		3
HQ SAC/LGMQ (ATCLO)	1	1		1
HQ TAC/DPAT	3	3		3
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AFESC/DEMG (TYNDALL AFB FL 32401)	1	1		1
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HQ USAFE/DPATC	1	1		1
HQ USMC/OMU	1	1		
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NODAC	1	1		
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PREFACE

This report presents the results of an Air Force Occupational Survey of the Pavements Maintenance Specialist (AFSC 551X0) and Construction Equipment Operator (AFSC 551X1) career ladders. The report was requested by the USAF Engineering Services Center at Tyndall AFB FL. Authority for conducting occupational surveys is contained in AFR 35-2. Computer products upon which this report is based are available for use by operations and training officials.

The survey instrument used in this project was developed by Captain Clint C. Thatcher, Inventory Development Specialist. Sergeant Harold R. Tackett provided computer support for this project. Major Ian Falle and Dr Linda Aslett analyzed the survey data and wrote the report. This report was reviewed and approved by Mr James B. Keeth and Lieutenant Colonel Jimmy L. Mitchell, Chief, Airman Career Ladders Analysis Section, Occupational Analysis Branch, USAF Occupational Measurement Center, Randolph AFB, Texas 78150.

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 the USAF Occupational Measurement Center, attention to the Chief, Occupational Analysis Branch (OMY), Randolph AFB, Texas 78150.

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SUMMARY OF RESULTS

1. Survey Coverage: Inventory booklets were completed by 1,643 job incumbents holding DAFSC 551X0 and 551X1 during the period June through September 1981. This survey response resulted in information from 848 Pavements Maintenance personnel and 752 Construction Equipment Operator personnel. Thirty-five 9-skill and CEM level personnel also filled out inventory booklets. These samples were representative in terms of MAJCOM and grade distributions and provided comprehensive views of both populations.

2. Specialty Structure: The overall job structure of these two career ladders consisted of three major job clusters and nine independent job types. Jobs generally separated personnel into AFSC specific groups, with some groups composed of personnel doing strictly technical tasks; groups with supervisors still doing technical tasks; and groups composed of Red Horse Team members. Senior managers formed into one group, consistent with the merged 9-skill and CEM levels for these career ladders. Several unique jobs composed of members of both ladders were Missile Support, Gunnery Range, and Training personnel.

3. DAFSC and Skill-Level Task Differences: The majority of 3-, 5-, and 7-skill level personnel performed AFSC-specific technical tasks. There was some 551X0/X1 overlap in use of several types of heavy equipment (dump trucks, forklifts, and front-end loaders) and some junior 551X1 personnel did some concrete tasks; but, generally, the job groups performed the tasks and jobs directly applicable to their DAFSC. It was not until the 9-skill level that career ladder personnel devoted the majority of their time to supervisory and management functions.

4. Career Ladder Documents: Both the AFR 39-1 Specialty Descriptions and STSs provide good descriptions of the jobs performed by 551X0/X1 personnel. Current training documents for 551X0 personnel were generally supported by the survey data; however, some areas and tasks were suggested for review. Training documents for the 551X1 career ladder were not assessed due to the difficulty of comparing the survey data to the interservice training course conducted by the U.S. Army at Fort Leonard Wood MO.

5. Implications: Merger of these career ladders based on this survey data is not warranted. Although some overlap occurs in equipment use and some manual labor task performance, personnel predominantly performed tasks comprising jobs directly related to their DAFSC. Membership in Red Horse Teams or assignment to unique jobs, such as missile support or gunnery ranges, somewhat distorted AFSC distinctions, but represented only a small portion of total career ladder personnel. Both STS and POI require review.

OCCUPATIONAL SURVEY REPORT
PAVEMENTS MAINTENANCE SPECIALIST AND CONSTRUCTION
EQUIPMENT OPERATOR CAREER LADDERS
(AFSCs 551X0/X1)

INTRODUCTION

↙ This is a report of an occupational survey of the Pavements Maintenance Specialist and Construction Equipment Operator career ladders (AFSCs 551X0/X1) completed by the Occupational Analysis Branch, USAF Occupational Measurement Center, in May 1982. The 551X0/X1 specialties were last surveyed in 1974. This survey was requested to gather data which could be used to examine the amount of job overlap occurring between the two specialties, since merger of the two career ladders is under consideration. ↘

Background

The history of the 551X0/X1 career ladders dates from 1951 when AFS 550X0, Construction Specialist, was created. In 1954, the AFS was divided into two ladders, Roads and Grounds Specialist (551X0) and Construction Equipment Operator (551X1). Both AFSCs remained basically stable until 1964 when the 551X0 career ladder was renamed Pavements Maintenance Specialist. At the 9-skill level, the two career ladders merge into the present Pavements and Construction Equipment Superintendent, AFSC 55199. CEM Code 55100 was added 31 October 1978.

AFR 39-1 describes the Pavements Maintenance Specialist job as constructing, maintaining, and repairing airfield pavements, aircraft revetments, airfield surface mats and membranes, roads, curbs, walks, railroad, subgrades and drainage structures. AFR 39-1 presents the job of the Construction Equipment Operator as operating construction equipment to prepare surfaces, lift and move heavy objects or materials, excavate, ditch and move earth; stabilize and compact soil; install paving materials; and remove ice and snow.

Formal Category A training supporting these ladders consists of two courses. The entry-level course for Pavements Maintenance personnel, 3ABR55130, is located at Sheppard AFB TX and lasts four weeks. The 551X1 career ladder is supported by an interservice course, 5ABA55131, Construction Equipment Operator, conducted by the U.S. Army at Fort Leonard Wood MO. Present course length is six and one-half weeks.

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SURVEY METHODOLOGY

Inventory Development

The data collection instrument for this occupational survey was USAF Job Inventory AFPT 90-551-443, dated June 1981. A tentative task list was prepared after reviewing pertinent career ladder publications and directives, tasks from previous job inventories, and data from the last occupational survey report (OSR). The tentative task list was then evaluated in the field through personal interviews with 28 subject-matter specialists from five bases. The resulting job inventory contained a comprehensive listing of 879 tasks grouped under 26 duty headings and a background section containing such information as grade, duty title, time in service, job satisfaction, and Prime Beef or Red Horse Team membership.

Survey Administration

During the period June through September 1981, Consolidated Base Personnel Offices (CBPOs), in operational units worldwide, administered the inventory to job incumbents holding DAFSCs 551X0 or 551X1. These job incumbents were selected from a computer-generated mailing list obtained from personnel data tapes maintained by the Air Force Human Resources Laboratory (AFHRL).

Each individual who completed the inventory first completed an identification and biographical information section and then checked each task performed in their current job. After checking all tasks performed, each member then rated each of these tasks on a nine-point scale showing relative time spent on that task as compared to all other tasks checked. The ratings ranged from one (very small amount time spent) through five (about average time spent) to nine (very large amount time spent).

To determine relative time spent for each task checked by a respondent, all of an incumbent's ratings are assumed to account for 100 percent of his or her time spent on the job and are summed. Each task rating is then divided by the total task ratings and multiplied by 100. This procedure provides a basis for comparing tasks in terms of both percent members performing and average percent time spent.

Survey Sample

Personnel were selected to participate in this survey to ensure an accurate representation across major commands (MAJCOM) and paygrade groups. Table 1 reflects the percentage distribution, by major command, of assigned personnel in the career ladders as of October 1981. Also listed in this table is the percent distribution, by major command, of respondents in the final survey sample.

Table 2 reflects the paygrade group distributions, while Table 3 lists the sample distribution by TAFMS groups. Approximately 65 percent of the personnel in both career ladders are in the grades E-1 through E-4 (see

Table 2) and about 60 percent are in their first enlistment (see Table 3). As reflected in these tables, the survey sample provides a very good representation of the career ladder population.

TABLE 1
COMMAND REPRESENTATION OF SURVEY SAMPLE

COMMAND	551X0		551X1	
	PERCENT OF ASSIGNED*	PERCENT OF SAMPLE	PERCENT OF ASSIGNED*	PERCENT OF SAMPLE
SAC	27	25	23	24
TAC	22	23	24	24
MAC	9	13	8	9
USAFE	9	7	15	9
PACAF	7	10	6	9
ATC	5	5	6	6
AAC	4	8	4	6
AFSC	4	4	3	5
AFLC	3	3	5	5
OTHER	10	2	6	3
TOTAL	100	100	100	100

*AS OF OCTOBER 1981

TABLE 2
PAYGRADE REPRESENTATION OF SURVEY SAMPLE

	551X0		551X1	
	PERCENT OF ASSIGNED*	PERCENT OF SAMPLE	PERCENT OF ASSIGNED*	PERCENT OF SAMPLE
AIRMAN	39	37	38	33
E-4	24	34	29	34
E-5	19	20	19	19
E-6	9	5	9	10
E-7	6	4	5	4

*AS OF OCTOBER 1981

TABLE 3
TAFMS DISTRIBUTION OF SURVEY SAMPLE

	MONTHS IN THE SERVICE					
	1-48	49-96	97-144	145-192	193-240	241+
NUMBER IN AFS 551X0 SAMPLE	531	125	90	44	34	17
PERCENT OF AFS 551X0 SAMPLE	63%	15%	11%	5%	4%	2%
NUMBER IN AFS 551X1 SAMPLE	425	139	74	60	45	7
PERCENT OF AFS 551X1 SAMPLE	57%	18%	10%	8%	6%	1%

Task Factor Administration

In addition to completing the job inventory, selected senior 551X0 and 551X1 personnel were also asked to complete a second booklet for either training emphasis (TE) or task difficulty (TD). The TE and TD booklets are processed separately from the job inventories. The rating information is used in several analyses discussed in detail within this report.

Task Difficulty. Each person completing a task difficulty booklet was asked to rate all inventory tasks on a nine-point scale (from extremely low to extremely high) as to relative difficulty. Difficulty is defined as the length of time required by an average member to learn to do the task. Task difficulty data were independently collected from 56 experienced 7- or 9-skill level 551XX personnel stationed worldwide (see Tables 4 and 5), with all raters assessing the difficulty of tasks in both career ladders.

Three separate sets of task difficulty data were analyzed. These included task difficulty data as rated by respondents from both career ladders combined (56 members) and data for each career ladder separately as rated by the members of each specialty (28 AFSC 551X0 raters and 28 AFSC 551X1 raters). The interrater reliability (as assessed through components of variance of standard group means) was high for all three sets of task difficulty data. The interrater reliability for the combined group was .95. Taken separately, the interrater reliability was .91 for 551X0 personnel and .90 for 551X1 personnel. For the purposes of this report, the combined task difficulty rater group was used. Ratings were adjusted so tasks of average difficulty would have a 5.00 rating. The resulting data is essentially a rank ordering of tasks indicating the degree of difficulty for each task in the inventory.

Job Difficulty Index (JDI). After computing the combined 551XX task difficulty index for each task item, it was then possible to compute a Job Difficulty Index (JDI) for the job groups identified in the survey analysis.

This index provides a relative measure of which jobs, in comparison to other jobs, are more or less difficult. An equation using the number of tasks performed and the average difficulty per unit time spent (ADPUTS) as variables are the basis for the JDI. Thus, the more time a group spends on difficult tasks and the more tasks they perform, the higher the JDI. The index ranges from 1.0 for very easy jobs to 25.0 for very difficult jobs. The indices are adjusted so the average JDI is 13.00.

Training Emphasis. Individuals completing training emphasis booklets were asked to rate tasks on a ten-point scale from no training required to extremely heavy training required. Training emphasis is a rating of which tasks require structured training for first-term personnel. Structured training is defined as training provided at resident technical schools, field training detachments (FTD), mobile training teams (MTT), formal OJT, or any other organized training method. Training emphasis data were independently collected from 78 experienced 551XX 7- and 9-skill level personnel stationed worldwide (see Tables 4 and 5).

Three separate sets of training emphasis data were analyzed. These included training emphasis data as rated by respondents of both career ladders combined (78 members) and data for each career ladder separately as rated by the members of each specialty (43 AFSC 551X0 raters and 35 AFSC 551X1 raters). The interrater reliability (as assessed through components of variance of standard group means) for the combined raters was not acceptable due to insufficient agreement between the two groups, indicating possible different training policies for each ladder. The interrater reliability for 551X0 raters was .94 and .93 for 551X1 raters, indicating that, within each ladder, there was good agreement among raters as to which tasks required some form of structured training and which did not.

When used in conjunction with other information, such as percent members performing, task difficulty and training emphasis ratings can provide insight into training requirements. Such insights may help validate lengthening or shortening portions of instruction supporting AFSC needed knowledges or skills.

TABLE 4
COMMAND DISTRIBUTION OF 551X0 TASK DIFFICULTY AND
TRAINING EMPHASIS RATERS

<u>COMMAND</u>	<u>PERCENT OF ASSIGNED</u>	<u>PERCENT OF TASK DIFFICULTY RATERS</u>	<u>PERCENT OF TRAINING EMPHASIS RATERS</u>
SAC	27	26	20
TAC	22	26	30
MAC	9	4	12
USAFE	9	4	4
PACAF	7	4	5
ATC	5	0	9
AAC	4	7	7
AFSC	4	15	9
AFLC	3	7	2
OTHER	10	7	-

TABLE 5
COMMAND DISTRIBUTION OF 551X1 TASK DIFFICULTY AND
TRAINING EMPHASIS RATERS

<u>COMMAND</u>	<u>PERCENT OF ASSIGNED</u>	<u>PERCENT OF TASK DIFFICULTY RATERS</u>	<u>PERCENT OF TRAINING EMPHASIS RATERS</u>
TAC	24	14	29
SAC	23	17	20
USAFE	15	17	9
MAC	8	3	9
PACAF	6	10	9
ATC	6	10	6
AFLC	5	0	4
AAC	4	10	6
AFSC	3	7	4
OTHER	6	10	4

CAREER LADDER STRUCTURE

The main issue in this survey was to determine if personnel in the two career ladders were performing jobs similar enough to justify merging the two specialties. This issue was addressed by examining how jobs in both specialties are related and how much similarity exists among the jobs.

Each person in the survey sample performs a set of tasks called a Job. A group of jobs whose personnel perform many similar tasks and spend similar amounts of time performing them is called a Job Type. Job types having a substantial degree of similarity are grouped and called a Cluster. Those specialized job types too dissimilar to fit within a cluster are labeled Independent Job Types.

Based on the analysis of the task data, the survey sample separated into three major groupings: (1) Managerial personnel (including both 551X0 and 551X1 members); (2) Pavements Maintenance (AFS 551X0) personnel; and (3) Construction Equipment Operator (AFS 551X1) personnel. In addition, several specialized independent job types containing both 551X0 and 551X1 personnel were also identified.

A division of jobs performed in the 551X0 and 551X1 career ladders based on task similarity and relative time spent is illustrated in Figure 1. These clusters and job types are listed below. The group (GRP) number is referenced to computer printed information included for use by classification and training managers. The letter "N" stands for the number of people in the group.

- I. PAVEMENTS MAINTENANCE PERSONNEL CLUSTER (GRP118, N=466)
 - a. Pavements Workers (GRP199, N=399)
 - b. Pavements Maintenance First-Line Supervisors (GRP274, N=32)
 - c. Pavements Roller Operators (GRP184, N=20)
 - d. Red Horse Pavements Personnel (GRP276, N=15)
- II. GROUNDS MAINTENANCE PERSONNEL (GRP063, N=38)
- III. BASE AREA MAINTENANCE PERSONNEL (GRP177, N=48)
- IV. CONSTRUCTION EQUIPMENT OPERATOR CLUSTER (GRP190, N=486)
 - a. Equipment Operator First-Line Supervisors (GRP366, N=63)
 - b. Red Horse Equipment Operators (GRP301, N=29)
 - c. The jobs performed by 394 members of this cluster are described by the cluster job description. They are indicated by a * in Figure 1.
- V. DUMP TRUCK AND FRONT-END LOADER OPERATORS (GRP245, N=18)

- VI. MANAGERIAL PERSONNEL CLUSTER (GRP091, N=138)
 - a. Pavements and Equipment Operator Foremen and Superintendents (GRP203, N=104)
 - b. Pavements and Equipment Operator Shop Managers and Supervisors (GRP149, N=17)
- VII. MISSILE SUPPORT PERSONNEL (GRP220, N=19)
- VIII. GUNNERY RANGE PERSONNEL (GRP221, N=27)
- IX. SWEEPER OPERATORS (GRP033, N=16)
- X. SNOW REMOVAL EQUIPMENT OPERATORS (GRP076, N=27)
- XI. SNOW REMOVAL SUPERVISORS (GRP186, N=42)
- XII. TRAINERS (GRP048, N=17)

Eighty-two percent of the survey respondents were performing the jobs grouped within the three clusters and nine independent job types listed above. The remaining 18 percent performed jobs that did not group with any of the defined job types. Job titles for some of these respondents included: Ground Safety NCO, Financial Management Assistant, Inventory Manager, Railroad Maintenance Specialist, and Refuse Foreman. Tasks performed distinctly separated these airmen from others in the mainstream of their AFSC.

Job Descriptions

The following paragraphs describe the jobs included in the clusters and independent job types defined through the career ladder structure analysis.

I. PAVEMENTS MAINTENANCE PERSONNEL CLUSTER (GRP118, N=466). This cluster of 466 respondents provides a cross section of work within the 551X0 career ladder. It represents all skill levels and includes airmen performing both broad and limited jobs. A list of representative tasks performed by personnel in this cluster, except as noted below, is shown in Table 6. The jobs making up this job cluster are described below.

Ia. Pavements Workers (GRP199, N=399). This job type is comprised of 3- and 5-skill level personnel of the 551X0 career ladder who performed large numbers of pavements and concrete tasks. In addition, these personnel performed some tasks involving the operation of equipment, such as dump trucks and front-end loaders. The tools and equipment used were directly associated with pavements construction and maintenance. Few group members were responsible for landscaping or other grounds care tasks. Besides performing all the cluster-typical tasks shown in Table 6, members of this job type uniquely performed many manual labor tasks, such as compacting asphalt, mixing concrete with hand tools, finishing concrete pavements by hand, and digging trenches. Other tasks performed included:

drill holes in concrete with pneumatic drill
cut asphalt with saw
hand shovel concrete
hand spread hot mix bituminous materials
spread concrete with hand screeds

TABLE 6

Representative Tasks of Pavements Maintenance Personnel Cluster
(GRP118, N=466)

Operate dump trucks
Remove debris from drainage systems
Construct and maintain chain link fences
Hand shovel concrete
Operate air compressors
Compact base-course materials with motorized rollers
Set up portable concrete mixers
Break concrete with jackhammers or other tools
Fabricate expansion joints
Patch airfield concrete with epoxy mortar
Assemble, disassemble and clean concrete forms
Level areas by backdragging with front-end loaders
Clean pavement surfaces and joints by jet air blasting
Drill holes in concrete with pneumatic drills
Finish concrete surfaces with bullfloats, power trowels or by hand
Dig trenches with hand tools
Operate joint and crack cleaning machines
Perform plant-mix cold-laid and hot-laid patching
Hand spread hot mix bituminous materials

Ib. Pavements Maintenance First-Line Supervisors (GRP274, N=32). These members performed most concrete and pavements tasks, but were also responsible for numerous managerial and supervisory tasks. Eighty percent or more of these personnel performed physical tasks, such as breaking concrete with jackhammers and hand shoveling concrete. Additionally, over 80 percent supervised and counseled subordinates, prepared APRs, and evaluated personnel for promotion, demotion, or reclassification actions. Management tasks included setting work priorities, determining requirements for space, personnel, equipment, or supplies, and developing work methods or procedures. Other tasks performed included:

- plan and implement safety programs
- supervise pavements maintenance technicians
- inventory equipment, tools, or supplies
- compute quantity of concrete needed
- cut, bend and tie reinforcing steel
- prepare damaged asphalt surfaces for surface treatment

Ic. Pavements Roller Operators (GRP184, N=20). These 20 people performed some concrete tasks, but the major focus of their work was with asphalt paving. In conjunction with this work, group members operated motorized rollers to compact sub-base, base, and bituminous materials. Dump trucks were used to spread asphalt aggregate and to tow construction equipment. Maintenance and repair of flexible pavements was also part of this group's work. Some concrete tasks, such as breaking concrete with jackhammers and patching concrete, formed a part of this job type's work, but the almost exclusive emphasis on construction and maintenance of asphalt paving was unique to this group. Other tasks performed included:

- perform spot patching
- patch concrete with bituminous material
- compact asphalt with hand tools
- prepare base course for flexible pavements

Id. Red Horse Pavements Personnel (GRP276, N=15). Most of these personnel were assigned to the 554 Civil Engineering Squadron (CES) in Korea. All are members of a Red Horse Team. They performed many tasks common to the cluster, but concentrated more heavily on concrete work. The tasks performed range from operation of transit concrete mixers and batch-mix plants, to construction of concrete forms and hand shoveling concrete. The broad scope of concrete tasks performed appeared to support the deployment mobility requirements of their unit. Over 80 percent of the members performed bunker and revetments construction duties, as well as hauling equipment and personnel tasks. The machinery used for these tasks included the more commonly used dump trucks, forklifts and front-end loaders, as well as equipment peculiar to this job type, such as cargo vehicles and personnel baskets. Half of this group of 5-skill level personnel were responsible for supervision of 3-skill level pavements airmen. Other tasks performed included:

- compact materials in revetment bins with hand tools
- erect tents
- rough grade areas with front-end loaders
- operate air compressors
- place wire mesh for concrete reinforcing
- unload concrete from transit concrete mixers

II. GROUNDS MAINTENANCE PERSONNEL (GRP063, N=38). Members of this independent job type performed tasks almost totally involved in base grass care and maintenance. The limited nature of their job was revealed in the fact that 50 percent of the group's relative time was spent performing only 20 tasks. These tasks included mowing grass, planting or removing trees and shrubs, and laying sod. Equipment use was limited to support of grass care: mowers, towed by tractors or hand-propelled and dump trucks to haul and dump materials or tow other equipment. Equipment unique to this independent job type included power edgers and spreaders for grass seeding or fertilizer application. These personnel also performed shop maintenance on mowers as well as operator inspection and maintenance on tractors, dump trucks and tractor attachments. Supervision or management tasks were not part of this group's responsibility. Other tasks performed included:

- edge grassy areas with power edgers
- trim trees or shrubs
- prepare seed beds
- plant ground cover
- aerify grounds with tractors using aerifier attachments

III. BASE AREA MAINTENANCE PERSONNEL (GRP177, N=48). The 48 members of this independent job type also performed basic grounds functions, but used more heavy equipment and performed more tasks. A characteristic adding to this group's uniqueness was its large membership of personnel involved in Prime Beef functions. Over 70 percent of this group performed Prime Beef functions, and many group members had been deployed three or more times since October 1977. Although the main element of this job was maintenance of area vegetation, as with the previous group these airmen also constructed and maintained fences and operated front-end loaders and snow plows, making their job more diverse. Among the specific tasks performed were:

- remove debris from drainage systems
- clean snow from dump trucks
- remove trees or shrubs by hand
- maintain chain link fences
- cut grass with towed mowers
- apply fertilizers with hand equipment

IV. CONSTRUCTION EQUIPMENT OPERATOR CLUSTER (GRP190, N=486). This large group of 551X1 personnel operated, as well as performed operator inspection and maintenance on many kinds of construction equipment.

