

U.S. Department of Labor Employment and Training Administration Office of Apprenticeship Training, Employer and Labor Services (OATELS) Washington, D.C. 20210	Distribution:  A-541 Headquarters A-544 All Field Tech A-547 SD+RD+SAC+; Lab.Com	<u>Subject:</u> National Guideline Standards of Apprenticeship for National Elevator Industry Educational Program (NEIEP)  <u>Code:</u> 400
Symbols: DSNIP/FG	Action: Immediate	

**PURPOSE:** To transmit to the Office of Apprenticeship Training, Employer and Labor Services (OATELS), Bureau of Apprenticeship and Training (BAT) staff new National Guideline Standards of Apprenticeship for the National Elevator Industry Educational Program (NEIEP).

**BACKGROUND:** The OATELS Administrator certified the National Guideline Standards for NEIEP on September 12, 2002. The NEIEP is a joint labor-management educational trust fund serving the International Union of Elevator Constructors (IUEC) and the employers who signed individual agreements with IUEC. Those employers are: ThyssenKrupp, KONE, Schindler, Otis, Fujitec, the Elevator Contractors of America-Multi-employer Bargain Group, Mitsubishi Elevator Division, and AMTECH Elevator Services.

The attached National Guideline Standards are in compliance with the requirements of Title 29, CFR Parts 29 and 30. Because of the existing Master Company Agreement, which expires on July 8, 2007, all affiliates of IUEC are in complete agreement with the local apprenticeship standards contained within these National Guideline Standards. Therefore, IUEC has recommended that these local apprenticeship standards be used to accommodate IUEC Locals and signatory employers. However, the NEIEP, IUEC, and participating employers are cognizant that SACs may need to impose additional requirements that must be addressed in the local standards.

If you have any questions, please contact Frank Goethe at (202) 693-3813.

**ACTION:** OATELS/BAT staff should review and retain a copy of this bulletin, including all attachments, as a source for developing apprenticeship standards and/or providing technical assistance.

**NOTE:** This bulletin is being sent via electronic mail (e-mail).

Attachment

**NATIONAL  
GUIDELINES FOR  
APPRENTICESHIP STANDARDS**

Developed by

**NATIONAL ELEVATOR INDUSTRY EDUCATION PROGRAM (NEIEP)**

For

**INTERNATIONAL UNION OF ELEVATOR CONSTRUCTORS (IUEC)**

And

**PARTICIPATING EMPLOYERS**

**Occupation:**

**ELEVATOR CONSTRUCTOR MECHANIC**

**O\*NET/SOC CODE: 47-4021.00 RAIS CODE: 0173**

**DEVELOPED IN COOPERATION WITH THE  
U.S. DEPARTMENT OF LABOR  
BUREAU OF APPRENTICESHIP AND TRAINING**

**APPROVED AND CERTIFIED BY:**

**//SIGNED//**

**ANTHONY SWOOPE, ADMINISTRATOR  
OFFICE OF APPRENTICESHIP TRAINING, EMPLOYER AND LABOR SERVICES  
UNITED STATES DEPARTMENT OF LABOR**

**CERTIFICATION DATE: 9/12/02  
CERTIFICATION NUMBER: C-2002-06**

**SERVING THE INDUSTRY WITH A BUREAU OF APPRENTICESHIP AND TRAINING  
(BAT) APPROVED APPRENTICESHIP PROGRAM**

## NATIONAL ELEVATOR INDUSTRY EDUCATION PROGRAM MISSION STATEMENT



**The National Elevator Industry Education Program (NEIEP) is a joint labor-management educational trust fund serving the International Union of Elevator Constructors (IUEC) and the employers who employ its members. Some of NEIEP's main responsibilities are to manage and direct the implementation of curricula; design, administer and monitor probationary training and evaluation programs for all new hires entering the trade; administer a home study program for eligible students; and for instructors – conduct initial through advanced level seminars to improve teaching skills and techniques. The overall mission of NEIEP is to improve the knowledge and skills of apprentices and mechanics not only for their benefit, but also for the benefit of their employer and the industry.**

### **FOREWORD**

The National Elevator Industry Education Program (NEIEP) recognizes the need for structured training to maintain the high level of skill and competence demanded in the elevator industry. Registered apprenticeship provides the most practical and sound method to meet that need, to prepare individuals to be skilled craft workers, and to ensure industry an adequate supply of skilled workers. In furtherance of those goals, the NEIEP has established these pattern standards of apprenticeship outlining for local committees the terms and conditions for the qualification, recruitment, selection, employment and training of apprentices that should be included in their local apprenticeship standards.

Title 29, Code of Federal Regulations, Part 29, outlines the requirements for registration of acceptable apprenticeship programs for Federal purposes, and sets forth labor standards that safeguard the welfare of apprentices. Such registration may be by the U. S. Department of Labor, Bureau of Apprenticeship and Training (BAT), or by a State Apprenticeship Agency (SAC) recognized by the Bureau as the appropriate body in that State for approval of local apprenticeship programs for Federal purposes. Title 29, Code of Federal Regulations, Part 30 sets forth the requirements for equal employment opportunity in apprenticeship to which all registered apprenticeship programs must adhere.

