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CABLE SPLICING INSTALLATION AND MAINTENANCE CAREER LADDER, AFSC--ETC(U)  
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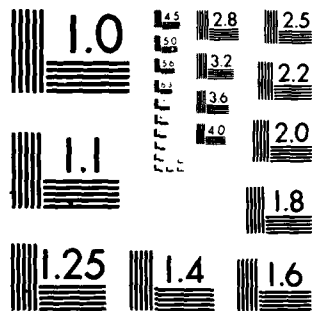
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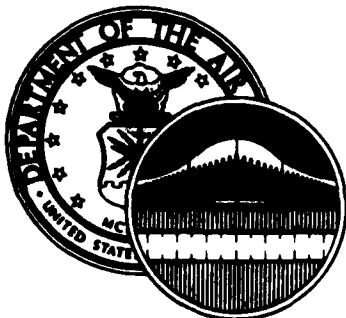
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# OCCUPATIONAL SURVEY REPORT

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CABLE SPLICING INSTALLATION AND  
MAINTENANCE CAREER LADDER

AFSC 361X1

AFPT 90-361-429

JULY 1981

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

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## PREFACE

This report represents the results of a detailed Air Force Occupational Survey of the Cable Splicing Installation and Maintenance (361X1) career ladder. The report was prepared in response to a request by personnel at the Technical Training Center, Sheppard AFB, Texas. This request was initiated to assess the impact on training requirements of the recent merger of all Cable Splicer and Maintenance personnel into one AFSC. Authority for conducting occupational surveys is contained in AFR 35-2. Computer outputs from which this report was produced are available for use by operating and training officials.

The survey instrument was developed by Mr. James L. Slovak, Inventory Development Specialist. Second Lieutenant Beverly C. Turman, Occupational Survey Analyst, analyzed the data and wrote the final report. This report has been reviewed and approved by Lieutenant Colonel Jimmy L. Mitchell, Chief, Airman Analysis Section, Occupational Analysis Branch, USAF Occupational Measurement Center, Randolph AFB, Texas 78150.

The Air Force Occupational Analysis Program has been in existence since 1956 when initial research was undertaken by the Air Force Human Resources Laboratory to develop the methodology for conducting occupational surveys. In 1967, an operational survey program was established within the Air Training Command and surveys were produced annually on 12 enlisted specialties. In 1972, the program was expanded to conduct occupational surveys covering 51 career fields annually. Finally, in 1976, the program was again expanded to also include surveys of officer utilization fields, to support interservice or joint service occupational analysis, and to permit special management applications projects.

Copies of this report are available to air staff sections, major commands, and other interested training and management personnel upon request to the USAF Occupational Measurement Center, attention of the Chief, Occupational Analysis Branch (OMY), Randolph AFB, Texas 78150.

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## SUMMARY OF RESULTS

1. Survey Coverage: The Cable Splicing Installation and Maintenance career ladder job inventory was administered worldwide during the period September 1980 through February 1981. Survey results were based on the responses of 596 respondents, representing 66 percent of the assigned personnel.
2. Career Ladder Structure: Nineteen job groups covering Base Cable, Electronics Installation (EI), and Hardened Intersite Cable Systems were identified. The 361X1 AFSC is fairly homogeneous in terms of the jobs which are performed by the Base Cable and EI personnel. Both groups performed many common tasks and spent similar amounts of time on a large number of functions. The job of incumbents working on Hardened Intersite Cable Systems (HICS), however, is somewhat different due to the requirements for some specialized types of equipment.
3. Career Ladder Progression: Due to the highly technical nature of the specialty, members of all skill levels are required to perform many tasks. As experience increases, however, incumbents are responsible for a wider variety of increasingly difficult tasks. As a result, while the job of the 3- and 5-skill level respondents is primarily technical in nature, the major emphasis for individuals holding a 7-skill level is basically supervisory.
4. CONUS and Overseas Comparisons: While the jobs of incumbents in both CONUS and overseas locations were very similar, greater percentages of overseas respondents reported performing tasks that were related to the installation and maintenance of telephone cable. In addition, only 361X1 personnel within the CONUS are assigned to work in Hardened Intersite Cable Systems (HICS) duty areas.
5. AFR 39-1 Specialty Descriptions: Overall, the AFR 39-1 specialty descriptions provided very accurate overviews of the 361X1 AFSC. Survey data indicated, however, that only small percentages of 5-skill level respondents reported using pressurization computers in order to locate leaks in pressurized cable systems or completing maintenance data collection forms.
6. Training: Both the STS, dated April 1978, and the current Plan of Instruction (POI) for course J3ABR36131-002 were generally consistent with survey data although there were some items that may warrant review by appropriate career ladder personnel.
7. Implications: The merger of two Cable Splicing specialties into one career field has had little impact on the jobs being performed but the consolidation has resulted in the cross flow of personnel. This creates problems in OJT by requiring more extensive orientation training. In spite of this, the majority of individuals in the specialty have high job satisfaction and feel their talents and training are well used by the Air Force.

OCCUPATIONAL SURVEY REPORT  
CABLE SPLICING INSTALLATION AND MAINTENANCE CAREER LADDER  
(AFSC 361X1)

INTRODUCTION

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This is a report of an occupational survey of the Cable Splicing Installation and Maintenance career ladder (AFSC 361X1) completed by the Occupational Analysis Branch, USAF Occupational Measurement Center in June 1981. The survey was requested by the Sheppard Technical Training Center (STTC) in order to determine what impact the recent merger of all Cable Splicer/ Maintenance personnel will have on training requirements.

Background

Historically, this AFSC has experienced a number of changes. The Cable Splicing Installation and Maintenance Career Ladder had its beginning in July 1954 as the 361X1 Cable Splicing specialty. In March 1965, the career ladder was divided into two separate AFSCs. The 361X3 and 361X4 classifications were created, with the former becoming the Missile Systems Cable Splicing specialty and the latter retaining the original title as the Cable Splicing specialty. In April 1977, the 361X3 and 361X4 AFSCs were redesignated as the 361X1 and 361X2 career ladders, respectively. Finally, both specialties were merged once more as the 361X1 AFSC and given its present title in April 1978.

The basic job of 361X1 personnel, as described by AFR 39-1, is to perform various activities related to the installation, maintenance, and repair of splice cases, underground and aerial cables, communications-electronics meteorological (CEM) cables, and hardened missile cable systems. This generally includes monitoring, analyzing, and troubleshooting CEM cable and hardened missile cable systems, the maintenance of plant-in-place and maintenance/inspection cable records, and the locating, repairing and replacing of faulty splice cases. Career ladder members may receive formal training in the basic Cable Splicing Installation and Maintenance Specialist eleven week course at the Sheppard Technical Training Center.

Objectives

This survey was requested by the Sheppard Technical Training Center in order to assess the effects of the recent merger of the 361X1 and the 361X2 career ladders. Other major topics that are discussed in this report include: (1) the development and administration of the survey instrument; (2) the job structure within the career ladder; (3) a comparison of career field responsibilities to AFR 39-1 Specialty Descriptions; and (4) an analysis of skill level groups.

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## SURVEY METHODOLOGY

### Inventory Development

The data collection instrument for this occupational survey was USAF Job Inventory AFPT 90-361-429. As a starting point, tasks from the previous inventory were reviewed, revised, and updated through detailed research of current career ladder publications and directives. This new tentative task list was then reviewed and validated by course personnel at STTC and a number of subject matter specialists at F. E. Warren AFB. The resulting inventory contained 410 tasks grouped under 13 duty headings. Also included in the inventory was an extensive background section that asked for such information as:

- (A) Job Satisfaction
- (B) Level of command at which duties are performed
- (C) Job Title
- (D) Duty Area
- (E) AFSC previously held prior to merging
- (F) Splice cases installed or repaired
- (G) Equipment used

### Survey Administration

During the period September 1980 through February 1981, consolidated base personnel offices in operational units worldwide administered the job inventory to incumbents holding the 361X1 DAFSC. These personnel were selected from a computer generated mailing list which was obtained from personnel data tapes maintained by the Air Force Human Resources Laboratory (AFHRL).

Each respondent who completed a job inventory first completed an identification and biographical information section and then checked all tasks which were performed in his or her present job. Those tasks that were checked were then rated on a nine-point scale showing the relative amount of time spent on that task as compared to all other tasks checked. The ratings ranged from one (very small amount of time spent) to nine (very large amount of time spent, with a rating of five representing an average amount of time spent in performing a task).

To determine the relative amount of time spent on each task checked by a respondent, all of the incumbent's ratings are assumed to account for 100 percent of the time spent on the job. These ratings are totaled and each task rating is then divided by the total number of task responses. The resulting quotient is then multiplied by 100. This procedure provides a basis for comparing all tasks in terms of both percent members performing and relative percent time spent.

### Data Processing Analysis

Once job inventories are returned from the field, they are prepared so that task responses and background information can be optically scanned. Other biographical information (such as name, base, AUTOVON extension) are keypunched onto disks and entered directly into a UNIVAC 1108 computer. Once both sets of data are entered into the computer, the tasks, background, and biographical information are merged to form a complete case record for each respondent. Computer generated programs using Comprehensive Occupational Data Analysis Programs (CODAP) techniques are then applied to the data.

CODAP produces job descriptions for respondents based on their responses to specific inventory tasks. Computer generated job descriptions are available for DAFSC, TAFMS, and MAJCOM groups, and include such information as percent members performing each task, the average percent time spent performing each task, the percent members using various pieces of equipment, and the cumulative average percent time spent by all members on each task in the inventory.

### Task Factor Administration

In addition to completing the job inventory, selected senior 361X1 incumbents were also asked to complete a second booklet for either training emphasis or task difficulty. Information from these booklets was processed separately from the job inventories, and the information was then used in a number of different analyses which will be discussed in greater detail within this report.

Task Difficulty. The experienced NCOs who completed the task difficulty booklets rated all of the tasks on a nine-point scale from extremely low to extremely high difficulty, with difficulty being defined as the length of time that it takes for the average incumbent to learn to do the task. Ratings were then adjusted so that tasks of average difficulty have a rating of 5.00.

Task difficulty data was independently collected from 39 incumbents stationed worldwide. The interrater reliability (as assessed through components of variance of standard group means) was .95, which indicated very high agreement among the raters. The resulting data is a rank ordering of tasks based on the relative degree of difficulty assigned to each task within the inventory.

Job Difficulty Index (JDI). Once a task difficulty index is computed for each task item, it is then possible to compute a Job Difficulty Index (JDI) for all of the groups identified in the survey analysis. This provides a relative measure of the job difficulty for each functional group. The number of tasks performed and the average task difficulty per unit time spent (ATDPUTS) are used as the major variables to compute the JDI. The index ranges from one for very easy jobs to 25 for very difficult jobs. The indices are adjusted so that the average job difficulty index is 13.00. Consequently, the more time a group spends on difficult tasks, and the greater the number of tasks performed, the higher will be the job difficulty index.

Training Emphasis. A group of senior NCO's receiving training emphasis booklets were asked to rate all of the tasks on a ten-point scale which ranged from no training required to extremely heavy training required. Training emphasis yields a rating of tasks which indicates where the emphasis should be placed on 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. The training emphasis data were collected from 58 incumbents (see Table 4 for command representation of raters). The interrater reliability (as assessed through the components of variance of standard group means) for these raters was .97, which indicated a very high degree of agreement among the raters as to which tasks required some form of structured training and which did not. Tasks which were rated highest in training emphasis had ratings of 5.3 and above, while the average rating was 3.4. Those tasks with a training emphasis rating of 1.5 and below could be considered to require very little emphasis in training.

When used in conjunction with other factors, such as percent members performing, the training emphasis ratings can provide an insight into training requirements. This may help validate the lengthening or shortening of specific units of instruction in various training programs.

#### Survey Sample

Incumbents were selected to participate in this survey so as to insure an accurate representation across all MAJCOM and paygrade groups. Tables 1 and 2 list the distribution of assigned and sampled personnel by major command and paygrade groups, respectively. Table 3 reflects the distribution of the survey sample in terms of months Total Active Federal Military Service (TAFMS). As demonstrated by these tables, the overall sample was representative of the career ladder population as a whole.

TABLE 1

#### COMMAND REPRESENTATION OF SURVEY SAMPLE

| <u>COMMAND</u> | <u>PERCENT OF<br/>ASSIGNED</u> | <u>PERCENT OF<br/>SAMPLE</u> |
|----------------|--------------------------------|------------------------------|
| AFCC           | 92                             | 88                           |
| ATC            | 3                              | 4                            |
| OTHER          | <u>5</u>                       | <u>8</u>                     |
| TOTAL          | 100                            | 100                          |

TOTAL ASSIGNED\* 898  
 TOTAL ELIGIBLE FOR SURVEY\*\* 768  
 USEABLE SURVEYS RETURNED 596  
 RETURN RATE 78%

\*Authorized strength as of October 1980

\*\*Excludes those in PCS status, hospital or with less than 6 weeks on the job

TABLE 2  
PAYGRADE REPRESENTATION OF SURVEY SAMPLE

| <u>COMMAND</u> | <u>PERCENT OF<br/>ASSIGNED</u> | <u>PERCENT OF<br/>SAMPLE</u> |
|----------------|--------------------------------|------------------------------|
| AIRMAN         | 36                             | 34                           |
| E-4            | 21                             | 21                           |
| E-5            | 25                             | 26                           |
| E-6            | 13                             | 14                           |
| E-7            | <u>5</u>                       | <u>5</u>                     |
| TOTAL          | 100                            | 100                          |

TABLE 3  
TAFMS DISTRIBUTION OF SURVEY SAMPLE

|                             | <u>MONTHS TOTAL ACTIVE FEDERAL MILITARY SERVICE</u> |              |               |                |                |             |
|-----------------------------|-----------------------------------------------------|--------------|---------------|----------------|----------------|-------------|
|                             | <u>1-48</u>                                         | <u>49-96</u> | <u>97-144</u> | <u>145-192</u> | <u>193-240</u> | <u>241+</u> |
| NUMBER IN AFS 361X1 SAMPLE  | 256                                                 | 138          | 78            | 56             | 51             | 12          |
| PERCENT IN AFS 361X1 SAMPLE | 43%                                                 | 23%          | 13%           | 10%            | 9%             | 2%          |

TABLE 4  
COMMAND REPRESENTATION OF 361X1 TASK DIFFICULTY AND  
TRAINING EMPHASIS RATERS

| <u>COMMAND</u> | <u>PERCENT OF<br/>ASSIGNED</u> | <u>PERCENT OF TASK<br/>DIFFICULTY RATERS</u> | <u>PERCENT OF TRAINING<br/>EMPHASIS RATERS</u> |
|----------------|--------------------------------|----------------------------------------------|------------------------------------------------|
| AFCC           | 92                             | 95                                           | 90                                             |
| ATC            | 3                              | 2                                            | 3                                              |
| OTHER          | <u>5</u>                       | <u>3</u>                                     | <u>7</u>                                       |
| TOTAL          | 100                            | 100                                          | 100                                            |

## CAREER LADDER STRUCTURE

A key aspect of the Occupational Analysis Program is to examine the job structure of each specialty on the basis of what people are actually doing in the field, rather than on the basis of what official career ladder documents say they are doing. This analysis of actual job structure is made possible by the use of the Comprehensive Occupational Data Analysis Programs (CODAP). By using CODAP, jobs are identified on the basis of similarity in tasks performed and the relative time spent performing those tasks.

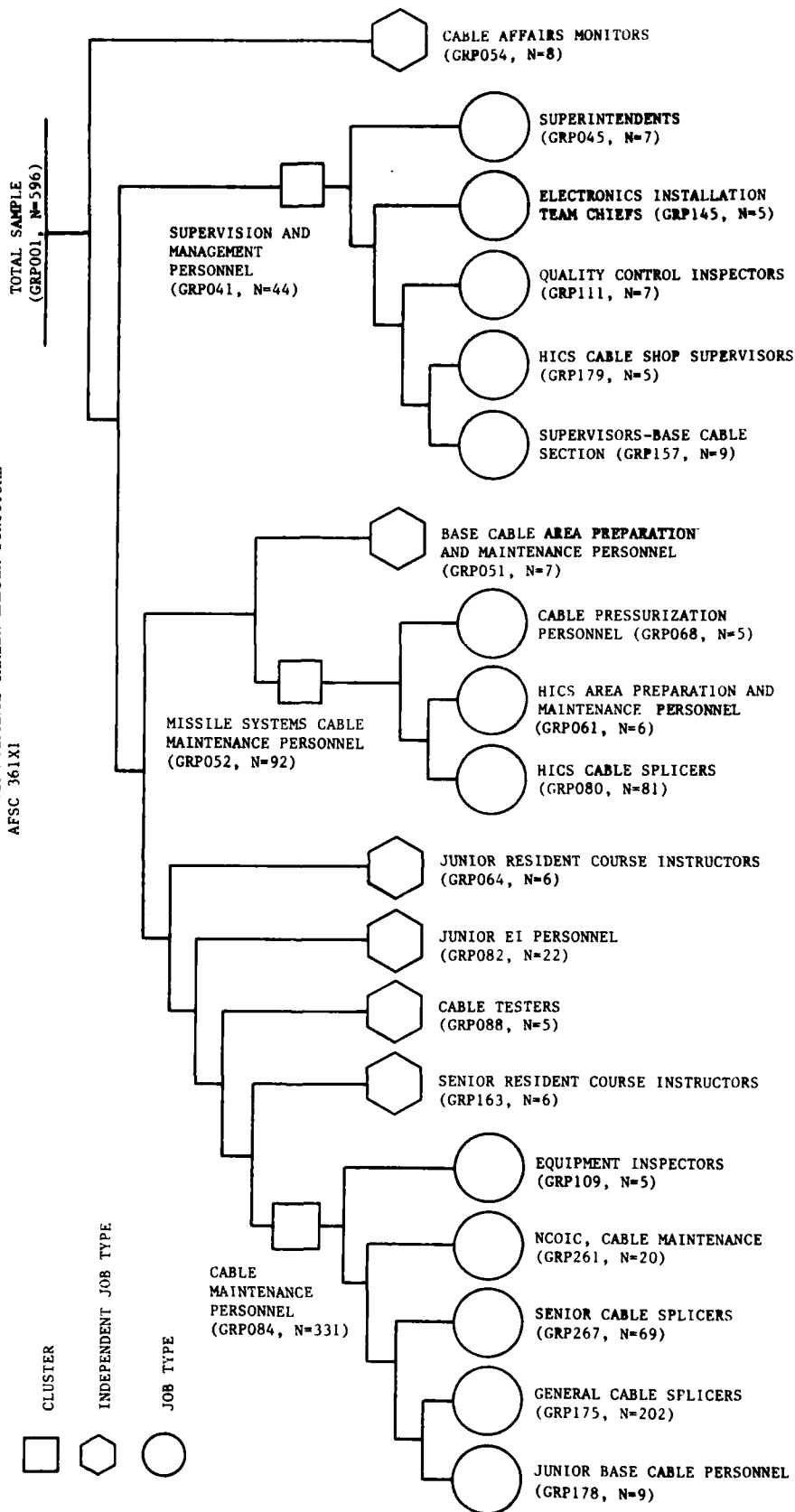
The specialty structure analysis process consists of determining the functional job structure of career ladder personnel in terms of job types, clusters, and independent job types. A job type is a group of individuals who perform many of the same tasks and also spend similar amounts of time performing them. When there is a substantial degree of similarity between different job types, they are grouped together and labeled as clusters. Finally, there are often cases of specialized job types that are too dissimilar to be grouped into any cluster. These unique groups are labeled independent job types.

### Specialty Overview

The job structure of the Cable Splicing Installation and Maintenance career ladder was determined by performing a job type analysis of the 596 survey respondents. Based on similarity of tasks performed and the amount of time spent in performing each task, the jobs performed by the 361X1 respondents are listed below and illustrated in Figure 1. (Each job group is identified with a group identification number to cross reference the groups to computer printouts included in the statistical summary package provided to selected users. These identification numbers are shown as GRP numbers for each type of job.)

- I. CABLE MAINTENANCE PERSONNEL (GRP084, N=331)
  - a. Junior Base Cable Personnel (GRP178, N=9)
  - b. General Cable Splicers (GRP175, N=202)
  - c. Senior Cable Splicers (GRP267, N=69)
  - d. NCOIC Cable Maintenance (GRP261, N=20)
  - e. Equipment Inspectors (GRP109, N=5)
- II. SENIOR RESIDENT COURSE INSTRUCTORS (GRP163, N=6)
- III. CABLE TESTERS (GRP088, N=5)
- IV. JUNIOR ELECTRONICS INSTALLATION PERSONNEL (GRP082, N=22)
- V. JUNIOR RESIDENT COURSE INSTRUCTORS (GRP064, N=6)
- VI. MISSILE SYSTEMS CABLE MAINTENANCE PERSONNEL (GRP052, N=92)
  - a. HICS Cable Splicers (GRP080, N=81)
  - b. HICS Area Preparation and Maintenance Personnel (GRP061, N=6)
  - c. Cable Pressurization Personnel (GRP068, N=5)

FIGURE 1  
CABLE SPLICING INSTALLATION AND MAINTENANCE CAREER LADDER STRUCTURE  
AFSC 361X1



- VII. BASE CABLE AREA PREPARATION AND MAINTENANCE PERSONNEL (GRP051, N=7)
- VIII. SUPERVISION AND MANAGEMENT PERSONNEL (GRP041, N=44)
  - a. Supervisors-Base Cable Section (GRP157, N=9)
  - b. HICS Cable Shop Supervisors (GRP179, N=5)
  - c. Quality Control Inspectors (GRP111, N=7)
  - d. Electronics Installation Team Chiefs (GRP145, N=5)
  - e. Superintendents (GRP045, N=7)
- IX. CABLE AFFAIRS MONITORS (GRP054, N=8)

The respondents forming these clusters and job types accounted for 87 percent of the total survey sample. The remaining 13 percent of the sample consisted of respondents who did not group with any of the job types or clusters described above.

In general, the 361X1 career ladder is relatively homogeneous in terms of the Base Cable and Electronics Installation (EI) functions. However, the data indicated that the job which was performed by the Hardened Intersite Cable Systems (HICS) personnel is somewhat different in nature from the other two areas. For example, HICS incumbents reported repairing, installing, and maintaining some types of equipment and performing tasks which are unique only to missile systems. As a result, these individuals have remained a relatively separate and distinguishable group. Conversely, individuals working in Base Cable and EI duty areas are responsible for repairing and installing a wider variety of splice cases and utilizing additional equipment that HICS personnel do not normally use. In view of this, the structure of the career ladder is fairly homogeneous in terms of the job types within a particular cluster although the individual clusters represent very distinct types of jobs.