The amount of time spent operating many types of equipment varied somewhat, but the types of equipment used were markedly consistent over the entire group. Table 7 provides an overview of representative tasks performed by members of this cluster. Work with dump trucks, front-end loaders, and forklifts were the most commonly shared tasks. Tractors, sweepers, graders, and cranes were also heavily used, but in varying degrees depending on location and base needs. Seasonal machinery, such as snow removal equipment, accounted for a small amount of variation among individuals. Three- and 5-skill level airmen formed the majority of this cluster. Three hundred and ninety-four of the equipment operators in the cluster perform jobs which are described by the tasks outlined above and shown in Table 7. While there are some variations (based on seasonal equipment or other local needs), these variations are not distinctly different jobs. There were two groups, supervisors and Red Horse equipment operators, that were not completely described by the cluster tasks shown above. They are described separately below.

IVa. Equipment Operator First-Line Supervisors (GRP366, N=63). This job type consisted of personnel who spend the majority of their time performing cluster-typical tasks, but who are also involved in management and supervision. All of these personnel operate dump trucks, forklifts, front-end loaders, graders, cranes, and crawler-type tractors extensively, and half of the members also work with sweepers, rollers, and scapers. As part of their supervisory duties, these 5- and 7-skill level personnel prepared APRs, conducted training including OJT, and counseled subordinates. Management responsibilities for these supervisors focused on organizing and planning work activities, and implementing policies, directives, and procedures. Specific tasks performed included:

- cut and fill with graders
- crown dirt roads with graders
- position cranes for operation
- spread material other than asphalt with graders
- adjust tilt of dozer blades
- direct cut, fill or compaction operations

IVb. Red Horse Equipment Operator (GRP301, (N=29). Job incumbents in this job type performed many of the cluster-typical tasks, but were unique in performance of several unique types of tasks. All 29 members were Red Horse members, with 20 stationed at the 823 CES at Hurlburt Field. The unique task areas performed by these 5- and 7-skill level personnel were well drilling, concrete work, and rapid runway repair (RRR) functions. This was the only group in the career ladder analysis which performed well drilling tasks. Twenty percent of this group performed operator inspections and maintenance on well drilling equipment, operated rotary type well drilling machines, and constructed suction pits for mud drilling. Other drilling tasks included:

- determine mud weight and viscosity
- install and maintain suction hoses
- grout and seal casings
- erect and lock drill masts in place
- clean pipe threads

These personnel were also the only 551X1s performing a large number of the concrete tasks, which are typically a 551X0 function. All Red Horse members performed some concrete tasks, with 80 percent or more reporting they removed concrete forms, broke concrete with jackhammers, and hand shovelled concrete. The nature of Red Horse Team responsibilities also appeared with over half of the group performing RRR tasks.

- install or remove keylocks
- repackage RRR kits
- install or remove ramps
- fill bomb damaged areas with blown debris using front-end loaders

V. DUMP TRUCK AND FRONT-END LOADER OPERATORS (GRP245, N=18). This independent job type is characterized by the use of limited types of equipment and the performance of few tasks in the inventory. The tasks performed by these 18 airmen involved almost exclusively hauling, dumping, and spreading of materials, and the loading, unloading, and stockpiling of materials. Equipment used for these tasks were dump trucks, forklifts, and front-end loaders. Specific tasks performed by this group included:

- backfill excavations with front-end loaders
- load dump trucks with front-end loaders
- level areas by backdragging with front-end loaders
- haul materials with front-end loaders using multi-purpose buckets
- spread materials from dump trucks

TABLE 7

Representative Tasks of Construction Equipment Operator Cluster
(GRP190, N=486)

Operate and perform operator inspection and maintenance on: Dump trucks; front-end loaders; airfield vacuum, street, towed-type, and multi-purpose sweepers; cranes; graders; tractors; tractor trailers or attachments; forklifts; and snow removal equipment.

Dump, haul and spread materials with dump trucks

Excavate with tractors using backhoe or front-end loader attachments.

Move palletized materials or equipment with forklift

Backfill with graders or crawler-type tractors

Rough grade areas with front-end loaders, graders or crawler-type tractors

Stockpile materials using front-end loaders or crawler-type tractors

Cut and fill with graders

Install or remove crane cables; grader blades or scarifier teeth; and broom cores, or broom segments on sweepers

VI. MANAGERIAL PERSONNEL CLUSTER (GRP091, N=138). This cluster consisted of senior 551X0 and 551X1 personnel who spent most of their time managing work sections and supervising pavements or equipment operator personnel. Table 8 provides a list of representative tasks performed by members of this group. These 7- and 9-skill level personnel performed a diverse variety of supervision and management tasks. Performance of the technical tasks of pavements maintenance or equipment operation no longer formed a major component of their job. In fact, less than 15 percent of the group's relative work time was spent doing any technical pavements or equipment tasks.

TABLE 8

Representative Tasks of 551X0/X1 Managerial Personnel Cluster
(GRP091, N=138)

Plan or schedule work assignments

Supervise civilian and 5- and 7-skill X0/X1 personnel

Conduct and evaluate OJT

Prepare APRs

Analyze and Assign workload requirements

Investigate accidents or incidents

Develop work methods or procedures

Write correspondence

Plan or prepare briefings

Plan and implement safety programs

Direct maintenance and utilization of equipment

Conduct or participate in Staff meetings

Coordinate work activities and progress with other CE shops

Establish performance standards

During the job analysis, both 551X0 and 551X1 personnel grouped together into small groups based upon common task performance patterns unusual for the survey sample. These independent job types, composed of both 551X0/551X1 personnel, are described in the following paragraphs.

Vla. Pavements And Equipment Operator Foremen And Superintendents (GRP149, N=104). These individuals performed many of the typical management and supervisory tasks for this cluster, but also spent proportionally more time on administrative functions than other cluster members. Forms and their completion was a major job component. Those forms extensively included:

- AF Form 327: Base Civil Engineer Work Order
- AF Form 561: Base Civil Engineering Weekly Schedule
- AF Form 103: Base Civil Engineering Work Clearance Request
- AF Form 1879: Base Civil Engineering Job Order Record
- AF Form 1135: Base Civil Engineering Real Property Maintenance Request
- AF Form 332: Base Civil Engineering Work Request
- AF Form 1734: Base Civil Engineering Work Schedule
- AFTO Form 373: Operator's Inspection Guide and Trouble Report (Special Equipment)
- AFTO Form 374: Operator's Inspection Guide and Trouble Report (General Purpose Vehicle)

Members of this job type also performed many evaluation functions, such as assessing organizational procedures, schedules, and programs. Half of these NCOs conducted evaluations on new equipment, as well as inspecting forms and files. Specific tasks included:

- write correspondence
- prepare local operating instructions
- plan or schedule work assignments
- initiate personnel action requests
- establish performance standards
- evaluate suggestions
- schedules leaves or passes

Vlb. Pavements And Equipment Operator Shop Managers And Supervisors (GRP149, N=17). This job type is typical of cluster members in their supervision of 551X0 or 551X1 personnel, and responsibility for management functions. However, this small group is more involved in directing and implementing the activities of a work section. Administrative, paperwork tasks are performed by only half of the group and such tasks occupied less than 10 percent of the group's relative job time. The scope of this job was narrower than for the Foreman and Superintendent group (Vla), with 70 percent of their job time occupied by 35 tasks. Some of those specific tasks included:

- counsel subordinates
- prepare APRs
- supervise 55130, 55150, and civilian personnel
- inventory equipment, tools, or supplies
- coordinate work progress
- conduct OJT

VII. MISSILE SUPPORT PERSONNEL (GRP220, N=19). This group consisted of 19 personnel operating heavy equipment and performing grounds maintenance to support missile site facilities. Because many of these sites are in northern climates, snow and ice removal using dump trucks and front-end loaders are common tasks. Proper upkeep of these facilities involved these personnel in cutting weeds, mowing grass, and maintenance of many kinds of fences. Some specific missile support tasks performed include:

- perform flood control on missile sites
- remove snow from missile silo topsides and launch closure doors
- install and maintain security fencing and launch control and cattle gates
- install and maintain missile site warning, security and identification signs

VIII. GUNNERY RANGE PERSONNEL (GRP221, N=27). Members of this small independent job type support gunnery range operations. Operation of heavy equipment, such as dump trucks, front-end loaders, graders, and tractors, occupied 40 percent of the group's time. But, despite performing some tasks common to either the 551X0 or 551X1 clusters described earlier, the performance of gunnery range tasks separated these members from their AFS peers. Most of their duty time was spent performing tasks supporting gunnery range operations, such as:

- operate fuel trucks
- level ground with crawler type tractor for placement of targets
- pick up expended shells by hand
- maintain range gates
- clear range of destroyed heavy armor
- tow heavy armor
- construct wooden targets and storage areas
- load and unload armored equipment on lowboy trailers

Approximately one-third of these personnel also performed some supervisory or managerial tasks.

IX. SWEEPER OPERATORS (GRP033, N=16). This group of 3- and 5-skill level personnel worked with only two basic pieces of equipment: sweepers and dump trucks. Operation of sweepers and dump trucks accounted for two-thirds of the group's time. Unique to this group was the high use of sweepers, with one-third of the total job time spent operating airfield vacuum, multi-purpose, and street sweepers. Dump trucks were used for hauling and spreading materials. Another distinguishing feature was the narrow range of tasks performed. Specific tasks performed included:

- sweep airfield pavements with airfield vacuum sweepers
- sweep pavements with street sweepers
- install or remove broom cores and broom segments on sweepers
- install or remove filter bags in vacuum sweepers
- sweep areas with multi-purpose sweepers

X. SNOW REMOVAL EQUIPMENT OPERATORS (GRP076, N=27). These airmen performed a small number of tasks involving use of a few kinds of heavy equipment. Group members were assigned to the northern tier of bases both in CONUS and overseas, and reported their jobs consisted mostly of snow removal and sweeping. Ice and snow removal of streets and airfields involved use of air blast snow sweepers, rollover snow plows, and dump trucks equipped with snow plow attachments. Maintenance of these same surfaces during the remainder of the year involved use of airfield vacuum sweepers, street sweepers, and towed-type sweepers. This group performed such tasks as hauling and spreading materials with dump trucks and loading dump trucks with front-end loaders in common with other equipment operators; but, the narrow range of tasks and types of equipment used isolated them into a separate and independent job type. Specific distinctive tasks performed included:

- clear airfield areas with air blast snow sweepers
- remove snow with rollover snow plows
- spread chemicals or abrasives over ice or snow covered areas with spreaders
- haul snow using dump trucks
- prepare snow plow equipment for summer storage

XI. SNOW REMOVAL SUPERVISORS (GRP186, N=42). This independent job type was composed of members involved in heavy equipment operation, coupled with some supervisory responsibilities. These 42 people operated many of the career ladder-common equipment (dump trucks, forklifts, front-end loaders), but operated snow removal equipment to a greater degree than other groups. Their supervisory and management roles involved them in tasks such as:

- coordinate runway or taxiway snow removal with tower operators and base operations
- counsel trainees on training progress
- coordinate with weather officer for expected snow quantities, temperatures, or winds
- direct and implement OJT programs
- determine work priorities
- direct maintenance or utilization of equipment

XII. TRAINERS (GRP048, N=17). These 17 personnel were managers and trainers. The group included two instructors, one CDC writer, and several training NCOs. No other group identified in this survey wrote training reports or lesson plans, wrote and scored tests, and procured training aids, space, or equipment. Although managerial functions similar to other groups, such as writing correspondence, preparing briefings, and conducting staff meetings were performed, the training tasks clearly separated this independent job type from all other groups. Specific tasks performed included:

- administer tests
- schedule advanced or special training
- conduct training conferences or briefings
- conduct resident course classroom instruction
- establish or maintain study reference files
- write training reports

Comparison of Specialty Jobs

Analysis of the 551X0/X1 career ladder structure revealed that most personnel performed jobs which were AFS-specific. Table 9 presents selected background information for the clusters and independent job types identified.

The two largest groups in the survey were the Construction Equipment Operator Cluster and the Pavements Maintenance Personnel Cluster. These groups were very similar in grade, number of tasks performed, and average number of months in career field as well as total military service. Most were first-term personnel performing a large number of tasks.

Considerably more variance occurred among the independent job types. All were small groups, but with distinguishing characteristics. The job which contained the most senior career ladder personnel was the Trainers, with an average grade of E-6, coupled with 143 months experience in the career field and a TAFMS of 160 months. The most junior independent job type was the Sweeper Operators who were overwhelmingly first-term personnel and performed the fewest tasks among the job groups. Unique jobs which employed both 551X0/X1 personnel in approximately equal proportions were the Missile Support, Gunnery Range, and Snow Removal groups.

Job satisfaction among 551X0 personnel generally was good (see Table 10). Most members found their job interesting and had a good sense of accomplishment in job performance. There were, however, two groups who found their jobs dull. These job groups were the Grounds (GRP063) and Base Area (GRP177) Maintenance personnel. Both groups performed jobs considerably different from their AFS peers. These 86 airmen performed very limited jobs involving care of vegetation, minor repair or construction of fences, and use of snow removal equipment. They performed few of the job skills for which they were trained. Ninety percent of the Grounds Maintenance Group and 75 percent of the Base Area Maintenance Group spent less than 10 percent of their time performing pavements maintenance duties. Correspondingly, both groups gave the lowest ratings of all 551X0 job groups to job utilization of talents or training.

Job satisfaction among 551X1 personnel was also generally favorable (see Table 10). The majority of members felt their jobs were interesting and had a good sense of accomplishment in performance of those jobs. Members of the Dump Truck and Front-End Loader Operators independent job type were less pleased with their work. These airmen were performing duties related to their AFS, but in a very limited scope. Such work could contribute to job dissatisfaction.

Job satisfaction for most job groups composed of both 551X0/X1 personnel was good and most personnel believed their talents and training were being well used on the job. Two of the groups, however, were less satisfied. Sweeper Operators (GRP033) and Snow Removal Equipment Operators (GRP076) believed their jobs were dull, utilizing little of either their training or talent. Both jobs represented by these groups were narrow in scope and were heavily filled by first-term personnel.

Career ladder jobs were also compared for difficulty using the Job Difficulty Index (JDI) described in the Task Factor Administration portion of this report. The JDI is based on the number of tasks performed and the relative difficulty of these tasks. The index ranges from 1.0 for very simple jobs to 25.0 for the most difficult jobs. This index presents an overview of jobs within a career ladder and pinpoints those jobs of increasing responsibility and broader scope.

Table 9 displays the JDI values for the jobs performed by 551X0/X1 personnel. The most difficult jobs are those of supervisors who continued to perform AFS technical tasks and 551X1 Red Horse personnel who also performed many 551X0 tasks. Jobs with the lowest JDI were those narrow in the scope of AFS duties performed, as with the Grounds and Base Area Maintenance job types. Note that these are also the jobs reflecting low job satisfaction and utilization of training or talent (see Table 10). Pavements Roller Operators was the only job with a low JDI whose incumbents reported good job satisfaction and utilization of talents and training.

Overall, this analysis supports the present classification system of two separate ladders. No merger of the 551X0 and 551X1 career ladders is recommended. Problems tend to occur in those small, specialized job groups where the job performed is limited in scope and tasks performed are not fully related to the primary tasks of the AFSC to which these people are assigned.