The purpose of these National Guideline Standards is to provide policy and guidance to local Joint Apprenticeship Committees (JAC) in developing standards for apprenticeship for local approval and registration. The U. S. Department of Labor, Office of Apprenticeship Training, Employer and Labor Services certify these National Guideline Standards developed by the NEIEP, as substantially conforming to the requirements of Title 29, CFR Parts 29 and 30. The SACs recognized by the Bureau of Apprenticeship and Training to register local programs, and/or local laws and regulations, may impose additional requirements that must be addressed in the local apprenticeship standards.

Local standards of apprenticeship must be developed and registered by each local JAC that undertakes to carry out an apprenticeship training program. The local standards of apprenticeship will be the JAC's written plan outlining all terms and conditions for the recruitment, selection, employment, training, and supervision of apprentices as subscribed to by the JAC, and must meet all the requirements of the local registration agency.

The establishment of local apprenticeship programs under these National Guideline Standards will provide the sponsor with a skilled and versatile work force at each of its locations by providing apprentices the opportunity to become mechanics through an organized and properly supervised program of training, practical experience and related instruction.

### **THE NATIONAL ELEVATOR INDUSTRY EDUCATION PROGRAM (NEIEP)**

The National Elevator Industry, Inc., and the International Union of Elevator Constructors (IUEC) have established an Educational Trust Fund administered by a joint board of trustees. The Educational Trust Fund known as the "National Elevator Industry Education Program" shall provide an apprenticeship program for the education and training of apprentices as well as a continuing education program for elevator mechanics. Such Fund has been established pursuant to and in compliance with the provisions of Section 302 of the Labor – Management Relations Act, as amended.

The pattern standards for development of local apprenticeship programs are set forth within these National Guideline Standards. Through coordination with the Director of the NEIEP, local JACs shall prepare and submit for approval to the applicable registration agency such documents as may be necessary to secure registration of their apprenticeship program.

The Board of Trustees of the Educational Trust shall have full authority to adopt these National Guideline Standards for all parties signatory to the Master Company Agreement with IUEC.

Except as otherwise specifically provided for in the national guideline standards, any disputes arising out of the application of the provisions of a local program, which are not resolved by the JAC, will be subject to the established grievance procedure. By mutual agreement, the parties may waive the steps of the grievance procedure and refer a grievance directly to arbitration.

### **DEVELOPMENT OF AFFIRMATIVE ACTION PLAN AND SELECTION PROCEDURES**

Equal employment opportunity is required of every registered apprenticeship program. Such requirements apply to the recruitment, selection, employment, and training of apprentices throughout their apprenticeship.

Those programs with five or more apprentices, or where there is a likelihood of five or more apprentices, must have a written affirmative action plan and selection procedure that is approved by the registration agency as part of the standards of apprenticeship.

Sample affirmative action plan and selection procedures are attached.

Representatives of the registration agency are available to assist the local JAC in developing its standards of apprenticeship, affirmative action plan and selection procedures using the sample provided. Once developed, the standards of apprenticeship, as well as the affirmative

action plan and selection procedures must be submitted to the registration agency for approval and registration.

**OFFICIAL ADOPTION OF NATIONAL GUIDELINES FOR  
APPRENTICESHIP STANDARDS:**

The National Elevator Industry Education Program hereby officially adopts these National Guidelines for Apprenticeship Standards on this 6th day of September 2002.

*//Signed//*

\_\_\_\_\_  
Earl Romnes, Chairman, NEIEP

NEIEP

*//Signed//*

\_\_\_\_\_  
Larry Sakamoto, Co-Chairman,

**STANDARDS OF APPRENTICESHIP**

**DEVELOPED BY**

*Insert Name Of JAC*

**FOR THE OCCUPATION OF**

**ELEVATOR CONSTRUCTOR**

**O\*NET/SOC CODE: 47-4021.00 RAIS CODE: 0173**

**APPROVED BY**

*Insert Name Of Registration Agency*

**SERVING THE INDUSTRY WITH A BUREAU OF APPRENTICESHIP AND TRAINING  
(BAT)**

**APPROVED APPRENTICESHIP PROGRAM**

## TABLE OF CONTENTS

Pa g e

Forewordii

Definitionsiii

SECTION I.	Program Administration	1
SECTION II.	Term of Apprenticeship	2
SECTION III.	Qualifications for Apprenticeship	2
SECTION IV.	Equal Opportunity Pledge	3
SECTION V.	Affirmative Action Plan	3
SECTION VI.	Apprenticeship Agreement	3
SECTION VII.	Probationary Period	4
SECTION VIII.	Credit for Previous Experience	5
SECTION IX.	Related Instruction	5
SECTION X.	Safety and Health Training	6
SECTION XI.	Work Experience	6
SECTION XII.	Hours of Work	6
SECTION XIII.	Ratio of Apprentices to Mechanics	6
SECTION XIV.	Layoff	6
SECTION XV.	Qualification of Employers	7
SECTION XVI.	Supervision of Apprentices	7
SECTION XVII.	Wage and Advancement	7
SECTION XVIII.	Responsibilities of the Apprentice	8
SECTION XIX.	Disciplinary Action	9
SECTION XX.	Adjusting Differences/Complaint Procedure	9
SECTION XXI.	Certificate of Completion of Apprenticeship	11
SECTION XXII.	Records and Examinations	11
SECTION XXIII.	Maintenance of Records	12
SECTION XXIV.	Transfer of Training Obligation	12
SECTION XXV.	Consultants	12
SECTION XXVI.	Registration of Standards	13
SECTION XXVII.	Amendments or Modifications	13
SECTION XXVIII.	Cancellation and Deregistration	13
SECTION XXIX.	Notice to Registration Agency	13
SECTION XXX.	Conformance with Federal Laws/Collective Bargaining Agreement	14
SECTION XXXI.	Official Adoption of Apprenticeship Standards	15

Addendum A - Work Process Schedule

Addendum B - Related Instruction Outline

Addendum C - Affirmative Action Plan and Selection Procedures

Addendum D - Sample Apprenticeship Agreement

## **FOREWORD**

These [Insert Name Of Joint Apprenticeship Committee (JAC)] Apprenticeship Standards have as their objective, the training of Elevator Constructors skilled in all phases of the industry. The JAC recognizes that in order to accomplish this, there must be well-developed on-the-job training and supplemental related instruction.