#### Job Group Descriptions

The following paragraphs contain brief descriptions of the clusters, their respective job types, and the independent job types which were identified through the specialty structure analysis. In addition, Table 5 provides selected background information, and Table 6 lists job satisfaction data for the job groups. Also included at the end of this report is Appendix A, which contains representative tasks for each of the clusters, job types, and independent job types.

I. CABLE MAINTENANCE PERSONNEL (GRP084, N=331). These incumbents represented the largest cluster that was identified within the 361X1 career ladder, accounting for 56 percent of the sample. These 331 incumbents performed a wide range of tasks related to the preparation and maintenance of work areas, performing cables tests and corrective functions, installing communications systems cables, and splicing cables. Sixty-eight percent of these respondents hold a 5-skill level, with the remainder of the personnel in this group divided almost equally between the 3- and 7-skill levels (see Table 5). This group has an average paygrade of E-4, with an average of 74 months TAFMS. Overall, these individuals reported performing about 143 tasks. Their job typically involves such tasks as:

- establishing talking circuits
- identifying or tagging conductors
- installing test splices or closures
- flash testing splices or closures
- installing lead sleeves

The first job type to be identified within this cluster was the Junior Base Cable Personnel (GRP178, N=9). Although members of this group perform many of the basic installation and maintenance tasks as other respondents within the Cable Maintenance Personnel cluster, their job is slightly more limited in scope. These incumbents performed a small number of tasks (72) than any other group within the same cluster, and spent a large percentage of their time on tasks which were related to sealing cables. Their job frequency included such functions as:

- preparing lead sleeves for sealing
- flash testing splices or closures
- excavating splicing pits or cable trenches using hand tools
- removing or installing lead sleeves
- bridge-splicing telephone conductors using mechanical connectors

In terms of background information, 44 percent of these respondents are still in their first enlistment, and 44 percent hold the 3-skill level. It is interesting to note that while these incumbents have the least number of months in the 361X1 career field (30) than any group within the cluster, they do not have the lowest average number of months TAFMS (63). This may partially be due to the fact that a third of these respondents have recently been retrained from other specialties.

The second group existing within the cluster were the General Cable Splicers (GRP175, N=202). These individuals represent the largest job type to be identified, comprising nearly 34 percent of the survey sample. The composition of this group is divided fairly equally between base communications maintenance and EI personnel, indicating the great deal of overlap which is present between these two duty areas. The job of these respondents involves performing a wide range of tasks which are related to general equipment operation and the maintenance and repairing of cables and equipment. This includes such tasks as:

- installing auxiliary sleeves
- operating splicer trucks
- wrapping completed splices with muslin or plastic
- making temporary or emergency splice seals
- installing lead wedges, disks, or end plates
- placing or operating water pumps

Seventy-nine percent of these incumbents held the 5-skill level, and had an average of 56 months TAFMS. Over 58 percent of the members of this group are still in their first enlistment, and they reported performing an average of 116 tasks. Although they appear relatively satisfied with their job, 56 percent of these individuals felt that they probably would not reenlist.

Another job type included within the cluster were the Senior Cable Splicers (GRP267, N=69). The survey data indicated that this group is also comprised of both base communications maintenance and EI personnel. These respondents performed the greatest number of tasks (225) of any group within the sample. While these incumbents perform the same basic range of technical tasks as the General Cable Splicers, greater percentages of these respondents also reported performing an additional number of administrative and supervisory tasks. Such tasks included:

- interpreting cable records or cable splicing diagrams
- coordinating with using agencies before opening sheaths or working on pressurization systems
- interpreting cable transfer work sheets or cut sheets
- interpreting CIRS or plant-in-place records
- supervising cable splicing installation and maintenance specialists (AFSC 36151)
- supervising apprentice cable splicing installation and maintenance specialists (AFSC 36131)

The average paygrade for these respondents is approximately E-5, and the average number of months TAFMS among these incumbents is 109 months.

Another very senior group that has been identified within the cluster is the NCOICs of Cable Maintenance (GRP261, N=20). Seventy-five percent of these respondents hold a 7-skill level, and they reported having an average of 156 months TAFMS. Greater percentages of these individuals spend time performing tasks related to the organizing of work assignments and the supervision of other personnel than any other group within the cluster. Their job includes such tasks as:

- planning work assignments
- determining work priorities
- scheduling work assignments
- planning cable installations, modifications, removals, or rehabilitation
- orienting newly assigned personnel
- supervising cable splicing installation and maintenance specialists (AFSC 36151)

These incumbents perform an average of 197 tasks, and have an average paygrade of approximately E-6. Fifty-five percent of these respondents are assigned to overseas locations.

The last job type to be identified within the cluster was the Equipment Inspectors (GRP109, N=5). Respondents in this group spent a large portion of their time on the job performing tasks related to the inspection and maintenance of tools, equipment, and vehicles. This typically involved such tasks as:

- inspecting work areas for hazardous working conditions
- performing vehicle operator inspections using forms such as AFTO Form 373 or AFTO Form 374
- inspecting vehicles or special purpose equipment
- inspecting cable vaults, handholes, or manholes
- inspecting hand or special purpose tools
- maintaining tools or equipment

All five of these individuals hold the 5-skill level, and perform an average of 101 tasks. In addition, they have an average of 93 months TAFMS, and an average paygrade of E-4.

II. SENIOR RESIDENT COURSE INSTRUCTORS (GRP163, N=6). Members of this group perform a large number of tasks related to conducting classroom training, and testing and evaluation of resident course trainees. In addition, these incumbents spend a relatively large percentage of their time inspecting equipment, work areas, and work performed by other personnel. This usually includes such tasks as:

- conducting resident course classroom training
- evaluating progress of resident course students
- inspecting work areas for hazardous working conditions
- inspecting in-progress work
- inspecting climbing equipment, poles or areas prior to ascending poles
- evaluating compliance with work standards

These respondents have an average paygrade of approximately E-5, and perform an average of 79 tasks.

III. CABLE TESTERS (GRP088, N=5). Although all members of this independent job type do perform a limited number of cable sealing tasks these respondents also spend a greater percentage of their time than any other group within the survey sample on those tasks which are related to the performance of cables tests and corrective functions. Their job typically involves:

- testing circuits or cable pairs for resistance
- locating cable faults using delcon cable fault locators
- making wet section throws
- performing insulation resistance tests
- testing circuits or cable pairs for voltage

These respondents represent a relatively junior group, as three of the five members of this group hold the 3-skill level, with the remaining two members holding 5- and 7-skill levels respectively. Personnel within this group perform an average of only 52 tasks.

IV. JUNIOR ELECTRONICS INSTALLATION PERSONNEL (GRP082, N=22). Survey data indicated that these incumbents have an average of only 42 months TAFMS, and an average of only 30 months in the career field. Although members of this group do perform many of the basic tasks related to cable splicing and maintenance, their job appears to be slightly limited in scope. These respondents spend the greatest percentage of their time performing such tasks as:

- operating splicer trucks
- establishing talking circuits
- removing or installing lead sleeves
- bridge-splicing telephone conductors using mechanical connectors
- preparing lead sleeves for sealing

Over 68 percent of the personnel within this group are still in their first enlistment, and they have an average paygrade of approximately E-3. These individuals perform an average of 54 tasks.

V. JUNIOR RESIDENT COURSE INSTRUCTORS (GRP064, N=6). Similar to the Senior Resident Course Instructors, these incumbents perform a large number of tasks related to the conducting of classroom training. Members of this group, however, do not perform many of the inspection and evaluation tasks that most of their senior counterparts typically perform. In addition, they spend slightly greater percentages of their time on a number of more technical tasks. Their job usually includes:

- conducting resident course classroom training
- administering tests
- flash testing splices or closures
- installing lead sleeves
- scoring tests

This group performs fewer tasks than the more senior instructors (45 versus 79), and in addition, they have an average of only 46 months in the career field compared to an average of 77 for the other group.

VI. MISSILE SYSTEMS CABLE MAINTENANCE PERSONNEL (GRP052, N=92). This cluster, which represents approximately 15 percent of the survey sample, is composed of 361X1 personnel who work on Hardened Intersite Cable Systems (HICS). Members of this group repair and maintain primarily ATI and Terminal (HICS) splice cases and install numerous other types of equipment which are unique to missile systems only. In addition, these incumbents spend relatively large percentages of their time performing those tasks which are involved in pressurizing and maintaining cable pressure systems. Their job typically includes such tasks as:

- traveling to or from missile cable work areas
- assembling ATI splice cases
- adjusting HICS pressure contactors
- repairing ATI pressure component assemblies
- straight-splicing HICS cable using mechanical connectors
- installing or removing HICS pressure contactor assemblies

The average paygrade of these incumbents is approximately E-4, and they have an average of 54 months TAFMS. Over 65 percent of the members of this group are still in their first enlistment, and they perform an average of 83 tasks. While job satisfaction is fairly high among these respondents, 60 percent felt that they would not, or probably would not, reenlist.

The first group to be identified within this cluster was the HICS Cable Splicers (GRP080, N=81). Because these respondents account for the majority of the personnel within the Missile Systems Cable Maintenance Cluster, the job which they perform is nearly identical to that which was previously mentioned in the description of the cluster as a whole. Overall, as characteristic of the entire cluster, these respondents spend much of their time on the job working with ATI splice cases, HICS pressure contactors, and ATI pressure component assemblies, all of which are basically unique to missile systems only. This involves such tasks as:

- bridge-splicing HICS cable using mechanical connectors
- installing or removing HICS pressure contactors
- performing preventive maintenance inspections (PMI) on HICS cable yards
- installing or removing HICS pressure contactor assemblies
- repairing ATI pressure component assemblies

Sixty-two percent of these respondents are still in their first enlistment, and have an average of 59 months TAFMS. The average paygrade for personnel in this group is E-4.

The next group to be identified in the cluster was the HICS Area Preparation and Maintenance Personnel (GRP061, N=6). The job of this small group of six respondents is primarily involved with operating the necessary equipment and performing those tasks which are required to prepare work areas for cable splicing and maintenance activities. This will usually involve such tasks as:

- washing or waxing vehicles or trailers
- traveling to or from missile cable work areas
- excavating splicing pits or cable trenches using hand tools
- loading or replenishing splicing materials prior to dispatch of splicer trucks
- operating splicer trucks
- operating backhoes

These respondents represent a fairly junior group, with 100 percent of them holding the 3-skill level. In addition, all of them are still in their first enlistment, having an average of only 13 months TAFMS. Personnel in this group also perform an average of 31 tasks, which seems to indicate that their job may be more limited in scope due to their relatively low experience levels.

The last group to be described in this cluster is the Cable Pressurization Personnel (GRP068, N=5). These members spend greater percentages of their time than any other group within the survey sample on tasks which are related to pressurizing and maintaining cable pressurization systems. This frequently includes:

- adjusting HICS pressure contactors
- repairing ATI pressure component assemblies
- performing preventive maintenance inspections (PMIs) on air-dryer assemblies
- locating pressure leaks with solution tests
- testing pressure contactors

These incumbents are also fairly junior, with 60 percent of them holding the 3-skill level. All of these respondents are also in their first enlistment, and have an average paygrade of E-3.

VII. BASE CABLE AREA PREPARATION AND MAINTENANCE PERSONNEL (GRP051, N=7). The job of these members, similar to the one performed by the HICS Area Preparation and Maintenance Personnel, primarily consists of

operating various types of equipment and doing a number of other tasks which are required to prepare work areas for cable splicing or maintenance functions. Their job typically includes:

- removing or replacing manhole covers
- operating splicer trucks
- traveling to or from base work areas
- erecting barriers or manhole guards around open trenches or pits
- erecting traffic warning devices
- testing manholes for combustible gases

Similar to their HICS counterparts, the majority of these respondents hold a 3-skill level and are in their first enlistment. The average paygrade for this group was also approximately E-3.

VIII. SUPERVISION AND MANAGEMENT PERSONNEL (GRP041, N=44). This cluster, representing approximately seven percent of the sample, is comprised of individuals who perform a large number of supervisory and planning functions. These incumbents are responsible for counseling and evaluating subordinates, as well as prioritizing and scheduling work assignments. Their job typically involves:

- counseling personnel on personal or military related problems
- supervising cable-splicing installation and maintenance specialists (AFSC 36151)
- evaluating compliance with work standards
- planning work assignments
- determining work priorities

Eighty percent of these respondents hold a 7-skill level, and have an average paygrade of E-6. Members of this group also have an average of 163 months TAFMS and perform approximately 101 tasks.

The first group in this cluster is the Supervisors-Base Cable Section (GRP157, N=9). Assigned primarily to base communications maintenance duty areas, they spend the majority of their time managing and evaluating personnel as well as planning and inspecting work assignments and areas. This typically involves:

- planning work assignments
- interpreting policies, directives, or procedures
- supervising cable splicing installation and maintenance specialists (AFSC 36151)
- evaluating compliance with work standards
- analyzing workload requirements
- scheduling leaves or passes

As is characteristic of nearly all personnel within this cluster, these incumbents represent a fairly senior and experienced group. For example, 89 percent of these members hold a 7-skill level, and overall, have an average paygrade of approximately E-7. In addition, these respondents reported having approximately 199 months TAFMS, with 67 percent assigned to overseas locations.

The second group to be identified within the cluster was the HICS Shop Supervisors (GRP179, N=5). Members of this group, although working on Hardened Intersite Cable Systems, perform many of the same basic supervisory functions as their counterparts in the base cable sections. There are a number of basic tasks, however, which are unique to this group. These tasks include:

- inspecting Hardened Intersite Cable Splices
- inspecting HICS cable for hardness integrity
- performing preventive maintenance inspections (PMI) on HICS cable yards

These members have an average paygrade of E-6, and perform an average of over 202 tasks.

Another group within the same cluster is the Quality Control Inspectors (GRP111, N=7). These incumbents inspect and evaluate work areas, equipment, and tools, as well as completed or in-progress work in order to determine if the appropriate standards and specifications have been adequately met. Their job frequently involves such tasks as:

- inspecting in-progress work
- inspecting buried cable installations for compliance with technical directives or specifications
- inspecting grounds or bonding devices
- inspecting or reporting evidences of corrosion
- coordinating final quality control verification tests with receiving installations

Eighty-six percent of these respondents are located overseas, and the average paygrade for the group is E-6. In addition, eighty-six percent of these individuals hold a 7-skill level. Reenlistment intentions among this group is very low, as only two of these respondents probably will reenlist even though all other job satisfaction indices were fairly high.

The fourth group to be described were the Electronics Installation Team Chiefs (GRP145, N=5). Similar to the other members of the cluster, these EI personnel are responsible for counseling and supervising their subordinates, annotating and interpreting records and forms, and coordinating activities with other agencies. This includes such tasks as:

- obtaining right-of-way, road permits, digging permits, or other clearances
- coordinating prior to installation of cable, antenna, or inside plant schemes with using organization
- supervising cable splicing installation and maintenance specialists (AFSC 36151)
- annotating as-built or as-installed drawings
- interpreting cable transfer work sheets or cut sheets

Four of these individuals hold a 7-skill level, with the remaining member holding a 5-skill level. This group has an average of 176 months TAFMS.

The last group to be identified in the Supervision and Management cluster is the Superintendents (GRP045, N=7). This group is comprised of both EI, base cable, and HICS personnel. On the average, these incumbents supervise an average of 11 subordinates, more than any other group within the sample. Members of this small group supervise civilian personnel as well as other 361X1 supervisors who hold 7-skill levels. These individuals also spend large percentages of their time on tasks which are related to OJT and other training programs. This typically includes:

- supervising cable splicing installation and maintenance supervisors (AFSC 36171)
- supervising civilian personnel
- assigning on-the-job training (OJT) trainers
- assigning personnel to duty positions
- directing or implementing OJT programs
- maintaining training records, charts, or graphs

These individuals have a greater number of months in the career field (152) than any other group which was identified, and they have an average of 196 months TAFMS.

IX. CABLE AFFAIRS MONITORS (GRP054, N=8). Members of this group perform a job which appears to be fairly administrative in structure. They have reported performing an average of only 21 tasks, nearly all of which are related to the maintenance of records and files, or the annotation and interpretation of various forms and diagrams. Their job frequently encompasses such tasks as:

- maintaining cable records, diagrams, or card files
- making entries on plant-in-place records
- interpreting CIRS or plant-in-place records
- annotating as-built or as-installed drawings
- maintaining standard publications, records, or correspondence files

Seventy-five percent of these individuals hold a 5-skill level, and have an average of 154 months TAFMS. Survey data, however, indicates that job satisfaction among members of this group is the lowest of any group within the sample. This may be a result of the fact that their job is fairly restricted in its range of potential activities which these respondents may perform.

### Structure Summary

Overall, as previously noted, the jobs of the Base Cable and Electronics Installation personnel were very similar in terms of the tasks performed and the relative percentage of time spent performing them. The job of the HICS personnel has some unique aspects, however, due to a number of different types of procedures and equipment that is used only for missile systems. In addition, as a whole, those respondents assigned to HICS duty areas represented a slightly more junior group than those incumbents who were assigned to the other two areas.

An examination of job satisfaction information reveals that while the majority of personnel in the 361X1 career ladder found their job fairly interesting, there were a number of groups that were identified which had relatively low reenlistment intentions. This trend was particularly noticeable among members of the Missile Systems Cable Maintenance Personnel Cluster, Cable Affairs Monitors, and Quality Control Inspectors.

TABLE 5  
BACKGROUND DATA FOR FUNCTIONAL JOB GROUPS

|                              | CABLE<br>MAINTENANCE<br>PERSONNEL<br>(GRP084) | SENIOR<br>RESIDENT<br>COURSE<br>INSTRUCTORS<br>(GRP163) | CABLE<br>TESTERS<br>(GRP088) | JUNIOR EI<br>PERSONNEL<br>(GRP082) | JUNIOR<br>RESIDENT<br>COURSE<br>INSTRUCTORS<br>(GRP064) | MISSILE<br>SYSTEMS CABLE<br>MAINTENANCE<br>PERSONNEL<br>(GRP052) | BASE CABLE AREA<br>PREPARATION AND<br>MAINTENANCE<br>PERSONNEL<br>(GRP051) | SUPERVISION<br>AND<br>MANAGEMENT<br>PERSONNEL<br>(GRP041) | CABLE<br>AFFAIRS<br>MONITORS<br>(GRP054) |
|------------------------------|-----------------------------------------------|---------------------------------------------------------|------------------------------|------------------------------------|---------------------------------------------------------|------------------------------------------------------------------|----------------------------------------------------------------------------|-----------------------------------------------------------|------------------------------------------|
| NUMBER IN GROUP:             | 331                                           | 6                                                       | 5                            | 22                                 | 6                                                       | 92                                                               | 7                                                                          | 44                                                        | 8                                        |
| PERCENT OF SAMPLE:           | 56%                                           | 1%                                                      | 1%                           | 4%                                 | 1%                                                      | 15%                                                              | 1%                                                                         | 7%                                                        | 1%                                       |
| PERCENT LOCATED OVERSEAS:    | 35%                                           | -                                                       | 40%                          | 36%                                | -                                                       | -                                                                | 43%                                                                        | 43%                                                       | 13%                                      |
| DAFSC DISTRIBUTION           |                                               |                                                         |                              |                                    |                                                         |                                                                  |                                                                            |                                                           |                                          |
| 36131                        | 14%                                           | 17%                                                     | 60%                          | 50%                                | -                                                       | 38%                                                              | 57%                                                                        | 2%                                                        | -                                        |
| 36151                        | 68%                                           | 50%                                                     | 20%                          | 46%                                | 83%                                                     | 47%                                                              | 43%                                                                        | 16%                                                       | 75%                                      |
| 36171                        | 17%                                           | 33%                                                     | 20%                          | -                                  | 17%                                                     | 14%                                                              | -                                                                          | 80%                                                       | 25%                                      |
| NOT REPORTED                 | 1%                                            | -                                                       | -                            | 4%                                 | -                                                       | 1%                                                               | -                                                                          | 2%                                                        | -                                        |
| AVERAGE GRADE:               |                                               |                                                         |                              |                                    |                                                         |                                                                  |                                                                            |                                                           |                                          |
| AVERAGE MONTHS IN CAREER     | E-4                                           | E-5                                                     | E-4                          | E-3                                | E-4                                                     | E-4                                                              | E-3                                                                        | E-6                                                       | E-5                                      |
| FIELD:                       | 54                                            | 77                                                      | 33                           | 30                                 | 46                                                      | 34                                                               | 27                                                                         | 126                                                       | 77                                       |
| AVERAGE MONTHS IN SERVICE    | 74                                            | 79                                                      | 57                           | 42                                 | 57                                                      | 54                                                               | 48                                                                         | 163                                                       | 154                                      |
| (TAFMS):                     | 45%                                           | 33%                                                     | 40%                          | 68%                                | 50%                                                     | 65%                                                              | 57%                                                                        | 7%                                                        | 13%                                      |
| PERCENT IN FIRST ENLISTMENT: |                                               |                                                         |                              |                                    |                                                         |                                                                  |                                                                            |                                                           |                                          |
| PERCENT MEMBERS SUPERVISING: | 31%                                           | 17%                                                     | 20%                          | 14%                                | -                                                       | 25%                                                              | 14%                                                                        | 77%                                                       | 25%                                      |
| AVERAGE NUMBER DIRECTLY      | 1                                             | 1                                                       | *                            | *                                  | -                                                       | 1                                                                | *                                                                          | 5                                                         | *                                        |
| SUPERVISED:                  |                                               |                                                         |                              |                                    |                                                         |                                                                  |                                                                            |                                                           |                                          |
| AVERAGE NUMBER OF TASKS      | 143                                           | 79                                                      | 52                           | 54                                 | 45                                                      | 83                                                               | 33                                                                         | 101                                                       | 21                                       |
| PERFORMED:                   | 14.6                                          | 12.8                                                    | 9.0                          | 7.5                                | 9.3                                                     | 12.5                                                             | 3.5                                                                        | 15.9                                                      | 8.7                                      |
| JOB DIFFICULTY INDEX (JD1):  |                                               |                                                         |                              |                                    |                                                         |                                                                  |                                                                            |                                                           |                                          |