TABLE 9
SELECTED BACKGROUND DATA FOR 551X0/X1 JOB CLUSTERS AND INDEPENDENT JOB TYPES

NO. IN GROUP AVG GRADE AVG NO. TASKS PERFORMED	PAVEMENTS MAINT		BASE AREA MAINT		CONST EQUIP OPER		DUMP TRUCK FRONT-END LOADER OPERATORS		MANAGERIAL CLUSTER		MISSILE SUPPORT RANGE		GUNNERY SWEEPER OPERS		SNOW REMOVAL OPERATORS		SNOW REMOVAL SUPV		TRAINERS	
	CLUSTER	LJT	CLUSTER	LJT	CLUSTER	LJT	CLUSTER	LJT	CLUSTER	LJT	CLUSTER	LJT	CLUSTER	LJT	CLUSTER	LJT	CLUSTER	LJT	CLUSTER	LJT
466	3.8	38	3.4	48	486	18	138	19	6.5	27	3.6	4.1	16	27	3.6	42	17	6.0	37	
133		32		79	135	61	72	74	83	24	58	152								
DAFSC DISTRIBUTION																				
55130	19%	29%	15%	1%	6%	8%	42%	7%	31%	59%	19%	6%								
55150	69%	55%	71%	2%	11%	36%	42%	15%	-	-	19%	29%								
55170	10%	5%	2%	1%	-	-	5%	4%	19%	4%	5%	24%								
55131	*	8%	4%	15%	39%	-	47%	15%	50%	37%	31%	29%								
55151	1%	3%	8%	71%	44%	4%	5%	15%	-	-	29%	12%								
55171	-	-	-	9%	-	28%	-	-	-	-	-	-								
55199/00	-	-	-	-	-	21%	-	-	-	-	-	-								
AVERAGE DATA																				
AVG MONTHS IN CAREER FIELD	49	33	43	47	23	169	38	61	23	28	112	143								
AVG MONTHS IN SERVICE	54	42	47	55	39	192	45	68	28	41	133	160								
PERCENT IN 1ST ENLISTMENT	69%	81%	75%	71%	89%	8%	79%	58%	94%	89%	5%	-								
PERCENT SUPERVISING	20%	10%	10%	20%	7.4	76%	22%	23%	-	10%	79%	17%								
JOB DIFFICULTY INDEX (JDI)	12.4	5.5	9.3	15.1	7.4	14.1	10.7	12.1	7.1	9.4	16.8	13.0								

- NONE IN GROUP
* LESS THAN 1 PERCENT

TABLE 10

JOB SATISFACTION INFORMATION FOR 551X0/X1 JOB GROUPS
(PERCENT RESPONDING)

	PAVEMENTS MAINTENANCE CLUSTER (N=466)	GROUNDS MAINTENANCE (N=38)	BASE AREA MAINTENANCE (N=48)	CONST EQUIP OPERATORS CLUSTER (N=486)	DUMP TRUCK OPERATORS (N=18)	MANAGERIAL PERSONNEL CLUSTER (N=138)
<u>HOW DO YOU FIND YOUR JOB:</u>						
DULL	18	34	25	9	28	9
SO-SO	25	29	25	17	28	14
INTERESTING	54	37	46	73	44	74
<u>HOW WELL DOES YOUR JOB UTILIZE YOUR TALENTS:</u>						
VERY LITTLE OR NOT AT ALL	31	45	38	21	44	16
FAIRLY WELL TO PERFECTLY	69	55	62	77	56	83
<u>HOW WELL DOES YOUR JOB UTILIZE YOUR TRAINING:</u>						
VERY LITTLE OR NOT AT ALL	23	58	54	23	39	19
FAIRLY WELL TO PERFECTLY	76	40	46	77	61	80
<u>HOW SATISFIED ARE YOU WITH THE SENSE OF ACCOMPLISHMENT GAINED FROM YOUR JOB:</u>						
DISSATISFIED	22	37	31	20	33	23
AMBIVALENT	14	21	23	13	11	7
SATISFIED	69	41	46	66	55	69
<u>DO YOU PLAN TO REENLIST:</u>						
NO, I WILL RETIRE WITH 20 YEARS MILITARY SERVICE	2	3	0	2	0	26
NO OR PROBABLY NO	46	50	63	48	55	12
YES OR PROBABLY YES	51	47	35	48	44	62

TABLE 10 (CONTINUED)

JOB SATISFACTION INFORMATION FOR 551X0/X1 JOB GROUPS
(PERCENT RESPONDING)

	MISSILE SUPPORT (N=19)	GUNNERY RANGE (N=27)	SWEEPER OPERATORS (N=16)	SNOW EQUIP OPERATORS (N=27)	SNOW REMOVAL SUPERVISORS (N=42)	TRAINERS (N=17)
<u>HOW DO YOU FIND YOUR JOB:</u>						
DULL	5	22	44	37	14	6
SO-SO	32	37	6	41	7	12
INTERESTING	58	41	50	22	79	71
<u>HOW WELL DOES YOUR JOB UTILIZE YOUR TALENTS:</u>						
VERY LITTLE OR NOT AT ALL	42	33	63	63	14	18
FAIRLY WELL TO PERFECTLY	58	67	37	37	83	82
<u>HOW WELL DOES YOUR JOB UTILIZE YOUR TRAINING:</u>						
VERY LITTLE OR NOT AT ALL	21	37	69	59	14	24
FAIRLY WELL TO PERFECTLY	79	63	31	41	86	77
<u>HOW SATISFIED ARE YOU WITH THE SENSE OF ACCOMPLISHMENT GAINED FROM YOUR JOB:</u>						
DISSATISFIED	16	29	44	55	21	6
AMBIVALENT	37	15	0	11	2	12
SATISFIED	47	55	56	43	75	76
<u>DO YOU PLAN TO REENLIST:</u>						
NO, I WILL RETIRE WITH 20 YEARS MILITARY SERVICE	0	4	0	0	2	6
NO OR PROBABLY NO	58	52	50	72	19	6
YES OR PROBABLY YES	37	44	44	22	79	88

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 analysis. The DAFSC analysis identifies differences in tasks performed at the various skill levels. This information is also used to evaluate how well career ladder documents, such as AFR 39-1 Specialty Descriptions and the Specialty Training Standard (STS), reflect what career ladder personnel are actually doing in the field.

AFSC 551X0

DAFSC 55130/50: The job of these 711 incumbents was generally concerned with construction and maintenance of rigid pavements and concrete structures, operation of dump trucks, front-end loaders and forklifts, and ground maintenance. The majority of these airmen grouped with the Pavements Maintenance Personnel Cluster and the Grounds and Base Area Maintenance Personnel independent job types. Ninety-five tasks comprised 50 percent of this group's total job time. Table 11 provides a representative list of common tasks performed by most 55130/50 incumbents.

DAFSC 55170: As 551X0 incumbents progressed from the 3- and 5-skill level to the 7-skill level, the job they performed became slightly broader, with 110 tasks comprising 50 percent of the total job time. While 30 percent of their relative time is still spent performing technical tasks, such as breaking concrete with jackhammers, hauling and dumping materials with dump trucks, loading dump trucks with front-end loaders, and hand shoveling concrete, the dominant features of the job involved supervision and training. As shown in Table 12, the most common tasks performed are primarily within these duties. Characteristically, most 7-skill level airmen grouped in the Managerial Personnel Cluster and in supervisory or training job groups within the clusters and independent job types.

AFSC 551X1

DAFSC 55131/51: These 618 members primarily operated a variety of heavy construction equipment, most notably dump trucks, forklifts, and front-end loaders. Eighty tasks comprised 50 percent of their total job time. The majority were found in the Construction Equipment Operator Cluster and several of the smaller independent job types. In addition to operating the equipment already mentioned, these incumbents also operated auxiliary construction equipment, crawler-type equipment, and industrial tractors. Thirty percent or less of these 551X1s reported performing some tasks more typical of the 551X0 career ladder. These tasks included spread rock and heavy gravel by hand to prevent erosion, break concrete with jackhammers, and seed grass by hand. Table 13 lists those tasks performed by most 55131 and 55151 personnel.

DAFSC 55171: Similar to the trend found in the 551X0 ladder, as incumbents progressed from the 3- and 5-skill levels to the 7-skill level, they continued to operate many kinds of heavy equipment but were also becoming increasingly involved in supervision and management tasks. Table 14 lists

the most common tasks performed. As with the 55170 group, most tasks relate to supervision and training.

DAFSC 55199/00

The 35 members of this skill level performed basically a managerial and administrative job with very little time spent on technical tasks. Most of these members grouped in the Managerial Personnel Cluster. The tasks most commonly performed are shown in Table 15.

Summary

Job progression within both ladders followed normal patterns. The lowest skill levels performed tasks which were predominantly manual or technical in nature with increasing supervision and managerial responsibilities noted as skill level increased. While there was some technical task performance overlap between 551X0 and 551X1 personnel at lower skill levels, it was not appreciable.

TABLE 11

REPRESENTATIVE TASKS PERFORMED BY DAFSC 55130/55150 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING
L447 DUMP MATERIALS FROM DUMP TRUCKS	82
L450 HAUL MATERIALS WITH DUMP TRUCKS	78
F158 BREAK CONCRETE WITH JACKHAMMERS	74
L462 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON DUMP TRUCKS	74
F196 OPERATE AIR COMPRESSORS	71
F185 HAND SHOVEL CONCRETE	69
F193 MIX CONCRETE WITH HAND TOOLS	68
F168 CONSTRUCT WOODEN CONCRETE FORMS	66
F224 REMOVE CONCRETE FORMS	65
F213 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON AIR COMPRESSORS	65
F227 SAW CONCRETE	65
L468 SPREAD MATERIALS FROM DUMP TRUCKS	63
F179 FINISH CONCRETE PAVEMENTS TO NONSKID SURFACES WITH BROOMS OR BURLAP DRAGS	63
F232 SPREAD CONCRETE WITH HAND SCREEDS	63
F164 COMPACT BASE COURSE MATERIALS WITH PNEUMATIC TAMPERS	63
F231 SET UP WOODEN CONCRETE FORMS	62
G243 COMPACT ASPHALT WITH HAND TOOLS	61
L471 TOW TRAILERS OR CONSTRUCTION EQUIPMENT WITH DUMP TRUCKS	61
Z861 FIRE M-16 RIFLES	60
G248 CUT ASPHALT WITH SAWS	59
F180 FINISH CONCRETE PAVEMENTS TO SMOOTH SURFACE BY HAND	58
L435 APPLY PROTECTIVE COATING TO DUMP TRUCK BEDS FOR HAULING ASPHALT	58
F221 PLACE EXPANSION JOINT MATERIAL	58
F159 BREAK CONCRETE WITH TOOLS OTHER THAN JACKHAMMER	57
F229 SEAL CRACKS AND JOINTS	57

TABLE 12

REPRESENTATIVE TASKS PERFORMED BY DAFSC 55170 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING
C85 PREPARE APRs	81
B29 COUNSEL SUBORDINATES ON PERSONAL OR MILITARY-RELATED PROBLEMS	75
A16 PLAN OR SCHEDULE WORK ASSIGNMENTS	72
A4 COORDINATE WORK ACTIVITIES WITH OTHER CE SHOPS	72
B64 SUPERVISE PAVEMENTS MAINTENANCE SPECIALISTS	71
B59 SUPERVISE APPRENTICE PAVEMENTS MAINTENANCE SPECIALISTS	67
A2 ASSIGN SPONSORS FOR NEWLY ASSIGNED PERSONNEL	66
B56 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	65
A25 SCHEDULE LEAVES OR PASSES	63
Z861 FIRE M-16 RIFLES	63
C83 INDORSE AIRMAN PERFORMANCE REPORTS (APR)	63
A5 COORDINATE WORK PROGRESS WITH BASE CIVIL ENGINEERING SCHEDULING	61
D96 COUNSEL TRAINEES ON TRAINING PROGRESS	61
E135 ANNOTATE ON-THE-JOB TRAINING RECORD (AF FORM 623)	61
A1 ASSIGN PERSONNEL TO DUTY POSITIONS	60
D108 MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS	60
B60 SUPERVISE CIVILIAN PERSONNEL	59
A7 DETERMINE WORK PRIORITIES	58
D93 CONDUCT OJT	58
B42 DIRECT OR IMPLEMENT OJT PROGRAMS	57
D104 EVALUATE OJT TRAINEES	57
L462 PERFORM OPERATOR INSPECTIONS & MAINTENANCE ON DUMP TRUCKS	55
A6 DETERMINE REQUIREMENTS FOR SPACE, PERSONNEL, EQUIPMENT, OR SUPPLIES	55
C71 EVALUATE INDIVIDUALS FOR PROMOTION, DEMOTION, OR RECLASSIFICATION	55
E137 ANNOTATE OPERATOR'S INSPECTION GUIDE AND TROUBLE REPORT (GENERAL PURPOSE VEHICLES) (AFTO FORM 374)	53

TABLE 13

REPRESENTATIVE TASKS PERFORMED BY DAFSC 55131/55151 PERSONNEL

<u>TASKS</u>	<u>PERCENT MEMBERS PERFORMING</u>
L447 DUMP MATERIALS FROM DUMP TRUCKS	92
L454 LOAD DUMP TRUCKS WITH FRONT-END LOADERS	91
L446 DRIVE FRONT-END LOADERS TO OR FROM WORK AREAS	89
L450 HAUL MATERIALS WITH DUMP TRUCKS	89
L460 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON FRONT-END LOADERS	89
L462 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON DUMP TRUCKS	87
L452 LEVEL AREAS BY BACKDRAGGING WITH FRONT-END LOADERS	86
L468 SPREAD MATERIALS FROM DUMP TRUCKS	83
L470 STOCKPILE MATERIALS WITH FRONT-END LOADERS	82
L444 BACKFILL EXCAVATIONS WITH FRONT-END LOADERS	81
L469 SPREAD MATERIALS WITH FRONT-END LOADERS	78
S688 LOAD OR UNLOAD CONSTRUCTION EQUIPMENT FROM LOWBOYS	71
N513 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE OF GRADERS	70
L467 ROUGH GRADE AREAS WITH FRONT-END LOADERS	69
L445 DRIVE FORKLIFTS TO OR FROM WORK AREAS	69
N508 DRIVE GRADERS TO OR FROM WORK AREAS	68
L461 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON FORKLIFTS	66
L455 LOAD MATERIALS WITH FRONT-END LOADERS USING MULTIPURPOSE BUCKETS	65
L459 MOVE PALLETIZED MATERIALS OR EQUIPMENT WITH FORKLIFTS	65
S684 HAUL CONSTRUCTION EQUIPMENT USING LOWBOYS	65
L453 LEVEL MATERIALS WITH FRONT-END LOADERS USING MULTIPURPOSE BUCKETS	64
Z861 FIRE M-16 RIFLES	63
S694 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON TRACTOR TRAILERS	63
Q609 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON AIRFIELD VACUUM SWEEPERS	63
M477 DRIVE TRACTORS TO OR FROM WORK AREAS	62

TABLE 14

REPRESENTATIVE TASKS PERFORMED BY DAFSC 55171 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING
C85 PREPARE APRs	76
B29 COUNSEL SUBORDINATES ON PERSONAL OR MILITARY-RELATED PROBLEMS	75
B61 SUPERVISE CONSTRUCTION EQUIPMENT OPERATORS (AFSC 55151)	75
A16 PLAN OR SCHEDULE WORK ASSIGNMENTS	71
A4 COORDINATE WORK ACTIVITIES WITH OTHER CIVIL ENGINEERING SHOPS	68
E137 ANNOTATE OPERATOR'S INSPECTION GUIDE AND TROUBLE REPORT (GENERAL PURPOSE VEHICLES) (AFTO FORM 374)	68
B58 SUPERVISE APPRENTICE CONSTRUCTION EQUIPMENT OPERATORS (AFSC 55131)	68
E136 ANNOTATE OPERATOR'S INSPECTION GUIDE AND TROUBLE REPORT (SPECIAL EQUIPMENT) (AFTO FORM 373)	67
L462 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON DUMP TRUCKS	63
D96 COUNSEL TRAINEES ON TRAINING PROGRESS	62
D93 CONDUCT OJT	62
L460 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON FRONT-END LOADERS	62
D108 MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS	61
L454 LOAD DUMP TRUCKS WITH FRONT-END LOADERS	60
L447 DUMP MATERIALS FROM DUMP TRUCKS	60
B41 DIRECT MAINTENANCE OR UTILIZATION OF EQUIPMENT	59
A1 ASSIGN PERSONNEL TO DUTY POSITIONS	59
A25 SCHEDULE LEAVES OR PASSES	59
D104 EVALUATE OJT TRAINEES	59
L446 DRIVE FRONT-END LOADERS TO OR FROM WORK AREAS	59
A6 DETERMINE REQUIREMENTS FOR SPACE, PERSONNEL, EQUIPMENT, OR SUPPLIES	58
B56 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	58
C83 INDORSE AIRMAN PERFORMANCE REPORTS (APR)	57
B33 DIRECT CUT, FILL, OR COMPACTION OPERATIONS	57
A2 ASSIGN SPONSORS FOR NEWLY ASSIGNED PERSONNEL	57

TABLE 15

REPRESENTATIVE TASKS PERFORMED BY DAFSC 55199/55100 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING
B62 SUPERVISE CONSTRUCTION EQUIPMENT TECHNICIANS (AFSC 55171)	94
B29 COUNSEL SUBORDINATES ON PERSONAL OR MILITARY-RELATED PROBLEMS	94
C85 PREPARE APRs	94
B28 CONDUCT OR PARTICIPATE IN STAFF MEETINGS	91
B65 SUPERVISE PAVEMENTS MAINTENANCE TECHNICIANS (AFSC 55170)	91
A6 DETERMINE REQUIREMENTS FOR SPACE, PERSONNEL, EQUIPMENT, OR SUPPLIES	91
A11 ESTABLISH ORGANIZATIONAL POLICIES, OFFICE INSTRUCTIONS (OI), OR STANDING OPERATING PROCEDURES (SOP)	91
C83 INDORSE AIRMAN PERFORMANCE REPORTS (APR)	88
A4 COORDINATE WORK ACTIVITIES WITH OTHER CE SHOPS	88
A15 PLAN OR PREPARE BRIEFINGS	88
A7 DETERMINE WORK PRIORITIES	85
C67 ANALYZE WORKLOAD REQUIREMENTS	85
B55 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	85
A25 SCHEDULE LEAVES OR PASES	85
A1 ASSIGN PERSONNEL TO DUTY POSITIONS	85
B66 WRITE CORRESPONDENCE	82
A20 PREPARE JOB DESCRIPTIONS	82
C86 SELECT INDIVIDUALS FOR SPECIALIZED TRAINING	82
A5 COORDINATE WORK PROGRESS WITH BASE CE SCHEDULING	80
C70 EVALUATE COMPLIANCE WITH PERFORMANCE STANDARDS	80
C71 EVALUATE INDIVIDUALS FOR PROMOTION, DEMOTION, OR RECLASSIFICATION	80
A9 DEVELOP WORK METHODS OR PROCEDURES	80
A2 ASSIGN SPONSORS FOR NEWLY ASSIGNED PERSONNEL	80
B51 IMPLEMENT SAFETY PROGRAMS OR PROCEDURES	77
C73 EVALUATE JOB DESCRIPTIONS	77

ANALYSIS OF AFR 39-1 SPECIALTY DESCRIPTIONS

Survey data were compared to the current AFR 39-1 Specialty Descriptions for the Pavements Maintenance and Construction Equipment career ladders. The AFR 39-1 descriptions are intended to provide a broad overview of the duties and tasks performed in each skill level of a specialty.

The Specialty Descriptions accurately reflect the nature of 3-, 5-, 7-, and 9-skill level jobs within both the 551X0 and 551X1 career ladders. Three- and 5-skill level jobs are basically composed of technical tasks; 7-skill level jobs are a mix of technical and supervisory tasks; and 9-skill level jobs are focused on management, supervision and administration tasks. No major changes are recommended at this time.

ANALYSIS OF EXPERIENCE GROUPS (TAFMS)

Utilization patterns for survey respondents in different Total Active Federal Military Service groups were examined to determine if there were differences in tasks performed. The 551X0/551X1 members surveyed fit the usual pattern seen in most career ladders. As time in service increased, there was a corresponding increase in performance of duties involving supervisory, managerial, and training tasks (see Tables 16 and 17). As time spent in these tasks increased, time spent performing technical tasks declined. Through the third enlistment, technical tasks remained the focus of the 551X0/X1 job. Following a transition during the fourth enlistment, the fifth enlistment found supervisory and managerial functions accounting for the majority of the respondents' time.

First-Enlistment Personnel

First-enlistment personnel (1-48 months) spent the majority of their job time performing technical tasks related to their AFS. Tables 16 and 17 display summaries of percentage of time spent on job duties. The column "1-48 months" graphically displays the nature of the first-enlistment airmen's job. Despite some overlap of 551X0/X1 performance in the operation of dump trucks, front-end loaders, and forklifts, the job duties of each AFS were distinctly separate. The first-term 551X0 members spent the bulk of their job time constructing and maintaining rigid pavements and concrete structures. The first-term 551X1 members operated heavy construction equipment with miscellaneous attachments. Tables 18 and 19 present those tasks performed by the most first-term personnel.