This recognition has resulted in the development of these apprenticeship standards. They were developed in accordance with the basic standards recommended by the United States Department of Labor, Bureau of Apprenticeship and Training, as a basis from which JACs can work to establish an apprenticeship training program that meets the particular needs of the area.

\

## DEFINITIONS

**APPRENTICE:** An individual meeting the qualifications described in these Standards of Apprenticeship who has signed an apprenticeship agreement providing for training and related instruction under the standards and who is registered with the registration agency.

**APPRENTICESHIP AGREEMENT:** The written agreement between the apprentice and the Joint Apprenticeship Committee setting forth the responsibilities and obligations of all parties to the agreement with respect to the apprentice's employment and training under the standards. Each apprenticeship agreement must be registered with the registration agency.

**AREA COORDINATOR:** Individuals hired by the NEIEP to manage apprenticeship programs in their jurisdictional areas.

**CERTIFICATE OF COMPLETION OF APPRENTICESHIP:** The certificate of completion issued by the registration agency to those registered apprentices certified and documented as successfully completing the apprentice training requirements outlined in the standards of apprenticeship.

**COLLECTIVE BARGAINING AGREEMENT:** The negotiated agreement between the IUEC and signatory employers that sets forth the terms and conditions of employment.

**DICTIONARY OF OCCUPATIONAL TITLES (D.O.T.):** Provides basic occupational information including job definitions, detailed tasks to be performed, and a number indicating a range of time to prepare for average performance in the occupation. The last update to the DOT was completed in 1991. Much of the data in the DOT was collected much earlier than that, during the 1970's, which does not accommodate the needs of today's labor market. An Advisory Panel on the Dictionary of Occupational Titles was convened in 1990 and published a report in 1993 that laid the basis for the development of the Occupational Information Network, or O\*NET.

**EMPLOYER:** Any employer who has signed an agreement with the IUEC agreeing to be bound to these standards of apprenticeship and to contribute to the cost of maintaining the program of education provided for herein.

**NATIONAL ELEVATOR INDUSTRY EDUCATIONAL PROGRAM (NEIEP):** The joint trust of the International Union of Elevator Constructors and the signatory employers who employ its members.

**MECHANIC:** A journey level individual recognized by the sponsor as being fully trained and qualified to perform the work of the trade and to provide example, guidance and training to apprentices.

**O\*NET-SOC CODE:** The Occupational Information Network (O\*NET) codes and titles are based on the new Standard Occupational Classification (SOC) system mandated by the federal Office of Management and Budget for use in collecting statistical information on occupations. The O\*NET classification, **which replaces the DOT**, uses an 8-digit O\*NET-SOC code. Use of the SOC classification as a basis for the O\*NET codes ensures that O\*NET information can be readily linked to labor market information such as occupational employment and wage data at the national, State, and local levels.

**REGISTERED APPRENTICESHIP INFORMATION SYSTEM (RAIS):** The Federal system, which provides for the automated collection, retention, updating, retrieval and summarization of information related to apprentices and apprenticeship programs. Formerly known as the Apprenticeship Information Management System (AIMS).

**REGISTRATION AGENCY:** The U.S. Department of Labor's Bureau of Apprenticeship and Training or the recognized State apprenticeship agency (as appropriate).

**SPONSOR:** The Joint Apprenticeship Committee in whose name the standards of apprenticeship will be registered, and which will have the full responsibility for the administration and operation of the apprenticeship program.

**STANDARDS OF APPRENTICESHIP:** This entire document including all addenda and attachments hereto, and any future addenda or additions approved by the registration agency.

**UNION:** Shall mean the **International Union of Elevator Constructors (IUEC)** and any of its affiliated local unions party to an appropriate labor agreement between the parties.

## **SECTION I - PROGRAM ADMINISTRATION**

### **Structure of the Joint Apprenticeship Committee (JAC)**

[Name Of Committee], hereinafter referred to as the JAC, is the sponsor of the apprenticeship program outlined under these standards of apprenticeship. The JAC is composed of an equal number of representatives not to exceed a total of 8, appointed by employers and by the International Union of Elevator Constructors. A new chairman will be appointed each year, a representative from the IUEC will be appointed on odd years and a representative from the employers will be appointed on even years.

### **The JAC shall be responsible for:**

1. Establishing and registering standards of apprenticeship, and ensuring adherence to them.
2. Establishing and maintaining rules and requirements governing the selection of, as well as policies, administration, supervision, and training of apprentices. The rules and requirements shall be in conformity with the applicable bargaining agreement and with these apprenticeship standards.