\* DENOTES LESS THAN ONE PERCENT

TABLE 6  
JOB SATISFACTION DATA FOR FUNCTIONAL JOB GROUPS  
(PERCENT MEMBERS RESPONDING)\*

|                              | CABLE MAINTENANCE PERSONNEL (GRP084) |  | SENIOR RESIDENT COURSE INSTRUCTORS (GRP163) |  | CABLE TESTERS (GRP088) |  | JUNIOR E1 PERSONNEL (GRP082) |  | JUNIOR RESIDENT COURSE INSTRUCTORS (GRP064) |  | MISSILE SYSTEMS CABLE MAINTENANCE PERSONNEL (GRP052) |  | BASE CABLE AREA PREPARATION AND MAINTENANCE PERSONNEL (GRP051) |  | SUPERVISION AND MANAGEMENT PERSONNEL (GRP041) |  | CABLE AFFAIRS MONITORS (GRP054) |  |
|------------------------------|--------------------------------------|--|---------------------------------------------|--|------------------------|--|------------------------------|--|---------------------------------------------|--|------------------------------------------------------|--|----------------------------------------------------------------|--|-----------------------------------------------|--|---------------------------------|--|
|                              |                                      |  |                                             |  |                        |  |                              |  |                                             |  |                                                      |  |                                                                |  |                                               |  |                                 |  |
| I FIND MY JOB:               |                                      |  |                                             |  |                        |  |                              |  |                                             |  |                                                      |  |                                                                |  |                                               |  |                                 |  |
| DULL                         | 2                                    |  | -                                           |  | -                      |  | 5                            |  | -                                           |  | 8                                                    |  | 14                                                             |  | 9                                             |  | 25                              |  |
| SO-SO                        | 7                                    |  | 17                                          |  | 20                     |  | 27                           |  | -                                           |  | 23                                                   |  | -                                                              |  | 14                                            |  | 50                              |  |
| INTERESTING                  | 89                                   |  | 67                                          |  | 80                     |  | 68                           |  | 100                                         |  | 67                                                   |  | 72                                                             |  | 77                                            |  | 25                              |  |
| MY JOB UTILIZES MY TALENTS:  |                                      |  |                                             |  |                        |  |                              |  |                                             |  |                                                      |  |                                                                |  |                                               |  |                                 |  |
| LITTLE OR NOT AT ALL         | 8                                    |  | -                                           |  | 20                     |  | 14                           |  | -                                           |  | 22                                                   |  | 14                                                             |  | 11                                            |  | 37                              |  |
| FAIRLY WELL TO VERY WELL     | 71                                   |  | 83                                          |  | 60                     |  | 86                           |  | 83                                          |  | 71                                                   |  | 86                                                             |  | 59                                            |  | 50                              |  |
| EXCELLENTLY TO PERFECTLY     | 20                                   |  | -                                           |  | 20                     |  | -                            |  | 17                                          |  | 7                                                    |  | -                                                              |  | 30                                            |  | 13                              |  |
| MY JOB UTILIZES MY TRAINING: |                                      |  |                                             |  |                        |  |                              |  |                                             |  |                                                      |  |                                                                |  |                                               |  |                                 |  |
| LITTLE TO NOT AT ALL         | 6                                    |  | -                                           |  | 20                     |  | 14                           |  | 17                                          |  | 16                                                   |  | 29                                                             |  | 14                                            |  | 62                              |  |
| FAIRLY WELL TO VERY WELL     | 74                                   |  | 83                                          |  | 80                     |  | 73                           |  | 50                                          |  | 76                                                   |  | 71                                                             |  | 45                                            |  | 25                              |  |
| EXCELLENTLY TO PERFECTLY     | 18                                   |  | 17                                          |  | -                      |  | 13                           |  | 33                                          |  | 6                                                    |  | -                                                              |  | 41                                            |  | 13                              |  |
| I PLAN TO REENLIST:          |                                      |  |                                             |  |                        |  |                              |  |                                             |  |                                                      |  |                                                                |  |                                               |  |                                 |  |
| NO OR PROBABLY NO            | 48                                   |  | 33                                          |  | 20                     |  | 59                           |  | 33                                          |  | 60                                                   |  | 29                                                             |  | 41                                            |  | 62                              |  |
| YES OR PROBABLY YES          | 49                                   |  | 67                                          |  | 80                     |  | 36                           |  | 67                                          |  | 40                                                   |  | 71                                                             |  | 59                                            |  | 38                              |  |

\*SOME COLUMNS MAY NOT ADD UP TO 100 PERCENT DUE TO NO RESPONSE

## ANALYSIS OF DAFSC GROUPS

In addition to identifying the job structure of the 361X1 career ladder, the 3-, 5-, and 7-skill level groups within the survey sample were also examined. This analysis revealed similarities and differences between these groups in terms of the tasks which they perform and the relative percentage of time they spent on duties. Information from this analysis may also be useful in determining the accuracy of career ladder documents, such as the AFR 39-1 Specialty Descriptions and the Specialty Training Standard (STS).

Overall, as is common in many specialties, the job of the 3- and 5-skill level personnel is primarily technical in nature. Consequently, members of these groups reported spending an average of 83 percent and 78 percent of their time, respectively, on such functions. Three duties, preparing and maintaining work areas, installing communications system cables, and performing cables tests and corrective functions, accounted for almost 50 percent of the time on the job for both groups, indicating that the main focus of the job is on these areas (see Table 7). In addition, both skill levels were also very similar in terms of the tasks which they performed. Tables 8 and 9 provide lists of those tasks which are most commonly performed by the 3- and 5-skill level incumbents. There were some differences, however, between these respondents. Slightly larger percentages of the 3-skill level respondents reported installing or repairing a number of different types of equipment which are unique to Hardened Intersite Cable Systems. This is primarily a result of the fact that personnel in this duty area accounted for a large percentage of the 3-skill level incumbents the survey sample. In addition, there were also a number of other tasks which differentiated between the two groups. These tasks are presented in Table 10. As demonstrated by this table, greater percentages of the respondents holding a 5-skill level performed a variety of tasks ranging in complexity from making cable transfers to directing traffic at work areas. However, the diversity of these tasks also indicates that there were no large duty differences between the two groups.

In comparison, those respondents holding 7-skill levels reported spending much of their time on supervisory and administrative functions. These incumbents spent an average of over 55 percent of their time on tasks related to these duties. Many of these tasks involve inspecting equipment and supplies, interpreting records and diagrams, and supervising and counseling subordinates (see Table 11). These individuals also spent 45 percent of their time on technical tasks. Many of these tasks were related to the conducting of cables tests, such as locating cable faults and pressure leaks or testing circuits or cable pairs for resistance, continuity, and voltage. Table 12 provides a list of those tasks which best differentiated between the 5- and 7-skill level respondents. As demonstrated by this table, individuals holding the 7-skill level are involved with many activities related to personnel management and perform fewer tasks related to preparing and maintaining work areas.

DAFSC skill levels were also examined across job groups. As illustrated by Table 13, the General Cable Splicers accounted for the majority of the 5-skill level respondents. In addition, while the DAFSC 36171 personnel were distributed fairly evenly among many of the identified job groups, substantial numbers of the 3-skill level incumbents were either HICS Cable Splicers or General Cable Splicers.

TABLE 7

## RELATIVE PERCENTAGE OF TIME SPENT ON DUTIES BY DAFSC GROUPS

| DUTIES                                                                                                         | 36131<br>PERSONNEL<br>(N=118) | 36151<br>PERSONNEL<br>(N=336) | 36171<br>PERSONNEL<br>(N=135) |
|----------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------------------|-------------------------------|
| A ORGANIZING AND PLANNING                                                                                      | 2                             | 3                             | 11                            |
| B DIRECTING AND IMPLEMENTING                                                                                   | 1                             | 2                             | 10                            |
| C INSPECTING AND EVALUATING                                                                                    | 9                             | 8                             | 16                            |
| D TRAINING                                                                                                     | 2                             | 4                             | 9                             |
| E INTERPRETING AND MAINTAINING PUBLICA-<br>TIONS, RECORDS, REPORTS, AND DIAGRAMS                               | 3                             | 5                             | 9                             |
| F MAINTAINING TOOLS AND EQUIPMENT                                                                              | 8                             | 5                             | 4                             |
| G PREPARING AND MAINTAINING WORK AREAS                                                                         | 22                            | 21                            | 10                            |
| H INSTALLING COMMUNICATIONS SYSTEM CABLES                                                                      | 10                            | 13                            | 6                             |
| I PERFORMING CABLES TESTS AND CORRECTIVE<br>FUNCTIONS                                                          | 15                            | 16                            | 11                            |
| J SPLICING CABLES                                                                                              | 3                             | 3                             | 2                             |
| K INSTALLING SPLICE CASES, LOADING COILS,<br>BUILDOUT CAPACITORS, AND ELECTRICAL<br>SURGE ARRESTOR CABLE STUBS | 3                             | 2                             | 1                             |
| L SEALING CABLES                                                                                               | 9                             | 10                            | 5                             |
| M PRESSURIZING AND MAINTAINING CABLE<br>PRESSURE SYSTEMS                                                       | 13                            | 8                             | 6                             |

TABLE 8  
 REPRESENTATIVE TASKS PERFORMED BY DAFSC 36131 PERSONNEL  
 (N=118)

| TASKS                                                                     | PERCENT<br>MEMBERS<br>PERFORMING |
|---------------------------------------------------------------------------|----------------------------------|
| F200 WASH OR WAX VEHICLES OR TRAILERS                                     | 81                               |
| I365 FLASH TEST SPLICES OR CLOSURES                                       | 75                               |
| M397 LOCATE PRESSURE LEAKS WITH SOLUTION TESTS                            | 73                               |
| M408 TAKE PRESSURE READINGS USING PRESSURE TESTING GAUGES                 | 67                               |
| I297 LOCATE CABLE FAULTS USING MULTIMETERS                                | 66                               |
| G242 TRAVEL TO OR FROM BASE WORK AREAS                                    | 64                               |
| I293 ESTABLISH TALKING CIRCUITS                                           | 60                               |
| M385 CHARGE CABLE SYSTEMS WITH NITROGEN OR DRY AIR                        | 60                               |
| I305 LOCATE CABLE ROUTES USING PLANT-IN-PLACE RECORDS                     | 60                               |
| G205 CLEAN SPLICING PITS                                                  | 59                               |
| H250 CLEAN CAP CONDUCTORS                                                 | 59                               |
| G223 OPERATE SPLICER TRUCKS                                               | 58                               |
| G216 EXCAVATE SPLICING PITS OR CABLE TRENCHES USING HAND TOOLS            | 58                               |
| I315 PERFORM INSULATION RESISTANCE TESTS                                  | 56                               |
| H247 BEND OR ARRANGE BURIED CABLES FOR SPLICING                           | 56                               |
| G228 PLACE OR OPERATE WATER PUMPS                                         | 55                               |
| I294 IDENTIFY OR TAG CONDUCTORS                                           | 55                               |
| I329 TEST CIRCUITS OR CABLE PAIRS FOR RESISTANCE                          | 55                               |
| I369 MAKE TEMPORARY OR EMERGENCY SPLICE SEALS                             | 54                               |
| H258 INSTALL CABLE ROUTE SIGNS, POLE MARKERS, OR IDENTIFICATION<br>PLATES | 53                               |
| G211 ERECT BARRIERS ON MANHOLE GUARDS AROUND OPEN TRENCHES OR<br>PITS     | 53                               |
| L367 INSTALL LEAD SLEEVES                                                 | 53                               |
| L372 PREPARE LEAD SLEEVES FOR SEALING                                     | 53                               |
| I328 TEST CIRCUITS OR CABLE PAIRS FOR CONTINUITY                          | 53                               |
| C113 INSPECT VEHICLES OR SPECIAL PURPOSE EQUIPMENT                        | 52                               |

TABLE 9

REPRESENTATIVE TASKS PERFORMED BY DAFSC 36151 PERSONNEL  
(N=336)

| <u>TASKS</u>                                                              | <u>PERCENT<br/>MEMBERS<br/>PERFORMING</u> |
|---------------------------------------------------------------------------|-------------------------------------------|
| F200 WASH OR WAX VEHICLES OR TRAILERS                                     | 82                                        |
| L365 FLASH TEST SPLICES OR CLOSURES                                       | 82                                        |
| I293 ESTABLISH TALKING CIRCUITS                                           | 80                                        |
| H250 CLEAN CAP CONDUCTORS                                                 | 80                                        |
| M397 LOCATE PRESSURE LEAKS WITH SOLUTION TESTS                            | 78                                        |
| G228 PLACE OR OPERATE WATER PUMPS                                         | 77                                        |
| G223 OPERATE SPLICER TRUCKS                                               | 76                                        |
| I292 DETECT CABLE FAULTS USING HEADSETS AND BATTERIES                     | 76                                        |
| I297 LOCATE CABLE FAULTS USING MULTIMETERS                                | 75                                        |
| G211 ERECT BARRIERS OR MANHOLE GUARDS AROUND OPEN TRENCHES OR<br>PITS     | 75                                        |
| I305 LOCATE CABLE ROUTES USING PLANT-IN-PLACE RECORDS                     | 74                                        |
| I294 IDENTIFY OR TAG CONDUCTORS                                           | 74                                        |
| G242 TRAVEL TO OR FROM BASE WORK AREAS                                    | 74                                        |
| H247 BEND OR ARRANGE BURIED CABLES FOR SPLICING                           | 74                                        |
| G216 EXCAVATE SPLICING PITS OR CABLE TRENCHES USING HAND TOOLS            | 74                                        |
| L373 SEAL CABLE ENDS                                                      | 74                                        |
| H258 INSTALL CABLE ROUTE SIGNS, POLE MARKERS, OR IDENTIFICATION<br>PLATES | 74                                        |
| G205 CLEAN SPLICING PITS                                                  | 73                                        |
| L367 INSTALL LEAD SLEEVES                                                 | 72                                        |
| G234 REMOVE WATER FROM MANHOLES                                           | 72                                        |
| L377 WRAP COMPLETED SPLICES WITH MUSLIN OR PLASTIC                        | 72                                        |
| L372 PREPARE LEAD SLEEVES FOR SEALING                                     | 72                                        |
| J334 BRIDGE-SPLICE TELEPHONE CONDUCTORS USING MECHANICAL<br>CONNECTORS    | 72                                        |
| M385 CHARGE CABLE SYSTEMS WITH NITROGEN OR DRY AIR                        | 71                                        |
| L366 INSTALL AUXILIARY SLEEVES                                            | 71                                        |

TABLE 10

TASKS WHICH BEST DIFFERENTIATE DAFSCs 36131 AND 36151 PERSONNEL  
(PERCENT MEMBERS PERFORMING)

| TASKS                                                                     | DAFSC<br>36131<br>(N=118) | DAFSC<br>36151<br>(N=336) | DIFFERENCE |
|---------------------------------------------------------------------------|---------------------------|---------------------------|------------|
| K351 ASSEMBLE ATI SPLICE CASES                                            | 40                        | 21                        | +19        |
| M380 ADJUST HICS PRESSURE CONTACTORS                                      | 34                        | 17                        | +17        |
| J333 BRIDGE-SPLICE HICS CABLE USING MECHANICAL CONNECTORS                 | 35                        | 21                        | +14        |
| M390 INSTALL OR REMOVE HICS PRESSURE CONTACTOR ASSEMBLIES                 | 31                        | 17                        | +14        |
| M404 REPAIR ATI PRESSURE COMPONENT ASSEMBLIES                             | 30                        | 17                        | +13        |
| F197 PERFORM PREVENTIVE MAINTENANCE INSPECTIONS (PMI) ON HICS CABLE YARDS | 30                        | 18                        | +12        |
| I310 MAKE WORKING CABLE SECTION REPLACEMENTS                              | 35                        | 66                        | -31        |
| H277 INSTALL QUICK-CONNECT OR PUNCH-ON TERMINALS                          | 27                        | 58                        | -31        |
| I324 REPAIR CABLE SHEATH DEFECTS USING OTHER THAN HEAT SHRINK METHODS     | 32                        | 63                        | -31        |
| I308 MAKE CABLE TRANSFERS                                                 | 16                        | 46                        | -30        |
| I295 IDENTIFY SPECIAL CIRCUITS, SUCH AS FIRE ALARM OR DATA CIRCUITS       | 25                        | 55                        | -30        |
| L363 CAST OR PREPARE DISKS OR END PLATES                                  | 36                        | 65                        | -29        |
| G201 BACKFILL BASE TELEPHONE CABLE SYSTEM SPLICING PITS OR CABLE TRENCHES | 33                        | 61                        | -28        |
| J340 BUTT-SPLICE TELEPHONE CONDUCTORS USING MECHANICAL CONNECTORS         | 37                        | 65                        | -28        |
| G215 ERECT TRAFFIC WARNING DEVICES                                        | 42                        | 70                        | -28        |
| G213 ERECT OR REMOVE GROUND TENTS                                         | 36                        | 64                        | -28        |
| L375 SEAL JOINTS USING TORCH METHODS                                      | 42                        | 69                        | -27        |
| H257 INSTALL CABLE RACKS OR HOOKS ON MANHOLES                             | 28                        | 55                        | -27        |
| G237 SELECT TRAFFIC WARNING DEVICES REQUIRED FOR WORK AREAS               | 31                        | 58                        | -27        |
| F196 PERFORM OPERATOR MAINTENANCE ON WATER PUMPS                          | 20                        | 46                        | -26        |
| G210 DIRECT TRAFFIC AT WORK AREAS                                         | 25                        | 51                        | -26        |

TABLE 11  
 REPRESENTATIVE TASKS PERFORMED BY DAFSC 36171 PERSONNEL  
 (N=135)

| TASKS                                                                                                 | PERCENT<br>MEMBERS<br>PERFORMING |
|-------------------------------------------------------------------------------------------------------|----------------------------------|
| E170 PERFORM VEHICLE OPERATOR INSPECTIONS USING FORMS SUCH AS<br>AFTO FORM 373 OR AFTO FORM 374       | 69                               |
| B 68 SUPERVISE CABLE SPLICING INSTALLATION AND MAINTENANCE<br>SPECIALISTS (AFSC 36151)                | 67                               |
| C112 INSPECT TEST EQUIPMENT                                                                           | 67                               |
| E159 INTERPRET CABLE RECORDS OR CABLE SPLICING DIAGRAMS                                               | 67                               |
| C113 INSPECT VEHICLES OR SPECIAL PURPOSE EQUIPMENT                                                    | 67                               |
| C114 INSPECT WORK AREAS FOR HAZARDOUS WORKING CONDITIONS                                              | 66                               |
| B 60 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES                                                          | 65                               |
| B 46 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS                                       | 64                               |
| C102 INSPECT IN-PROGRESS WORK                                                                         | 63                               |
| C 99 INSPECT HAND OR SPECIAL PURPOSE TOOLS                                                            | 63                               |
| I305 LOCATE CABLE ROUTES USING PLANT-IN-PLACE RECORDS                                                 | 63                               |
| C 98 INSPECT GROUNDS OR BONDING DEVICES                                                               | 62                               |
| C 94 INSPECT BURIED CABLE INSTALLATIONS FOR COMPLIANCE WITH<br>TECHNICAL DIRECTIVES OR SPECIFICATIONS | 61                               |
| C108 INSPECT SPLICING MATERIALS                                                                       | 61                               |
| D141 ORIENT NEWLY-ASSIGNED PERSONNEL                                                                  | 61                               |
| C 96 INSPECT CABLE VAULTS, HANDHOLES, OR MANHOLES                                                     | 60                               |
| B 65 RESOLVE TECHNICAL MAINTENANCE PROBLEMS                                                           | 59                               |
| A 31 PLAN WORK ASSIGNMENTS                                                                            | 59                               |
| I329 TEST CIRCUITS OR CABLE PAIRS FOR RESISTANCE                                                      | 59                               |
| D125 COUNSEL TRAINEES ON TRAINING PROGRESS                                                            | 59                               |
| F200 WASH OR WAX VEHICLES OR TRAILERS                                                                 | 59                               |
| M397 LOCATE PRESSURE LEAKS WITH SOLUTION TESTS                                                        | 59                               |
| B 64 RESOLVE TECHNICAL INSTALLATION PROBLEMS                                                          | 58                               |
| A 35 SCHEDULE WORK ASSIGNMENTS                                                                        | 58                               |
| D126 DEMONSTRATE HOW TO LOCATE TECHNICAL INFORMATION                                                  | 58                               |

TABLE 12

TASKS WHICH BEST DIFFERENTIATE 36151 AND 36171 PERSONNEL  
(PERCENT MEMBERS PERFORMING)

| TASKS                                                                                    | DAFSC            | DAFSC            | DIFFERENCE |
|------------------------------------------------------------------------------------------|------------------|------------------|------------|
|                                                                                          | 36151<br>(N=336) | 36171<br>(N=135) |            |
| H250 CLEAN CAP CONDUCTORS                                                                | 80               | 45               | +35        |
| H211 ERECT BARRIERS OR MANHOLE GUARDS AROUND OPEN<br>TRENCHES OR PITS                    | 75               | 46               | +29        |
| G204 CLEAN MANHOLES                                                                      | 67               | 38               | +29        |
| G205 CLEAN SPLICING PITS                                                                 | 73               | 45               | +28        |
| G215 ERECT TRAFFIC WARNING DEVICES                                                       | 70               | 42               | +28        |
| H247 BEND OR ARRANGE BURIED CABLES FOR SPLICING                                          | 74               | 46               | +28        |
| H258 INSTALL CABLE ROUTE SIGNS, POLE MARKERS, OR<br>IDENTIFICATION PLATES                | 74               | 47               | +27        |
| G228 PLACE OR OPERATE WATER PUMPS                                                        | 77               | 57               | +20        |
| L365 FLASH TEST SPLICES OR CLOSURES                                                      | 82               | 56               | +26        |
| I292 DETECT CABLE FAULTS USING HEADSETS AND BATTERIES                                    | 76               | 50               | +26        |
| L372 PREPARE LEAD SLEEVES FOR SEALING                                                    | 72               | 46               | +26        |
| I322 REMOVE OR INSTALL LEAD SLEEVES                                                      | 70               | 44               | +26        |
| B 50 DRAFT CORRESPONDENCE                                                                | 7                | 56               | -49        |
| B 46 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED<br>PROBLEMS                       | 16               | 64               | -48        |
| A 35 SCHEDULE WORK ASSIGNMENTS                                                           | 12               | 58               | -46        |
| B 68 SUPERVISE CABLE SPLICING INSTALLATION AND MAIN-<br>TENANCE SPECIALISTS (AFSC 36151) | 23               | 67               | -44        |
| B 64 RESOLVE TECHNICAL INSTALLATION PROBLEMS                                             | 14               | 58               | -44        |
| B 65 RESOLVE TECHNICAL MAINTENANCE PROBLEMS                                              | 16               | 59               | -43        |
| A 31 PLAN WORK ASSIGNMENTS                                                               | 16               | 59               | -43        |
| C 79 EVALUATE COMPLIANCE WITH WORK STANDARDS                                             | 10               | 51               | -41        |
| D148 REVIEW JPGS                                                                         | 12               | 52               | -40        |
| A 34 SCHEDULE LEAVES OR PASSES                                                           | 8                | 48               | -40        |
| A 15 DETERMINE WORK PRIORITIES                                                           | 17               | 56               | -39        |
| B 59 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES                                       | 8                | 47               | -39        |

TABLE 13

## DAFSC DISTRIBUTION ACROSS JOB GROUPS

| JOB GROUPS                                               | DAFSC<br>36131<br>(N=95) | DAFSC<br>36151<br>(N=282) | DAFSC<br>36171<br>(N=101) |
|----------------------------------------------------------|--------------------------|---------------------------|---------------------------|
| JUNIOR BASE CABLE PERSONNEL                              | 4                        | 4                         | 1                         |
| GENERAL CABLE SPLICERS                                   | 31                       | 159                       | 11                        |
| SENIOR CABLE SPLICERS                                    | 4                        | 37                        | 27                        |
| NCOIC CABLE MAINTENANCE                                  | 1                        | 4                         | 15                        |
| EQUIPMENT INSPECTORS                                     | -                        | 5                         | -                         |
| SENIOR RESIDENT COURSE INSTRUCTORS                       | 1                        | 3                         | 2                         |
| CABLE TESTERS                                            | 3                        | 1                         | 1                         |
| JUNIOR EI PERSONNEL                                      | 11                       | 10                        | -                         |
| JUNIOR RESIDENT COURSE INSTRUCTORS                       | -                        | 5                         | 1                         |
| HICS CABLE SPLICERS                                      | 26                       | 41                        | 13                        |
| HICS AREA PREPARATION AND MAINTENANCE PERSONNEL          | 6                        | -                         | -                         |
| CABLE PRESSURIZATION PERSONNEL                           | 3                        | 2                         | -                         |
| BASE CABLE AREA PREPARATION AND MAINTENANCE<br>PERSONNEL | 4                        | 3                         | -                         |
| SUPERVISOR-BASE CABLE SECTION                            | -                        | -                         | 8                         |
| HICS CABLE SHOP SUPERVISORS                              | 1                        | 1                         | 3                         |
| QUALITY CONTROL INSPECTORS                               | -                        | 1                         | 6                         |
| ELECTRONICS INSTALLATION TEAM CHIEFS                     | -                        | 1                         | 4                         |
| SUPERINTENDENTS                                          | -                        | -                         | 7                         |
| CABLE AFFAIRS MONITORS                                   | -                        | 5                         | 2                         |

### Summary

Overall, the jobs of the 3- and 5-skill level personnel were very similar. Both groups performed a wide range of technical tasks and used a wide variety of cable splicing equipment. At the 7-skill level, respondents also spent nearly half their time on technical tasks. Their most time-consuming functions, however, were supervisory in nature.