TABLE 16

PERCENT TIME SPENT ON DUTIES BY 551X0 EXPERIENCE GROUPS
(RELATIVE PERCENT TIME)

DUTY	ENLISTMENT GROUPS (MONTHS TAFMS)						
	1-48 (N=531)	49-96 (N=125)	97-144 (N=90)	145-192 (N=44)	193-240 (N=34)	241+ (N=17)	
A. ORGANIZING AND PLANNING	2	4	7	9	17	16	
B. DIRECTING AND IMPLEMENTING	2	7	10	13	18	22	
C. INSPECTING AND EVALUATING	-	3	5	6	11	14	
D. TRAINING	-	4	5	7	9	12	
E. PERFORMING ADMINISTRATIVE FUNCTIONS	1	4	6	5	8	9	
F. CONSTRUCTING AND MAINTAINING RIGID PAVEMENTS AND CONCRETE STRUCTURES	32	20	21	11	10	9	
G. CONSTRUCTING AND MAINTAINING FLEXIBLE PAVEMENTS	9	7	6	3	2	2	
H. CONSTRUCTING AND MAINTAINING DRAINAGE SYSTEMS	5	4	5	3	2	2	
I. CONSTRUCTING BUNKERS AND REVETMENTS	-	-	-	-	-	-	
J. PERFORMING RAPID RUNWAY REPAIR (RRR) FUNCTIONS	2	2	1	1	2	1	
K. PERFORMING GROUNDS MAINTENANCE	10	9	6	11	5	-	
L. OPERATING DUMP TRUCKS, FRONT-END LOADERS, AND FORKLIFTS	13	13	11	10	4	3	
M. OPERATING INDUSTRIAL TRACTORS AND ATTACHMENTS	4	4	3	4	1	1	
N. OPERATING GRADERS AND ATTACHMENTS	-	-	2	-	-	-	
O. OPERATING CRAWLER-TYPE TRACTORS AND ATTACHMENTS	-	-	-	1	-	-	
P. OPERATING SCRAPERS	-	-	-	-	-	-	
Q. AUXILIARY CONSTRUCTION EQUIPMENT	4	5	3	2	1	-	
R. OPERATING CRANES AND ATTACHMENTS	-	-	-	-	-	-	
S. OPERATING MISCELLANEOUS EQUIPMENT	1	2	1	2	-	-	
T. PERFORMING SNOW REMOVAL FUNCTIONS	6	5	4	7	3	3	
U. RIGGING HOISTING EQUIPMENT	-	-	-	-	-	-	
V. PERFORMING MISSILE SUPPORT EQUIPMENT	-	-	-	-	-	-	
W. PERFORMING WELL DRILLING FUNCTIONS	-	-	-	-	-	-	
X. PERFORMING SPECIALIZED DUTIES	-	-	-	-	1	-	
Y. PERFORMING RANGE SUPPORT FUNCTIONS	-	-	-	-	-	-	
Z. PERFORMING PRIME BEEF PROGRAM FUNCTIONS	3	3	2	3	2	4	

TABLE 17

PERCENT TIME SPENT ON DUTIES BY 551X1 EXPERIENCE GROUPS
(RELATIVE PERCENT TIME)

DUTY	ENLISTMENT GROUPS (MONTHS TAFTS)					
	1-48 (N=425)	49-96 (N=139)	97-144 (N=74)	145-192 (N=60)	193-240 (N=45)	241+ (N=7)
A. ORGANIZING AND PLANNING	-	3	7	10	14	12
B. DIRECTING AND IMPLEMENTING	2	5	11	14	17	13
C. INSPECTING AND EVALUATING	-	1	5	7	11	7
D. TRAINING	-	3	5	8	7	6
E. PERFORMING ADMINISTRATIVE FUNCTIONS	1	3	5	7	9	7
F. CONSTRUCTING AND MAINTAINING RIGID PAVEMENTS AND CONCRETE STRUCTURES	3	2	2	1	2	-
G. CONSTRUCTING AND MAINTAINING FLEXIBLE PAVEMENTS	-	-	-	-	-	-
H. CONSTRUCTING AND MAINTAINING DRAINAGE SYSTEMS	3	2	2	2	3	3
I. CONSTRUCTING BUNKERS AND REVETMENTS	-	-	-	-	-	-
J. PERFORMING RAPID RUNWAY REPAIR (RRR) FUNCTIONS	2	1	2	2	3	-
K. PERFORMING GROUNDS MAINTENANCE	5	4	3	2	2	4
L. OPERATING DUMP TRUCKS, FRONT-END LOADERS, AND FORKLIFTS	25	22	16	10	7	9
M. OPERATING INDUSTRIAL TRACTORS AND ATTACHMENTS	6	6	4	3	2	3
N. OPERATING GRADERS AND ATTACHMENTS	7	9	7	6	3	5
O. OPERATING CRAWLER-TYPE TRACTORS AND ATTACHMENTS	7	6	6	4	2	8
P. OPERATING SCRAPERS	-	1	-	-	-	-
Q. AUXILIARY CONSTRUCTION EQUIPMENT	13	8	5	4	3	4
R. OPERATING CRANES AND ATTACHMENTS	5	6	5	4	4	7
S. OPERATING MISCELLANEOUS EQUIPMENT	4	4	3	3	2	3
T. PERFORMING SNOW REMOVAL FUNCTIONS	6	5	6	4	2	3
U. RIGGING HOISTING EQUIPMENT	-	-	-	1	-	2
V. PERFORMING MISSILE SUPPORT EQUIPMENT	-	-	-	-	-	-
W. PERFORMING WELL DRILLING FUNCTIONS	-	-	-	-	-	-
X. PERFORMING SPECIALIZED DUTIES	-	-	-	-	-	-
Y. PERFORMING RANGE SUPPORT FUNCTIONS	-	-	-	-	-	-
Z. PERFORMING PRIME BEEF PROGRAM FUNCTIONS	3	3	2	5	3	2

TABLE 18

REPRESENTATIVE TASKS PERFORMED BY DAFSC 551X0 FIRST ENLISTMENT
(1-48 MONTHS TAFMS) PERSONNEL
(N=531)

TASKS	PERCENT MEMBERS PERFORMING
L447 DUMP MATERIALS FROM DUMP TRUCKS	84
L450 HAUL MATERIALS WITH DUMP TRUCKS	80
F158 BREAK CONCRETE WITH JACKHAMMERS	78
F196 OPERATE AIR COMPRESSORS	74
L462 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON DUMP TRUCKS	74
F185 HAND SHOVEL CONCRETE	72
F193 MIX CONCRETE WITH HAND TOOLS	72
F168 CONSTRUCT WOODEN CONCRETE FORMS	69
F224 REMOVE CONCRETE FORMS	69
F227 SAW CONCRETE	68
F213 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON AIR COMPRESSORS	66
F179 FINISH CONCRETE PAVEMENTS TO NONSKID SURFACES WITH BROOMS OR BURLAP DRAGS	66
F164 COMPACT BASE COURSE MATERIALS WITH PNEUMATIC TAMPERS	66
F232 SPREAD CONCRETE WITH HAND SCREEDS	65
F231 SET UP WOODEN CONCRETE FORMS	64
G243 COMPACT ASPHALT WITH HAND TOOLS	64
L468 SPREAD MATERIALS FROM DUMP TRUCKS	63
F159 BREAK CONCRETE WITH TOOLS OTHER THAN JACKHAMMER	62
F180 FINISH CONCRETE PAVEMENTS TO SMOOTH SURFACE BY HAND	62

TABLE 19

REPRESENTATIVE TASKS PERFORMED BY DAFSC 551X1 FIRST-ENLISTMENT
(1-48 MONTHS TAFMS) PERSONNEL
(N=425)

TASKS	PERCENT MEMBERS PERFORMING
L447 DUMP MATERIALS FROM DUMP TRUCKS	95
L454 LOAD DUMP TRUCKS WITH FRONT-END LOADERS	94
L450 HAUL MATERIALS WITH DUMP TRUCKS	93
L446 DRIVE FRONT-END LOADERS TO OR FROM WORK AREAS	92
L460 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON FRONT-END LOADERS	91
L462 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON DUMP TRUCKS	89
L452 LEVEL AREAS BY BACKDRAGGING WITH FRONT-END LOADERS	88
L468 SPREAD MATERIALS FROM DUMP TRUCKS	86
L470 STOCKPILE MATERIALS WITH FRONT-END LOADERS	84
L444 BACKFILL EXCAVATIONS WITH FRONT-END LOADERS	83
L469 SPREAD MATERIALS WITH FRONT-END LOADERS	79
S688 LOAD OR UNLOAD CONSTRUCTION EQUIPMENT FROM LOWBOYS	71
L467 ROUGH GRADE AREAS WITH FRONT-END LOADERS	70
L445 DRIVE FORKLIFTS TO OR FROM WORK AREAS	69
N513 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE OF GRADERS	69
Q609 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON AIRFIELD VACUUM SWEEPERS	68
Q622 SWEEP AIRFIELD PAVEMENTS WITH AIRFIELD VACUUM SWEEPERS	67
L455 LOAD MATERIALS WITH FRONT-END LOADERS USING MULTIPURPOSE BUCKETS	67

551X0/X1 Equipment Use

Major equipment types used by 30 percent or more of first-term personnel are shown in Table 20. Despite considerable overlap in equipment used, there are AFS differences revealed in the percent of personnel using the equipment types common to both groups. Construction Equipment Operator personnel work with forklifts, front-end loaders, and sweepers in higher numbers than Pavements personnel. Pavements Maintenance personnel work more often with jackhammers than 551X1 personnel. Three types of heavy equipment are used approximately equally by members of either career ladder: dump trucks, power mowers, and snow plows. Common use of these equipment types is more likely related to the types of tasks given to first-termers than symptomatic of two AFSCs performing similiar jobs.

TABLE 20

EQUIPMENT USED BY 30 PERCENT OR MORE OF FIRST-ENLISTMENT PERSONNEL
(1-48 MONTHS TAFMS)

<u>EQUIPMENT</u>	<u>PERCENT 551X0 USING</u>	<u>PERCENT 551X1 USING</u>
DUMP TRUCKS	88	96
JACKHAMMERS	78	33
CONCRETE ROUTERS AND SAWS	70	-
TAMPERS	66	-
FRONT-END LOADERS	64	95
TRACTORS	57	78
CONCRETE DRILLS	55	-
CONCRETE MIXERS	52	-
POWER MOWERS	40	34
SNOW PLOWS	38	35
FORKLIFTS	35	74
JITTER BUGS	34	-
SWEEPERS	31	78
GRADERS	-	77
CRAWLER TRACTORS	-	75
VACUUM SWEEPERS	-	69
LOWBOYS	-	67
BACKHOES	-	63
CRANES	-	46
TOWED ROLLERS	-	40
MOTORIZED ROLLERS	-	34
AIR BLAST SNOW SWEEPERS	-	32
TRENCHING MACHINES	-	31
CLAMSHELLS	-	30

Job Satisfaction Data

Tables 21 and 22 present data reflecting the job interest, perceived utilization of talents and training, and reenlistment intentions of selected TAFMS groups and a comparative sample of other Direct Support career ladders surveyed in 1981.

AFSC 551X0: Overall, 551X0 incumbents reflected good job satisfaction (see Table 21). As expected, 551X0 first-termers had the lowest satisfaction, with less than 50 percent finding their job interesting. As experience increased, however, the percent of incumbents finding their jobs interesting increased, with 70 percent of career personnel (97+ months TAFMS) indicating this was the case. This trend among 551X0 personnel was very similar to that seen in other similar ladders surveyed in 1981.

Perceived utilization of talents and training was also fairly high across all experience groups. Notable trends, however, were seen in the perceived use of training by first and second-termers. The percent of 551X0 personnel in these groups who felt their training was used well on the job was much lower than for similar ladders surveyed in 1981.

AFSC 551X1: Job satisfaction for 551X1 incumbents was generally higher than for 551X0 personnel (see Table 22). This trend was readily apparent for first-term incumbents. For example, 68 percent of 551X1 first-termers found their job interesting as compared to only 47 percent of 551X0 first-termers. The 551X1 first-termers also reflected a much higher job interest than other similar ladders surveyed in 1981. As with 551X0 personnel, the percent of 551X1 first and second-enlistment personnel who felt their training was used fairly well or better was much lower than for the similar ladders.

TABLE 21

COMPARISON OF JOB SATISFACTION INDICATORS BY 551X0 TAFMS GROUPS
(PERCENT MEMBERS RESPONDING)*

	1-48 MONTHS TAFMS		49-96 MONTHS TAFMS		97+ MONTHS TAFMS	
	551X0 (N=531)	COMPARATIVE SAMPLE** (N=1,392)	551X0 (N=125)	COMPARATIVE SAMPLE** (N=352)	551X0 (N=182)	COMPARATIVE SAMPLE** (N=703)
<u>EXPRESSED JOB INTEREST:</u>						
DULL	24	30	16	14	9	10
SO-SO	27	27	22	26	16	16
INTERESTING	47	43	58	59	70	72
<u>PERCEIVED UTILIZATION OF TALENTS:</u>						
LITTLE OR NOT AT ALL	40	48	28	25	16	17
FAIRLY WELL TO PERFECTLY	60	51	70	75	82	82
<u>PERCEIVED UTILIZATION OF TRAINING:</u>						
LITTLE OR NOT AT ALL	34	17	33	13	17	12
FAIRLY WELL TO PERFECTLY	65	82	65	87	87	86
<u>REENLISTMENT INTENTIONS:</u>						
PLAN TO RETIRE	-	-	-	-	8	2
NO, OR PROBABLY NO	60	57	32	26	7	27
YES, OR PROBABLY YES	38	41	64	72	75	71

* COLUMNS MAY NOT ADD TO 100% DUE TO NO RESPONSE AND ROUNDING

** COMPARATIVE SAMPLE INCLUDED ALL DIRECT SUPPORT CAREER LADDERS SURVEYED IN 1981;

AFSCs INCLUDED WERE 566X0 AND 631X0

TABLE 22

COMPARISON OF JOB SATISFACTION INDICATORS BY 551X1 TAFMS GROUPS
(PERCENT MEMBERS RESPONDING)*

	1-48 MONTHS TAFMS		49-96 MONTHS TAFMS		97+ MONTHS TAFMS	
	551X1 (N=425)	COMPARATIVE SAMPLE** (N=1,392)	551X1 (N=139)	COMPARATIVE SAMPLE** (N=352)	551X1 (N=180)	COMPARATIVE SAMPLE** (N=703)
<u>EXPRESSED JOB INTEREST:</u>						
DULL	14	30	10	14	8	10
SO-SO	17	27	20	26	16	16
INTERESTING	68	43	67	59	73	72
<u>PERCEIVED UTILIZATION OF TALENTS:</u>						
LITTLE OR NOT AT ALL	28	48	26	25	20	17
FAIRLY WELL TO PERFECTLY	71	51	73	75	78	82
<u>PERCEIVED UTILIZATION OF TRAINING:</u>						
LITTLE OR NOT AT ALL	29	17	26	13	24	12
FAIRLY WELL TO PERFECTLY	71	82	73	87	74	86
<u>REENLISTMENT INTENTIONS:</u>						
PLAN TO RETIRE	-	-	-	-	9	2
NO, OR PROBABLY NO	63	57	31	26	10	27
YES, OR PROBABLY YES	36	41	66	72	74	71

* COLUMNS MAY NOT ADD TO 100% DUE TO NO RESPONSE AND ROUNDING

** COMPARATIVE SAMPLE INCLUDED ALL DIRECT SUPPORT CAREER LADDERS SURVEYED IN 1981;
AFSCs INCLUDED WERE 566X0 AND 631X0

TRAINING ANALYSIS

Occupational survey data are a source of information which can assist training managers in the development of training programs relevant to the needs of personnel working in their first assignment within the career ladder. Factors which may be used in evaluating training are the percent of first job (1-24 months TAFMS) or first enlistment (1-48 months TAFMS) members performing tasks, along with training emphasis and task difficulty ratings (as discussed in the TASK FACTOR ADMINISTRATION section). These factors were used in evaluating the Specialty Training Standards (STS) for both career ladders and the Plan of Instruction (POI) for Course 3ABR55130. A POI match with the Joint Service 5ABA55131 Course conducted by the U.S. Army at Fort Leonard Wood was deemed unfeasible. Training emphasis ratings for equipment reinforced conclusions drawn from task data discussed below. See the Training Extract for a detailed data presentation. Technical school personnel from the Sheppard Technical Training Center, Sheppard AFB, Texas, matched inventory tasks to appropriate sections of both STSs and POI. It was this matching upon which comparisons are based. A complete computer listing displaying the percent members performing, training emphasis ratings, and task difficulty ratings for each task statement, along with STS and POI matching, was forwarded to the technical school for their use in any further detailed review of training documents. A summary of that information is provided below.

Training Emphasis (Tasks)

AFS 551X0: Table 23 lists the top 25 tasks which raters indicated required the most training emphasis. The tasks included generally were performed by a majority of first-enlistment personnel.

Four of the 25 tasks, however, are performed by less than 30 percent of the survey group. These tasks involved operation of several specific types of equipment--asphalt distributors, asphalt heating kettles, and joint sealing machines. Although senior 551X0 personnel indicated training was important on these tasks, current resident training does not include this instruction. The decision to exclude such training appears correct, for survey data revealed less than a third of first-term personnel use this equipment and use of the equipment does not increase with time in the career field. At the 7-skill level, less than 30 percent of 551X0 personnel performed operator inspection and maintenance on asphalt heating kettles, 21 percent operated joint sealing machines, and less than 15 percent operated asphalt distributors. This equipment, though indicative of the 551X0 career field, is not commonly used by job incumbents at any skill level and is, therefore, not recommended for resident course instruction.

The remaining 20 tasks are not presently part of resident training. Training managers and school personnel have determined that the equipment-specific tasks are more efficiently taught during on-the-job training while at the first-assignment site. Review of these 20 tasks revealed at least one task possibly appropriate for resident training--compute quantity of concrete needed. This task is not equipment-related and warrants review for resident course inclusion with 40 percent of first-term performing and among the highest training rating of all 551X0 tasks.

AFS 551X1: Table 24 displays the top 25 tasks which raters believe required the highest training emphasis. All of the tasks are performed by 30 percent or more of first-enlistment airmen. Many of the tasks included were operator inspection and maintenance of various types of construction equipment. Equipment included were dump trucks, front-end loaders, forklifts, vacuum and multipurpose sweepers, crawler-type tractors and their attachments, tractor trailers, cranes, graders, and snow removal equipment. In addition, 11 of the 25 tasks involved operation of graders and cranes. Several of the grader and crane tasks were also rated difficult in relation to other tasks performed by 551X1 first-enlistment personnel. Equipment training for Air Force personnel is conducted by the Army at Fort Leonard Wood, Missouri. This training has suffered alternately from cutbacks in instructor manpower and equipment for training purposes. Air Force training managers should review training emphasis data for feedback to Army trainers on Air Force training needs for 551X1 entry-level personnel.

TABLE 23

TASKS RATED HIGHEST IN TRAINING EMPHASIS FOR 551X0 PERSONNEL

TASKS	TRAINING EMPHASIS	TASK DIFFICULTY	PERCENT MEMBERS PERFORMING	
			FIRST ENLISTMENT	TOTAL 55150 SAMPLE
F213 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON AIR COMPRESSORS	6.49	4.79	66	66
F196 OPERATE AIR COMPRESSORS	6.44	4.37	74	71
F165 COMPUTE QUANTITY OF CONCRETE NEEDED	6.28	4.79	40	43
F182 FINISH CONCRETE SURFACES WITH BULLFLOATS	6.16	4.91	56	57
F158 BREAK CONCRETE WITH JACKHAMMERS	6.02	3.34	77	74
F227 SAW CONCRETE	5.88	4.12	67	66
F168 CONSTRUCT WOODEN CONCRETE FORMS	5.86	4.63	69	65
F208 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON CONCRETE SAWS	5.84	4.52	53	55
L462 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON DUMP TRUCKS	5.84	4.09	74	73
F229 SEAL CRACKS AND JOINTS	5.77	4.03	58	58
G268 PREPARE BASE COURSE FOR FLEXIBLE PAVEMENTS	5.74	5.35	55	53
F231 SET UP WOODEN CONCRETE FORMS	5.72	4.30	64	62
G248 CUT ASPHALT WITH SAWS	5.65	3.90	60	62
F180 FINISH CONCRETE PAVEMENTS TO SMOOTH SURFACE BY HAND	5.63	5.33	61	58
F205 PATCH CONCRETE WITH BITUMINOUS MATERIAL	5.63	4.09	43	43
G260 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON ASPHALT HEATING KETTLES	5.63	5.15	22	25
F201 OPERATE JOINT SEALING MACHINES	5.61	5.03	28	29
F194 MIX CONCRETE WITH PORTABLE CONCRETE MIXERS	5.54	4.14	52	52
L450 HAUL MATERIALS WITH DUMP TRUCKS	5.54	3.82	79	78
F223 PLACE WIRE MESH FOR CONCRETE REINFORCING	5.51	3.33	59	57
G256 OPERATE ASPHALT DISTRIBUTORS DURING APPLICATIONS	5.51	5.52	20	23
G266 PREPARE ASPHALT DISTRIBUTORS FOR OPERATION	5.49	5.54	20	23
L460 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON FRONT-END LOADERS	5.46	4.32	42	48
F206 PATCH CONCRETE WITH CEMENT MORTAR	5.44	4.23	42	39
F221 PLACE EXPANSION JOINT MATERIAL	5.44	3.06	60	58

TABLE 24

TASKS RATED HIGHEST IN TRAINING EMPHASIS FOR 551X1 PERSONNEL

TASKS	TRAINING EMPHASIS	TASK DIFFICULTY	PERCENT MEMBERS PERFORMING	
			FIRST ENLISTMENT	TOTAL 551X1 SAMPLE
N503 CUT AND FILL WITH GRADERS	6.69	5.96	52	59
O555 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON CRAWLER-TYPE TRACTOR ATTACHMENTS	6.66	4.95	57	60
L462 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON DUMP TRUCKS	6.63	4.09	89	87
Q609 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON AIRFIELD VACUUM SWEEPERS	6.69	5.08	67	62
L460 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON FRONT-END LOADERS	6.54	4.32	90	89
N500 BACKFILL WITH GRADERS	6.54	5.11	47	54
N510 MAINTAIN ROAD SHOULDERS WITH GRADERS	6.54	6.15	43	48
R659 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON CRANES	6.51	6.17	44	45
N502 CROWN DIRT ROADS WITH GRADERS	6.49	6.22	52	56
R664 PREPARE LOADS TO BE LIFTED	6.46	5.84	40	44
N513 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE OF GRADERS	6.43	4.95	69	72
Q622 SWEEP AIRFIELD PAVEMENTS WITH AIRFIELD VACUUM SWEEPERS	6.29	4.58	67	61
S694 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON TRACTOR TRAILERS	6.29	4.88	62	67
L444 BACKFILL EXCAVATIONS WITH FRONT-END LOADERS	6.26	4.36	82	82
R649 INSTALL OR REMOVE CRANE CABLES	6.26	6.05	44	47
L461 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON FORKLIFTS	6.23	4.32	63	69
R639 DIRECT CRANE OPERATORS WITH HAND SIGNALS	6.23	5.59	50	51
L454 LOAD DUMP TRUCKS WITH FRONT-END LOADERS	6.20	4.60	93	91
R636 DETERMINE PROPER BOOM ANGLES	6.17	6.07	36	40
L455 LOAD MATERIALS WITH FRONT-END LOADERS USING MULTIPURPOSE BUCKETS	6.14	4.67	67	67
O556 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON CRAWLER-TYPE TRACTORS	6.11	4.98	61	63
T718 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON SNOW REMOVAL EQUIPMENT	6.09	5.13	40	39
N509 FINISH GRADE AREAS WITH GRADERS	6.03	7.79	43	48
N501 BLEND MATERIALS WITH GRADERS	6.03	5.80	33	36
Q618 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON MULTIPURPOSE SWEEPERS	6.03	5.48	48	46

Specialty Training Standard (STS)

AFS 551X0: A review of STS 551X0, dated August 1978, compared STS sections to survey data. Paragraphs containing general information or subject matter proficiency requirements were not evaluated. The STS provides thorough coverage of the jobs performed by field personnel. In some cases, tasks did not have high numbers of first-enlistment personnel performing them. Examples of such tasks include use of backhoes, asphalt distributors, paving machines, and power trowels. Less than 25 percent of first-enlistment personnel work with such equipment. Table 25 lists tasks performed by 20 percent or less 551X0 personnel with STS skill-level or training code levels in need of review. Two tasks relate to completion of two forms (DD Form 1354 and AF Form 1801). The current STS codes these forms as requiring 2c level for fully qualified 5-skill personnel. Survey data, though, reveals less than 10 percent of 551X0 personnel complete these forms. Couple this with the extremely low training emphasis ratings received and annotation of these forms may qualify for lowering of STS code to 2b or less.