3. Selecting apprentices in accordance with the affirmative action plan/selection procedure made a part of the apprenticeship standards.
4. Initiating and signing all apprenticeship agreements for apprentices and forwarding those agreements to the registration agency for approval. In addition, the JAC will notify the registration agency and other appropriate parties of the cancellation, suspension, or reinstatement of apprentices and the reasons therefore, and of apprentice completions.
5. Arranging for apprentices to get the required on-the-job training and related instruction, provided by the National Elevator Industry Educational Program and other agreed upon qualified training resources that will provide them with the diversity of training delineated in the attached Work Process Schedule and Related Instruction Outline (Addenda A and B respectively).
6. Monitoring and evaluating apprentice's progress including the review of apprentice's records to ensure apprentices and their employers are fulfilling their responsibilities under the program. JAC will review, approve and document all apprentice actions including hours, content, and progress in training on-the-job and in related instruction; step progressions; disciplinary actions; poor evaluations; corrective action plans; successful completions; cancellations; and any other performance or attendance-related issues.
7. Hearing and resolving complaints regarding violations of the apprenticeship agreement.
8. Certifying the apprentice has completed both the required on-the-job training and related instruction, and submitting such certification to the registration agency with request for issuance of the Certificate of Completion of Apprenticeship.
9. Developing, implementing and reviewing the affirmative action plan, EEO efforts, and selection procedures. Modifying the affirmative action plan/selection procedures as a result of the review when appropriate.
10. Maintaining all records relating to the recruitment, selection, employment and training of apprentices for a minimum of five years.
11. Administering and operating an apprenticeship training program for the trade of Elevator Constructor.
12. Evaluate, investigate and determine credit for previous experience and education pursuant to an objective set of standards to be adopted by JAC.

## **SECTION II - TERM OF APPRENTICESHIP - 29.5(b)(2)**

The term of apprenticeship shall consist of four (4) years with a minimum OJT attainment of 6800 hours supplemented by the required hours of related instruction.

## **SECTION III - QUALIFICATIONS FOR APPRENTICESHIP - 29.5(b)(10)**

Applicants shall meet the following minimum qualifications:

1. All applicants shall be at least eighteen (18) years of age.
2. Applicants shall be high school graduates or provide proof of equivalent educational attainment such as successful completion of the General Education Development (GED) tests. Each applicant shall submit, with the completed application, a high school transcript or an official report of GED test results.
3. All applicants shall pass an examination designed to test the applicant's reading and math skills and aptitude for employment in the elevator industry
4. Upon selection, pass a valid drug test. (Paid for by employer).
5. Be capable of performing the physical requirements of the job without posing a direct threat to the health and safety of themselves or others.
6. Consent to a post offer pre-hire medical exam.

Selection into the apprenticeship program will be in accordance with the affirmative action plan and selection procedures made a part of these standards. (Addendum C)

## **SECTION IV - EQUAL OPPORTUNITY PLEDGE - 29.5(b)(20)**

The recruitment, selection, employment, and training of apprentices during their apprenticeship, shall be without discrimination because of race, color, religion, national origin, or sex. The JAC will take affirmative action to provide equal opportunity in apprenticeship and will operate the apprenticeship program as required under Title 29 of the Code of Federal Regulations, Part 30, as amended. (Insert applicable state regulations here, if applicable)

## **SECTION V - AFFIRMATIVE ACTION PLAN - 29.5(b)**

If the sponsor employs five or more apprentices, the JAC will adopt an affirmative action plan and selection procedures as required under Title 29, CFR Part 30. It will be attached as Addendum C.

## **SECTION VI - APPRENTICESHIP AGREEMENT - 29.5(b)(11)**

After an applicant for apprenticeship has been selected, but before employment as an apprentice or enrollment in related instruction, the apprentice shall be covered by a written apprenticeship agreement (Addendum D) signed by the JAC and the apprentice and approved by and registered with the registration agency. Such agreement shall contain a statement making the terms and conditions of these standards a part of the agreement as though expressly written therein.

For this reason each apprentice shall be given the opportunity to review these standards, the JAC's policies including the complaint process, and the apprenticeship agreement before signing the agreement. Review of such documents may include a discussion on the content and meaning of the documents between the JAC or its designee and the apprentice.

The original completed and signed apprenticeship agreement must be forwarded to the registration agency for approval and final execution before taking effect. A copy will be returned to the coordinator who will ensure that a copy is provided to the apprentice, the employer, the JAC and, when applicable, the Veteran's Administration.

## **SECTION VII - PROBATIONARY PERIOD - 29.5(b)(8), (b)(19)**

Each applicant selected for apprenticeship shall serve a probationary period of 6 months of on-the-job training. (A newly hired apprentice without previous mechanical experience shall be classified as a probationary employee in the status of an apprentice for a period or periods totaling six (6) months/within the aggregate period of not more than nine (9) months).

Probationary apprentices shall advance from the fifty (50) percent wage rate to the first year apprentice wage rate upon completion of 6 months in the elevator industry provided such probationary apprentices have worked a minimum of one hundred (100) hours in each thirty (30) day period during the six (6) months.

Apprentices may complete their probationary period with more than one employer provided such employer has a labor contract with the IUFC, and the period of six (6) months probation may cover an aggregate period of not more than nine (9) months. A month shall be deemed worked when the probationary apprentice completes one hundred (100) hours in any thirty (30) day period.

During the probationary period either the apprentice or JAC may terminate the apprenticeship agreement, without stated cause, by notifying the registration agency and the other party in writing.