## COMPARISON OF SURVEY DATA TO AFR 39-1 SPECIALTY DESCRIPTIONS

A comparison was made between the survey data and the specialty descriptions of the 361X1 career ladder as outlined in AFR 39-1. Overall, these descriptions provide very accurate and complete overviews of the duties and responsibilities of personnel within the AFSC. However, the 5-skill level description contained two items which were not fully supported by the survey data. Paragraph 2c includes the use of pressurization computers in order to locate leaks in pressurized cable systems, while paragraph 2d includes the completion of maintenance data collection forms by the 5-skill level incumbents. Survey results indicated that there were actually only very small percentages of respondents who reported performing these tasks. In view of this, these two areas may warrant further review in order to determine if their continued listing in the specialty description is necessary.

## ANALYSIS OF EXPERIENCE (AFMS) GROUPS

Incumbents in the 361X1 career ladder were also examined in terms of TAFMS groups in order to determine how personnel utilization patterns change as a function of experience. Table 14 provides a list of the relative amount of time spent on duties by various TAFMS groups. As illustrated, as the number of months of experience increases, overall, respondents reported spending greater percentages of their time performing administrative and supervisory functions. However, the increase is not as dramatic as one would expect. Even the more experienced incumbents still performed many of the same types of technical functions as less experienced personnel. For example, members of nearly all TAFMS groups reported spending relatively substantial percentages of their time preparing and maintaining work areas, and performing cables tests and corrective functions.

### Job Satisfaction

In addition to an analysis of tasks performed, career ladder incumbents in their first enlistment (1-48 months TAFMS), second enlistment (49-96 months TAFMS), and career status (97+ months) were also examined in terms of various job satisfaction indices. As illustrated by Table 15, members of this specialty appeared to be highly satisfied with the job which they were performing. Generally, job interest and perceived utilization of talents and training for 361X1 personnel with 1-48 and 49-96 months were much higher than those of corresponding groups in a comparative sample composed of a number of similar specialties in the Mission Equipment Maintenance area. These differences, however, were much less pronounced for members of the career groups. In addition, when compared to 361X1 incumbents, reenlistment intentions were nearly identical for members of the comparative sample with 1-48 months TAFMS, while they were slightly lower for individuals composing the 49-96 months group in the comparative sample. This trend becomes sharply reversed for the more senior respondents in the career group. Overall, although nearly all job satisfaction indices were high for incumbents in this AFSC, reenlistment intentions were generally very low for first enlistment and career personnel.

### First Enlistment Personnel

For training purposes, the job of first enlistment personnel was also examined in addition to the general TAFMS analysis. Overall, these incumbents performed many of the same basic installation, repairing, and cable testing functions that were typically performed by nearly all groups within the 361X1 career ladder. Typically, the job of these respondents frequently involves detecting and locating cable faults or pressure leaks, installing lead sleeves, and making temporary or emergency splice seals (see Table 16). In addition, due to the highly technical nature of this AFSC, first enlistment personnel in this specialty must utilize a wide variety of equipment in the course of performing their job. Table 17 provides a representative listing of those pieces of equipment that were used by 30 percent or more of the 361X1 incumbents with 1-48 months TAFMS.

TABLE 14

## RELATIVE TIME SPENT ON DUTIES BY TAFMS GROUPS

| DUTIES                                                                                                        | MONTHS TAFMS    |                  |                  |                   |                   |                |
|---------------------------------------------------------------------------------------------------------------|-----------------|------------------|------------------|-------------------|-------------------|----------------|
|                                                                                                               | 1-48<br>(N=256) | 49-96<br>(N=138) | 97-144<br>(N=78) | 145-192<br>(N=56) | 193-240<br>(N=51) | 241+<br>(N=12) |
| A ORGANIZING AND PLANNING                                                                                     | 2               | 4                | 6                | 10                | 11                | 14             |
| B DIRECTING AND IMPLEMENTING                                                                                  | 2               | 3                | 5                | 9                 | 11                | 9              |
| C INSPECTING AND EVALUATING                                                                                   | 7               | 10               | 10               | 14                | 16                | 18             |
| D TRAINING                                                                                                    | 2               | 4                | 8                | 13                | 5                 | 5              |
| E INTERPRETING AND MAINTAINING PUBLICATIONS,<br>RECORDS, REPORTS AND DIAGRAMS                                 | 3               | 5                | 7                | 9                 | 10                | 11             |
| F MAINTAINING TOOLS AND EQUIPMENT                                                                             | 6               | 6                | 5                | 6                 | 5                 | 3              |
| G PREPARING AND MAINTAINING WORK AREAS                                                                        | 22              | 19               | 17               | 10                | 12                | 11             |
| H INSTALLING COMMUNICATIONS SYSTEMS CABLES                                                                    | 13              | 12               | 9                | 6                 | 6                 | 6              |
| I PERFORMING CABLES TESTS AND CORRECTIVE<br>FUNCTIONS                                                         | 17              | 15               | 14               | 9                 | 11                | 12             |
| J SPlicing CABLES                                                                                             | 3               | 3                | 3                | 2                 | 2                 | 1              |
| K INSTALLING SPlice CASES, LOADING COILS,<br>BUILDOUT CAPACITORS AND ELECTRICAL SURGE<br>ARRESTOR CABLE STUBS | 2               | 2                | 1                | 2                 | 1                 | *              |
| L SEALING CABLES                                                                                              | 10              | 9                | 8                | 4                 | 5                 | 5              |
| M PRESSURIZING AND MAINTAINING CABLE PRESSURE<br>SYSTEMS                                                      | 11              | 8                | 7                | 6                 | 5                 | 5              |

\* DENOTES LESS THAN ONE PERCENT

TABLE 15

JOBS SATISFACTION DATA FOR TAFMS GROUPS  
(PERCENT MEMBERS RESPONDING)

|                              | 1-48 MONTHS                     |                                            | 49-96 MONTHS                    |                                          | 97+ MONTHS                      |                                            |
|------------------------------|---------------------------------|--------------------------------------------|---------------------------------|------------------------------------------|---------------------------------|--------------------------------------------|
|                              | 361X1<br>RESPONDENTS<br>(N=256) | 1980<br>COMPARATIVE<br>SAMPLE<br>(N=1,374) | 361X1<br>RESPONDENTS<br>(N=138) | 1980<br>COMPARATIVE<br>SAMPLE<br>(N=853) | 361X1<br>RESPONDENTS<br>(N=197) | 1980<br>COMPARATIVE<br>SAMPLE<br>(N=1,426) |
| I FIND MY JOB:               |                                 |                                            |                                 |                                          |                                 |                                            |
| DULL                         | 4                               | 24                                         | 5                               | 17                                       | 6                               | 14                                         |
| SO-SO                        | 11                              | 20                                         | 14                              | 22                                       | 13                              | 16                                         |
| INTERESTING                  | 84                              | 56                                         | 80                              | 61                                       | 78                              | 70                                         |
| NOT REPORTED                 | 1                               | -                                          | 1                               | -                                        | 3                               | -                                          |
| MY JOB UTILIZES MY TALENTS:  |                                 |                                            |                                 |                                          |                                 |                                            |
| NOT AT ALL TO VERY LITTLE    | 14                              | 37                                         | 12                              | 31                                       | 10                              | 24                                         |
| FAIRLY WELL TO VERY WELL     | 75                              | 58                                         | 75                              | 62                                       | 63                              | 61                                         |
| EXCELLENTLY TO PERFECTLY     | 10                              | 5                                          | 13                              | 7                                        | 25                              | 15                                         |
| NOT REPORTED                 | 1                               | -                                          | -                               | -                                        | 2                               | -                                          |
| MY JOB UTILIZES MY TRAINING: |                                 |                                            |                                 |                                          |                                 |                                            |
| NOT AT ALL TO VERY LITTLE    | 10                              | 30                                         | 11                              | 28                                       | 13                              | 25                                         |
| FAIRLY WELL TO VERY WELL     | 75                              | 62                                         | 76                              | 63                                       | 61                              | 59                                         |
| EXCELLENTLY TO PERFECTLY     | 13                              | 7                                          | 13                              | 8                                        | 25                              | 15                                         |
| NOT REPORTED                 | 2                               | 1                                          | -                               | 1                                        | 1                               | 1                                          |
| I PLAN TO REENLIST:          |                                 |                                            |                                 |                                          |                                 |                                            |
| NO OR PROBABLY NO            | 63                              | 66                                         | 38                              | 51                                       | 63                              | 32                                         |
| YES OR PROBABLY YES          | 35                              | 33                                         | 60                              | 48                                       | 35                              | 67                                         |
| NOT REPORTED                 | 2                               | 1                                          | 2                               | 1                                        | 2                               | 1                                          |

COMPARATIVE SAMPLE TAKEN FROM ALL MISSION EQUIPMENT MAINTENANCE SPECIALTIES SURVEYED IN 1980; INCLUDES  
AFSC's 30XXX, 31XXX, 32XXX, 34XXX, 36XXX, 40XXX, 42XXX, 43XXX, 44XXX, AND 46XXX

TABLE 16

REPRESENTATIVE TASKS PERFORMED BY 361X1 INCUMBENTS  
WITH 1-48 MONTHS TAFMS

| TASKS                                                                     | PERCENT<br>MEMBERS<br>PERFORMING<br>(N=256) |
|---------------------------------------------------------------------------|---------------------------------------------|
| F200 WASH OR WAX VEHICLES OR TRAILERS                                     | 85                                          |
| L365 FLASH TEST SPLICES OR CLOSURES                                       | 82                                          |
| M397 LOCATE PRESSURE LEAKS WITH SOLUTION TESTS                            | 80                                          |
| I297 LOCATE CABLE FAULTS USING MULTIMETERS                                | 78                                          |
| I293 ESTABLISH TALKING CIRCUITS                                           | 77                                          |
| H250 CLEAN CAP CONDUCTORS                                                 | 77                                          |
| M385 CHARGE CABLE SYSTEMS WITH NITROGEN OR DRY AIR                        | 73                                          |
| G223 OPERATE SPLICER TRUCKS                                               | 72                                          |
| G242 TRAVEL TO OR FROM BASE WORK AREAS                                    | 72                                          |
| G205 CLEAN SPLICING PITS                                                  | 72                                          |
| G216 EXCAVATE SPLICING PITS OR CABLE TRENCHES USING HAND TOOLS            | 71                                          |
| I305 LOCATE CABLE ROUTES USING PLANT-IN-PLACE RECORDS                     | 71                                          |
| G228 PLACE OR OPERATE WATER PUMPS                                         | 71                                          |
| M408 TAKE PRESSURE READINGS USING PRESSURE TESTING GAUGES                 | 70                                          |
| H247 BEND OR ARRANGE BURIED CABLES FOR SPLICING                           | 70                                          |
| I294 IDENTIFY OR TAG CONDUCTORS                                           | 69                                          |
| G211 ERECT BARRIERS OR MANHOLE GUARDS AROUND OPEN TRENCHES<br>OR PITS     | 69                                          |
| I292 DETECT CABLE FAULTS USING HEADSETS AND BATTERIES                     | 69                                          |
| L373 SEAL CABLE ENDS                                                      | 69                                          |
| L369 MAKE TEMPORARY OR EMERGENCY SPLICE SEALS                             | 68                                          |
| H258 INSTALL CABLE ROUTE SIGNS, POLE MARKERS, OR IDENTIFICATION<br>PLATES | 68                                          |
| L367 INSTALL LEAD SLEEVES                                                 | 67                                          |
| I329 TEST CIRCUITS OR CABLE PAIRS FOR RESISTANCE                          | 67                                          |
| I315 PERFORM INSULATION RESISTANCE TESTS                                  | 67                                          |
| L372 PREPARE LEAD SLEEVES FOR SEALING                                     | 66                                          |

TABLE 17

## EQUIPMENT USED BY 30 PERCENT OR MORE FIRST ENLISTMENT PERSONNEL

| <u>EQUIPMENT</u>                         | <u>PERCENT<br/>MEMBERS<br/>PERFORMING<br/>(N=256)</u> |
|------------------------------------------|-------------------------------------------------------|
| HAND TOOLS                               | 93                                                    |
| PICKS OR SHOVELS                         | 88                                                    |
| CRIMPING TOOLS                           | 87                                                    |
| WATER PUMPS (PORTABLE)                   | 84                                                    |
| PRESSURE TESTING REGULATORS              | 84                                                    |
| SPLICERS MAINTENANCE TRUCKS              | 83                                                    |
| LADDERS                                  | 82                                                    |
| 200 CF NITROGEN CYLINDERS                | 80                                                    |
| STENCIL KITS                             | 76                                                    |
| WINCHES                                  | 75                                                    |
| METAL STAMP KITS                         | 75                                                    |
| WALKING OR MEASURING WHEELS (CYLOMETERS) | 74                                                    |
| INJECTION GUNS                           | 74                                                    |
| PORTABLE HEATERS                         | 73                                                    |
| FIRST-AID KITS                           | 72                                                    |
| AIR DRYER COMPRESSORS AND METER PANELS   | 72                                                    |
| ACETYLENE CYLINDERS                      | 71                                                    |
| TRAFFIC WARNING DEVICES                  | 69                                                    |
| ACETYLENE TORCH KITS                     | 69                                                    |
| MANHOLE GUARDS                           | 67                                                    |
| PORTABLE PRESSURE TESTING KITS           | 66                                                    |
| MANHOLE HOOKS                            | 66                                                    |
| ELECTRIC DRILLS                          | 64                                                    |
| SPLICER SEAT AND TOOL BOX                | 62                                                    |
| GROUND TENTS                             | 61                                                    |
| TORQUE WRENCHES                          | 57                                                    |
| PROPANE CYLINDERS                        | 54                                                    |
| PORTABLE GENERATORS                      | 53                                                    |
| TUBE CUTTERS                             | 52                                                    |
| CLIMBING EQUIPMENT                       | 52                                                    |
| GPC-28AF GENERAL PURPOSE UNITS           | 51                                                    |
| FAULT ALARM LOCATOR PANELS               | 51                                                    |
| WIRE WRAP GUNS                           | 50                                                    |
| VENTILATOR BLOWERS OR SAILS              | 50                                                    |
| END PLATE MOLD SETS                      | 50                                                    |
| AERIAL HANDLINES AND BUCKETS             | 50                                                    |
| AERIAL TENTS AND PLATFORMS               | 47                                                    |
| TEMPORARY LASHING WIRE CLAMPS            | 46                                                    |
| SAFETY KITS                              | 45                                                    |
| CABLE REEL TRAILERS                      | 44                                                    |
| CABLE RACKING JACKS                      | 44                                                    |

TABLE 17 (CONTINUED)

EQUIPMENT USED BY 30 PERCENT OR MORE FIRST ENLISTMENT PERSONNEL

| EQUIPMENT                            | PERCENT<br>MEMBERS<br>PERFORMING<br>(N=256) |
|--------------------------------------|---------------------------------------------|
| TRACTOR-BACKHOES                     | 43                                          |
| SOLDERING COPPERS                    | 40                                          |
| MANHOLE RAIN RINGS                   | 40                                          |
| FIRE POTS OR GAS FURNACES            | 38                                          |
| DUCT RODS                            | 37                                          |
| CABLE REEL JACKS                     | 37                                          |
| CABLE BENDERS                        | 37                                          |
| THERMOMETERS                         | 35                                          |
| MANHOLE CABLE SHEATHS                | 34                                          |
| FLARING TUBING KITS                  | 34                                          |
| CABLE MARKING GAUGES (HICS)          | 33                                          |
| AERIAL CABLE BLOCKS                  | 33                                          |
| CABLE LASHING MACHINES               | 32                                          |
| CABLE GRIPS                          | 32                                          |
| BONDING STRAP ALIGNMENT TOOLS (HICS) | 32                                          |
| UNDERGROUND CABLE GUIDES             | 31                                          |
| 24 CF NITROGEN CYLINDERS             | 31                                          |

In terms of distribution across the career ladder, the majority of the first enlistment incumbents were relatively concentrated in two main areas. Two job groups, the General Cable Splicers and the HICS Cable Splicers together accounted for over 65 percent of these respondents (see Figure 2). The remaining 35 percent of these individuals were scattered fairly evenly among the major job groups that have been identified within the sample (see Table 18).

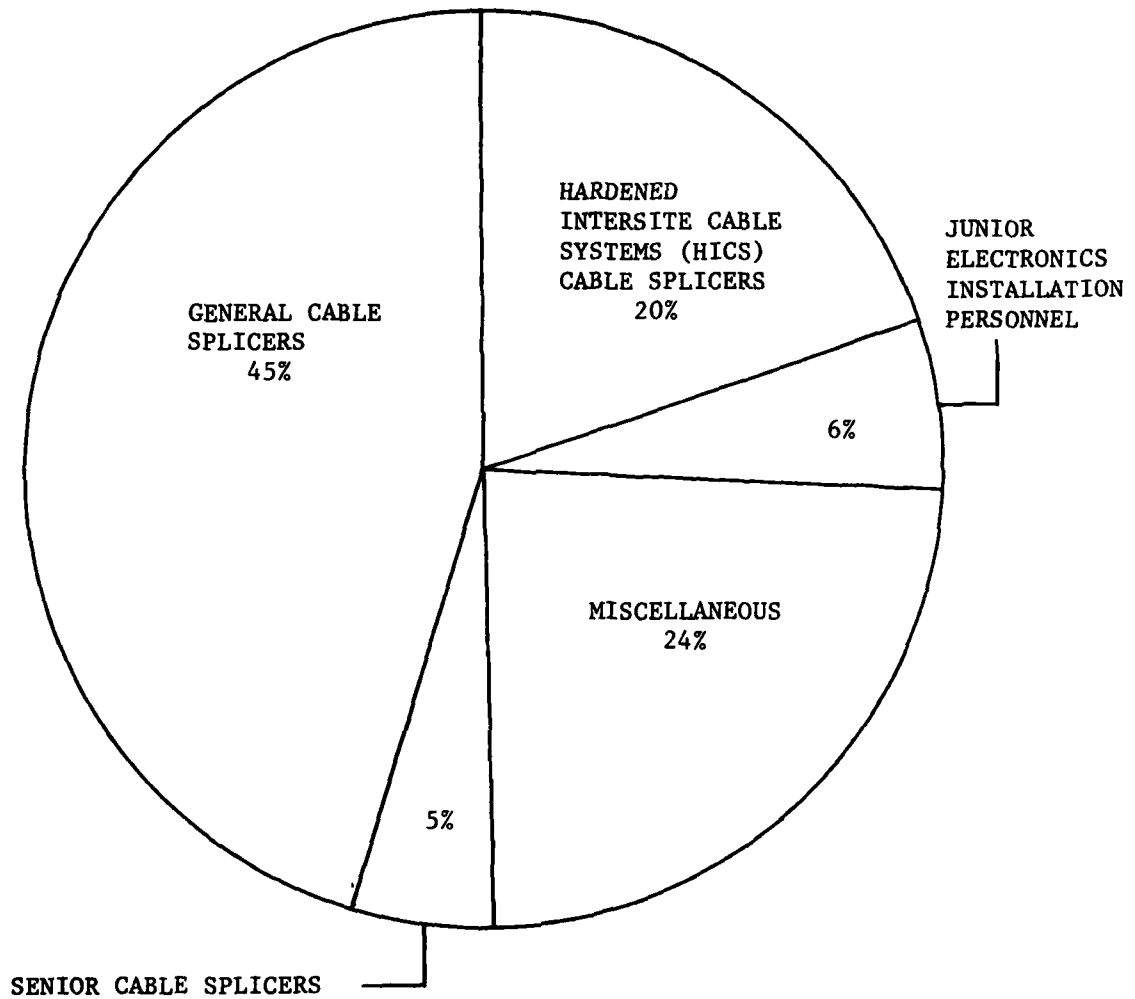
TABLE 18

## FIRST ENLISTMENT PERSONNEL DISTRIBUTION ACROSS MAJOR JOB GROUPS

| GROUP                                                 | FIRST<br>ENLISTMENT<br>PERSONNEL<br>(N=256) |
|-------------------------------------------------------|---------------------------------------------|
| JUNIOR BASE CABLE PERSONNEL                           | 4                                           |
| GENERAL CABLE SPLICERS                                | 116                                         |
| SENIOR CABLE SPLICERS                                 | 13                                          |
| NCOIC CABLE MAINTENANCE                               | 2                                           |
| EQUIPMENT INSPECTORS                                  | -                                           |
| SENIOR RESIDENT COURSE INSTRUCTORS                    | 2                                           |
| CABLE TESTERS                                         | 2                                           |
| JUNIOR EI PERSONNEL                                   | 15                                          |
| JUNIOR RESIDENT COURSE INSTRUCTORS                    | 3                                           |
| HICS CABLE SPLICERS                                   | 50                                          |
| HICS AREA PREPARATION AND MAINTENANCE PERSONNEL       | 6                                           |
| CABLE PRESSURIZATION PERSONNEL                        | 4                                           |
| BASE CABLE AREA PREPARATION AND MAINTENANCE PERSONNEL | 4                                           |
| SUPERVISORS-BASE CABLE SECTION                        | -                                           |
| HICS CABLE SHOP SUPERVISORS                           | -                                           |
| QUALITY CONTROL INSPECTORS                            | -                                           |
| ELECTRONICS INSTALLATION TEAM CHIEFS                  | -                                           |
| SUPERINTENDENTS                                       | -                                           |
| CABLE AFFAIRS MONITORS                                | 1                                           |
| NOT GROUPED                                           | 34                                          |

FIGURE 2

DISTRIBUTION OF FIRST ENLISTMENT PERSONNEL ACROSS CAREER LADDER JOBS  
(PERCENT MEMBERS RESPONDING)  
(N=256)



## ANALYSIS OF CONUS VERSUS OVERSEAS GROUPS

A comparison was made between the tasks performed by DAFSC 36151 personnel stationed within the CONUS and those located overseas. Results indicated that while the job performed by both groups was basically the same, a number of variations did exist. Those respondents who were assigned overseas reported performing a slightly higher average number of tasks than those within the CONUS (134 versus 104). In addition, greater percentages of personnel overseas performed tasks that were related to the installation and maintenance of telephone cable than their counterparts in the CONUS (see Table 19). This may be due to the fact that military personnel are often tasked with performing a number of functions overseas that are frequently performed by, or contracted out to commercial telephone companies within the CONUS. The data also indicated that substantial percentages of respondents located in the CONUS work in support of Hardened Intersite Cable Systems (HICS). There are no corresponding types of jobs overseas.