In addition, 14 tasks are shown in Table 25 accompanied by the code required for training of 3-skill personnel. These tasks are highlighted for consideration because of the extremely low number of 551X0 personnel performing them. Training Managers may wish to review these tasks and their associated STS areas of drainage systems, rapid runway repair, and aircraft shelters for reduction of training time spent in these areas.

Seven tasks performed by 30 percent or more of first-enlistment personnel were not referenced to the current STS (see Table 26). These tasks should be reviewed by subject-matter and training specialists to determine if they should be included during the next STS revision. Three of these tasks involved filling of concrete popouts with different materials; three of the tasks related to use of specific equipment. The pieces of equipment were tractor attachments and snow removal equipment.

AFS 551X1: STS 551X1, dated June 1978, was also reviewed and compared to survey data. Four tasks with high first-enlistment percentage performing and high training emphasis were not matched to a specific STS reference (see Table 27). Two of these tasks were among those rated highest in need for training (see Table 24). These tasks are performance of operator inspection and maintenance on front-end loaders and crawler-type tractors. Both are performed by over half of first-enlistment personnel. These four tasks should be considered for inclusion in the STS during the next STS review.

Survey data revealed that annotation of request for Issue or Turn-In form (AF Form 1801) was performed by only 6 percent of 5-skill level 551X1 personnel. The present STS proficiency code level for 5-skill personnel is presently 2c. During the next STS review this form may warrant downgrade to 2b or lower based on extremely low numbers of 5-skill level personnel working with this form.

Resident training for entry-level 551X1 Air Force personnel is conducted by the U.S. Army at Ft. Leonard Wood. Due to manpower cutbacks the Construction Equipment Operator course has been running as a 6 week, 3 day course. This cutback has had some detrimental effect on training in that

trainees get less actual hands-on operation of equipment. The future for the course is brighter because instructor manpower will be augmented in October and the course will return to an 11-week, 3-day POI. Whether the course is efficiently supporting Air Force needs requires close review of survey data and the proposed Army POI by training managers.

TABLE 25

TASKS PERFORMED BY TWENTY PERCENT OR LESS 55150 PERSONNEL
(SUGGESTED FOR STS CODE LEVEL REVIEW)

TASK	STS CODE	TRNG EMP	TASK DIF	PERCENT MEMBERS PERFORMING	
				1ST ENL	TOTAL 55150
E145 ANNOTATE TRANSFER AND ACCEPTANCE OF MILITARY REAL PROPERTY (DD FORM 1354)	2c	.28	5.29	3	5
E141 ANNOTATE REQUEST FOR ISSUE ON TURN-IN (AF FORM 1801)	2c	1.53	4.41	3	7
TRNG CODE					
G261 PERFORM PENETRATION PATCHING	B	1.93	4.73	10	13
H317 MAINTAIN FRENCH DRAINAGE SYSTEMS	B	2.53	4.29	11	13
H313 MAINTAIN CHECK DAMS	B	2.23	3.96	9	11
H322 MAINTAIN SANDBAG	B	1.93	3.37	9	11
H315 MAINTAIN EMBANKMENTS	B	1.88	4.09	12	13
H316 MAINTAIN FLUMES	B	1.88	3.82	10	10
H314 MAINTAIN EARTHEN DAMS	B	1.67	4.11	7	7
H319 MAINTAIN LEACHING FIELDS	B	1.26	4.01	5	5
H323 MAINTAIN VERTICAL DRY WELLS	B	.88	4.27	5	5
J357 COMPUTE AMOUNT OF MATTING REQUIRED	B	3.63	5.57	6	7
J367 MELT AND POUR LEAD-SULFATE ANCHORING MIXTURE	B	2.67	4.36	10	9
I346 FILL REVETMENT BINS WITH CLAMSHELLS	B	1.61	6.04	4	4
I332 COMPACT MATERIALS IN REVETMENT BINS WITH HAND TOOLS	B	2.44	3.94	8	9
I333 COMPACT MATERIALS IN REVETMENT BINS WITH PNEUMATIC TAMPS	B	2.86	4.35	6	6

TABLE 26

TASKS NOT REFERENCED TO STS 551X0
(30% OR MORE PERFORMING/HIGH TRAINING EMPHASIS)

TASK		PERCENT MEMBERS PERFORMING			
		<u>TNG</u> <u>EMP</u>	<u>TSK</u> <u>DIF</u>	<u>1ST</u> <u>JOB</u>	<u>1ST</u> <u>ENL</u>
F204	PATCH AIRFIELD CONCRETE WITH EPOXY MORTAR	5.42	4.56	32	35
F176	FILL CONCRETE POPOUTS WITH EPOXY	5.26	4.31	32	38
F175	FILL CONCRETE POPOUTS WITH CEMENT MORTAR	5.09	3.52	41	40
T718	PERFORM OPERATOR INSPECTIONS AND MAIN- TENANCE ON SNOW REMOVAL EQUIPMENT	4.70	5.13	33	39
M491	PERFORM OPERATOR INSPECTIONS AND MAIN- TENANCE ON TRACTOR ATTACHMENTS	4.39	3.97	24	30
F177	FILL CONCRETE POPOUTS WITH ROAD TAR	4.02	3.28	30	32
T709	INSTALL OR REMOVE CUTTING EDGES TO PLOW BLADES	3.86	3.93	22	31

TABLE 27

TASKS NOT REFERENCED TO STS 551X1
(30% OR MORE PERFORMING/HIGH TRAINING EMPHASIS)

TASK		PERCENT MEMBERS PERFORMING			
		<u>TNG</u> <u>EMP</u>	<u>TSK</u> <u>DIF</u>	<u>1ST</u> <u>JOB</u>	<u>1ST</u> <u>ENL</u>
L460	PERFORM OPERATOR INSPECTIONS AND MAIN- TENANCE ON FRONT-END LOADERS	6.54	4.32	88	91
O556	PERFORM OPERATOR INSPECTIONS AND MAIN- TENANCE ON CRAWLER-TYPE TRACTORS	6.11	4.98	56	62
O553	LOAD AND UNLOAD CRAWLER-TYPE TRACTORS ON TRAILERS	5.94	5.50	47	60
N527	WINDROW MATERIALS WITH GRADERS	5.74	4.93	47	57

Plan of Instruction (POI)

Based on the previously mentioned assistance from technical school subject-matter specialists in matching inventory tasks to the 3ABR55130 POI, dated 19 November 1980, a computer product was generated displaying the results of the matching process. Information furnished includes training emphasis (TE) and task difficulty (TD) ratings, as well as percent members performing data for first job (1-24 months TAFMS) and first-enlistment (1-48 months TAFMS) personnel.

Most POI blocks and objectives are supported by survey data based on percentages of first-term personnel performing tasks or the high training emphasis or task difficulty rating calculated for those tasks. There were, however, three areas of the POI that were consistently performed by less than 30 percent of first-term personnel. These sections dealt with drainage systems (Block I4), rapid runway repair (Block IV1), and aircraft shelters (Block IV2). The large number of tasks referenced to these sections make usual display in a table or chart impractical. Subject-matter specialists and training personnel should thoroughly review these POI blocks to assess if training time is being effectively used, given the small numbers of first-term personnel performing these tasks.

Tasks referenced to remaining POI blocks with low first-term performance are shown in Table 28. Many of these tasks relate to asphalt paving activities which, as mentioned in the Training Emphasis section of this report, are performed by few 551X0 personnel. In addition to the asphalt equipment used by few job incumbents, some tasks using rollers of several kinds (motorized and towed) were performed by few personnel. Although the tasks presented in Table 28 have high training emphasis ratings (3.4 or higher), indicating some form of structured training is desirable, the majority of tasks also reflect average or below average task difficulty ratings. This suggests that if formal training is necessary, regardless of the low percentages of personnel performing these tasks, OJT may be more appropriate than resident technical training.

In addition to these tasks rated high in training emphasis as being performed by a low percentage personnel, there were also tasks being trained under authority of the POI which had below average training emphasis and task difficulty ratings, as well as fewer than 30 percent first-term airmen performing them. Again, many of these tasks were referenced to the POI sections dealing with drainage systems, rapid runway repair (RRR), and aircraft shelters. The number of tasks precluded table or chart presentation in this report. It is recommended that training personnel examine these areas of the POI for possible revision.

Table 29 presents tasks referenced to other sections of the POI which had low training emphasis and task difficulty ratings coupled with low percent performing. Some of the tasks reveal again the low use of such equipment as asphalt distributors. Other equipment also appeared, such as rotary tillers and power screeds. Mixing soils by numerous means is also among the tasks performed by few 551X0 personnel. Subject-matter specialists and training personnel may wish to further evaluate these tasks to determine if they represent an effective and appropriate use of resident course training time.

Some inventory tasks received high training emphasis ratings, but were not referenced to any portion of the POI. These tasks are performed by more than 30 percent of first-term personnel and may bear consideration for inclusion in the POI when it is next revised. Table 30 lists these tasks recommended for review by training personnel. The tasks underscore the use of dump trucks and front-end loaders among 551X0 job incumbents, but also suggest additional instruction may be warranted on air compressors and portable concrete mixers. Undoubtedly, some tasks, such as performance of operator inspections and maintenance on snow removal equipment, may be more efficiently left to OJT for first-term personnel, but tasks in Table 30 should be reviewed to determine if resident training is an appropriate vehicle for instruction on any of the tasks listed.

TABLE 28

POI BLOCKS REFLECTING PERFORMANCE BY A LOW PERCENTAGE OF FIRST ENLISTMENT PERSONNEL
(LESS THAN 30 PERCENT PERFORMING)

POI REFERENCE BLOCK-UNIT	TASKS	TRAINING TASK EMPHASIS	TASK DIFFICULTY	PERCENT MEMBERS PERFORMING	
				FIRST JOB (N=216)	FIRST ENLISTMENT (N=531)
I5B	Q598 COMPACT SUB-BASE WITH MOTORIZED ROLLERS	4.42	4.58	25	29
	Q595 COMPACT BASE COURSE MATERIALS WITH TOWED ROLLERS	3.98	4.29	12	18
	Q599 COMPACT SUB-BASE WITH TOWED ROLLERS	3.67	4.54	10	14
I11H	Q604 DRIVE ROLLERS TO OR FROM WORK AREAS	3.51	4.12	21	29
	F181 FINISH CONCRETE PAVEMENTS WITH POWER TROWELS	5.07	5.75	24	23
	F238 TAMP OR ROD CONCRETE AT FORMS EDGES OR CORNERS	4.65	3.58	25	27
	F237 TAMP CONCRETE WITH PNEUMATIC CONCRETE VIBRATORS	4.07	4.31	14	16
I111D	F186 INSTALL LOAD TRANSFER DEVICES AT CONCRETE JOINTS	3.58	4.71	11	13
	F235 TACK COAT CONCRETE WITH LIQUID ASPHALT	3.74	4.19	26	25
	G257 OPERATE ASPHALT PAVING MACHINE	5.07	6.91	21	25
	G267 PREPARE ASPHALT PAVING MACHINE FOR OPERATION	4.61	5.75	19	25
I112B	Q597 COMPACT BITUMINOUS MATERIALS WITH TOWED ROLLERS	3.91	4.84	10	14
I112C	G241 APPLY AGGREGATE TO BLEEDING ASPHALT PAVEMENTS	4.21	4.18	21	23
	G260 PERFORM OPERATOR INSPECTIONS & MAINTENANCE ON ASPHALT HEATING KETTLES	5.63	5.15	15	22
I112H	G280 USE MECHANICAL SPREADERS TO SPREAD HOT-MIX BITUMINOUS MATERIALS	4.05	6.01	14	17
I1121	G279 TREAT ASPHALT SURFACE WITH SLURRY SEAL COATS	3.98	5.22	25	24
	G278 TREAT ASPHALT SURFACE WITH SINGLE PASS SURFACE TREATMENTS	3.65	5.18	18	19
	G277 TREAT ASPHALT SURFACES WITH MULTIPLE PASS SURFACE TREATMENTS	3.49	5.47	12	13
G273	SKIN PATCH PONDING OR BIRD BATHS IN ASPHALT	3.58	4.40	21	26
L436	ATTACH OR REMOVE AGGREGATE SPREADERS TO OR FROM DUMP TRUCKS	3.51	3.51	18	24

TABLE 29

POI BLOCKS REFLECTING PERFORMANCE BY A LOW PERCENTAGE OF PERSONNEL AND
LOW TRAINING EMPHASIS AND TASK DIFFICULTY RATINGS

POI REFERENCE BLOCK-UNIT	TASKS	TRAINING EMPHASIS	TASK DIFFICULTY	PERCENT MEMBERS PERFORMING	
				FIRST JOB (N=216)	FIRST ENLISTMENT (N=531)
IIIB	K404 LOOSEN GROUND WITH GARDEN TYPE ROTARY TILLERS	1.49	4.06	7	9
IIIC	Q627 USE ROTOTILLERS FOR MECHANICAL AND CHEMICAL SOIL STABILIZATION	1.42	4.66	2	3
	K408 MIX MATERIALS WITH GARDEN TYPE ROTARY TILLERS	1.30	3.89	6	7
	K409 MIX SOILS WITH DISC HARROWS	1.28	3.79	4	6
	K410 MIX SOILS WITH DUMP TRUCKS	1.19	4.28	9	10
	K411 MIX SOILS WITH HAND SPREADERS	1.14	3.52	7	8
	K412 MIX SOILS WITH TRACTOR DRAWN SPREADERS	1.09	4.06	5	6
IIID	F187 INSTALL SNAP TIES	2.33	4.52	6	9
IIIH	F236 TAMP CONCRETE WITH ELECTRIC CONCRETE VIBRATORS	3.12	4.06	10	12
	F234 SPREAD CONCRETE WITH VIBRATOR POWER SCREEDS	3.02	4.61	18	18
	F214 PERFORM SLUMP TESTS	2.42	5.05	9	10
	F233 SPREAD CONCRETE WITH NONVIBRATOR POWER SCREEDS	2.37	3.91	17	16
	F220 PLACE CONCRETE IN FORMS WITH POWERED GEORGIA BUGGIES	.81	3.51	4	5
II12I	G276 TREAT ASPHALT SURFACES WITH FOG SEALS	3.26	4.61	12	14
	L437 ATTACH OR REMOVE ASPHALT DISTRIBUTORS TO OR FROM DUMP TRUCKS	2.47	3.81	15	19
	G254 LEVEL AGGREGATE IN SPREADERS	2.30	3.50	13	19
	G261 PERFORM PENETRATION PATCHING	1.93	4.73	9	10

TABLE 30

TASKS (WITH HIGH TRAINING EMPHASIS) NOT REFERENCED TO 3ABRS5130 POI BLOCKS
(30 PERCENT OR MORE PERFORMING)

TASKS	TRAINING * EMPHASIS	TASK ** DIFFICULTY	PERCENT MEMBERS PERFORMING	
			FIRST JOB (N=216)	FIRST ENLISTMENT (N=531)
F196 OPERATE AIR COMPRESSORS	6.44	4.37	74	74
F165 COMPUTE QUANTITY OF CONCRETE NEEDED	6.28	5.03	32	41
F208 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON CONCRETE SAWS	5.84	4.52	49	54
L462 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON DUMP TRUCKS	5.84	4.09	70	74
F205 PATCH CONCRETE WITH BITUMINOUS MATERIAL	5.63	4.09	43	44
F194 MIX CONCRETE WITH PORTABLE CONCRETE MIXERS	5.54	4.14	44	52
L450 HAUL MATERIALS WITH DUMP TRUCKS	5.44	3.82	79	80
L460 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON FRONT-END LOADERS	5.46	4.32	37	42
F206 PATCH CONCRETE WITH CEMENT MORTAR	5.44	4.23	44	42
F204 PATCH AIRFIELD CONCRETE WITH EPOXY MORTAR	5.42	4.56	32	35
L447 DUMP MATERIALS FROM DUMP TRUCKS	5.37	3.52	80	84
L454 LOAD DUMP TRUCKS WITH FRONT-END LOADERS	5.33	4.60	48	54
F176 FILL CONCRETE POPOUTS WITH EPOXY	5.26	4.31	32	38
F193 MIX CONCRETE WITH HAND TOOLS	5.21	3.65	72	72
L446 DRIVE FRONT-END LOADERS TO OR FROM WORK AREAS	5.21	3.54	39	47
L468 SPREAD MATERIALS FROM DUMP TRUCKS	5.19	4.63	61	64
L471 TOW TRAILERS OR CONSTRUCTION EQUIPMENT WITH DUMP TRUCKS	5.19	4.15	56	61
F211 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON PORTABLE CONCRETE MIXERS	5.16	4.78	32	36
F183 FINISH SUBGRADING BY HAND	5.12	4.04	49	51
F175 FILL CONCRETE POPOUTS WITH CEMENT MORTAR	5.09	3.52	41	40
L469 SPREAD MATERIALS WITH FRONT-END LOADERS	5.05	4.73	22	34

TABLE 30 (CONTINUED)

TASKS (WITH HIGH TRAINING EMPHASIS) NOT REFERENCED TO 3ABR55130 POI BLOCKS
(30 PERCENT OR MORE PERFORMING)

TASKS	TRAINING * EMPHASIS	TASK ** DIFFICULTY	PERCENT MEMBERS PERFORMING	
			FIRST JOB (N=216)	FIRST ENLISTMENT (N=531)
Q616 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON STEEL WHEEL ROLLERS	4.81	4.23	25	32
L444 BACKFILL EXCAVATIONS WITH FRONT-END LOADERS	4.77	4.36	20	32
T718 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON SNOW REMOVAL EQUIPMENT	4.70	5.13	33	39
L452 LEVEL AREAS BY BACKDRAGGING WITH FRONT-END LOADERS	4.65	4.44	29	38
L470 STOCKPILE MATERIALS WITH FRONT-END LOADERS	4.49	4.17	23	31
F190 LAY PLASTIC TO CURE CONCRETE	4.46	2.79	48	49
M490 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON TRACTORS	4.46	4.09	36	41
F200 OPERATE JOINT AND CRACK CLEANING MACHINES	4.42	4.91	38	37
L443 ATTACH OR REMOVE TRAILERS TO OR FROM DUMP TRUCKS	4.26	3.22	50	54
M477 DRIVE TRACTORS TO OR FROM WORK AREAS	4.21	3.03	44	48
F160 CLEAN CONCRETE MIXER DRUMS OR DELIVERY CHUTES	4.16	2.81	50	51
F177 FILL CONCRETE POPOUTS WITH ROAD TAR	4.02	3.28	30	32
F162 CLEAN PAVEMENT SURFACES AND JOINTS BY JET AIR BLASTING	3.95	3.66	24	35

* TE RATING OF 3.57 OR BETTER IS HIGH

** TD RATING OF 5.00 IS AVERAGE

MAJCOM COMPARISONS

Tasks for personnel of the nine major commands (MAJCOM) with the largest 551X0/X1 populations were compared to determine whether job content varied as a function of MAJCOM assignment.