The records for each probationary apprentice shall be reviewed prior to the end of the probationary period. Records shall consist of periodic reports from the apprentice's employer or employers, a complete record of attendance and grades in related instruction, and any disciplinary action taken during the probationary period. Any probationary apprentice considered to be unsatisfactory after a review of the probationary records shall have his or her apprenticeship agreement canceled before the expiration of the probationary period, and

the registration agency will be so notified.

Each probationary apprentice evaluated as satisfactory after a review of the probationary records shall be given full credit for the probationary period and continue in the program.

After the probationary period the apprenticeship agreement may be canceled at the request of the apprentice, or may be suspended, canceled or terminated by the JAC for good cause after documented due notice to the apprentice and a reasonable opportunity for corrective action. In such cases, the JAC will provide written notice to the apprentice and to the registration agency of the final action taken.

### **SECTION VIII - CREDIT FOR PREVIOUS EXPERIENCE - 29.5(b)(12)**

The JAC may grant credit toward the term of apprenticeship to new apprentices who demonstrate previous acquisition of experience, training or skills or knowledge equivalent to which would be received under these standards of apprenticeship. Credit for previous experience and/or education in the military service, an apprenticeship training program, a skilled trade classification with any company, or post high school degrees, certificates or courses may be granted to the time required on any phase of the apprenticeship training or related training schedule up to a maximum of two years.

Apprentice applicants seeking credit for previous experience, training or skills gained outside the supervision of the JAC, must submit such request at the time of application and furnish records and such other information as deemed appropriate by the JAC to substantiate the claim. To be eligible to receive credit for previous experience or education, apprentices must demonstrate satisfactorily that they possess such experience and or education and are able to do the job.

Applicants requesting such credit who are selected into the apprenticeship program shall start at the beginning wage rate. Prior to completion of the probationary period, the amount of credit to be awarded will be determined after review of the apprentice's previous work and training/education record and evaluation of the apprentice's performance, skill and knowledge demonstrated during the probationary period. In all cases, the JAC shall, by objective criteria, determine what credit shall be granted for prior experience and/or education.

At the time such credit is given, the apprentice's wage rate shall be correspondingly adjusted based on the amount of credit given toward completion of the work processes and or number of module final exams taken and passed.

The registration agency shall be notified promptly of the granting of credit and the adjusted wage rate for each apprentice.

### **SECTION IX - RELATED INSTRUCTION - 29.5(b)(4)**

During each segment of training, each apprentice is required to complete 144 hours a year of related instruction consisting of the modules assigned to that segment and attendance at classroom instruction available in their geographic area.

Apprentices will not be paid for hours spent attending related instruction classes.

Apprentices must successfully complete all modules and classroom instruction assigned for a particular segment of training before being advanced to the next period of training. In cases of failure of an apprentice to fulfill the obligations regarding related instruction without due cause, the JAC shall take appropriate disciplinary action and may terminate the apprenticeship agreement after due notice to the apprentice and opportunity for corrective action.

#### **SECTION X - SAFETY AND HEALTH TRAINING - 29.5(b)(9)**

All apprentices shall receive instruction in safe and healthful work practices and shall be trained in facilities and other environments that are in compliance with the occupational safety and health standards promulgated by the Secretary of Labor under Public Law 91-596.

#### **SECTION XI - WORK EXPERIENCE - 29.5(b)(3)**

During the term of apprenticeship the apprentice shall receive training in all phases of the trade necessary to qualify as a mechanic. The Work Process Schedule is attached to and forms a part of these standards (Addendum A).

#### **SECTION XII - HOURS OF WORK**

Apprentices shall work the same hours as mechanics. Apprentices may work overtime as provided by the collective bargaining agreement; however, no apprentice shall be allowed to work overtime if it interferes with related instruction classes. In case apprentices are required to work overtime, they shall receive credit on the term of apprenticeship for only the actual hours worked.

Apprentices who do not complete the required hours of on-the-job training during a given segment shall have that segment extended until the required number of hours of training is accrued.

#### **SECTION XIII - RATIO OF APPRENTICES TO MECHANICS 29.5(b)(7)**

Consistent with proper supervision, training, safety, and continuity of employment throughout and upon completion of the apprenticeship, the ratio of apprentices to mechanics shall be as set forth in the collective bargaining agreement. Copies of the pertinent language from the collective bargaining agreement will be provided to the registration agency.

#### **SECTION XIV - LAYOFF**

When a reduction in workforce occurs, apprentices are to be laid off in a manner consistent with the terms of the collective bargaining agreement.

If for any reason a layoff of an apprentice occurs, the apprenticeship agreement shall remain in effect unless cancelled by the JAC or the apprentice. However, credit for related instruction shall be given when the apprentice continues such instruction during the layoff.

#### **SECTION XV - QUALIFICATIONS OF EMPLOYERS**

All employers of apprentices must satisfy the JAC they can meet the following qualifications:

1. Be financially responsible and current in their fringe benefit obligations, as defined in the collective bargaining agreement;
2. Have the necessary facilities to assure safe and effective training;
3. Employ one or more mechanics steadily;
4. Agree to adhere to the program as administered.

#### **SECTION XVI - SUPERVISION OF APPRENTICES - 29.5(b)(14)**

The employer, or person designated by the employer such as the superintendent, foreman, or mechanic, shall be responsible for the training of the apprentice on the job. The supervisor of the apprentice shall be responsible for the apprentice's work assignments, periodic written evaluation of work performance and completion and submittal of progress reports provided by the JAC. Apprentices shall be under the general supervision of the employer and under the direct supervision of the mechanic to whom they are assigned.