Finally, there were some background differences between the two groups. Overseas respondents reported having a higher average paygrade, (4.2 versus 3.9) while both groups had approximately equal amounts of time in service (60 months for incumbents within the CONUS and 65 months for those overseas). It was also interesting to note that while both groups were similarly high on nearly all job satisfaction indices, reenlistment intentions for incumbents assigned to the CONUS were slightly lower than for those overseas. Fifty-seven percent of the overseas respondents felt that they would, or probably would reenlist, while only 47 percent of the respondents in the CONUS favored reenlistment.

TABLE 19

TASKS WHICH BEST DIFFERENTIATE DAFSC 36151 CONUS AND OVERSEAS PERSONNEL  
(PERCENT MEMBERS PERFORMING)

| TASKS                                                                             | CONUS<br>(N=240) | OVERSEAS<br>(N=95) | DIFFERENCE |
|-----------------------------------------------------------------------------------|------------------|--------------------|------------|
| G201 BACKFILL BASE TELEPHONE CABLE SYSTEM SPLICING PITS<br>OR CABLE TRENCHES      | 52               | 84                 | -32        |
| G243 TRAVEL TO OR FROM HOST BASE WORK AREAS                                       | 30               | 62                 | -32        |
| C96 INSPECT CABLE VAULTS, HANDHOLES, OR MANHOLES                                  | 39               | 71                 | -32        |
| I296 LOCATE CABLE FAULTS USING DELCON CABLE FAULT LOCATORS                        | 40               | 68                 | -28        |
| G246 WITHDRAW SCHEME MATERIALS FROM STORAGE                                       | 31               | 58                 | -27        |
| L370 MELT LEAD OR SOLDER TO PROPER TEMPERATURES                                   | 53               | 79                 | -26        |
| G215 ERECT TRAFFIC WARNING DEVICES                                                | 62               | 88                 | -26        |
| M378 ADJUST BASE TELEPHONE CABLE PRESSURE CONTACTORS                              | 17               | 42                 | -25        |
| J334 BRIDGE-SPLICE TELEPHONE CONDUCTORS USING MECHANICAL<br>CONNECTORS            | 65               | 90                 | -25        |
| L375 SEAL JOINTS USING TORCH METHODS                                              | 62               | 87                 | -25        |
| E171 PREPARE CABLE TRANSFER WORK SHEETS OR CUT SHEETS                             | 17               | 42                 | -25        |
| L363 CAST OR PREPARE DISKS OR END PLATES                                          | 57               | 82                 | -25        |
| H251 CONNECT PLASTIC TIP CABLES TO SPACE SAVER PROTECTORS<br>USING WIRE WRAP GUNS | 29               | 54                 | -25        |
| L368 INSTALL LEAD WEDGES, DISKS, OR END PLATES                                    | 61               | 85                 | -24        |
| J340 BUTT-SPLICE TELEPHONE CONDUCTORS USING MECHANICAL<br>CONNECTORS              | 58               | 82                 | -24        |

## TRAINING ANALYSIS

### Task Difficulty Data

Assessments of the relative difficulty of each task within the inventory was obtained through ratings provided by 39 experienced 361X1 personnel. These ratings were then standardized so that tasks of average difficulty have a rating of 5.0 and a standard deviation of 1.0. The Task Factor Administration section in the INTRODUCTION provides a more detailed explanation of these ratings. The objective of this procedure is to develop an ordered listing of tasks which would be considered for training. A complete list of tasks in order of their difficulty is included in the Training EXTRACT.

Table 20 provides examples of those tasks which were rated most difficult by these senior 361X1 technicians. As demonstrated, the tasks which were considered to be the most difficult to perform typically involved the supervision or training of managers and team chiefs, the computation of operating costs, and some methods of locating cable faults. Most of these tasks are primarily performed by the more senior incumbents within the AFSC.

Table 21 lists those tasks which were rated average in task difficulty. As illustrated, these tasks cover a variety of functions, including the preparation of a variety of administrative forms, performing equipment inspections, and installing aerial terminal cases or lead sleeves. In addition, some methods of performing cable splices were also rated average.

Table 22 provides a list of those tasks which were rated below average in task difficulty. Overall, most of these tasks are primarily related to the preparation and maintenance of work areas and equipment and usually do not require an extensive knowledge of the career field. Such tasks typically include cleaning manholes and splicing pits or washing and waxing vehicles or trailers and may not require formal technical training.

### Job Difficulty Index (JDI)

The JDI for each of the major job groups that have been identified within the 361X1 career ladder is presented in Table 23. Generally, there seems to be a wide range of variability in the relative degree of difficulty of each of the jobs which are performed. HICS Cable Shop Supervisors, who performed an average of over 202 tasks, had a JDI of 19.4. Conversely, the Base Cable Area Preparation and Maintenance Personnel, who reported performing an average of only 33 tasks, had a JDI of only 3.5.

Overall, those groups having the highest JDI ratings were typically composed of fairly senior personnel who performed a wide variety of supervisory functions. In addition, many of these respondents were also responsible for analyzing and interpreting technical information provided by cable records, cable splicing diagrams, and scheme drawings.

By comparison, those groups having the lowest JDIs were generally small groups composed of very junior respondents who tended to specialize in a limited number of functional areas. For example, the job of both groups having the lowest JDI ratings focused primarily on preparing and maintaining work areas, with very few cable splicing or installation tasks being performed.

TABLE 20

## TASKS RATED AS MOST DIFFICULT BY DAFSC 361X1 PERSONNEL

| TASKS                                                                                                              | TASK<br>DIFFICULTY | PERCENT<br>MEMBERS<br>PERFORMING<br>(N=596) |
|--------------------------------------------------------------------------------------------------------------------|--------------------|---------------------------------------------|
| B70 SUPERVISE CABLE/ANTENNA INSTALLATION AND<br>MAINTENANCE SUPERINTENDENTS (AFSC 36199)                           | 7.86               | 2                                           |
| B72 SUPERVISE TELEPHONE/CABLE AND ANTENNA<br>MAINTENANCE MANAGERS (AFSC 36200)                                     | 7.18               | 3                                           |
| D153 TRAIN HICS TEAM CHIEFS OR SECTION SUPERVISORS                                                                 | 7.16               | 5                                           |
| D142 PERFORM ELECTRONIC AND INSTALLATION (EI)<br>TEAM CHIEF TRAINING                                               | 6.99               | 6                                           |
| C117 WRITE STAFF STUDIES, SURVEYS, OR SPECIAL REPORTS,<br>SUCH AS MAINTENANCE REPORTS                              | 6.96               | 9                                           |
| A5 COMPUTE COSTS OF MANPOWER, MATERIALS, OR<br>EQUIPMENT                                                           | 6.93               | 9                                           |
| A19 ESTABLISH ORGANIZATIONAL POLICIES, OFFICE<br>INSTRUCTIONS (OI), OR MAINTENANCE OPERATING<br>INSTRUCTIONS (MOI) | 6.79               | 7                                           |
| I299 LOCATE CABLE FAULTS USING TIME DOMAIN<br>REFLECTOMETERS                                                       | 6.79               | 13                                          |
| D129 DEVELOP COURSE CURRICULA, PLANS OF INSTRUCTION<br>(POI), OR SPECIALTY TRAINING STANDARDS (STS)                | 6.77               | 3                                           |
| D152 TRAIN BASE CABLE TEAM CHIEFS OR SECTION<br>SUPERVISORS                                                        | 6.75               | 27                                          |
| G225 PERFORM LAUNCH FACILITY (LF) PENETRATION OR<br>BACKOUT PROCEDURES                                             | 6.68               | 13                                          |
| D143 PLAN INSTRUCTOR TRAINING PROGRAMS                                                                             | 6.66               | 2                                           |
| C78 EVALUATE BUDGET OR FINANCIAL REQUIREMENTS                                                                      | 6.65               | 4                                           |
| C80 EVALUATE INDIVIDUALS FOR PROMOTION, DEMOTION, OR<br>RECLASSIFICATION                                           | 6.59               | 9                                           |
| B65 RESOLVE TECHNICAL MAINTENANCE PROBLEMS                                                                         | 6.58               | 26                                          |

TABLE 21

## EXAMPLES OF TASKS RATED AVERAGE IN DIFFICULTY BY DAFSC 361X1 PERSONNEL

| TASKS                                                                                 | TASK<br>DIFFICULTY | PERCENT<br>MEMBERS<br>PERFORMING<br>(N=596) |
|---------------------------------------------------------------------------------------|--------------------|---------------------------------------------|
| A29 PLAN SAFETY PROGRAMS                                                              | 5.03               | 11                                          |
| A14 DETERMINE REQUIREMENTS FOR SPACE, PERSONNEL<br>EQUIPMENT, OR SUPPLIES             | 5.01               | 16                                          |
| J336 BRIDGE-SPLICE TELEPHONE CONDUCTORS USING<br>SOLDERED PIGTAILS OR TWISTED METHODS | 5.01               | 17                                          |
| C105 INSPECT METEOROLOGICAL CABLES                                                    | 5.01               | 18                                          |
| D125 COUNSEL TRAINEES ON TRAINING PROGRESS                                            | 5.00               | 27                                          |
| E171 PREPARE CABLE TRANSFER WORK SHEETS OR CUT SHEETS                                 | 5.00               | 24                                          |
| H253 INSTALL AERIAL TERMINAL CASES                                                    | 5.00               | 25                                          |
| I331 TEST ELECTRICAL SURGE ARRESTOR (ESA) BLOCKS<br>FOR RESISTANCE OR VALIDITY        | 5.00               | 20                                          |
| I295 IDENTIFY SPECIAL CIRCUITS, SUCH AS FIRE<br>ALARM OR DATA CIRCUITS                | 4.99               | 46                                          |
| L367 INSTALL LEAD SLEEVES                                                             | 4.99               | 63                                          |
| M401 PERFORM PREVENTIVE MAINTENANCE INSPECTIONS<br>(PMIS) ON AIR DRYER ASSEMBLIES     | 4.99               | 35                                          |

TABLE 22

## EXAMPLES OF TASKS RATED LOWEST IN DIFFICULTY BY DAFSC 361X1 PERSONNEL

| <u>TASKS</u>                                                      | <u>TASK<br/>DIFFICULTY</u> | <u>PERCENT<br/>MEMBERS<br/>PERFORMING<br/>(N=596)</u> |
|-------------------------------------------------------------------|----------------------------|-------------------------------------------------------|
| G204 CLEAN MANHOLES                                               | 1.56                       | 56                                                    |
| F200 WASH OR WAX VEHICLES OR TRAILERS                             | 1.72                       | 77                                                    |
| G205 CLEAN SPLICING PITS                                          | 1.92                       | 64                                                    |
| G233 REMOVE SNOW FROM WORK AREAS                                  | 2.31                       | 32                                                    |
| G245 WITHDRAW MATERIALS FROM BENCH STOCK                          | 2.47                       | 55                                                    |
| G232 REMOVE OR REPLACE MANHOLE COVERS                             | 2.48                       | 60                                                    |
| G216 EXCAVATE SPLICING PITS OR CABLE TRENCHES<br>USING HAND TOOLS | 2.58                       | 64                                                    |
| G235 REMOVE WATER FROM SPLICING PITS                              | 2.61                       | 58                                                    |
| G234 REMOVE WATER FROM MANHOLES                                   | 2.62                       | 63                                                    |
| G243 TRAVEL TO OR FROM HOST BASE WORK AREAS                       | 2.68                       | 36                                                    |
| G236 SEAL MANHOLE COVERS                                          | 2.78                       | 20                                                    |

TABLE 23

## JOB DIFFICULTY INDICES FOR CAREER LADDER GROUPS

| GROUP                                                                 | ATDPUTS* | NUMBER OF<br>TASKS<br>PERFORMED | JOB<br>DIFFICULTY<br>INDEX |
|-----------------------------------------------------------------------|----------|---------------------------------|----------------------------|
| I. SUPERVISION AND MANAGEMENT PERSONNEL (GRP041)                      | 5.2      | 101                             | 15.9                       |
| HICS Cable Shop Supervisors (GRP179)                                  | 5.1      | 202                             | 19.4                       |
| Supervisors-Base Cable Section (GRP157)                               | 5.3      | 124                             | 18.9                       |
| EI Team Chiefs (GRP145)                                               | 5.0      | 81                              | 14.1                       |
| Quality Control Inspectors (GRP111)                                   | 5.1      | 62                              | 13.5                       |
| Superintendents (GRP045)                                              | 5.3      | 47                              | 12.8                       |
| II. CABLE MAINTENANCE PERSONNEL (GRP084)                              | 4.4      | 143                             | 14.6                       |
| NCOIC Cable Maintenance (GRP261)                                      | 4.7      | 197                             | 19.3                       |
| Senior Cable Splicers (GRP267)                                        | 4.6      | 225                             | 18.9                       |
| General Cable Splicers (GRP175)                                       | 4.3      | 116                             | 13.0                       |
| Equipment Inspectors (GRP109)                                         | 4.2      | 101                             | 11.5                       |
| Junior Base Cable Personnel (GRP178)                                  | 4.2      | 72                              | 9.5                        |
| III. SENIOR RESIDENT COURSE INSTRUCTORS (GRP163)                      | 4.7      | 79                              | 12.8                       |
| IV. MISSILE SYSTEMS CABLE MAINTENANCE PERSONNEL (GRP052)              | 4.7      | 83                              | 12.5                       |
| V. JUNIOR RESIDENT COURSE INSTRUCTORS (GRP064)                        | 4.6      | 45                              | 9.3                        |
| VI. CABLE TESTERS (GRP088)                                            | 4.4      | 52                              | 9.0                        |
| VII. CABLE AFFAIRS MONITORS (GRP054)                                  | 5.0      | 21                              | 8.7                        |
| VIII. JUNIOR EI PERSONNEL (GRP082)                                    | 4.1      | 54                              | 7.5                        |
| IX. BASE CABLE AREA PREPARATION AND MAINTENANCE<br>PERSONNEL (GRP051) | 3.7      | 33                              | 3.9                        |

\*AVERAGE TASK DIFFICULTY PER UNIT TIME SPENT

In view of this, the Cable Splicing Installation and Maintenance career ladder seems to have a very gradual progression in which individuals entering the field initially perform a relatively specialized job. However, as experience levels increase, incumbents take on additional responsibilities and perform a much wider range of increasingly complex tasks. Overall, this progression tends to keep pace with the individual's expanding level of competence, resulting in the fact that job satisfaction indices are characteristically very high for personnel in this specialty.

### Training Emphasis Data

Training emphasis data was collected from 58 experienced career ladder incumbents for each task within the inventory. These ratings are useful in providing information on the training needs of the specialty as perceived by personnel within that AFSC. Overall, these assessments produced an average rating of 3.37 and a standard deviation of 1.92. The Task Factor Administration section of this report provides a more complete description of the data.

Table 24 lists those tasks which have been rated highest in training emphasis by the 361X1 respondents. As illustrated, these tasks primarily involve performing cables tests, locating cable faults, and removing or installing lead sleeves. This typically included such tasks as locating cable faults using multimeters, testing circuits or cable pairs for continuity, and preparing lead sleeves for sealing. In addition, those tasks which received the highest ratings were generally performed by large percentages of first enlistment personnel.

Those tasks which were rated lowest in training emphasis are presented in Table 25. These tasks primarily involve many supervisory and training functions such as scheduling instructor training programs, training Base Cable team chiefs or section supervisors, and evaluating budget or financial requirements. The survey data indicated that, generally, most of these tasks were performed by less than 10 percent of the first term personnel within the 361X1 AFSC.

TABLE 24

TASKS RATED ABOVE AVERAGE IN TRAINING EMPHASIS BY DAFSC 361X1 PERSONNEL

| TASKS                                                                                               | TRAINING<br>EMPHASIS | PERCENT OF<br>1-48 MONTHS<br>TAFMS MEMBERS<br>PERFORMING<br>(N=256) |
|-----------------------------------------------------------------------------------------------------|----------------------|---------------------------------------------------------------------|
| I294 IDENTIFY OR TAG CONDUCTORS                                                                     | 7.07                 | 69                                                                  |
| G239 TEST MANHOLES FOR COMBUSTIBLE GASES                                                            | 7.07                 | 63                                                                  |
| G240 TEST MANHOLES FOR POISONOUS GASES                                                              | 6.91                 | 60                                                                  |
| I293 ESTABLISH TALKING CIRCUITS                                                                     | 6.86                 | 77                                                                  |
| L367 INSTALL LEAD SLEEVES                                                                           | 6.81                 | 67                                                                  |
| L366 INSTALL AUXILIARY SLEEVES                                                                      | 6.79                 | 65                                                                  |
| I297 LOCATE CABLE FAULTS USING MULTIMETERS                                                          | 6.78                 | 78                                                                  |
| L375 SEAL JOINTS USING TORCH METHODS                                                                | 6.78                 | 58                                                                  |
| L369 MAKE TEMPORARY OR EMERGENCY SPLICE SEALS                                                       | 6.72                 | 68                                                                  |
| I310 MAKE WORKING CABLE SECTION REPLACEMENTS                                                        | 6.69                 | 56                                                                  |
| I296 LOCATE CABLE FAULTS USING DELCON FAULT LOCATORS                                                | 6.65                 | 40                                                                  |
| L368 INSTALL WEDGES, DISKS, OR END PLATES                                                           | 6.60                 | 59                                                                  |
| I298 LOCATE CABLE FAULTS USING RYCOM CABLE FAULT LOCATORS                                           | 6.59                 | 39                                                                  |
| I320 REMOVE OR INSTALL AUXILIARY SLEEVES                                                            | 6.57                 | 61                                                                  |
| L372 PREPARE LEAD SLEEVES FOR SEALING                                                               | 6.53                 | 66                                                                  |
| I309 MAKE WET SECTION THROWS                                                                        | 6.50                 | 46                                                                  |
| I322 REMOVE OR INSTALL LEAD SLEEVES                                                                 | 6.50                 | 63                                                                  |
| I306 LOCATE OR DETERMINE DEPTH OF BURIED CABLES, PIPES, OR<br>OTHER COMPONENTS USING TEST EQUIPMENT | 6.45                 | 52                                                                  |
| J334 BRIDGE-SPLICE TELEPHONE CONDUCTORS USING MECHANICAL<br>CONNECTORS                              | 6.41                 | 62                                                                  |
| I308 MAKE CABLE TRANSFERS                                                                           | 6.38                 | 31                                                                  |
| I307 LOCATE SPLIT CABLE PAIRS USING TONE SOURCES                                                    | 6.36                 | 50                                                                  |
| I328 TEST CIRCUITS OR CABLE PAIRS FOR CONTINUITY                                                    | 6.36                 | 64                                                                  |
| I315 PERFORM INSULATION RESISTANCE TESTS                                                            | 6.31                 | 67                                                                  |
| M396 LOCATE PRESSURE LEAKS USING PRESSURE GRADIENT METHODS                                          | 6.31                 | 45                                                                  |
| I305 LOCATE CABLE ROUTES USING PLANT-IN-PLACE RECORDS                                               | 6.29                 | 71                                                                  |