Pavements Maintenance (551X0) personnel were utilized basically the same among the commands. The largest component of their jobs involved construction and maintenance of rigid pavements and concrete with use of dump trucks, forklifts, and front-end loaders a major secondary activity. Two minor deviations from this pattern were noted. Within AAC, equipment operation became the primary work activity due to heavy use of snow removal equipment; and within TAC, grounds maintenance superseded equipment operation as the second most time-consuming duty.

Construction Equipment Operator (551X1) personnel were also utilized similarly throughout the major commands. Much of their time was spent operating three pieces of equipment: dump trucks, forklifts, and front-end loaders. Use of auxillary construction equipment, such as rollers and sweepers, was the second most common duty but some minor variations did occur. Within AAC, snow removal equipment was heavily used, grader use was higher within MAC and ATC; and AFSC personnel used crawler-type tractors more frequently.

ANALYSIS OF CONUS VERSUS OVERSEAS GROUPS

Comparisons were made of the tasks performed and background data for the 551X0/551X1 personnel surveyed to determine if career ladder jobs differed in any significant manner between Continental United States (CONUS) and overseas assignments. This review revealed no major difference in the utilization of these career ladder personnel. Minor differences are discussed below.

Pavements Maintenance (551X0) Personnel. Personnel in the overseas jobs had somewhat higher total active military service time and had been in their jobs a shorter period of time than CONUS personnel. These differences are probably due to the need for more experienced personnel overseas and the short-term nature of the overseas assignment in comparison to CONUS assignments. Another difference appeared in Prime Beef participation. CONUS personnel took part in home-station functions and deployment twice as often as overseas personnel. Sixty-three percent of overseas 551X0s had not participated in a Prime Beef deployment since October 1977. Forty-three percent of overseas 551X0s had not taken part in home-station Prime Beef activities since that date.

Construction Equipment Operator (551X1) Personnel. Overseas personnel had been on their job for a shorter period of time than CONUS personnel but, otherwise, were similar to CONUS 551X1 personnel in time in career field and total active military service. Differences in Prime Beef activities, however, emerged. CONUS 551X1 personnel participate more often than overseas personnel. Fifty-nine percent of overseas airmen (versus 40 percent CONUS) had not taken part in any Prime Beef deployments since October 1977. Participation in Prime Beef programs at home station was similar across the AFS. CONUS personnel (57 percent) and overseas personnel (53 percent) participated four or more times since October 1977.

COMPARISON TO PREVIOUS SURVEY

The results of the last survey in the 551X0/X1 career field were reviewed to determine changes, if any, in the jobs performed in these career ladders. The last survey was based on a sample of 2,000 members from both ladders and was published in 1974. Comparison with this study revealed a basically stable career ladder, but one change noted is worthy of discussion.

The 1981 job satisfaction data revealed modest growth in positive attitudes toward the 551X0 career ladder jobs. The 1974 survey reported 30 percent of 551X0 personnel and 13 percent of 551X1 personnel found their jobs dull. Among these survey participants, 41 percent of 551X0 personnel and 27 percent of 551X1 personnel believed their job neither utilized their talents or training. Data from the current survey revealed 20 percent of 551X0 personnel and 12 percent of 551X1 personnel felt their jobs were dull. Thirty-two percent of 551X0 and 27 percent of 551X1 personnel found their job did not utilize their talents or training. These figures show some improvement in job satisfaction among Pavements personnel, while the 551X1 career ladder remained substantially unchanged. In comparison with other support AFSCs surveyed in 1981, both career ladders fared well in favorable job satisfaction responses.

Data analysis resulted in many findings consistent with the 1974 survey. Similarities between the two surveys included the following:

- Pavements Maintenance personnel operated items of heavy equipment related to snow removal, sanitation and surface preparation or compaction.
- Construction Equipment Operators at lower skill levels do perform some Pavements Maintenance labor tasks.
- Personnel from both ladders performed ground maintenance, but 551X0 personnel were more likely to perform this work.
- Members of both ladders are sometimes used interchangeably to operate snow removal equipment where winter climates makes this a necessary job.

Despite these minor job overlaps, (mirrored in some common equipment usage), the majority of 551X0 and 551X1 personnel performed distinct and complementary jobs. In both career ladders, AFS typical tasks formed the bulk of most jobs identified in the 1981 job typing analysis. These separate career ladder roles reinforce similar conclusions found in the 1974 survey report.

IMPLICATIONS

The primary reason for initiating a survey of these two career ladders was to determine the amount of job overlap occurring within the Pavements Maintenance and Construction Equipment Operator specialties. Merger of the two specialties is under consideration based on perceived similarity in the jobs performed by 551X0/X1 personnel.

A decision to merge the 551X0/X1 career ladders is not warranted based on the data summarized in this report. Although some overlap in tasks performed was found in use of some equipment (most notably, in use of dump trucks, front-end loaders, and forklifts) and joint performance of some concrete and pavements tasks, the majority of 551X0/X1 personnel performed distinct but complementary jobs. Tasks performed in common often related to other group memberships as with Red Horse 551X1 members who performed large numbers of concrete tasks. Other unique groups included gunnery range and missile support personnel. Such mixed 551X0/X1 personnel groups existed but not in numbers sufficient to justify a career field merger.

A review of supporting training documents for these career ladders found that they were consistent with tasks performed, with a few exceptions. Both STSs were reviewed and recommendations for additions were made as well as suggestions for adjustment in skill-code levels. Recommendations for the 551X0 STS included additional coverage of operation of tractor attachments and snow removal equipment. Recommendations for the 551X1 STS included emphasis on operator inspection and maintenance of front-end loaders and crawler-type tractors. The 3ABR55130 POI was complete in job coverage, but, training managers should review the blocks of instruction covering drainage systems, rapid runway repair, and aircraft shelters. Many tasks in these blocks were performed by few field personnel, or received such low training emphasis and task difficulty ratings, that formal resident technical training on these tasks may not be cost effective. Suggested training additions included additional emphasis on air compressors, portable concrete mixers, and instruction on computation of concrete amount needed for a job.

APPENDIX A

REPRESENTATIVE TASKS FOR CAREER LADDER STRUCTURE GROUPS

TABLE A1
PAVEMENTS MAINTENANCE PERSONNEL CLUSTER
(GRP118)

TASKS	PERCENT MEMBERS PERFORMING (N=466)
F158 BREAK CONCRETE WITH JACKHAMMERS	96
F196 OPERATE AIR COMPRESSORS	96
L447 DUMP MATERIALS FROM DUMP TRUCKS	95
F185 HAND SHOVEL CONCRETE	93
L450 HAUL MATERIALS WITH DUMP TRUCKS	92
F224 REMOVE CONCRETE FORMS	92
F227 SAW CONCRETE	92
F213 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON AIR COMPRESSORS	91
F193 MIX CONCRETE WITH HAND TOOLS	91
F168 CONSTRUCT WOODEN CONCRETE FORMS	90
F232 SPREAD CONCRETE WITH HAND SCREEDS	88
F179 FINISH CONCRETE PAVEMENTS TO NONSKID SURFACES WITH BROOMS OR BURLAP DRAGS	88
L462 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON DUMP TRUCKS	88
F231 SET UP WOODEN CONCRETE FORMS	88
G248 CUT ASPHALT WITH SAWS	86
G243 COMPACT ASPHALT WITH HAND TOOLS	86
F164 COMPACT BASE COURSE MATERIALS WITH PNEUMATIC TAMPERS	85
F221 PLACE EXPANSION JOINT MATERIAL	84
L435 APPLY PROTECTIVE COATING TO DUMP TRUCK BEDS FOR HAULING ASPHALT	83
F229 SEAL CRACKS AND JOINTS	81
F223 PLACE WIRE MESH FOR CONCRETE REINFORCING	81
F219 PLACE CONCRETE IN FORMS WITH HAND TOOLS	80
L468 SPREAD MATERIALS FROM DUMP TRUCKS	80
F180 FINISH CONCRETE PAVEMENTS TO SMOOTH SURFACE BY HAND	80
F208 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON CONCRETE SAWS	79
F182 FINISH CONCRETE SURFACES WITH BULLFLOATS	79
G253 HAND SPREAD HOT MIX BITUMINOUS MATERIALS	78
G268 PREPARE BASE COURSE FOR FLEXIBLE PAVEMENTS	77
F218 PLACE CONCRETE IN FORMS WITH CONCRETE BUGGIES OR WHEELBARROWS	77
L471 TOW TRAILERS OR CONSTRUCTION EQUIPMENT WITH DUMP TRUCKS	74
H324 REMOVE DEBRIS FROM DRAINAGE SYSTEMS	71
G247 CUT ASPHALT WITH PAVEMENT BREAKERS	69
G265 PERFORM SPOT PATCHING	69
L443 ATTACH OR REMOVE TRAILERS TO OR FROM DUMP TRUCKS	65

TABLE A2
PAVEMENTS WORKERS
(GRP199)

TASKS	PERCENT MEMBERS PERFORMING (N=399)
F158 BREAK CONCRETE WITH JACKHAMMERS	97
F196 OPERATE AIR COMPRESSORS	97
L447 DUMP MATERIALS FROM DUMP TRUCKS	96
F185 HAND SHOVEL CONCRETE	95
F224 REMOVE CONCRETE FORMS	94
L450 HAUL MATERIALS WITH DUMP TRUCKS	94
F193 MIX CONCRETE WITH HAND TOOLS	94
F227 SAW CONCRETE	94
F168 CONSTRUCT WOODEN CONCRETE FORMS	92
F232 SPREAD CONCRETE WITH HAND SCREEDS	91
F231 SET UP WOODEN CONCRETE FORMS	91
F213 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON AIR COMPRESSORS	91
F179 FINISH CONCRETE PAVEMENTS TO NONSKID SURFACES WITH BROOMS OR BURLAP DRAGS	91
G243 COMPACT ASPHALT WITH HAND TOOLS	91
L462 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON DUMP TRUCKS	89
G248 CUT ASPHALT WITH SAWS	88
F164 COMPACT BASE COURSE MATERIALS WITH PNEUMATIC TAMPERS	87
F221 PLACE EXPANSION JOINT MATERIAL	86
L435 APPLY PROTECTIVE COATING TO DUMP TRUCK BEDS FOR HAULING ASPHALT	86
F219 PLACE CONCRETE IN FORMS WITH HAND TOOLS	84
F180 FINISH CONCRETE PAVEMENTS TO SMOOTH SURFACE BY HAND	84
F229 SEAL CRACKS AND JOINTS	83
F223 PLACE WIRE MESH FOR CONCRETE REINFORCING	83
L468 SPREAD MATERIALS FROM DUMP TRUCKS	82
F182 FINISH CONCRETE SURFACES WITH BULLFLOATS	82
G253 HAND SPREAD HOT MIX BITUMINOUS MATERIALS	80
F218 PLACE CONCRETE IN FORMS WITH CONCRETE BUGGIES OR WHEELBARROWS	80
F208 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON CONCRETE SAWS	80
G268 PREPARE BASE COURSE FOR FLEXIBLE PAVEMENTS	79
F159 BREAK CONCRETE WITH TOOLS OTHER THAN JACKHAMMER	78
L471 TOW TRAILERS OR CONSTRUCTION EQUIPMENT WITH DUMP TRUCKS	77
H324 REMOVE DEBRIS FROM DRAINAGE SYSTEMS	74
F194 MIX CONCRETE WITH PORTABLE CONCRETE MIXERS	73
G274 SPREAD ASPHALT AGGREGATE WITH DUMP TRUCKS	73
G265 PERFORM SPOT PATCHING	73
F172 DRILL HOLES IN CONCRETE WITH PNEUMATIC DRILLS	72
Z861 FIRE M-16 RIFLES	72
F183 FINISH SUBGRADING BY HAND	72
G247 CUT ASPHALT WITH PAVEMENT BREAKERS	71
F174 FABRICATE EXPANSION JOINTS	71

TABLE A3
PAVEMENTS MAINTENANCE FIRST-LINE SUPERVISORS
(GRP274)

TASKS	PERCENT MEMBERS PERFORMING (N=32)
F196 OPERATE AIR COMPRESSORS	100
F158 BREAK CONCRETE WITH JACKHAMMERS	97
F213 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON AIR COMPRESSORS	97
F168 CONSTRUCT WOODEN CONCRETE FORMS	97
F208 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON CONCRETE SAWS	97
F185 HAND SHOVEL CONCRETE	97
F193 MIX CONCRETE WITH HAND TOOLS	97
A16 PLAN OR SCHEDULE WORK ASSIGNMENTS	94
A4 COORDINATE WORK ACTIVITIES WITH OTHER CIVIL ENGINEERING SHOPS	94
B29 COUNSEL SUBORDINATES ON PERSONAL OR MILITARY RELATED PROBLEMS	94
G253 HAND SPREAD HOT MIX BITUMINOUS MATERIALS	94
F231 SET UP WOODEN CONCRETE FORMS	94
F224 REMOVE CONCRETE FORMS	94
F164 COMPACT BASE COURSE MATERIALS WITH PNEUMATIC TAMPERS	94
G248 CUT ASPHALT WITH SAWS	94
F221 PLACE EXPANSION JOINT MATERIALS	94
C85 PREPARE APRs	91
F179 FINISH CONCRETE PAVEMENTS TO NONSKID SURFACES WITH BROOMS OR BURLAP DRAGS	91
A5 COORDINATE WORK PROGRESS WITH BASE CIVIL ENGINEERING SCHEDULING	91
A7 DETERMINE WORK PRIORITIES	91
F182 FINISH CONCRETE SURFACES WITH BULLFLOATS	91
F227 SAW CONCRETE	91
F174 FABRICATE EXPANSION JOINTS	91
F194 MIX CONCRETE WITH PORTABLE CONCRETE MIXERS	91
F172 DRILL HOLES IN CONCRETE WITH PNEUMATIC DRILLS	91
B64 SUPERVISE PAVEMENTS MAINTENANCE SPECIALISTS (AFSC 55150)	88
B59 SUPERVISE APPRENTICE PAVEMENTS MAINTENANCE SPECIALISTS (AFSC 55130)	88
F165 COMPUTE QUALITY OF CONCRETE NEEDED	88
L447 DUMP MATERIALS FROM DUMP TRUCKS	88
G268 PREPARE BASE COURSE FOR FLEXIBLE PAVEMENTS	88
F219 PLACE CONCRETE IN FORMS WITH HAND TOOLS	88
G243 COMPACT ASPHALT WITH HAND TOOLS	88
F159 BREAK CONCRETE WITH TOOLS OTHER THAN JACKHAMMERS	88
F223 PLACE WIRE MESH FOR CONCRETE REINFORCING	88
B56 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	84

TABLE A4

PAVEMENTS ROLLER OPERATORS
(GRP184)

TASKS	PERCENT MEMBERS PERFORMING (N=20)
F158 BREAK CONCRETE WITH JACKHAMMERS	100
L462 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON DUMP TRUCKS	95
L450 HAUL MATERIALS WITH DUMP TRUCKS	95
L447 DUMP MATERIALS FROM DUMP TRUCKS	95
L435 APPLY PROTECTIVE COATING TO DUMP TRUCK BEDS FOR HAULING ASPHALT	85
L471 TOW TRAILERS OR CONSTRUCTION EQUIPMENT WITH DUMP TRUCKS	85
F227 SAW CONCRETE	85
F196 OPERATE AIR COMPRESSORS	80
Q596 COMPACT BITUMINOUS MATERIALS WITH MOTORIZED ROLLERS	80
F213 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON AIR COMPRESSORS	80
Q616 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON STEEL WHEEL ROLLERS	80
G253 HAND SPREAD HOT MIX BITUMINOUS MATERIALS	75
G248 CUT ASPHALT WITH SAWS	75
F193 MIX CONCRETE WITH HAND TOOLS	75
L468 SPREAD MATERIALS FROM DUMP TRUCKS	70
L443 ATTACH OR REMOVE TRAILERS TO OR FROM DUMP TRUCKS	70
Q594 COMPACT BASE COURSE MATERIALS WITH MOTORIZED ROLLERS	70
F229 SEAL CRACKS AND JOINTS	70
Z861 FIRE M-16 RIFLES	70
Q604 DRIVE ROLLERS TO OR FROM WORK AREAS	65
G268 PREPARE BASE COURSE FOR FLEXIBLE PAVEMENTS	65
G265 PERFORM SPOT PATCHING	65
F185 HAND SHOVEL CONCRETE	65
F164 COMPACT BASE COURSE MATERIALS WITH PNEUMATIC TAMPERS	65
L454 LOAD DUMP TRUCKS WITH FRONT-END LOADERS	60
G247 CUT ASPHALT WITH PAVEMENT BREAKERS	55
F179 FINISH CONCRETE PAVEMENTS TO NONSKID SURFACES WITH BROOMS OR BURLAP DRAGS	55
G269 PREPARE DAMAGED ASPHALT SURFACES FOR SURFACE TREATMENT	55
G243 COMPACT ASPHALT WITH HAND TOOLS	55
F221 PLACE EXPANSION JOINT MATERIAL	55
F168 CONSTRUCT WOODEN CONCRETE FORMS	55
F208 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON CONCRETE SAWS	55
F172 DRILL HOLES IN CONCRETE WITH PNEUMATIC DRILLS	55
Z859 ERECT TENTS	55
G274 SPREAD ASPHALT AGGREGATE WITH DUMP TRUCKS	50
K406 MAINTAIN CHAIN LINK FENCES	50
F205 PATCH CONCRETE WITH BITUMINOUS MATERIALS	50

TABLE A5
RED HORSE PAVEMENTS PERSONNEL
(GRP276)

TASKS	PERCENT MEMBERS PERFORMING (N=15)
F160 CLEAN CONCRETE MIXER DRUMS OR DELIVERY CHUTES	100
L462 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON DUMP TRUCKS	100
L450 HAUL MATERIALS WITH DUMP TRUCKS	100
L447 DUMP MATERIALS FROM DUMP TRUCKS	100
F223 PLACE WIRE MESH FOR CONCRETE REINFORCING	100
F224 REMOVE CONCRETE FORMS	100
L460 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON FRONT-END LOADERS	93
L454 LOAD DUMP TRUCKS WITH FRONT-END LOADERS	93
L446 DRIVE FRONT-END LOADERS TO OR FROM WORK AREAS	93
F185 HAND SHOVEL CONCRETE	93
F196 OPERATE AIR COMPRESSORS	93
L470 STOCKPILE MATERIALS WITH FRONT-END LOADERS	93
F213 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON AIR COMPRESSORS	93
F240 UNLOAD CONCRETE FROM TRANSIT CONCRETE MIXERS	87
L452 LEVEL AREAS BY BACKDRAGGING WITH FRONT-END LOADERS	87
F158 BREAK CONCRETE WITH JACKHAMMERS	87
F232 SPREAD CONCRETE WITH HAND SCREEDS	87
L445 DRIVE FORKLIFTS TO OR FROM WORK AREAS	87
F212 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON TRANSIT MIX CONCRETE TRUCKS	80
F190 LAY PLASTIC TO CURE CONCRETE	80
S687 HAUL EQUIPMENT OR PERSONNEL USING CARGO VEHICLES	80
F221 PLACE EXPANSION JOINT MATERIAL	80
L469 SPREAD MATERIALS WITH FRONT-END LOADERS	80
L453 LEVEL MATERIALS WITH FRONT-END LOADERS USING MULTIPURPOSE BUCKETS	80
F168 CONSTRUCT WOODEN CONCRETE FORMS	80
F195 OIL CONCRETE FORMS	80
L455 LOAD MATERIALS WITH FRONT-END LOADERS USING MULTIPURPOSE BUCKETS	80
L451 HAUL MATERIALS WITH FRONT-END LOADERS USING MULTIPURPOSE BUCKETS	80
F203 OPERATE TRANSMIT MIX CONCRETE TRUCKS	73
F164 COMPACT BASE COURSE MATERIALS WITH PNEUMATIC TAMPERS	73
I329 ASSEMBLE BIN-TYPE REVETMENT KITS	73
S693 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON CARGO VEHICLES	73
L461 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON FORKLIFTS	73
L456 LOAD MATERIALS WITH FRONT-END LOADERS USING FORKLIFT ATTACHMENTS	73
L458 LOAD OR UNLOAD ITEMS OF EQUIPMENT WITH FORKLIFTS	73