#### **SECTION XVII - WAGES AND ADVANCEMENT - 29.5(b)(5)**

Apprentices shall be paid a progressively increasing schedule of wages during their apprenticeship, based on the acquisition of increased skill and competence on the job and in related instruction. The wage schedule shall be a progressively increasing percentage of the mechanic's wage rate established in the applicable collective bargaining agreement.

The apprentice shall receive the full amount of all cost of living increases or bonuses that are negotiated through the collective bargaining agreement. When an apprentice completes the required hours of training and all of the required related instruction, the apprentice, upon recommendation of the JAC, shall be permitted to sit for the Mechanic's Examination. Upon successful completion of the Mechanic's Examination, the apprentice shall be classified as a mechanic and shall receive not less than the rate paid to a mechanic. Apprentices that do not successfully complete the Mechanic's Examination or who fail to sit for the Mechanic's Examination when they are required to do so shall be reclassified as fourth year apprentices and required to repeat related instruction classes as required by the Committee.

Before an apprentice is advanced to the next segment of training, or to the status of mechanic, the JAC shall evaluate all progress to determine whether advancement has been earned by satisfactory work on the job and in related instruction classes. In determining

whether satisfactory progress has been made, the JAC shall be guided by the records of work experience and related instruction.

#### WAGE RATE PER HOUR:

Probationary Apprentice, (0-6 months): 50% of Mechanic's Rate.

First Year Apprentice, (7-12 months): 55% of Mechanic's Rate, plus fringe benefits as provided by the collective bargaining agreement.

Second Year Apprentice, (13-24 months): 65% of Mechanic's Rate, plus fringe benefits as provided by the collective bargaining agreement.

Third Year Apprentice, (25-36 months): 70% of Mechanic's Rate, plus fringe benefits as provided by the collective bargaining agreement.

Fourth Year Apprentice, (37-48 months): 80% of Mechanic's Rate, plus fringe benefits as provided by the collective bargaining agreement.

### **SECTION XVIII - RESPONSIBILITIES OF THE APPRENTICE**

1. Perform diligently and faithfully the work of the trade and such other duties as may be assigned in accordance with these standards.
2. Respect their employer's property and abide by the working rules and regulations of the local union and the JAC.
3. Attend and complete satisfactorily the required hours of instruction in subjects related to the trade, as provided under these standards.
4. Maintain such records of on-the-job training and related instruction as required by the JAC.
5. Develop and practice safe working habits, and work in such a manner as to assure his or her personal safety and that of other workers.
6. Conduct him or her (self) at all times in a creditable and ethical manner.
7. Adhere to any other such policies or procedures established by the JAC.

### **SECTION XIX - DISCIPLINARY ACTION**

The JAC may take disciplinary action against any apprentice or employer for failure to comply with the apprenticeship agreement or the apprenticeship standards.

Before invoking disciplinary action the JAC will notify the apprentice or the employer of the infraction and provide a reasonable opportunity for corrective action.

Disciplinary action may include postponement of advancement from one segment of training (for apprentices) to the next or temporary removal of the apprentice from the job, causing loss of employment. It may also include suspension, cancellation or termination of the apprenticeship agreement and removal of the apprentice from the apprenticeship program. Such action will occur only after due notice to the apprentice and opportunity for corrective action. Removal by the JAC shall cancel the classification of the apprentice and thus the opportunity to complete the training.

Records of all disciplinary actions shall be maintained by the JAC. The registration agency shall be notified whenever a disciplinary action results in the suspension, cancellation or termination of an apprenticeship agreement and causes therefore.

**SECTION XX - ADJUSTING DIFFERENCES/COMPLAINT PROCEDURE - Title 29 CFR 29.5(b)(21), Title 29 CFR 29.30(11)**

The JAC shall have full authority to supervise the enforcement of these apprenticeship standards. Its decision will be final and binding on the employer, the union, and the apprentice, unless otherwise noted below.

If an applicant or an apprentice believes an issue exists that adversely affects his/her participation in the apprenticeship program or violates the provisions of the apprenticeship agreement or standards, relief may be sought through one or more of the following avenues, based on the nature of the issue:

**Title 29 CFR 29.5 (b)(21)**

1. For issues regarding wages, hours, working conditions, and other issues covered by the collective bargaining agreement, apprentices may seek resolution through the applicable grievance and arbitration in the articles of the collective bargaining agreement.
2. For apprenticeship program administrative issues or issues concerning provisions of the apprenticeship agreement or these standards not addressed in the collective bargaining agreement, the apprentice may choose to have the issue reviewed by the JAC. The JAC shall hear and resolve all complaints of violations concerning the apprenticeship agreement and the registered apprenticeship standards, for which written notification is received within fifteen (15) days of violations. The JAC shall make such rulings, as it deems necessary in each individual case, and within thirty (30) days of receiving the written notification. Either party to the apprenticeship agreement may consult with the registration agency for an interpretation of any provision of the standards over which differences occur. The name and address of the appropriate authority to receive, process and make disposition of complaints is: JAC should insert applicable information).

3. If the apprentice believes the JAC did not resolve the issue to his or her satisfaction, the apprentice may appeal to the (fill in the registration agency) and exercise its complaint procedure.