TABLE 25

## TASKS RATED BELOW AVERAGE IN TRAINING EMPHASIS BY DAFSC 361X1 PERSONNEL

| TASKS                                                                                               | TRAINING<br>EMPHASIS | PERCENT OF<br>1-48 MONTHS<br>TAFMS MEMBERS<br>PERFORMING<br>(N=256) |
|-----------------------------------------------------------------------------------------------------|----------------------|---------------------------------------------------------------------|
| D120 ASSIGN RESIDENT COURSE INSTRUCTORS                                                             | .07                  | 1                                                                   |
| B 70 SUPERVISE CABLE/ANTENNA INSTALLATION AND MAINTENANCE<br>SUPERINTENDENTS (AFSC 36199)           | .09                  | 2                                                                   |
| D149 SCHEDULE INSTRUCTOR TRAINING PROGRAMS                                                          | .17                  | 1                                                                   |
| C 90 EVALUATE UNIT EMERGENCY OR DISASTER PLANS                                                      | .19                  | 3                                                                   |
| B 43 CONDUCT STAFF MEETINGS                                                                         | .21                  | 2                                                                   |
| D137 EVALUATE PROGRESS OF RESIDENT COURSE STUDENTS                                                  | .22                  | 3                                                                   |
| D129 DEVELOP COURSE CURRICULA, PLANS OF INSTRUCTION (POI), OR<br>SPECIALTY TRAINING STANDARDS (STS) | .24                  | 2                                                                   |
| D128 DETERMINE RESIDENT COURSE TRAINING REQUIREMENTS                                                | .24                  | 2                                                                   |
| B 72 SUPERVISE TELEPHONE/CABLE AND ANTENNA MAINTENANCE<br>MANAGERS (AFSC 36200)                     | .24                  | 3                                                                   |
| C 78 EVALUATE BUDGET OR FINANCIAL REQUIREMENTS                                                      | .26                  | 3                                                                   |
| B 42 ASSIGN TEAMS BASED UPON LAUNCH FACILITY PENETRATION<br>AND EMERGENCY BACKOUT PROCEDURES        | .26                  | 4                                                                   |
| D122 CONDUCT RESIDENT COURSE CLASSROOM TRAINING                                                     | .28                  | 6                                                                   |
| A 32 PREPARE UNIT EMERGENCY OR DISASTER PLANS                                                       | .28                  | 3                                                                   |
| D152 TRAIN BASE CABLE TEAM CHIEFS OR SECTION SUPERVISORS                                            | .29                  | 2                                                                   |
| D143 PLAN INSTRUCTOR TRAINING PROGRAMS                                                              | .29                  | 2                                                                   |
| D153 TRAIN HICS TEAM CHIEFS OR SECTION SUPERVISORS                                                  | .33                  | 5                                                                   |
| B 69 SUPERVISE CABLE SPLICING INSTALLATION AND MAINTENANCE<br>SUPERVISORS (ASC 36171)               | .34                  | 2                                                                   |
| B 61 MAINTAIN CONTINGENCY PLANS                                                                     | .34                  | 3                                                                   |
| D151 SCORE TESTS                                                                                    | .36                  | 4                                                                   |
| C 77 EVALUATE ALERT OR EMERGENCY PROCEDURES                                                         | .36                  | 4                                                                   |
| A 38 SERVE ON AIRMEN CLASSIFICATION BOARDS                                                          | .36                  | 3                                                                   |
| A 1 ACT AS TRAINING ADVISOR AT STAFF LEVEL                                                          | .36                  | 6                                                                   |
| D155 WRITE TEST QUESTIONS                                                                           | .47                  | 2                                                                   |

### Specialty Training Standard (STS)

The 361X1 STS, dated April 1978, was reviewed for the 3-, 5-, and 7-skill level personnel. Subject matter specialists at the Sheppard Technical Training Center assisted in the analysis by matching job inventory tasks to specific STS items. Overall, while this document was fairly accurate in providing general training requirements for significant jobs which are performed by incumbents within the 361X1 AFSC, there were also a small number of items in which the tasks matched to them were performed by only small percentages of personnel. For example, item 4c which dealt with the use of Time Compliance Technical Orders, and item 5a(14) which was related to the preparation of organizational and functional charts, may both warrant a close review by appropriate subject matter specialists in order to determine if continued listing in the STS is necessary. A complete listing of the task data organized in the form of the STS was developed and is included in the EXTRACT of computer products provided to the training manager. This listing (FCTPRT) is provided to facilitate the review of the STS by training center personnel.

### Plan of Instruction (POI J3ABR36131-002)

The current Plan of Instruction for course J3ABR36131-002 was also examined with respect to the percentages of members performing tasks linked to criterion objectives as well as task difficulty data. Results indicated that generally the POI was consistent with the survey data. School personnel should closely examine the data provided, however, in order to determine if minor modifications in the course may be necessary.

## WRITE-IN COMMENTS

In addition to responding to the survey questions, incumbents were also encouraged to write in any additional information which may be relevant to the analysis of the 361X1 AFSC. This included such items as problems which they feel may presently exist in the career ladder, or tasks and equipment which individual members believe should be added to the job inventory. As a result, many comments covering a wide range of career field related subjects were collected.

A number of respondents expressed the general perception that the recent merger of the 361X1 and the 361X2 career ladders sometimes creates difficulties in terms of personnel utilization. According to these incumbents, when members who previously worked in one duty area are reassigned to another area, they are often unfamiliar with much of the equipment and many of the procedures which are part of the new job, even after completion of additional technical school training. Consequently, most of these respondents feel that a more extensive OJT system needs to be established in order to help compensate for this lack of specific job experience.

Finally, the majority of the other comments which were received consisted of a number of unique tasks that were performed and job titles which were held by some incumbents that were not listed in the job inventory.

## COMPARISON TO PREVIOUS SURVEY

The results of this survey were compared to those of the previous Occupational Survey Report AFPT 90-361-203, 204, dated June 1977. Although the earlier study was written prior to the recent merger of the 361X1 and 361X2 AFSCs, both specialties were included in the report. Consequently, the identified career ladder structure was very similar to the present survey, indicating that the types of jobs which exist have basically remained unchanged. Even though the terminology has varied slightly between time periods, the two reports have found that the specialty is composed of four major job groupings. These are resident technical school instructors, supervisory personnel, missile cable splicers, and a group of general cable splicers consisting of both base cable and EI personnel. In terms of job satisfaction, while all other indices have remained essentially the same, the current data indicates that the perceived utilization of training has risen sharply over the past four years.

Finally, while the majority of the missile cable splicers was assigned to SAC before the merger, currently this function has now been transferred to AFCC. As a result, this command accounts for over 92 percent of the incumbents in the Cable Splicing Installation and Maintenance career ladder (see Table 1).

## IMPLICATIONS

Currently, the 361X1 career ladder includes three major functions. As previously mentioned, these are distinguished as the base cable, EI, and HICS duty areas. However, while all three types of jobs share a common core of tasks and equipment, resulting in the merger of the 361X1 and 361X2 AFSCs, personnel working with missile cable do perform a number of tasks and use some types of equipment which are unique to missile systems only. Also, incumbents working in Base Cable and EI duty areas usually install a wider variety of splice cases and use many pieces of equipment that HICS personnel do not normally use. As a consequence, difficulties are sometimes created when individuals are reassigned from this area to another, or vice versa. Although these incumbents can receive additional technical school training before arriving at their new duty locations, write-in comments from the field and discussions with career ladder personnel seems to indicate that these newly reassigned individuals may need more extensive additional training and evaluation programs in order to overcome their general lack of job experience.

Thus, the merger of the two specialties into one AFSC has not substantially changed the jobs being performed in the field. Personnel working in the HICS duty area still remain a fairly separate and distinct group while the job of individuals working in the EI and Base Cable areas are very similar. This merger, has resulted in some cross flow between the missile site and other cable splicers and some problems have been encountered in terms of the learning needed to perform the new job.

In general, members of this AFSC appear to be interested in their jobs and feel their talents and training are well utilized. Career ladder documents (AFR 39-1, STS) are basically consistent with survey results.

## APPENDIX A

REPRESENTATIVE TASKS PERFORMED BY CABLE MAINTENANCE PERSONNEL  
(GRP084, N=331)

| TASKS                                                                  | PERCENT<br>MEMBERS<br>PERFORMING |
|------------------------------------------------------------------------|----------------------------------|
| I293 ESTABLISH TALKING CIRCUITS                                        | 99                               |
| I294 IDENTIFY OR TAG CONDUCTORS                                        | 98                               |
| L366 INSTALL AUXILIARY SLEEVES                                         | 97                               |
| L365 FLASH TEST SPLICES OR CLOSURES                                    | 97                               |
| L372 PREPARE LEAD SLEEVES FOR SEALING                                  | 97                               |
| G234 REMOVE WATER FROM MANHOLES                                        | 96                               |
| L367 INSTALL LEAD SLEEVES                                              | 96                               |
| L377 WRAP COMPLETED SPLICES WITH MUSLIN OR PLASTIC                     | 96                               |
| F200 WASH OR WAX VEHICLES OR TRAILERS                                  | 95                               |
| I292 DETECT CABLE FAULTS USING HEADSETS AND BATTERIES                  | 95                               |
| I322 REMOVE OR INSTALL LEAD SLEEVES                                    | 95                               |
| J334 BRIDGE-SPLICE TELEPHONE CONDUCTORS USING MECHANICAL<br>CONNECTORS | 95                               |
| H250 CLEAN CAP CONDUCTORS                                              | 95                               |
| G211 ERECT BARRIERS OR MANHOLE GUARDS AROUND OPEN TRENCHES             | 94                               |
| G239 TEST MANHOLES FOR COMBUSTIBLE GASES                               | 94                               |
| H286 MARK OR TAG CABLES, TERMINALS, OR SPLICES                         | 93                               |
| M397 LOCATE PRESSURE LEAKS WITH SOLUTION TESTS                         | 93                               |
| I320 REMOVE OR INSTALL AUXILIARY SLEEVES                               | 93                               |
| L368 INSTALL LEAD WEDGES, DISKS, OR END PLATES                         | 93                               |
| L364 DRY SPLICES USING DESICCANTS                                      | 93                               |
| L373 SEAL CABLE ENDS                                                   | 93                               |
| G232 REMOVE OR REPLACE MANHOLE COVERS                                  | 92                               |
| L375 SEAL JOINTS USING TORCH METHODS                                   | 92                               |
| G240 TEST MANHOLES FOR POISONOUS GASES                                 | 92                               |
| H247 BEND OR ARRANGE BURIED CABLES FOR SPLICING                        | 92                               |

**REPRESENTATIVE TASKS PERFORMED BY JUNIOR BASE CABLE PERSONNEL  
(GRP178, N=9)**

| <b>TASKS</b>                                                           | <b>PERCENT<br/>MEMBERS<br/>PERFORMING</b> |
|------------------------------------------------------------------------|-------------------------------------------|
| L372 PREPARE LEAD SLEEVES FOR SEALING                                  | 100                                       |
| L365 FLASH TEST SPLICES FOR CLOSURES                                   | 100                                       |
| G216 EXCAVATE SPLICING PITS OR CABLE TRENCHES USING HAND TOOLS         | 100                                       |
| L322 REMOVE OR INSTALL LEAD SLEEVES                                    | 100                                       |
| L367 INSTALL LEAD SLEEVES                                              | 100                                       |
| L375 SEAL JOINTS USING TORCH METHODS                                   | 100                                       |
| L366 INSTALL AUXILIARY SLEEVES                                         | 100                                       |
| I294 IDENTIFY OR TAG CONDUCTORS                                        | 100                                       |
| M397 LOCATE PRESSURE LEAKS WITH SOLUTION TESTS                         | 100                                       |
| F200 WASH OR WAX VEHICLES OR TRAILERS                                  | 100                                       |
| I293 ESTABLISH TALKING CIRCUITS                                        | 100                                       |
| J334 BRIDGE-SPLICE TELEPHONE CONDUCTORS USING MECHANICAL<br>CONNECTORS | 100                                       |
| G223 OPERATE SPLICER TRUCKS                                            | 89                                        |
| I320 REMOVE OR INSTALL AUXILIARY SLEEVES                               | 89                                        |
| M385 CHARGE CABLE SYSTEMS WITH NITROGEN OR DRY AIR                     | 89                                        |
| I305 LOCATE CABLE ROUTES USING PLANT-IN-PLACE RECORDS                  | 89                                        |
| H250 CLEAN CAP CONDUCTORS                                              | 89                                        |
| F191 PERFORM OPERATOR MAINTENANCE ON GENERAL PURPOSE VEHICLES          | 89                                        |
| L377 WRAP COMPLETED SPLICES WITH MUSLIN OR PLASTIC                     | 89                                        |
| I297 LOCATE CABLE FAULTS USING MULTIMETERS                             | 89                                        |
| L373 SEAL CABLE ENDS                                                   | 89                                        |
| L364 DRY SPLICES USING DESICCANTS                                      | 89                                        |
| H286 MARK OR TAG CABLES, TERMINALS, OR SPLICES                         | 89                                        |
| L376 SEAL SPLICES WITH EPOXY RESIN COMPOUNDS                           | 78                                        |
| L369 MAKE TEMPORARY OR EMERGENCY SPLICE SEALS                          | 78                                        |

**REPRESENTATIVE TASKS PERFORMED BY GENERAL CABLE SPLICERS  
(GRP175, N=202)**

| <b>TASKS</b>                                                           | <b>PERCENT<br/>MEMBERS<br/>PERFORMING</b> |
|------------------------------------------------------------------------|-------------------------------------------|
| L366 INSTALL AUXILIARY SLEEVES                                         | 99                                        |
| L367 INSTALL LEAD SLEEVES                                              | 99                                        |
| L365 FLASH TEST SPLICES OR CLOSURES                                    | 99                                        |
| I294 IDENTIFY OR TAG CONDUCTORS                                        | 99                                        |
| L372 PREPARE LEAD SLEEVES FOR SEALING                                  | 99                                        |
| I293 ESTABLISH TALKING CIRCUITS                                        | 99                                        |
| G234 REMOVE WATER FROM MANHOLES                                        | 97                                        |
| F200 WASH OR WAX VEHICLES OR TRAILERS                                  | 97                                        |
| I292 DETECT CABLE FAULTS USING HEADSETS AND BATTERIES                  | 97                                        |
| L364 DRY SPLICES USING DESICCANTS                                      | 96                                        |
| L377 WRAP COMPLETED SPLICES WITH MUSLIN OR PLASTIC                     | 95                                        |
| L368 INSTALL LEAD WEDGES, DISKS, OR END PLATES                         | 95                                        |
| L373 SEAL CABLE ENDS                                                   | 95                                        |
| H250 CLEAN CAP CONDUCTORS                                              | 95                                        |
| I322 REMOVE OR INSTALL LEAD SLEEVES                                    | 95                                        |
| G232 REMOVE OR REPLACE MANHOLE COVERS                                  | 94                                        |
| J334 BRIDGE-SPLICE TELEPHONE CONDUCTORS USING MECHANICAL<br>CONNECTORS | 94                                        |
| G228 PLACE OR OPERATE WATER PUMPS                                      | 94                                        |
| G239 TEST MANHOLES FOR COMBUSTIBLE GASES                               | 94                                        |
| G211 ERECT BARRIERS OR MANHOLE GUARDS AROUND OPEN TRENCHES<br>OR PITS  | 94                                        |
| I320 REMOVE OR INSTALL AUXILIARY SLEEVES                               | 93                                        |
| H286 MARK OR TAG CABLES, TERMINALS, OR SPLICES                         | 93                                        |
| G240 TEST MANHOLES FOR POISONOUS GASES                                 | 93                                        |
| L374 SEAL CABLES USING TAPE WRAPPED METHODS                            | 93                                        |
| H247 BEND OR ARRANGE BURIED CABLES FOR SPLICING                        | 93                                        |

REPRESENTATIVE TASKS PERFORMED BY SENIOR CABLE SPLICERS  
(GRP267, N=69)

| TASKS                                                                  | PERCENT<br>MEMBERS<br>PERFORMING |
|------------------------------------------------------------------------|----------------------------------|
| I293 ESTABLISH TALKING CIRCUITS                                        | 100                              |
| I367 INSTALL LEAD SLEEVES                                              | 100                              |
| I365 FLASH TEST SPLICES OR CLOSURES                                    | 100                              |
| I294 IDENTIFY OR TAG CONDUCTORS                                        | 100                              |
| G240 TEST MANHOLES FOR POISONOUS GASES                                 | 100                              |
| G239 TEST MANHOLES FOR COMBUSTIBLE GASES                               | 100                              |
| L366 INSTALL AUXILIARY SLEEVES                                         | 100                              |
| H286 MARK OR TAG CABLES, TERMINALS, OR SPLICES                         | 100                              |
| L377 WRAP COMPLETED SPLICES WITH MUSLIN OR PLASTIC                     | 100                              |
| L368 INSTALL LEAD WEDGES, DISKS, OR END PLATES                         | 100                              |
| L369 MAKE TEMPORARY OR EMERGENCY SPLICE SEALS                          | 100                              |
| H248 BEND OR RACK UNDERGROUND CABLES FOR SPLICING                      | 100                              |
| H247 BEND OR ARRANGE BURIED CABLES FOR SPLICING                        | 100                              |
| H250 CLEAN CAP CONDUCTORS                                              | 100                              |
| J334 BRIDGE-SPLICE TELEPHONE CONDUCTORS USING MECHANICAL<br>CONNECTORS | 99                               |
| I322 REMOVE OR INSTALL LEAD SLEEVES                                    | 99                               |
| I305 LOCATE CABLE ROUTES USING PLANT-IN-PLACE RECORDS                  | 99                               |
| L375 SEAL JOINTS USING TORCH METHODS                                   | 99                               |
| I320 REMOVE OR INSTALL AUXILIARY SLEEVES                               | 99                               |
| J340 BUTT-SPLICE TELEPHONE CONDUCTORS USING MECHANICAL<br>CONNECTORS   | 99                               |
| M397 LOCATE PRESSURE LEAKS WITH SOLUTION TESTS                         | 99                               |
| L372 PREPARE LEAD SLEEVES FOR SEALING                                  | 99                               |
| G211 ERECT BARRIERS OR MANHOLE GUARDS AROUND OPEN TRENCHES<br>OR PITS  | 99                               |
| G234 REMOVE WATER FROM MANHOLES                                        | 99                               |
| L363 CAST OR PREPARE DISKS OR END PLATES                               | 99                               |

**REPRESENTATIVE TASKS PERFORMED BY EQUIPMENT INSPECTORS  
(GRP109, N=5)**

| <b>TASKS</b>                                                                                    | <b>PERCENT<br/>MEMBERS<br/>PERFORMING</b> |
|-------------------------------------------------------------------------------------------------|-------------------------------------------|
| C114 INSPECT WORK AREAS FOR HAZARDOUS WORKING CONDITIONS                                        | 100                                       |
| E170 PERFORM VEHICLE OPERATOR INSPECTIONS USING FORMS SUCH AS<br>AFTO FORM 373 OR AFTO FORM 374 | 100                                       |
| G223 OPERATE SPLICER TRUCKS                                                                     | 100                                       |
| G232 REMOVE OR REPLACE MANHOLE COVERS                                                           | 100                                       |
| C96 INSPECT CABLE VAULTS, HANDHOLES, OR MANHOLES                                                | 100                                       |
| G239 TEST MANHOLES FOR COMBUSTIBLE GASES                                                        | 100                                       |
| G240 TEST MANHOLES FOR POISONOUS GASES                                                          | 100                                       |
| G234 REMOVE WATER FROM MANHOLES                                                                 | 100                                       |
| G228 PLACE OR OPERATE WATER PUMPS                                                               | 100                                       |
| F191 PERFORM OPERATOR MAINTENANCE ON GENERAL PURPOSE VEHICLES                                   | 100                                       |
| G201 BACKFILL BASE TELEPHONE CABLE SYSTEM SPLICING PITS OR<br>CABLE TRENCHES                    | 100                                       |
| F200 WASH OR WAX VEHICLES OR TRAILERS                                                           | 100                                       |
| G216 EXCAVATE SPLICING PITS OR CABLE TRENCHES USING HAND TOOLS                                  | 100                                       |
| H286 MARK OR TAG CABLES, TERMINALS, OR SPLICES                                                  | 100                                       |
| G211 ERECT BARRIERS OR MANHOLE GUARDS AROUND OPEN TRENCHES OR<br>PITS                           | 100                                       |
| I320 REMOVE OR INSTALL AUXILIARY SLEEVES                                                        | 100                                       |
| I322 REMOVE OR INSTALL LEAD SLEEVES                                                             | 100                                       |
| L366 INSTALL AUXILIARY SLEEVES                                                                  | 100                                       |
| C113 INSPECT VEHICLES OR SPECIAL PURPOSE EQUIPMENT                                              | 80                                        |
| C112 INSPECT TEST EQUIPMENT                                                                     | 80                                        |
| C99 INSPECT HAND OR SPECIAL PURPOSE TOOLS                                                       | 80                                        |
| C108 INSPECT SPLICING MATERIALS                                                                 | 80                                        |
| G204 CLEAN MANHOLES                                                                             | 80                                        |
| H250 CLEAN CAP CONDUCTORS                                                                       | 80                                        |

**REPRESENTATIVE TASKS PERFORMED BY NCOICs CABLE MAINTENANCE**  
(GRP261, N=20)

| <b>TASKS</b>                                                                                         | <b>PERCENT<br/>MEMBERS<br/>PERFORMING</b> |
|------------------------------------------------------------------------------------------------------|-------------------------------------------|
| I305 LOCATE CABLE ROUTES USING PLANT-IN-PLACE RECORDS                                                | 100                                       |
| C96 INSPECT CABLE VAULTS, HANDHOLES, OR MANHOLES                                                     | 100                                       |
| C94 INSPECT BURIED CABLE INSTALLATIONS FOR COMPLIANCE WITH<br>TECHNICAL DIRECTIVES OR SPECIFICATIONS | 100                                       |
| C102 INSPECT IN-PROGRESS WORK                                                                        | 100                                       |
| G242 TRAVEL TO OR FROM BASE WORK AREAS                                                               | 100                                       |
| G234 REMOVE WATER FROM MANHOLES                                                                      | 100                                       |
| G239 TEST MANHOLES FOR COMBUSTIBLE GASES                                                             | 100                                       |
| G240 TEST MANHOLES FOR POISONOUS GASES                                                               | 100                                       |
| J334 BRIDGE-SPLICE TELEPHONE CONDUCTORS USING MECHANICAL<br>CONNECTORS                               | 100                                       |
| L375 SEAL JOINTS USING TORCH METHODS                                                                 | 100                                       |
| H286 MARK OR TAG CABLES, TERMINALS, OR SPLICES                                                       | 100                                       |
| I293 ESTABLISH TALKING CIRCUITS                                                                      | 100                                       |
| I297 LOCATE CABLE FAULTS USING MULTIMETERS                                                           | 100                                       |
| L377 WRAP COMPLETED SPLICES WITH MUSLIN OR PLASTIC                                                   | 100                                       |
| I294 IDENTIFY OR TAG CONDUCTORS                                                                      | 100                                       |
| M397 LOCATE PRESSURE LEAKS WITH SOLUTION TESTS                                                       | 100                                       |
| G245 WITHDRAW MATERIALS FROM BENCH STOCK                                                             | 100                                       |
| A31 PLAN WORK ASSIGNMENTS                                                                            | 95                                        |
| E168 MAKE ENTRIES ON PLANT-IN-PLACE RECORDS                                                          | 95                                        |
| B60 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES                                                          | 95                                        |
| G223 OPERATE SPLICER TRUCKS                                                                          | 95                                        |
| C112 INSPECT TEST EQUIPMENT                                                                          | 95                                        |
| E170 PERFORM VEHICLE OPERATOR INSPECTIONS USING FORMS SUCH AS<br>AFTO FORM 373 OR AFTO FORM 374      | 95                                        |
| L365 FLASH TEST SPLICES OR CLOSURES                                                                  | 95                                        |
| D121 CONDUCT OJT                                                                                     | 95                                        |