TABLE A6
 GROUNDS MAINTENANCE PERSONNEL
 (GRP063)

TASKS	PERCENT MEMBERS PERFORMING (N=38)
K338 CUT GRASS WITH TOWED MOWERS	84
M475 CUT GRASS WITH TRACTORS USING MOWER ATTACHMENTS	84
K389 CUT WEEDS	71
K387 CUT GRASS WITH HAND MOWERS OR SELF-PROPELLED MOWERS	66
M477 DRIVE TRACTORS TO OR FROM WORK AREAS	63
K423 REMOVE TREES OR SHRUBS BY HAND	63
K432 TRIM TREES OR SHRUBS	63
L447 DUMP MATERIALS FROM DUMP TRUCKS	63
M490 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON TRACTORS	58
L450 HAUL MATERIALS WITH DUMP TRUCKS	58
K416 PERFORM OPERATOR INSPECTIONS OR MAINTENANCE ON MOWERS	50
K424 SEED GRASS BY HAND	50
K418 PERFORM SHOP MAINTENANCE ON MOWERS	47
Z861 FIRE M-16 RIFLES	47
M491 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON TRACTOR ATTACHMENTS	45
L462 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON DUMP TRUCKS	42
K426 SOD AREAS	39
K421 PLANT TREES OR SHRUBS	37
K383 CONSTRUCT CHAIN LINK FENCES	34
K406 MAINTAIN CHAIN LINK FENCES	34
L443 ATTACH OR REMOVE TRAILERS TO OR FROM DUMP TRUCKS	32
Z858 DON CHEMICAL WARFARE PERSONAL PROTECTIVE CLOTHING	32

TABLE A7
BASE AREA MAINTENANCE PERSONNEL
(GRP177)

TASKS	PERCENT MEMBERS PERFORMING (N=48)
K388 CUT GRASS WITH TOWED MOWERS	96
K387 CUT GRASS WITH HAND MOWERS OR SELF-PROPELLED MOWERS	96
M477 DRIVE TRACTORS TO OR FROM WORK AREAS	94
L447 DUMP MATERIALS FROM DUMP TRUCKS	94
K424 SEED GRASS BY HAND	94
M475 CUT GRASS WITH TRACTORS USING MOWER ATTACHMENTS	92
K389 CUT WEEDS	92
L450 HAUL MATERIALS WITH DUMP TRUCKS	90
L462 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON DUMP TRUCKS	88
M490 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON TRACTORS	85
K416 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON MOWERS	83
K423 REMOVE TREES OR SHRUBS BY HAND	83
K425 SEED GRASS WITH SPREADERS	83
K432 TRIM TREES OR SHRUBS	81
M491 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON TRACTOR ATTACHMENTS	77
K406 MAINTAIN CHAIN LINK FENCES	77
L468 SPREAD MATERIALS FROM DUMP TRUCKS	77
M499 TOW TRAILERS OR EQUIPMENT WITH TRACTORS	75
K421 PLANT TREES OR SHRUBS	75
K390 EDGE GRASSY AREAS WITH POWER EDGERS	73
L471 TOW TRAILERS OR CONSTRUCTION EQUIPMENT WITH DUMP TRUCKS	73
K376 APPLY FERTILIZERS WITH HAND EQUIPMENT	73
K426 SOD AREAS	71
K418 PERFORM SHOP MAINTENANCE ON MOWERS	63
K383 CONSTRUCT CHAIN LINK FENCES	63
Z861 FIRE M-16 RIFLES	63
L454 LOAD DUMP TRUCKS WITH FRONT-END LOADERS	58
L443 ATTACH OR REMOVE TRAILERS TO OR FROM DUMP TRUCKS	58
L460 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON FRONT-END LOADERS	58
T700 CLEAN SNOW FROM DUMP TRUCKS	56
K405 MAINTAIN BARBED WIRE FENCES	56
L446 DRIVE FRONT-END LOADERS TO OR FROM WORK AREAS	54
T718 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON SNOW REMOVAL EQUIPMENT	52
H324 REMOVE DEBRIS FROM DRAINAGE SYSTEMS	52
K381 CHOP VEGETATION FROM JOINTS OR CRACKS IN PAVEMENTS	52
L452 LEVEL AREAS BY BACKDRAGGING WITH FRONT-END LOADERS	52
M486 OPERATE TRACTORS USING STONE RAKE ATTACHMENTS	48
T709 INSTALL OR REMOVE CUTTING EDGES TO PLOW BLADES	46

TABLE A8
CONSTRUCTION EQUIPMENT OPERATOR CLUSTER
(GRP190)

TASKS	PERCENT MEMBERS PERFORMING (N=486)
L454 LOAD DUMP TRUCKS WITH FRONT-END LOADERS	100
L447 DUMP MATERIALS FROM DUMP TRUCKS	100
L446 DRIVE FRONT-END LOADERS TO OR FROM WORK AREAS	99
L460 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON FRONT-END LOADERS	97
L452 LEVEL AREAS BY BACKDRAGGING WITH FRONT-END LOADERS	97
L450 HAUL MATERIALS WITH DUMP TRUCKS	97
L462 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON DUMP TRUCKS	96
L468 SPREAD MATERIALS FROM DUMP TRUCKS	96
L470 STOCKPILE MATERIALS WITH FRONT-END LOADERS	95
L444 BACKFILL EXCAVATIONS WITH FRONT-END LOADERS	93
L469 SPREAD MATERIALS WITH FRONT-END LOADERS	92
S688 LOAD OR UNLOAD CONSTRUCTION EQUIPMENT FROM LOWBOYS	84
N513 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE OF GRADERS	83
L467 ROUGH GRADE AREAS WITH FRONT-END LOADERS	83
L445 DRIVE FORKLIFTS TO OR FROM WORK AREAS	82
N508 DRIVE GRADERS TO OR FROM WORK AREAS	82
L461 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON FORKLIFTS	80
L459 MOVE PALLETIZED MATERIALS OR EQUIPMENT WITH FORKLIFTS	79
L455 LOAD MATERIALS WITH FRONT-END LOADERS USING MULTIPURPOSE BUCKETS	78
L453 LEVEL MATERIALS WITH FRONT-END LOADERS USING MULTIPURPOSE BUCKETS	77
S684 HAUL CONSTRUCTION EQUIPMENT USING LOWBOYS	77
S694 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON TRACTOR TRAILERS	76
L458 LOAD OR UNLOAD ITEMS OF EQUIPMENT WITH FORKLIFTS	76
O556 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON CRAWLER- TYPE TRACTORS	75
M477 DRIVE TRACTORS TO OR FROM WORK AREAS	75
N515 REMOVE OR REPLACE GRADER BLADES	73
M478 EXCAVATE WITH TRACTORS USING BACKHOE ATTACHMENTS	73
Q609 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON AIRFIELD VACUUM SWEEPERS	73
M490 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON TRACTORS	73
O553 LOAD OR UNLOAD CRAWLER-TYPE TRACTORS ON TRAILERS	72
N527 WINDROW MATERIALS WITH GRADERS	72
Q622 SWEEP AIRFIELD PAVEMENTS WITH AIRFIELD VACUUM SWEEPERS	72
Q608 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON TOWED TYPE SWEEPERS	71
L451 HAUL MATERIALS WITH FRONT-END LOADERS USING MULTIPURPOSE BUCKETS	71

TABLE A9
EQUIPMENT OPERATOR FIRST-LINE SUPERVISORS
(GRP366)

TASKS	PERCENT MEMBERS PERFORMING (N=63)
L454 LOAD DUMP TRUCKS WITH FRONT-END LOADERS	100
N508 DRIVE GRADERS TO OR FROM WORK AREAS	100
L447 DUMP MATERIALS FROM DUMP TRUCKS	100
L470 STOCKPILE MATERIALS WITH FRONT-END LOADERS	100
N500 BACKFILL WITH GRADERS	100
N515 REMOVE OR REPLACE GRADER BLADES	100
L468 SPREAD MATERIALS FROM DUMP TRUCKS	100
S688 LOAD OR UNLOAD CONSTRUCTION EQUIPMENT FROM LOWBOYS	98
L446 DRIVE FRONT-END LOADERS TO OR FROM WORK AREAS	98
N503 CUT AND FILL WITH GRADERS	98
L444 BACKFILL EXCAVATIONS WITH FRONT-END LOADERS	98
L452 LEVEL AREAS BY BACKDRAGGING WITH FRONT-END LOADERS	98
L469 SPREAD MATERIALS WITH FRONT-END LOADERS	98
N513 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE OF GRADERS	95
S684 HAUL CONSTRUCTION EQUIPMENT USING LOWBOYS	95
N527 WINDROW MATERIALS WITH GRADERS	95
N519 ROUGH GRADE AREAS WITH GRADERS	95
L460 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON FRONT-END LOADERS	95
N502 CROWN DIRT ROADS WITH GRADERS	95
N507 CUT V-DITCHES WITH GRADERS	95
L450 HAUL MATERIALS WITH DUMP TRUCKS	94
L462 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON DUMP TRUCKS	94
0556 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON CRAWLER- TYPE TRACTORS	94
S694 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON TRACTOR TRAILERS	94
L459 MOVE PALLETIZED MATERIALS OR EQUIPMENT WITH FORKLIFTS	94
0555 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON CRAWLER- TYPE TRACTOR ATTACHMENTS	92
0537 BACKFILL WITH CRAWLER-TYPE TRACTORS	92
L453 LEVEL MATERIALS WITH FRONT-END LOADERS USING MULTIPURPOSE BUCKETS	92
L467 ROUGH GRADE AREAS WITH FRONT-END LOADERS	92
N509 FINISH GRADE AREAS WITH GRADERS	92
N516 REMOVE OR REPLACE SCARIFIER TEETH ON GRADERS	92
L458 LOAD OR UNLOAD ITEMS OF EQUIPMENT WITH FORKLIFTS	92
N522 SLOPE ROAD SHOULDERS WITH GRADERS	92
L461 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE OF FORKLIFTS	90
R639 DIRECT CRANE OPERATORS WITH HAND SIGNALS	90
N524 SPREAD MATERIALS OTHER THAN ASPHALT WITH GRADERS	90
R676 SET OUTRIGGERS FOR CRANE OPERATION	90

TABLE A10
RED HORSE EQUIPMENT OPERATOR PERSONNEL
(GRP301)

TASKS	PERCENT MEMBERS PERFORMING (N=29)
L446 DRIVE FRONT-END LOADERS TO OR FROM WORK AREAS	100
L447 DUMP MATERIALS FROM DUMP TRUCKS	100
L460 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON FRONT-END LOADERS	100
L454 LOAD DUMP TRUCKS WITH FRONT-END LOADERS	100
L462 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON DUMP TRUCKS	100
L452 LEVEL AREAS BY BACKDRAGGING WITH FRONT-END LOADERS	100
S688 LOAD OR UNLOAD CONSTRUCTION EQUIPMENT FROM LOWBOYS	100
L444 BACKFILL EXCAVATIONS WITH FRONT-END LOADERS	100
L469 SPREAD MATERIALS WITH FRONT-END LOADERS	100
L453 LEVEL MATERIALS WITH FRONT-END LOADERS USING MULTIPURPOSE BUCKETS	97
L455 LOAD MATERIALS WITH FRONT-END LOADERS USING MULTIPURPOSE BUCKETS	97
L468 SPREAD MATERIALS FROM DUMP TRUCKS	97
L461 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON FORKLIFTS	97
0536 BACKBLADE WITH CRAWLER-TYPE TRACTORS	97
0553 LOAD AND UNLOAD CRAWLER-TYPE TRACTORS ON TRAILERS	97
L467 ROUGH GRADE AREAS WITH FRONT-END LOADERS	97
F196 OPERATE AIR COMPRESSORS	97
L450 HAUL MATERIALS WITH DUMP TRUCKS	93
L470 STOCKPILE MATERIALS WITH FRONT-END LOADERS	93
S684 HAUL CONSTRUCTION EQUIPMENT USING LOWBOYS	93
L459 MOVE PALLETIZED MATERIALS OR EQUIPMENT WITH FORKLIFTS	93
L451 HAUL MATERIALS WITH FRONT-END LOADERS USING MULTIPURPOSE BUCKETS	93
L458 LOAD OR UNLOAD ITEMS OF EQUIPMENT WITH FORKLIFTS	93
0537 BACKFILL WITH CRAWLER-TYPE TRACTORS	93
0543 CLEAR BRUSH AND SMALL TREES WITH CRAWLER-TYPE TRACTORS	93
0556 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON CRAWLER- TYPE TRACTORS	90
S694 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON TRACTOR TRAILERS	90
S691 LOAD OR UNLOAD CONSTRUCTION EQUIPMENT FROM DROP GOOSENECK TRAILERS	90
L445 DRIVE FORKLIFTS TO OR FROM WORK AREAS	90
0555 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON CRAWLER- TYPE TRACTOR ATTACHMENTS	90
F158 BREAK CONCRETE WITH JACKHAMMERS	90
0562 ROUGH GRADE WITH CRAWLER-TYPE TRACTORS	86
N513 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE OF GRADES	86
0566 STOCKPILE MATERIALS WITH CRAWLER-TYPE TRACTORS	86

TABLE A11

DUMP TRUCK AND FRONT-END LOADER OPERATORS
(GRP245)

TASKS	PERCENT MEMBERS PERFORMING (N=18)
L450 HAUL MATERIALS WITH DUMP TRUCKS	100
L447 DUMP MATERIALS FROM DUMP TRUCKS	100
L454 LOAD DUMP TRUCKS WITH FRONT-END LOADERS	100
L460 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON FRONT-END LOADERS	100
L462 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON DUMP TRUCKS	94
L455 LOAD MATERIALS WITH FRONT-END LOADERS USING MULTIPURPOSE BUCKETS	89
L452 LEVEL AREAS BY BACKDRAGGING WITH FRONT-END LOADERS	89
L446 DRIVE FRONT-END LOADERS TO OR FROM WORK AREAS	83
L468 SPREAD MATERIALS FROM DUMP TRUCKS	61
L451 HAUL MATERIALS WITH FRONT-END LOADERS USING MULTIPURPOSE BUCKETS	61
L470 STOCKPILE MATERIALS WITH FRONT-END LOADERS	56
L453 LEVEL MATERIALS WITH FRONT-END LOADERS USING MULTIPURPOSE BUCKETS	56
L444 BACKFILL EXCAVATIONS WITH FRONT-END LOADERS	56
L469 SPREAD MATERIALS WITH FRONT-END LOADERS	39
L458 LOAD OR UNLOAD ITEMS OF EQUIPMENT WITH FORKLIFTS	33
L456 LOAD MATERIALS WITH FRONT-END LOADERS USING FORKLIFTS ATTACHMENTS	33
L461 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON FORKLIFTS	33
L445 DRIVE FORKLIFTS TO OR FROM WORK AREAS	33
L471 TOW TRAILERS OR CONSTRUCTION EQUIPMENT WITH DUMP TRUCKS	33
0556 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON CRAWLER- TYPE TRACTORS	33
0553 LOAD AND UNLOAD CRAWLER-TYPE TRACTORS ON TRAILERS	33
L459 MOVE PALLETIZED MATERIALS OR EQUIPMENT WITH FORKLIFTS	28
0536 BACKBLADE WITH CRAWLER-TYPE TRACTORS	28
L440 ATTACH OR REMOVE MULTIPURPOSE BUCKETS TO OR FROM FRONT-END LOADERS	28
L467 ROUGH GRADE AREAS WITH FRONT-END LOADERS	28

TABLE A12
MANAGERIAL PERSONNEL CLUSTER
(GRP91)

TASKS	PERCENT MEMBERS PERFORMING (N=138)
B29 COUNSEL SUBORDINATES ON PERSONAL OR MILITARY-RELATED PROBLEMS	94
C85 PREPARE APRs	92
A4 COORDINATE WORK ACTIVITIES WITH OTHER CIVIL ENGINEERING SHOPS	90
A25 SCHEDULE LEAVES OR PASSES	86
A16 PLAN OR SCHEDULE WORK ASSIGNMENTS	83
C83 INDORSE AIRMAN PERFORMANCE REPORTS (APR)	82
A2 ASSIGN SPONSORS FOR NEWLY ASSIGNED PERSONNEL	80
A7 DETERMINE WORK PRIORITIES	79
A5 COORDINATE WORK PROGRESS WITH BASE CIVIL ENGINEERING SCHEDULING	78
A6 DETERMINE REQUIREMENTS FOR SPACE, PERSONNEL, EQUIPMENT, OR SUPPLIES	76
A1 ASSIGN PERSONNEL TO DUTY POSITIONS	76
B55 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	73
C71 EVALUATE INDIVIDUALS FOR PROMOTION, DEMOTION, OR RECLASSIFICATION	72
C70 EVALUATE COMPLIANCE WITH PERFORMANCE STANDARDS	71
B66 WRITE CORRESPONDENCE	70
B51 IMPLEMENT SAFETY PROGRAMS OR PROCEDURES	70
B28 CONDUCT OR PARTICIPATE IN STAFF MEETINGS	68
C67 ANALYZE WORKLOAD REQUIREMENTS	68
A9 DEVELOP WORK METHODS OR PROCEDURES	68
B60 SUPERVISE CIVILIAN PERSONNEL	65
E135 ANNOTATE ON-THE-JOB TRAINING RECORD (AF FORM 623)	65
A12 ESTABLISH PERFORMANCE STANDARDS	64
D96 COUNSEL TRAINEES ON TRAINING PROGRESS	63
E119 ANNOTATE BASE CIVIL ENGINEERING WEEKLY SCHEDULE (AF FORM 561)	62
E137 ANNOTATE OPERATOR S INSPECTION GUIDE AND TROUBLE REPORT (GENERAL PURPOSE VEHICLES) (AFTO FORM 374)	62
C82 EVALUATE WORK SCHEDULES	62
B41 DIRECT MAINTENANCE OR UTILIZATION OF EQUIPMENT	57
B65 SUPERVISE PAVEMENTS MAINTENANCE TECHNICIANS (AFSC 55170)	54
B64 SUPERVISE PAVEMENTS MAINTENANCE SPECIALISTS (AFSC 55150)	48
B59 SUPERVISE APPRENTICE PAVEMENTS MAINTENANCE SPECIALISTS (AFSC 55130)	43

TABLE A13

PAVEMENTS AND EQUIPMENT OPERATOR FOREMEN AND SUPERINTENDENTS
(GRP203)