### **Title 29 CFR 30.11**

1. Any apprentice or applicant for apprenticeship who believes that he or she has been discriminated against on the basis of race, color, religion, national origin, or sex, with regard to apprenticeship, or that the equal opportunity standards with respect to his or her selection have not been followed in the operation of the apprenticeship program, may contact directly the Federal Equal Employment Opportunity Commission (EEOC), and/or the U.S. Department of Labor, Registration Agency.
2. The complaint must be filed not later than one hundred eighty (180) days from the date of the alleged discrimination or specified failure to follow the equal opportunity standards, and, in the case of complaints filed directly with the review body designated by the program sponsor to review such complaints, any referral of such complaint by the complainant to the U.S. Department of Labor must occur within the time limitation stated above or thirty (30) days from the final decision of such review body, whichever is later. The time may be extended by the U.S. Department of Labor for good cause shown. Complaints of sexual harassment in the workplace may be filed and processed under Title 29, CFR Part 30, and the procedures as set forth above.

The complaint shall be in writing and shall be signed by the complainant. It must include the name, address, and telephone number of the person allegedly discriminated against, the program sponsor involved, and a brief description of the circumstances of the failure to apply equal opportunity standards.

The JAC will provide written notice of their complaint procedure to all applicants for apprenticeship and all apprentices.

### **SECTION XXI - CERTIFICATE OF COMPLETION OF APPRENTICESHIP - 29.5(b)(15)**

Upon satisfactory completion of the requirements of the apprenticeship program as established in these standards, the JAC shall so certify in writing to the registration agency and request that a Certificate of Completion of Apprenticeship be awarded to the completing apprentice(s). Such requests shall be accompanied by the appropriate documentation for both the on-the-job training and the related instruction.

### **SECTION XXII - RECORDS AND EXAMINATIONS - 29.5(b)(6)**

Each apprentice shall be responsible for maintaining a record of his/her work experience/training on the job and in related instruction and for having this record verified by his/her supervisor at the end of each week. Apprentices shall authorize an effective release of their completed related instruction records from the local school authorities to the JAC. The record cards and all data pertaining to the apprenticeship will be the property of the JAC. This record will be included in each apprentice's record file maintained by the JAC.

Before each period of advancement, or at any other time when conditions warrant, the JAC shall evaluate the apprentice's record to determine whether he/she has made satisfactory progress. If an apprentice's related instruction or on-the-job progress is found to be unsatisfactory, the JAC may determine whether the apprentice will continue in a probationary status, or require the apprentice to repeat a process or series of processes before advancing to the next wage classification.

Should it be found that the apprentice does not have the demonstrated ability or learned behavior to continue the training to become a mechanic, the JAC will, after the apprentice has been given adequate assistance and opportunity for corrective action, cancel the apprenticeship agreement.

Written records of progress evaluations and corrective and final actions shall be maintained by the JAC.

### **SECTION XXIII - MAINTENANCE OF RECORDS - 29.5(b)(22)**

The JAC shall maintain for a period of five (5) years from the date of last action, all records relating to apprentice applications (whether or not selected), the employment and training of apprentices, and any other information relevant to the operation of the program, including but not limited to, records on the recruitment, application and selection of apprentices, and records on individual apprentice's job assignments, promotions, demotions, layoffs, terminations, rates of pay, or other forms of compensation, hours of work and training, evaluations, and other relevant data. The records shall permit identification of minority and female (minority and non-minority) participants. The records shall be made available on request to the registration agency.

### **SECTION XXIV - TRANSFER OF TRAINING OBLIGATION - 29.5(13)**

The JAC may transfer an apprentice from one employer to another to provide continuous employment and to assure the apprentice more complete on-the-job training experience in all aspects of the trade.

If an employer is unable to fulfill its training obligation due to lack of work or failure to conform to the standards of apprenticeship, the JAC, with the consent of the apprentice, may move the affected apprentice(s) to other participating employers.

### **SECTION XXV - CONSULTANTS**

Representatives of the registration agency will be available to advise and assist in the successful operation of this apprenticeship program upon request by the program sponsor.

### **SECTION XXVI - REGISTRATION OF STANDARDS**

These standards of apprenticeship will, upon adoption by the JAC, be submitted to the appropriate registration agency for approval. Such approval is required before implementation of this program.

## **SECTION XXVII - AMENDMENTS OR MODIFICATIONS - 29.5(b)(17)**

These standards of apprenticeship may be amended at any time by the JAC, provided that no amendment or modification adopted shall alter any apprenticeship agreement in force at the time without the consent of all parties to the agreement, and provided further that such amendment shall be submitted to the registration agency for approval and registration prior to being placed in effect. A copy of each amendment adopted will be furnished to each apprentice to whom the amendment applies.

## **SECTION XXVIII - CANCELLATION AND DEREGISTRATION - 29.5(b)(17)**

**(Insert Name Of JAC)** reserves the right to discontinue at any time the apprenticeship program set forth herein. The registration agency shall be notified promptly of any decision to cancel the program.

Deregistration of these standards of apprenticeship may be initiated by the registration agency for failure of the JAC to abide by the provisions herein. Such deregistration will be in accordance with the registration agency's regulations and procedures.

Within fifteen (15) days of cancellation of the apprenticeship program (whether voluntary or involuntary), the JAC will notify each apprentice of the cancellation and the effect of it. This notification will conform to the requirements of Title 29, CFR Part 29.7.