**REPRESENTATIVE TASKS PERFORMED BY SENIOR RESIDENT COURSE INSTRUCTORS  
(GRP163, N=6)**

| <b>TASKS</b>                                                                | <b>PERCENT<br/>MEMBERS<br/>PERFORMING</b> |
|-----------------------------------------------------------------------------|-------------------------------------------|
| D122 CONDUCT RESIDENT COURSE CLASSROOM TRAINING                             | 100                                       |
| D137 EVALUATE PROGRESS OF RESIDENT COURSE STUDENTS                          | 100                                       |
| G217 INSPECT CLIMBING EQUIPMENT, POLES OR AREAS PRIOR TO<br>ASCENDING POLES | 100                                       |
| D139 MAINTAIN TRAINING AIDS, SPACE, OR EQUIPMENT                            | 100                                       |
| L367 INSTALL LEAD SLEEVES                                                   | 100                                       |
| D151 SCORE TESTS                                                            | 100                                       |
| I297 LOCATE CABLE FAULTS USING MULTIMETERS                                  | 100                                       |
| D118 ADMINISTER TESTS                                                       | 100                                       |
| I322 REMOVE OR INSTALL LEAD SLEEVES                                         | 100                                       |
| I293 ESTABLISH TALKING CIRCUITS                                             | 100                                       |
| I294 IDENTIFY OR TAG CONDUCTORS                                             | 100                                       |
| K359 INSTALL OR REPLACE 20 or 21 SERIES SPLICE CASES                        | 100                                       |
| L377 WRAP COMPLETED SPLICES WITH MUSLIN OR PLASTIC                          | 100                                       |
| I315 PERFORM INSULATION RESISTANCE TESTS                                    | 100                                       |
| L365 FLASH TEST SPLICES OR CLOSURES                                         | 100                                       |
| I309 MAKE WET SECTION THROWS                                                | 100                                       |
| I292 DETECT CABLE FAULTS USING HEADSETS AND BATTERIES                       | 100                                       |
| L364 DRY SPLICES USING DESICCANTS                                           | 100                                       |
| C114 INSPECT WORK AREAS FOR HAZARDOUS WORKING CONDITIONS                    | 83                                        |
| C112 INSPECT TEST EQUIPMENT                                                 | 83                                        |
| C108 INSPECT SPLICING MATERIALS                                             | 83                                        |
| C99 INSPECT HAND OR SPECIAL PURPOSE TOOLS                                   | 83                                        |
| G231 RAISE OR LOWER CABLE SPLICING PLATFORMS                                | 83                                        |
| F190 MAINTAIN TOOLS OR EQUIPMENT                                            | 83                                        |
| D125 COUNSEL TRAINEES ON TRAINING PROGRESS                                  | 83                                        |

REPRESENTATIVE TASKS PERFORMED BY CABLE TESTERS  
(GRP88, N=5)

| TASKS                                                                  | PERCENT<br>MEMBERS<br>PERFORMING |
|------------------------------------------------------------------------|----------------------------------|
| L367 INSTALL LEAD SLEEVES                                              | 100                              |
| L372 PREPARE LEAD SLEEVES FOR SEALING                                  | 100                              |
| L377 WRAP COMPLETED SPLICES WITH MUSLIN OR PLASTIC                     | 100                              |
| L375 SEAL JOINTS USING TORCH METHODS                                   | 100                              |
| L373 SEAL CABLE ENDS                                                   | 100                              |
| L364 DRY SPLICES USING DESICCANTS                                      | 100                              |
| I322 REMOVE OR INSTALL LEAD SLEEVES                                    | 80                               |
| L369 MAKE TEMPORARY OR EMERGENCY SPlice SEALS                          | 80                               |
| J334 BRIDGE-SPLICE TELEPHONE CONDUCTORS USING MECHANICAL<br>CONNECTORS | 80                               |
| I329 TEST CIRCUITS OR CABLE PAIRS FOR RESISTANCE                       | 80                               |
| I309 MAKE WET SECTION THROWS                                           | 80                               |
| F200 WASH OR WAX VEHICLES OR TRAILERS                                  | 80                               |
| I320 REMOVE OR INSTALL AUXILIARY SLEEVES                               | 80                               |
| M397 LOCATE PRESSURE LEAKS WITH SOLUTION TESTS                         | 80                               |
| L365 FLASH TEST SPLICES OR CLOSURES                                    | 80                               |
| L366 INSTALL AUXILIARY SLEEVES                                         | 80                               |
| I315 PERFORM INSULATION RESISTANCE TESTS                               | 80                               |
| I296 LOCATE CABLE FAULTS USING DELCON CABLE FAULT LOCATORS             | 60                               |
| I305 LOCATE CABLE ROUTES USING PLANT-IN-PLACE RECORDS                  | 60                               |
| L376 SEAL SPLICES WITH EPOXY RESIN COMPOUNDS                           | 60                               |
| M408 TAKE PRESSURE READINGS USING PRESSURE TESTING GAUGES              | 60                               |
| G223 OPERATE SPLICER TRUCKS                                            | 60                               |
| I332 TREAT CABLES OR OTHER MATERIALS FOR CORROSION                     | 60                               |
| I330 TEST CIRCUITS OR CABLE PAIRS FOR VOLTAGE                          | 60                               |
| I292 DETECT CABLE FAULTS USING HEADSETS AND BATTERIES                  | 60                               |

REPRESENTATIVE TASKS PERFORMED BY JUNIOR EI PERSONNEL  
(GRP082, N=22)

| TASKS                                                                  | PERCENT<br>MEMBERS<br>PERFORMING |
|------------------------------------------------------------------------|----------------------------------|
| L367 INSTALL LEAD SLEEVES                                              | 95                               |
| I293 ESTABLISH TALKING CIRCUITS                                        | 86                               |
| I322 REMOVE OR INSTALL LEAD SLEEVES                                    | 86                               |
| L365 FLASH TEST SPLICES OR CLOSURES                                    | 86                               |
| L366 INSTALL AUXILIARY SLEEVES                                         | 86                               |
| J334 BRIDGE-SPLICE TELEPHONE CONDUCTORS USING MECHANICAL<br>CONNECTORS | 86                               |
| L372 PREPARE LEAD SLEEVES FOR SEALING                                  | 86                               |
| G232 REMOVE OR REPLACE MANHOLE COVERS                                  | 86                               |
| I320 REMOVE OR INSTALL AUXILIARY SLEEVES                               | 82                               |
| G204 CLEAN MANHOLES                                                    | 82                               |
| G234 REMOVE WATER FROM MANHOLES                                        | 82                               |
| G223 OPERATE SPLICER TRUCKS                                            | 77                               |
| F200 WASH OR WAX VEHICLES OR TRAILERS                                  | 77                               |
| L369 MAKE TEMPORARY OR EMERGENCY SPLICE SEALS                          | 77                               |
| H250 CLEAN CAP CONDUCTORS                                              | 77                               |
| G211 ERECT BARRIERS OR MANHOLE GUARDS AROUND OPEN TRENCHES<br>OR PITS  | 77                               |
| G239 TEST MANHOLES FOR COMBUSTIBLE GASES                               | 77                               |
| J340 BUTT-SPLICE TELEPHONE CONDUCTORS USING MECHANICAL<br>CONNECTORS   | 77                               |
| L364 DRY SPLICES USING DESICCANTS                                      | 73                               |
| L368 INSTALL LEAD WEDGES, DISKS, OR END PLATES                         | 73                               |
| I294 IDENTIFY OR TAG CONDUCTORS                                        | 68                               |
| I292 DETECT CABLE FAULTS USING HEADSETS AND BATTERIES                  | 68                               |
| L377 WRAP COMPLETED SPLICES WITH MUSLIN OR PLASTIC                     | 68                               |
| L363 CAST OR PREPARE DISKS OR END PLATES                               | 68                               |
| G240 TEST MANHOLES FOR POISONOUS GASES                                 | 68                               |

REPRESENTATIVE TASKS PERFORMED BY JUNIOR RESIDENT COURSE INSTRUCTORS  
(GRP064, N=6)

| TASKS                                                                                    | PERCENT<br>MEMBERS<br>PERFORMING |
|------------------------------------------------------------------------------------------|----------------------------------|
| D118 ADMINISTER TEST                                                                     | 100                              |
| D122 CONDUCT RESIDENT COURSE CLASSROOM TRAINING                                          | 83                               |
| L365 FLASH TEST SPLICES OR CLOSURES                                                      | 83                               |
| L367 INSTALL LEAD SLEEVES                                                                | 83                               |
| L375 SEAL JOINTS USING TORCH METHODS                                                     | 83                               |
| D151 SCORE TESTS                                                                         | 83                               |
| L377 WRAP COMPLETED SPLICES WITH MUSLIN OR PLASTIC                                       | 83                               |
| L372 PREPARE LEAD SLEEVES FOR SEALING                                                    | 83                               |
| L373 SEAL CABLE ENDS                                                                     | 83                               |
| J334 BRIDGE-SPLICE TELEPHONE CONDUCTORS USING MECHANICAL<br>CONNECTORS                   | 67                               |
| I329 TEST CIRCUITS OR CABLE PAIRS FOR RESISTANCE                                         | 67                               |
| L366 INSTALL AUXILIARY SLEEVES                                                           | 67                               |
| L374 SEAL CABLES USING TAPE WRAPPED METHODS                                              | 67                               |
| I292 DETECT CABLE FAULTS USING HEADSETS AND BATTERIES                                    | 67                               |
| L368 INSTALL LEAD WEDGES, DISKS, OR END PLATES                                           | 67                               |
| L370 MELT LEAD OR SOLDER TO PROPER TEMPERATURES                                          | 67                               |
| I315 PERFORM INSULATION RESISTANCE TESTS                                                 | 67                               |
| I293 ESTABLISH TALKING CIRCUITS                                                          | 67                               |
| G239 TEST MANHOLES FOR COMBUSTIBLE GASES                                                 | 67                               |
| G240 TEST MANHOLES FOR POISONOUS GASES                                                   | 67                               |
| H250 CLEAN CAP CONDUCTORS                                                                | 67                               |
| K360 INSTALL OR REPLACE 9A, 10A, 11A, OR 12A SPLICE CASES                                | 50                               |
| I330 TEST CIRCUITS OR CABLE PAIRS FOR VOLTAGE                                            | 50                               |
| J335 BRIDGE-SPLICE TELEPHONE CONDUCTORS USING NONSOLDERED<br>PIGTAILS OR TWISTED METHODS | 50                               |
| K359 INSTALL OR REPLACE 20 OR 21 SERIES SPLICE CASES                                     | 50                               |

REPRESENTATIVE TASKS PERFORMED BY MISSILE SYSTEMS CABLE MAINTENANCE PERSONNEL  
(GRPO52, N=92)

| TASKS                                                                            | PERCENT<br>MEMBERS<br>PERFORMING |
|----------------------------------------------------------------------------------|----------------------------------|
| M380 ADJUST HICS PRESSURE CONTACTORS                                             | 99                               |
| K351 ASSEMBLE ATI SPLICE CASES                                                   | 95                               |
| M390 INSTALL OR REMOVE HICS PRESSURE CONTACTOR ASSEMBLIES                        | 93                               |
| J333 BRIDGE-SPLICE HICS CABLE USING MECHANICAL CONNECTORS                        | 93                               |
| G244 TRAVEL TO OR FROM MISSILE CABLE WORK AREAS                                  | 91                               |
| J347 STRAIGHT-SPLICE HICS CABLE USING MECHANICAL CONNECTORS                      | 91                               |
| M404 REPAIR ATI PRESSURE COMPONENT ASSEMBLIES                                    | 90                               |
| I331 TEST ELECTRICAL SURGE ARRESTOR (ESA) BLOCKS FOR<br>RESISTANCE OR VALIDITY   | 87                               |
| M391 INSTALL OR REMOVE HICS PRESSURE CONTACTORS                                  | 85                               |
| M408 TAKE PRESSURE READINGS USING PRESSURE TESTING GAUGES                        | 84                               |
| H276 INSTALL PRESSURE CONTACTORS                                                 | 83                               |
| K352 FABRICATE LINK CABLES                                                       | 83                               |
| F197 PERFORM PREVENTIVE MAINTENANCE INSPECTIONS (PMI) ON<br>HICS CABLE YARDS     | 83                               |
| F200 WASH OR WAX VEHICLES OR TRAILERS                                            | 80                               |
| M399 PERFORM OPERATIONAL CHECKS ON CABLE AIR-DRYER ASSEMBLIES                    | 80                               |
| M403 REMOVE OR REPLACE AIR-DRYER COMPONENTS OR ASSEMBLIES                        | 80                               |
| M385 CHARGE CABLE SYSTEMS WITH NITROGEN OR DRY AIR                               | 79                               |
| M401 PERFORM PREVENTIVE MAINTENANCE INSPECTIONS (PMI) ON<br>AIR-DRYER ASSEMBLIES | 77                               |
| I300 LOCATE CABLE FAULTS USING WHEATSTONE BRIDGES                                | 77                               |
| H258 INSTALL CABLE ROUTE SIGNS, POLE MARKERS, OR IDENTIFICA-<br>TION PLATES      | 76                               |
| M410 TEST PRESSURE CONTACTORS                                                    | 76                               |
| M400 PERFORM OPERATIONAL CHECKS ON PRESSURE CONTACTORS                           | 76                               |
| I305 LOCATE CABLE ROUTES USING PLANT-IN-PLACE RECORDS                            | 74                               |
| I332 TREAT CABLES OR OTHER MATERIALS FOR CORROSION                               | 73                               |
| M379 ADJUST CONTROLS ON CABLE AIR-DRYERS                                         | 72                               |

REPRESENTATIVE TASKS PERFORMED BY HICS CABLE SPLICERS  
(GRP080, N=81)

| TASKS                                                                             | PERCENT<br>MEMBERS<br>PERFORMING |
|-----------------------------------------------------------------------------------|----------------------------------|
| M380 ADJUST HICS PRESSURE CONTACTORS                                              | 100                              |
| M390 INSTALL OR REMOVE HICS PRESSURE CONTACTOR ASSEMBLIES                         | 96                               |
| G244 TRAVEL TO OR FROM MISSILE CABLE WORK AREAS                                   | 95                               |
| K351 ASSEMBLE ATI SPLICE CASES                                                    | 95                               |
| J347 STRAIGHT-SPLICE HICS CABLE USING MECHANICAL CONNECTORS                       | 95                               |
| J333 BRIDGE-SPLICE HICS CABLE USING MECHANICAL CONNECTORS                         | 95                               |
| I331 TEST ELECTRICAL SURGE ARRESTOR (ESA) BLOCKS FOR<br>RESISTANCE OR VALIDITY    | 93                               |
| M404 REPAIR ATI PRESSURE COMPONENT ASSEMBLIES                                     | 91                               |
| M391 INSTALL OR REMOVE HICS PRESSURE CONTACTORS                                   | 90                               |
| M408 TAKE PRESSURE READINGS USING PRESSURE TESTING GAUGES                         | 89                               |
| H276 INSTALL PRESSURE CONTACTORS                                                  | 88                               |
| M385 CHARGE CABLE SYSTEMS WITH NITROGEN OR DRY AIR                                | 88                               |
| K352 FABRICATE LINK CABLES                                                        | 86                               |
| F197 PERFORM PREVENTIVE MAINTENANCE INSPECTIONS (PMI) ON<br>HICS CABLE YARDS      | 86                               |
| M399 PERFORM OPERATIONAL CHECKS ON CABLE AIR-DRYER ASSEMBLIES                     | 85                               |
| M403 REMOVE OR REPLACE AIR-DRYER COMPONENTS OR ASSEMBLIES                         | 84                               |
| I332 TREAT CABLES OR OTHER MATERIALS FOR CORROSION                                | 83                               |
| M400 PERFORM OPERATIONAL CHECKS ON PRESSURE CONTACTORS                            | 83                               |
| M401 PERFORM PREVENTIVE MAINTENANCE INSPECTIONS (PMI) ON AIR-<br>DRYER ASSEMBLIES | 81                               |
| I305 LOCATE CABLE ROUTES USING PLANT-IN-PLACE RECORDS                             | 80                               |
| H258 INSTALL CABLE ROUTE SIGNS, POLE MARKERS, OR IDENTIFICATION<br>PLATES         | 80                               |
| M397 LOCATE PRESSURE LEAKS WITH SOLUTION TESTS                                    | 79                               |
| M379 ADJUST CONTROLS ON CABLE AIR DRYERS                                          | 77                               |
| K355 FORM OR SECURE CABLES FOR ATI CASE SPLICING                                  | 73                               |
| L365 FLASH TEST SPLICES OR CLOSURES                                               | 72                               |

**REPRESENTATIVE TASKS PERFORMED BY CABLE PRESSURIZATION PERSONNEL  
(GRP068, N=5)**

| <u>TASKS</u>                                                                     | <u>PERCENT<br/>MEMBERS<br/>PERFORMING</u> |
|----------------------------------------------------------------------------------|-------------------------------------------|
| M380 ADJUST HICS PRESSURE CONTACTORS                                             | 100                                       |
| K351 ASSEMBLE ATI SPLICE CASES                                                   | 100                                       |
| M404 REPAIR ATI PRESSURE COMPONENT ASSEMBLIES                                    | 100                                       |
| J347 STRAIGHT-SPLICE HICS CABLE USING MECHANICAL CONNECTORS                      | 100                                       |
| K352 FABRICATE LINK CABLES                                                       | 100                                       |
| J333 BRIDGE-SPLICE HICS CABLE USING MECHANICAL CONNECTORS                        | 100                                       |
| K355 FORM OR SECURE CABLES FOR ATI CASE SPLICING                                 | 80                                        |
| K353 FABRICATE MISSILE CABLES                                                    | 80                                        |
| M401 PERFORM PREVENTIVE MAINTENANCE INSPECTIONS (PMI) ON<br>AIR DRYER ASSEMBLIES | 60                                        |
| M397 LOCATE PRESSURE LEAKS WITH SOLUTION TESTS                                   | 60                                        |
| M396 LOCATE PRESSURE LEAKS USING PRESSURE GRADIENT METHODS                       | 60                                        |
| M379 ADJUST CONTROLS ON CABLE AIR DRYERS                                         | 60                                        |
| F197 PERFORM PREVENTIVE MAINTENANCE INSPECTIONS (PMI) ON HICS<br>CABLE YARDS     | 60                                        |
| M410 TEST PRESSURE CONTACTORS                                                    | 60                                        |
| I329 TEST CIRCUITS OR CABLE PAIRS FOR RESISTANCE                                 | 60                                        |
| M402 PURGE CABLES WITH NITROGEN OR DRY AIR                                       | 60                                        |
| C97 INSPECT ELECTRICAL SURGE ARRESTOR (ESA) ROOMS                                | 60                                        |
| K356 INSTALL BUILDOUT CAPACITORS OR LOAD COILS IN MISSILE CABLE<br>SPLICE CASES  | 60                                        |
| I331 TEST ELECTRICAL SURGE ARRESTOR (ESA) BLOCKS FOR RESISTANCE<br>OR VALIDITY   | 60                                        |
| M390 INSTALL OR REMOVE HICS PRESSURE CONTACTOR ASSEMBLIES                        | 60                                        |
| K354 FABRICATE OR INSTALL SUPPORT PLANKS FOR SPLICING MISSILE<br>CABLES          | 60                                        |

**REPRESENTATIVE TASKS PERFORMED BY HICS AREA PREPARATION AND MAINTENANCE PERSONNEL  
(GRP061, N=6)**

| <b>TASKS</b>                                                                                    | <b>PERCENT<br/>MEMBERS<br/>PERFORMING</b> |
|-------------------------------------------------------------------------------------------------|-------------------------------------------|
| G244 TRAVEL TO OR FROM MISSILE CABLE WORK AREAS                                                 | 100                                       |
| F200 WASH OR WAX VEHICLES OR TRAILERS                                                           | 83                                        |
| G216 EXCAVATE SPLICING PITS OR CABLE TRENCHES USING HAND<br>TOOLS                               | 83                                        |
| M380 ADJUST HICS PRESSURE CONTACTORS                                                            | 83                                        |
| G222 OPERATE BACKHOES                                                                           | 83                                        |
| M390 INSTALL OR REMOVE HICS PRESSURE CONTACTOR ASSEMBLIES                                       | 83                                        |
| K351 ASSEMBLE ATI SPLICE CASES                                                                  | 83                                        |
| C113 INSPECT VEHICLES OR SPECIAL PURPOSE EQUIPMENT                                              | 67                                        |
| G221 LOAD OR REPLENISH SPLICING MATERIALS PRIOR TO DISPATCH<br>OF SPLICER TRUCKS                | 67                                        |
| G223 OPERATE SPLICER TRUCKS                                                                     | 67                                        |
| G202 BACKFILL HICS SPLICING PITS OR CABLE TRENCHES                                              | 67                                        |
| M404 REPAIR ATI PRESSURE COMPONENT ASSEMBLIES                                                   | 67                                        |
| J333 BRIDGE-SPLICE HICS CABLE USING MECHANICAL CONNECTORS                                       | 67                                        |
| M403 REMOVE OR REPLACE AIR-DRYER COMPONENTS OR ASSEMBLIES                                       | 67                                        |
| E170 PERFORM VEHICLE OPERATOR INSPECTIONS USING FORMS SUCH AS<br>AFTO FORM 373 OR AFTO FORM 374 | 50                                        |
| M397 LOCATE PRESSURE LEAKS WITH SOLUTION TESTS                                                  | 50                                        |
| F191 PERFORM OPERATOR MAINTENANCE ON GENERAL PURPOSE VEHICLES                                   | 50                                        |
| G241 TEST PRESSURE REGULATORS FOR PRESSURE CREEPAGE                                             | 50                                        |
| I300 LOCATE CABLE FAULTS USING WHEATSTONE BRIDGES                                               | 50                                        |
| M399 PERFORM OPERATIONAL CHECKS ON CABLE AIR-DRYER ASSEMBLIES                                   | 50                                        |
| M408 TAKE PRESSURE READINGS USING PRESSURE TESTING GAUGES                                       | 50                                        |
| M391 INSTALL OR REMOVE HICS PRESSURE CONTACTORS                                                 | 50                                        |
| H276 INSTALL PRESSURE CONTACTORS                                                                | 50                                        |
| H258 INSTALL CABLE ROUTE SIGNS, POLE MARKERS, OR IDENTIFICATION<br>PLATES                       | 50                                        |
| G205 CLEAN SPLICING PITS                                                                        | 50                                        |