TASKS	PERCENT MEMBERS PERFORMING (N=104)
A4 COORDINATE WORK ACTIVITIES WITH OTHER CIVIL ENGINEERING SHOPS	97
B29 COUNSEL SUBORDINATES ON PERSONAL OR MILITARY RELATED PROBLEMS	97
C85 PREPARE APRs	96
A25 SCHEDULE LEAVES OR PASSES	93
C83 INDORSE AIRMAN PERFORMANCE REPORTS (APR)	91
A2 ASSIGN SPONSORS FOR NEWLY ASSIGNED PERSONNEL	89
A5 COORDINATE WORK PROGRESS WITH BASE CIVIL ENGINEERING SCHEDULING	88
A7 DETERMINE WORK PRIORITIES	88
C71 EVALUATE INDIVIDUALS FOR PROMOTION, DEMOTION, OR RECLASSIFICATION	87
A6 DETERMINE REQUIREMENTS FOR SPACE, PERSONNEL, EQUIPMENT OR SUPPLIES	86
C67 ANALYZE WORKLOAD REQUIREMENTS	85
A1 ASSIGN PERSONNEL TO DUTY POSITIONS	85
A16 PLAN OR SCHEDULE WORK ASSIGNMENTS	84
B55 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	83
B66 WRITE CORRESPONDENCE	81
B28 CONDUCT OR PARTICIPATE IN STAFF MEETINGS	81
C70 EVALUATE COMPLIANCE WITH PERFORMANCE STANDARDS	81
B51 IMPLEMENT SAFETY PROGRAMS OR PROCEDURES	80
A9 DEVELOP WORK METHODS OR PROCEDURES	78
C82 EVALUATE WORK SCHEDULES	76
B60 SUPERVISE CIVILIAN PERSONNEL	75
A12 ESTABLISH PERFORMANCE STANDARDS	74
C73 EVALUATE JOB DESCRIPTIONS	74
A20 PREPARE JOB DESCRIPTIONS	74
E119 ANNOTATE BASE CIVIL ENGINEERING WEEKLY SCHEDULE (AF FORM 561)	73
A17 PLAN SAFETY PROGRAMS	72
B56 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	72
E135 ANNOTATE ON-THE-JOB TRAINING RECORD (AF FORM 623)	71
A15 PLAN OR PREPARE BRIEFINGS	69
C87 WRITE CIVILIAN PERFORMANCE RATINGS OR SUPERVISORY APPRAISALS	68
E137 ANNOTATE OPERATOR'S INSPECTION GUIDE AND TROUBLE REPORT (GENERAL PURPOSE VEHICLES) (AFTO FORM 374)	68
B42 DIRECT OR IMPLEMENT OJT PROGRAMS	68

TABLE A14

PAVEMENTS AND EQUIPMENT OPERATOR SHOP MANAGERS AND SUPERVISORS
(GRP149)

TASKS	PERCENT MEMBERS PERFORMING (N=17)
A16 PLAN OR SCHEDULE WORK ASSIGNMENTS	94
B29 COUNSEL SUBORDINATES ON PERSONAL OR MILITARY RELATED PROBLEMS	94
A4 COORDINATE WORK ACTIVITIES WITH OTHER CIVIL ENGINEERING SHOPS	94
A25 SCHEDULE LEAVES OR PASSES	82
B59 SUPERVISE APPRENTICE PAVEMENTS MAINTENANCE SPECIALISTS (AFSC 55130)	76
C85 PREPARE APRs	76
B64 SUPERVISE PAVEMENTS MAINTENANCE SPECIALISTS (AFSC 55150)	65
A5 COORDINATE WORK PROGRESS WITH BASE CIVIL ENGINEERING SCHEDULING	65
A2 ASSIGN SPONSORS FOR NEWLY ASSIGNED PERSONNEL	65
B60 SUPERVISE CIVILIAN PERSONNEL	59
A7 DETERMINE WORK PRIORITIES	59
A6 DETERMINE REQUIREMENTS FOR SPACE, PERSONNEL, EQUIPMENT, OR SUPPLIES	59
A1 ASSIGN PERSONNEL TO DUTY POSITIONS	59
D96 COUNSEL TRAINEES ON TRAINING PROGRESS	59
E136 ANNOTATE OPERATOR'S INSPECTION GUIDE AND TROUBLE REPORT (SPECIAL EQUIPMENT) (AFTO FORM 373)	53
D108 MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS	53
E137 ANNOTATE OPERATOR'S INSPECTION GUIDE AND TROUBLE REPORT (GENERAL PURPOSE VEHICLES) (AFTO FORM 374)	47
B43 DIRECT PAVEMENT SURFACING OPERATIONS	47
C70 EVALUATE COMPLIANCE WITH PERFORMANCE STANDARDS	47
E135 ANNOTATE ON-THE-JOB TRAINING RECORD (AF FORM 623)	47
B56 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	41
B55 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	41
A12 ESTABLISH PERFORMANCE STANDARDS	41
B41 DIRECT MAINTENANCE OR UTILIZATION OF EQUIPMENT	35
E121 ANNOTATE BCE JOB ORDER RECORD (AF FORM 1879)	35

TABLE A15

INDEPENDENT JOB TYPES

MISSILE SUPPORT PERSONNEL
(GRP220)

TASKS	PERCENT MEMBERS PERFORMING (N=19)
L450 HAUL MATERIALS WITH DUMP TRUCKS	100
L447 DUMP MATERIALS FROM DUMP TRUCKS	100
V778 REMOVE SNOW FROM MISSILE SILO TOPSIDES	100
V777 REMOVE SNOW FROM LAUNCH CLOSURE DOORS	100
L454 LOAD DUMP TRUCKS WITH FRONT-END LOADERS	95
L468 SPREAD MATERIALS FROM DUMP TRUCKS	95
L471 TOW TRAILERS OR CONSTRUCTION EQUIPMENT WITH DUMP TRUCKS	89
S690 LOAD OR UNLOAD CONSTRUCTION EQUIPMENT FROM TILT BED TRAILERS	89
L464 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON DUMP TRUCKS	89
L443 ATTACH OR REMOVE TRAILERS TO OR FROM DUMP TRUCKS	89
L452 LEVEL AREAS BY BACKDRAGGING WITH FRONT-END LOADERS	89
V774 MAINTAIN GRASS AND WEEDS AT OR BELOW EIGHT INCHES AROUND LCF AREA	84
T724 REMOVE SNOW OR ICE WITH FRONT-END LOADERS	84
L460 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON FRONT-END LOADERS	84
L469 SPREAD MATERIALS WITH FRONT-END LOADERS	84
V775 PERFORM FLOOD CONTROL ON MISSILE SITES	84
V768 INSTALL AND MAINTAIN SECURITY FENCING	84
L446 DRIVE FRONT-END LOADERS TO OR FROM WORK AREAS	84
Z861 FIRE M-16 RIFLES	84
M475 CUT GRASS WITH TRACTORS USING MOWER ATTACHMENTS	79
S685 HAUL CONSTRUCTION EQUIPMENT USING TILT BED TRAILERS	79
L444 BACKFILL EXCAVATIONS WITH FRONT-END LOADERS	79
K388 CUT GRASS WITH TOWED MOWERS	74
V766 INSTALL AND MAINTAIN CATTLE GATES AND LAUNCH CONTROL FACILITY (LCF) GATES	74
L455 LOAD MATERIALS WITH FRONT-END LOADERS USING MULTIPURPOSE BUCKETS	74
T700 CLEAN SNOW FROM DUMP TRUCKS	74
V776 REMOVE SNOW BETWEEN BANJOS	68
K406 MAINTAIN CHAIN LINK FENCES	68
L453 LEVEL MATERIALS WITH FRONT-END LOADERS USING MULTIPURPOSE BUCKETS	68
Z859 ERECT TENTS	68
K405 MAINTAIN BARBED WIRE FENCES	63
S694 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON TRACTOR TRAILERS	63
L470 STOCKPILE MATERIALS WITH FRONT-END LOADERS	63
L451 HAUL MATERIALS WITH FRONT-END LOADERS USING MULTIPURPOSE BUCKETS	63

TABLE A16
INDEPENDENT JOB TYPES
GUNNERY RANGE PERSONNEL
(GRP221)

TASKS	PERCENT MEMBERS PERFORMING (N=27)
L446 DRIVE FRONT-END LOADERS TO OR FROM WORK AREAS	100
L447 DUMP MATERIALS FROM DUMP TRUCKS	96
L454 LOAD DUMP TRUCKS WITH FRONT-END LOADERS	96
N508 DRIVE GRADERS TO OR FROM WORK AREAS	96
L460 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON FRONT-END LOADERS	93
N513 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE OF GRADERS	93
L445 DRIVE FORKLIFTS TO OR FROM WORK AREAS	93
L462 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON DUMP TRUCKS	89
S684 HAUL CONSTRUCTION EQUIPMENT USING LOWBOYS	89
L452 LEVEL AREAS BY BACKDRAGGING WITH FRONT-END LOADERS	89
S688 LOAD OR UNLOAD CONSTRUCTION EQUIPMENT FROM LOWBOYS	85
L458 LOAD OR UNLOAD ITEMS OF EQUIPMENT WITH FORKLIFTS	85
L450 HAUL MATERIALS WITH DUMP TRUCKS	81
L444 BACKFILL EXCAVATIONS WITH FRONT-END LOADERS	81
Y850 PICK UP EXPENDED SHELLS BY HAWL	78
N519 ROUGH GRADE AREAS WITH GRADERS	78
S694 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON TRACTOR TRAILERS	78
L461 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON FORKLIFTS	78
N507 CUT V-DITCHES WITH GRADERS	78
Y840 CLEAR RANGE OF DESTROYED HEAVY ARMOR	74
Y841 CONSTRUCT WOODEN TARGETS AND STORAGE AREAS	74
L451 HAUL MATERIALS WITH FRONT-END LOADERS USING MULTIPURPOSE BUCKETS	74
N503 CUT AND FILL WITH GRADERS	74
Y844 LEVEL GROUND WITH CRAWLER-TYPE TRACTOR FOR PLACEMENT OF TARGETS	70
0556 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON CRAWLER- TYPE TRACTORS	70
L469 SPREAD MATERIALS WITH FRONT-END LOADERS	70
0536 BACKBLADE WITH CRAWLER-TYPE TRACTORS	70
N510 MAINTAIN ROAD SHOULDERS WITH GRADERS	70
0553 LOAD AND UNLOAD CRAWLER-TYPE TRACTORS AND TRAILERS	70
L467 ROUGH GRADE AREAS WITH FRONT-END LOADERS	67
L468 SPREAD MATERIALS FROM DUMP TRUCKS	67
N515 REMOVE OR REPLACE GRADER BLADES	67
N500 BACKFILL WITH GRADERS	67
0528 ADJUST ANGLES OF DOZER BLADES	67
L459 MOVE PALLETIZED MATERIALS OR EQUIPMENT WITH FORKLIFTS	67

TABLE A17
INDEPENDENT JOB TYPES
SWEEPER OPERATORS
(GRP33)

TASKS	PERCENT MEMBERS PERFORMING (N=16)
L447 DUMP MATERIALS FROM DUMP TRUCKS	88
L450 HAUL MATERIALS WITH DUMP TRUCKS	75
Q609 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON AIRFIELD VACUUM SWEEPERS	69
Q605 DRIVE SWEEPERS TO OR FROM WORK AREAS	63
L462 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON DUMP TRUCKS	56
Q622 SWEEP AIRFIELD PAVEMENTS WITH AIRFIELD VACUUM SWEEPERS	56
L468 SPREAD MATERIALS FROM DUMP TRUCKS	50
L454 LOAD DUMP TRUCKS WITH FRONT-END LOADERS	50
Q624 SWEEP AREAS WITH MULTIPURPOSE SWEEPERS	44
Q618 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON MULTIPURPOSE SWEEPERS	44
Q606 INSTALL OR REMOVE BROOM CORES AND BROOM SEGMENTS ON SWEEPERS	44
Q607 INSTALL OR REMOVE FILTER BAGS IN VACUUM SWEEPERS	44
L446 DRIVE FRONT-END LOADERS TO OR FROM WORK AREAS	44
Q617 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON STREET SWEEPERS	38
Q626 SWEEP PAVEMENTS WITH STREET SWEEPERS	38
Q608 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON TOWED TYPE SWEEPERS	38
Z861 FIRE M-16 RIFLES	31
N513 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE OF GRADERS	31
N508 DRIVE GRADERS TO OR FROM WORK AREAS	31
L460 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON FRONT-END LOADERS	31
E136 ANNOTATE OPERATOR'S INSPECTIONS GUIDE AND TROUBLE REPORT (SPECIAL EQUIPMENT) (AFTO FORM 373)	25
Q623 SWEEP AREAS WITH MAGNETIC SWEEPERS	25
Q625 SWEEP PAVEMENTS USING TOWED TYPE SWEEPERS	25
L470 STOCKPILE MATERIALS WITH FRONT-END LOADERS	25
F160 CLEAN CONCRETE MIXER DRUMS OR DELIVERY CHUTES	19

TABLE A18

INDEPENDENT JOB TYPES

SNOW REMOVAL EQUIPMENT OPERATORS
(GRP76)

TASKS	PERCENT MEMBERS PERFORMING (N=27)
L447 DUMP MATERIALS FROM DUMP TRUCKS	96
T718 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON SNOW REMOVAL EQUIPMENT	89
L450 HAUL MATERIALS WITH DUMP TRUCKS	89
T700 CLEAN SNOW FROM DUMP TRUCKS	85
T701 CLEAR AIRFIELD AREAS WITH AIR BLAST SNOW SWEEPERS	78
L462 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON DUMP TRUCKS	78
T731 REMOVE SNOW WITH ROLLOVER SNOW PLOWS	78
T709 INSTALL OR REMOVE CUTTING EDGES TO PLOW BLADES	74
T711 INSTALL OR REMOVE UNDER BODY BLADES	67
L446 DRIVE FRONT-END LOADERS TO OR FROM WORK AREAS	67
T708 HAUL SNOW USING DUMP TRUCKS	63
T710 INSTALL OR REMOVE SHOES AND CASTOR WHEELS	63
T734 SPREAD CHEMICALS OR ABRASIVES OVER ICE OR SNOW COVERED AREAS WITH ROTARY SAND SPREADERS AND DUMP TRUCKS	63
L454 LOAD DUMP TRUCKS WITH FRONT-END LOADERS	63
Q609 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON AIRFIELD VACUUM SWEEPERS	59
Q622 SWEEP AIRFIELD PAVEMENTS WITH AIRFIELD VACUUM SWEEPERS	59
T724 REMOVE SNOW OR ICE WITH FRONT-END LOADERS	56
L471 TOW TRAILERS OR CONSTRUCTION EQUIPMENT WITH DUMP TRUCKS	56
Z861 FIRE M-16 RIFLES	56
T733 SPREAD CHEMICALS OR ABRASIVES OVER ICE OR SNOW COVERED AREAS WITH SPREADERS	52
T719 PREPARE SNOW PLOW EQUIPMENT FOR SUMMER STORAGE	52
L468 SPREAD MATERIALS FROM DUMP TRUCKS	52
Q625 SWEEP PAVEMENTS USING TOWED TYPE SWEEPERS	52
L460 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON FRONT-END LOADERS	52
T720 REMOVE ICE WITH UNDER BODY SCRAPERS	48
L435 APPLY PROTECTIVE COATING TO DUMP TRUCK BEDS FOR HAULING ASPHALT	48
F158 BREAK CONCRETE WITH JACKHAMMERS	48
Q608 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON TOWED TYPE SWEEPERS	44
L452 LEVEL AREAS BY BACKDRAGGING WITH FRONT-END LOADERS	44
L470 STOCKPILE MATERIALS WITH FRONT-END LOADERS	44
M477 DRIVE TRACTORS TO OR FROM WORK AREAS	41
M490 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON TRACTORS	41
Q607 INSTALL OR REMOVE FILTER BAGS IN VACUUM SWEEPERS	37

TABLE A19
INDEPENDENT JOB TYPES
SNOW REMOVAL SUPERVISORS
(GRP186)

TASKS	PERCENT MEMBERS PERFORMING (N=42)
L462 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON DUMP TRUCKS	95
L460 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE ON FRONT-END LOADERS	95
L454 LOAD DUMP TRUCKS WITH FRONT-END LOADERS	95
L450 HAUL MATERIALS WITH DUMP TRUCKS	95
C85 PREPARE APRs	93
B29 COUNSEL SUBORDINATES ON PERSONAL OR MILITARY-RELATED PROBLEMS	93
L446 DRIVE FRONT-END LOADERS TO OR FROM WORK AREAS	93
A16 PLAN OR SCHEDULE WORK ASSIGNMENTS	90
L458 LOAD OR UNLOAD ITEMS OF EQUIPMENT WITH FORKLIFTS	90
L461 PERFORM OPERATOR INSPECTIONS AND MAINTENANCE OF FORKLIFTS	90
L447 DUMP MATERIALS FROM DUMP TRUCKS	90
L459 MOVE PALLETIZED MATERIALS OR EQUIPMENT WITH FORKLIFTS	88
L470 STOCKPILE MATERIALS WITH FRONT-END LOADERS	88
E135 ANNOTATE ON-THE-JOB TRAINING RECORDS (AF FORM 623)	86
B56 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	86
L452 LEVEL AREAS BY BACKDAGGING WITH FRONT-END LOADERS	86
L469 SPREAD MATERIALS WITH FRONT-END LOADERS	86
E136 ANNOTATE OPERATOR'S INSPECTION GUIDE AND TROUBLE REPORT (SPECIAL EQUIPMENT) (AFTO FORM 373)	83
E137 ANNOTATE OPERATOR'S INSPECTION GUIDE AND TROUBLE REPORT (GENERAL PURPOSE VEHICLES) (AFTO FORM 374)	83
A7 DETERMINE WORK PRIORITIES	83
D96 COUNSEL TRAINEES ON TRAINING PROGRESS	83
L444 BACKFILL EXCAVATIONS WITH FRONT-END LOADERS	81
D108 MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS	79
L445 DRIVE FORKLIFTS TO OR FROM WORK AREAS	79
L468 SPREAD MATERIALS FROM DUMP TRUCKS	79
B61 SUPERVISE CONSTRUCTION EQUIPMENT OPERATORS (AFSC 55151)	76
B60 SUPERVISE CIVILIAN PERSONNEL	76
D93 CONDUCT OJT	76
B55 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	76
A6 DETERMINE REQUIREMENTS FOR SPACE, PERSONNEL, EQUIPMENT, OR SUPPLIES	74
L467 ROUGH GRADE AREAS WITH FRONT-END LOADERS	74
B48 DIRECT SNOW REMOVAL OPERATIONS	71
A4 COORDINATE WORK ACTIVITIES WITH OTHER CIVIL ENGINEERING SHOPS	71

TABLE A20
INDEPENDENT JOB TYPES

TRAINERS
(GRP48)

TASKS	PERCENT MEMBERS PERFORMING (N=17)
D109 PREPARE LESSON PLANS	82
D110 PREPARE TRAINING AIDS	82
A15 PLAN OR PREPARE BRIEFINGS	71
B66 WRITE CORRESPONDENCE	65
A17 PLAN SAFETY PROGRAMS	65
D111 PROCURE TRAINING AIDS, SPACE, OR EQUIPMENT	65
D107 EVALUATE TRAINING MEHTODS, TECHNIQUES, OR PROGRAMS	59
B28 CONDUCT OR PARTICIPATE IN STAFF MEETINGS	59
Z861 FIRE M-16 RIFLES	59
D108 MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS	53
C86 SELECT INDIVIDUALS FOR SPECIALIZED TRAINING	53
B51 IMPLEMENT SAFETY PROGRAMS OR PROCEDURES	53
D116 WRITE TEST QUESTIONS	53
D112 SCHEDULE ADVANCED OR SPECIAL TRAINING	53
D90 ADMINISTER TESTS	47
D95 CONDUCT TRAINING CONFERENCES OR BRIEFINGS	47
C78 EVALUATE SAFETY PROGRAMS	47
B29 COUNSEL SUBORDINATES ON PERSONAL OR MILITARY RELATED PROBLEMS	47
A11 ESTABLISH ORGANIZATIONAL POLICIES, OFFICE INSTRUCTIONS (OI), OR STANDING OPERATING PROCEDURES (SOP)	47
D94 CONDUCT RESIDENT COURSE CLASSROOM TRAINING	41
D97 DEMONSTRATE HOW TO LOCATE TECHNICAL INFORMATION	41
B55 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	41
D114 SCORE TESTS	41
C84 INVESTIGATE ACCIDENTS OR INCIDENTS	41
B56 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	41
E150 MAINTAIN PUBLICATION FILES	35
C72 EVALUATE INSPECTION REPORTS OR PROCEDURES	35
B39 DIRECT MAINTENANCE OF ADMINISTRATIVE FILES	35
D103 ESTABLISH OR MAINTAIN STUDY REFERENCE FILES	35
E136 ANNOTATE OPERATOR'S INSPECTION GUIDE AND TROUBLE REPORT (SPECIAL EQUIPMENT) (AFTO FORM 373)	35
Z858 DON CHEMICAL WARFARE PERSONAL PROTECTIVE CLOTHING	35

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