REPRESENTATIVE TASKS PERFORMED BY BASE CABLE AREA  
PREPARATION AND MAINTENANCE PERSONNEL  
(GRP051, N=7)

| <u>TASKS</u>                                                          | <u>PERCENT<br/>MEMBERS<br/>PERFORMING</u> |
|-----------------------------------------------------------------------|-------------------------------------------|
| G232 REMOVE OR REPLACE MANHOLE COVERS                                 | 100                                       |
| G223 OPERATE SPLICER TRUCKS                                           | 100                                       |
| G242 TRAVEL TO OR FROM BASE WORK AREAS                                | 86                                        |
| G211 ERECT BARRIERS OR MANHOLE GUARDS AROUND OPEN TRENCHES<br>OR PITS | 86                                        |
| G215 ERECT TRAFFIC WARNING DEVICES                                    | 86                                        |
| G239 TEST MANHOLES FOR COMBUSTIBLE GASES                              | 86                                        |
| G201 BACKFILL BASE TELEPHONE CABLE SYSTEM SPLICING PITS               | 86                                        |
| G234 REMOVE WATER FROM MANHOLES                                       | 86                                        |
| G240 TEST MANHOLES FOR POISONOUS GASES                                | 71                                        |
| G228 PLACE OR OPERATE WATER PUMPS                                     | 71                                        |
| I293 ESTABLISH TALKING CIRCUITS                                       | 57                                        |
| F200 WASH OR WAX VEHICLES OR TRAILERS                                 | 57                                        |
| I329 TEST CIRCUITS OR CABLE PAIRS FOR RESISTANCE                      | 57                                        |

REPRESENTATIVE TASKS PERFORMED BY SUPERVISION AND MANAGEMENT PERSONNEL  
(GRP041, N=44)

| TASKS                                                                                                | PERCENT<br>MEMBERS<br>PERFORMING |
|------------------------------------------------------------------------------------------------------|----------------------------------|
| C113 INSPECT VEHICLES OR SPECIAL PURPOSE EQUIPMENT                                                   | 82                               |
| C114 INSPECT WORK AREAS FOR HAZARDOUS WORKING CONDITIONS                                             | 80                               |
| E159 INTERPRET CABLE RECORDS OR CABLE SPLICING DIAGRAMS                                              | 80                               |
| E170 PERFORM VEHICLE OPERATOR INSPECTIONS USING FORMS SUCH<br>AS AFTO FORM 373 OR AFTO FORM 374      | 77                               |
| C102 INSPECT IN-PROGRESS WORK                                                                        | 75                               |
| B46 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS                                       | 75                               |
| B65 RESOLVE TECHNICAL MAINTENANCE PROBLEMS                                                           | 75                               |
| C112 INSPECT TEST EQUIPMENT                                                                          | 75                               |
| B68 SUPERVISE CABLE SPLICING INSTALLATION AND MAINTAINING<br>SPECIALISTS (AFSC 36151)                | 73                               |
| A31 PLAN WORK ASSIGNMENTS                                                                            | 73                               |
| A15 DETERMINE WORK PRIORITIES                                                                        | 73                               |
| C94 INSPECT BURIED CABLE INSTALLATIONS FOR COMPLIANCE WITH<br>TECHNICAL DIRECTIVES OR SPECIFICATIONS | 70                               |
| A35 SCHEDULE WORK ASSIGNMENTS                                                                        | 70                               |
| B64 RESOLVE TECHNICAL INSTALLATION PROBLEMS                                                          | 70                               |
| C84 EVALUATE PERFORMANCE OF MAINTENANCE TEAMS                                                        | 68                               |
| E161 INTERPRET CIRS OR PLANT-IN-PLACE RECORDS                                                        | 68                               |
| C99 INSPECT HAND OR SPECIAL PURPOSE TOOLS                                                            | 68                               |
| D125 COUNSEL TRAINEES ON TRAINING PROGRESS                                                           | 68                               |
| D144 ORIENT NEWLY ASSIGNED PERSONNEL                                                                 | 68                               |
| C79 EVALUATE COMPLIANCE WITH WORK STANDARDS                                                          | 66                               |
| E169 PARTICIPATE IN STAFF MEETINGS                                                                   | 66                               |
| C87 EVALUATE SCHEME DRAWINGS OR SPECIFICATIONS                                                       | 64                               |
| C103 INSPECT INSTALLED CABLE PRESSURE SYSTEM EQUIPMENT OR<br>COMPONENTS                              | 64                               |
| A28 PLAN OR SCHEDULE INSPECTIONS                                                                     | 64                               |
| D135 EVALUATE OJT TRAINEES                                                                           | 64                               |

**REPRESENTATIVE TASKS PERFORMED BY SUPERINTENDENTS  
(GRP045, N=7)**

| <b>TASKS</b>                                                                                     | <b>PERCENT<br/>MEMBERS<br/>PERFORMING</b> |
|--------------------------------------------------------------------------------------------------|-------------------------------------------|
| A35 SCHEDULE WORK ASSIGNMENTS                                                                    | 100                                       |
| A34 SCHEDULE LEAVES OR PASSES                                                                    | 100                                       |
| B69 SUPERVISE CABLE SPLICING INSTALLATION AND MAINTENANCE<br>SUPERVISORS (AFSC 36171)            | 86                                        |
| A31 PLAN WORK ASSIGNMENTS                                                                        | 86                                        |
| B71 SUPERVISE CIVILIAN PERSONNEL                                                                 | 86                                        |
| A15 DETERMINE WORK PRIORITIES                                                                    | 86                                        |
| D119 ASSIGN ON-THE-JOB TRAINING (OJT) TRAINERS                                                   | 86                                        |
| D141 ORIENT NEWLY-ASSIGNED PERSONNEL                                                             | 86                                        |
| A4 ASSIGN SPONSORS FOR NEWLY ASSIGNED PERSONNEL                                                  | 86                                        |
| A3 ASSIGN PERSONNEL TO DUTY POSITIONS                                                            | 86                                        |
| E169 PARTICIPATE IN STAFF MEETINGS                                                               | 71                                        |
| B68 SUPERVISE CABLE SPLICING INSTALLATION AND MAINTENANCE<br>SPECIALISTS (AFSC 36151)            | 71                                        |
| B46 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS                                   | 71                                        |
| B67 SUPERVISE APPRENTICE CABLE SPLICING INSTALLATION AND<br>MAINTENANCE SPECIALISTS (AFSC 36131) | 71                                        |
| D125 COUNSEL TRAINEES ON TRAINING PROGRESS                                                       | 71                                        |
| D140 MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS                                                | 71                                        |
| D131 DIRECT OR IMPLEMENT OJT PROGRAMS                                                            | 57                                        |
| D148 REVIEW JPGS                                                                                 | 57                                        |
| A 36 SELECT PERSONNEL FOR TEMPORARY DUTY (TDY)                                                   | 57                                        |
| D127 DETERMINE OJT TRAINING REQUIREMENTS                                                         | 57                                        |
| D145 PREPARE JOB PROFICIENCY GUIDES (JPGS)                                                       | 57                                        |
| B58 INITIATE USAF HAZARD REPORT FORMS (AF FORM 457)                                              | 57                                        |
| A27 PLAN OR PREPARE BRIEFINGS                                                                    | 57                                        |
| D126 DEMONSTRATE HOW TO LOCATE TECHNICAL INFORMATION                                             | 57                                        |

**REPRESENTATIVE TASKS PERFORMED BY ELECTRONICS INSTALLATION TEAM CHIEFS  
(GRP145, N=5)**

| <b>TASKS</b>                                                                                                  | <b>PERCENT<br/>MEMBERS<br/>PERFORMING</b> |
|---------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| A10 COORDINATE PRIOR TO INSTALLATION OF CABLE, ANTENNA, OR<br>INSIDE PLANT SCHEMES WITH USING ORGANIZATION    | 100                                       |
| A24 OBTAIN RIGHT-OF-WAY, ROAD PERMITS, DIGGING PERMITS,<br>OR OTHER CLEARANCES                                | 100                                       |
| B68 SUPERVISE CABLE-SPLICING INSTALLATION AND MAINTENANCE<br>SPECIALISTS (AFSC 36151)                         | 100                                       |
| E170 PERFORM VEHICLE OPERATOR INSPECTIONS USING FORMS SUCH<br>AS AFTO FORM 373 OR AFTO FORM 374               | 100                                       |
| C102 INSPECT IN-PROGRESS WORK                                                                                 | 100                                       |
| E157 ANNOTATE AS-BUILT OR AS-INSTALLED DRAWINGS                                                               | 100                                       |
| C114 INSPECT WORK AREAS FOR HAZARDOUS WORKING CONDITIONS                                                      | 100                                       |
| E160 INTERPRET CABLE TRANSFER WORK SHEETS OR CUT SHEETS                                                       | 100                                       |
| E159 INTERPRET CABLE RECORDS OR CABLE SPLICING DIAGRAMS                                                       | 100                                       |
| B64 RESOLVE TECHNICAL INSTALLATION PROBLEMS                                                                   | 100                                       |
| C109 INSPECT SPLICING PITS                                                                                    | 100                                       |
| C112 INSPECT TEST EQUIPMENT                                                                                   | 100                                       |
| C113 INSPECT VEHICLES OR SPECIAL PURPOSE EQUIPMENT                                                            | 100                                       |
| C94 INSPECT BURIED CABLE INSTALLATIONS FOR COMPLETE COMPLIANCE<br>WITH TECHNICAL DIRECTIVES OR SPECIFICATIONS | 100                                       |
| C96 INSPECT CABLE VAULTS, HANDHOLES, OR MANHOLES                                                              | 100                                       |
| C98 INSPECT GROUNDS OR BONDING DEVICES                                                                        | 100                                       |
| B45 COORDINATE CONTROL OR TURN-IN EXCESS SCHEME MATERIALS WITH<br>RESPONSIBLE ACTIVITIES                      | 100                                       |
| B46 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS                                                | 80                                        |
| A33 REVIEW LISTS OF MATERIALS, SCHEME DRAWINGS, OR SCHEME<br>SPECIFICATIONS FOR ACCURACY                      | 80                                        |
| B63 REQUEST ENGINEERING CHANGE REQUESTS/AUTHORIZATIONS (ECR/A)                                                | 80                                        |
| A31 PLAN WORK ASSIGNMENTS                                                                                     | 80                                        |
| E171 PREPARE CABLE TRANSFER WORK SHEETS OR CUT SHEETS                                                         | 80                                        |
| E161 INTERPRET CIRS OR PLANT-IN-PLACE RECORDS                                                                 | 80                                        |
| E168 MAKE ENTRIES ON PLANT-IN-PLACE RECORDS                                                                   | 80                                        |
| A15 DETERMINE WORK PRIORITIES                                                                                 | 80                                        |

REPRESENTATIVE TASKS PERFORMED BY QUALITY CONTROL INSPECTORS  
(GRP111, N=7)

| TASKS                                                                                                | PERCENT<br>MEMBERS<br>PERFORMING |
|------------------------------------------------------------------------------------------------------|----------------------------------|
| C102 INSPECT IN-PROGRESS WORK                                                                        | 100                              |
| C93 INSPECT AERIAL, BURIED, OR UNDERGROUND CABLE SPLICES<br>OTHER THAN HICS                          | 100                              |
| C94 INSPECT BURIED CABLE INSTALLATIONS FOR COMPLIANCE WITH<br>TECHNICAL DIRECTIVES OR SPECIFICATIONS | 100                              |
| C98 INSPECT GROUNDS OR BONDING DEVICES                                                               | 100                              |
| C107 INSPECT OR REPORT EVIDENCES OF CORROSION                                                        | 100                              |
| C96 INSPECT CABLE VAULTS, HANDHOLES, OR MANHOLES                                                     | 100                              |
| C87 EVALUATE SCHEME DRAWINGS OR SPECIFICATIONS                                                       | 100                              |
| C108 INSPECT SPLICING MATERIALS                                                                      | 100                              |
| E159 INTERPRET CABLE RECORDS OR CABLE SPLICING DIAGRAMS                                              | 100                              |
| C99 INSPECT HAND OR SPECIAL PURPOSE TOOLS                                                            | 100                              |
| C75 COORDINATE FINAL QUALITY CONTROL VERIFICATION TESTS WITH<br>RECEIVING INSTALLATIONS              | 100                              |
| C114 INSPECT WORK AREAS FOR HAZARDOUS WORKING CONDITIONS                                             | 86                               |
| C103 INSPECT INSTALLED CABLE PRESSURE SYSTEM EQUIPMENT OR<br>COMPONENTS                              | 86                               |
| C109 INSPECT SPLICING PITS                                                                           | 86                               |
| C112 INSPECT TEST EQUIPMENT                                                                          | 86                               |
| C104 INSPECT INTERIOR OR EXTERIOR GROUNDING OR SEALING DEVICES                                       | 86                               |
| E161 INTERPRET CIRS OR PLANT-IN-PLACE RECORDS                                                        | 86                               |
| C105 INSPECT METEOROLOGICAL CABLES                                                                   | 86                               |
| C113 INSPECT VEHICLES OR SPECIAL PURPOSE EQUIPMENT                                                   | 86                               |
| E165 MAINTAIN STANDARD PUBLICATIONS, RECORDS, OR CORRESPONDENCE<br>FILES                             | 86                               |
| C73 ANALYZE REPORTS OR RECORDS TO IMPROVE INSTALLATION OR<br>MAINTENANCE PRACTICES                   | 86                               |
| E180 PREPARE TECHNICAL ORDER SYSTEM PUBLICATION IMPROVEMENT<br>REPORT AND REPLY FORMS (AFTO FORM 22) | 86                               |
| C79 EVALUATE COMPLIANCE WITH WORK STANDARDS                                                          | 71                               |
| C111 INSPECT TECHNICAL PUBLICATION FILES                                                             | 71                               |
| C81 EVALUATE INSPECTION REPORTS OR PROCEDURES                                                        | 71                               |

REPRESENTATIVE TASKS PERFORMED BY HICS CABLE SHOP SUPERVISORS  
(GRP179, N=5)

| TASKS                                                                                            | PERCENT<br>MEMBERS<br>PERFORMING |
|--------------------------------------------------------------------------------------------------|----------------------------------|
| C79 EVALUATE COMPLIANCE WITH WORK STANDARDS                                                      | 100                              |
| C81 EVALUATE INSPECTION REPORTS OR PROCEDURES                                                    | 100                              |
| B46 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS                                   | 100                              |
| C113 INSPECT VEHICLES OR SPECIAL PURPOSE EQUIPMENT                                               | 100                              |
| A35 SCHEDULE WORK ASSIGNMENTS                                                                    | 100                              |
| A31 PLAN WORK ASSIGNMENTS                                                                        | 100                              |
| C74 ANALYZE WORKLOAD REQUIREMENTS                                                                | 100                              |
| A15 DETERMINE WORK PRIORITIES                                                                    | 100                              |
| E165 MAINTAIN STANDARD PUBLICATIONS, RECORDS, OR CORRESPONDENCE<br>FILES                         | 100                              |
| E167 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD FORMS<br>(AFTO FORM 349)                 | 100                              |
| B47 DIRECT DEVELOPMENT OR MAINTENANCE OF STATUS BOARDS, GRAPHS,<br>OR CHARTS                     | 100                              |
| C112 INSPECT TEST EQUIPMENT                                                                      | 100                              |
| G244 TRAVEL TO OR FROM MISSILE CABLE WORK AREAS                                                  | 100                              |
| D119 ASSIGN ON-THE-JOB TRAINING (OJT) TRAINERS                                                   | 100                              |
| C84 EVALUATE PERFORMANCE OF MAINTENANCE TEAMS                                                    | 100                              |
| A20 ESTABLISH PERFORMANCE STANDARDS                                                              | 100                              |
| C91 EVALUATE WORK SCHEDULES                                                                      | 100                              |
| E170 PERFORM VEHICLE OPERATOR INSPECTIONS USING FORMS SUCH AS<br>AFTO FORM 373 OR AFTO FORM 374  | 100                              |
| B67 SUPERVISE APPRENTICE CABLE SPlicing INSTALLATION AND<br>MAINTENANCE SPECIALISTS (AFSC 36131) | 100                              |
| C80 EVALUATE INDIVIDUALS FOR PROMOTION, DEMOTION, OR<br>RECLASSIFICATION                         | 100                              |
| B60 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES                                                      | 100                              |
| D125 COUNSEL TRAINEES ON TRAINING PROGRESS                                                       | 100                              |
| B65 RESOLVE TECHNICAL MAINTENANCE PROBLEMS                                                       | 100                              |
| D148 REVIEW JPGS                                                                                 | 100                              |
| B69 SUPERVISE CABLE SPlicing INSTALLATION AND MAINTENANCE<br>SUPERVISORS (AFSC 36171)            | 100                              |

**REPRESENTATIVE TASKS PERFORMED BY SUPERVISORS - BASE CABLE SECTION  
(GRP157, N=9)**

| <b>TASKS</b>                                                                          | <b>PERCENT<br/>MEMBERS<br/>PERFORMING</b> |
|---------------------------------------------------------------------------------------|-------------------------------------------|
| A33 REVIEW LISTS OF MATERIALS, SCHEME DRAWINGS, OR SCHEME SPECIFICATIONS FOR ACCURACY | 100                                       |
| A31 PLAN WORK ASSIGNMENTS                                                             | 100                                       |
| B59 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES                                     | 100                                       |
| B46 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS                        | 100                                       |
| A35 SCHEDULE WORK ASSIGNMENTS                                                         | 100                                       |
| C79 EVALUATE COMPLIANCE WITH WORK STANDARDS                                           | 100                                       |
| C74 ANALYZE WORKLOAD REQUIREMENTS                                                     | 100                                       |
| B65 RESOLVE TECHNICAL MAINTENANCE PROBLEMS                                            | 100                                       |
| A28 PLAN OR SCHEDULE INSPECTIONS                                                      | 100                                       |
| A34 SCHEDULE LEAVES OR PASSES                                                         | 100                                       |
| B64 RESOLVE TECHNICAL INSTALLATION PROBLEMS                                           | 100                                       |
| A14 DETERMINE REQUIREMENTS FOR SPACE, PERSONNEL, EQUIPMENT, OR SUPPLIES               | 100                                       |
| D141 ORIENT NEWLY-ASSIGNED PERSONNEL                                                  | 100                                       |
| A36 SELECT PERSONNEL FOR TEMPORARY DUTY (TDY)                                         | 100                                       |
| A3 ASSIGN PERSONNEL TO DUTY POSITIONS                                                 | 100                                       |
| D127 DETERMINE OJT TRAINING REQUIREMENTS                                              | 100                                       |
| B66 REVIEW EQUIPMENT AUTHORIZATION LISTS                                              | 100                                       |
| A5 COMPUTE COSTS OF MANPOWER, MATERIALS, OR EQUIPMENT                                 | 100                                       |
| B68 SUPERVISE CABLE SPLICING INSTALLATION AND MAINTENANCE SPECIALISTS (AFSC 36151)    | 89                                        |
| E159 INTERPRET CABLE RECORDS OR CABLE SPLICING DIAGRAMS                               | 89                                        |
| C84 EVALUATE PERFORMANCE OF MAINTENANCE TEAMS                                         | 89                                        |
| B50 DRAFT CORRESPONDENCE                                                              | 89                                        |
| C87 EVALUATE SCHEME DRAWINGS OR SPECIFICATIONS                                        | 89                                        |
| C114 INSPECT WORK AREAS FOR HAZARDOUS WORKING CONDITIONS                              | 89                                        |
| A15 DETERMINE WORK PRIORITIES                                                         | 89                                        |

REPRESENTATIVE TASKS PERFORMED BY CABLE AFFAIRS MONITORS  
(GRP054, N=8)

| TASKS                                                                                           | PERCENT<br>MEMBERS<br>PERFORMING |
|-------------------------------------------------------------------------------------------------|----------------------------------|
| E161 INTERPRET CIRS OR PLANT-IN-PLACE RECORDS                                                   | 100                              |
| E168 MAKE ENTRIES ON PLANT-IN-PLACE RECORDS                                                     | 88                               |
| E157 ANNOTATE AS-BUILT OR AS-INSTALLED DRAWINGS                                                 | 88                               |
| E162 MAINTAIN CABLE RECORDS, DIAGRAMS, OR CARD FILES                                            | 88                               |
| A6 COORDINATE CABLE INSTALLATION OR MAINTENANCE WITH<br>CONTRACTORS                             | 88                               |
| E159 INTERPRET CABLE RECORDS OR CABLE SPLICING DIAGRAMS                                         | 75                               |
| C116 PERFORM AERIAL FLY-OVER INSPECTIONS OR SURVEYS                                             | 75                               |
| E170 PERFORM VEHICLE OPERATOR INSPECTIONS USING FORMS SUCH AS<br>AFTO FORM 373 OR AFTO FORM 374 | 75                               |
| A24 OBTAIN RIGHT-OF-WAY, ROAD PERMITS, DIGGING PERMITS, OR OTHER<br>CLEARANCES                  | 75                               |
| E165 MAINTAIN STANDARD PUBLICATIONS, RECORDS, OR CORRESPONDENCE<br>FILES                        | 50                               |
| E169 PARTICIPATE IN STAFF MEETINGS                                                              | 50                               |
| I305 LOCATE CABLE ROUTES USING PLANT-IN-PLACE RECORDS                                           | 50                               |
| F200 WASH OR WAX VEHICLES OR TRAILERS                                                           | 50                               |
| A25 PLAN CABLE INSTALLATIONS, MODIFICATIONS, REMOVALS, OR<br>REHABILITATION                     | 50                               |
| E160 INTERPRET CABLE TRANSFER WORK SHEETS OR CUT SHEETS                                         | 50                               |

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