## **SECTION XXIX - NOTICE TO REGISTRATION AGENCY - 29.5(b)(18)**

The registration agency shall be notified promptly of all new apprentices to be registered, credit granted, suspensions for any reason, reinstatements, extensions, completions, terminations, cancellations and causes therefore.

## **SECTION XXX - CONFORMANCE WITH FEDERAL LAWS AND APPLICABLE COLLECTIVE BARGAINING AGREEMENTS**

No provisions in these standards of apprenticeship shall be construed as permitting violation of any applicable, State or Federal laws or regulations.

Nothing in these standards of apprenticeship shall be interpreted as being inconsistent with existing or subsequent collective bargaining agreements establishing higher standards, or meant to interfere with or abridge management's rights as vested to them under the collective bargaining agreement.

**SECTION XXXI - OFFICIAL ADOPTION OF APPRENTICESHIP STANDARDS:**

The (Name Of JAC) hereby adopts these Standards for Apprenticeship on this \_\_\_\_ Day of \_\_\_\_\_, 2002.

REPRESENTING THE (Name Of JAC) :

\_\_\_\_\_

Signature of Chairman

\_\_\_\_\_  
Printed Name

\_\_\_\_\_

Signature of Secretary

\_\_\_\_\_  
Printed Name

**ADDENDUM A**  
**WORK PROCESS SCHEDULE**  
**TRADE SCHEDULE FOR: ELEVATOR CONSTRUCTOR**  
**O\*NET/SOC: 47-4021.00 RAIS CODE: 0175**

**APPROXIMATE HOURS**

---

A. CONSTRUCTION/MODERNIZATION

2300

1. SAFETY

- Identify job hazards
- What proper safety equipment to wear and use
- Common sense safety around elevators and escalators
- Fundamentals of first aid & MSDS information
- Avoiding electric shock, GFCI's
- Codes that apply to the elevator industry

2. PRINT READING

- Read prints
- Survey the hoistway for new installation and modernization
- Convert to meter equivalents

3. HANDLING MATERIALS & TOOLS: RIGGING & HOISTING

- Safety Procedures
- Properly handle and store elevator/escalator equipment
- Tie and identify knots, bends and hitches
- Safety procedures for hoisting heavy equipment
- Building a safe working platform & scaffolding
- Use all safety devices

4. PIT STRUCTURES

- Safety Procedures
- Introduction to the pit components and their purpose
- Install pit equipment: buffers, compensating sheaves, compensating ropes and chains
- Testing of pit equipment for proper operation

5. GUIDE RAILS

- Safety Procedures
- Prepare rails and rail runs
- Build templates, drop lines and plumb hoistways of single, multiple or corner post installations
- Install guide rails
- Use a rail gauge and align rails

6. MACHINE ROOM, ESCALATOR & OVERHEAD INSTALLATIONS

- Safety Procedures
- Layout and properly align & set equipment
- Properly align sheaves, tracks and gears
- Offset roping

- Calibrate and test
- Proper inspection and maintenance procedures for the equipment

#### 7. CAR & COUNTERWEIGHT ASSEMBLY & ROPING

- Safety Procedures
- Assemble car and counterweight sling
- Why elevators use counterweights
- Proper handling & storage of wire ropes
- Plan a rope run and learn other methods of installing and reroping

#### 8. WIRING INSTALLATION

- Safety Procedures
- Terminology for various tools and electrical equipment
- Plan and install raceway and conduit
- Bend conduit
- Plan wiring and pulling wires safely and efficiently
- Accurately prepare and install traveling cables
- Bonding and grounding equipment
- Prepare the elevator/escalator for running operation

#### 9. DOOR INSTALLATION

- Safety Procedures
- Proper terminology for doors and relating equipment
- Install car and hoistway entrances and door equipment accurately
- Install & adjust elevator doors, gates for passenger, freight & dumbwaiter

#### 10. HYDRAULICS

- Safety Procedures
- Drill a hole for a hydraulic jack
- Properly install and plumb the casing & jack with specific tools
- Layout a pipe run and connections to power unit and jack
- Hydraulic theory and valve operation
- Adjust the valves for proper operation
- Troubleshoot and isolate system problems

### B. SERVICE/REPAIR/MODERNIZATION/CONSTRUCTION

3500 hrs

#### 1. BASIC WIRING/ELECTRICITY

- Procedures for working safely with electricity
- Principle on which all electrical concepts are based
- What is electricity and where does it come from?

#### 2. SOLID STATE ELECTRONICS/RELAY LOGIC

- Safety Procedures
- Terminology and safety equipment used on electronic devices
- Binary & hexadecimal systems are related to digital circuitry
- Capacitors and capacitance are used on elevator equipment
- Inductance and inductors are used in circuits
- How a semi-conductor works
- Diode, zener diodes, photodiodes and light emitting diodes
- Understanding transistors and how they operate

- How SCR's are operated and used in elevator circuits
- Various digital gates and their function
- The functions of integrated power supplies
- Different configurations and uses of the Op Amp
- Relay logic

### 3. CIRCUIT TRACING/RELAY LOGIC

- Safety Procedures
- Read a wiring diagram symbol and apply it to the equipment on the job
- Sequence of operation of individual circuits such as starting, stopping car and hall call cancellation and direction selection
- Troubleshoot particular circuits that are malfunctioning
- Locate and repair electrical problems such as ground, opens, defective contacts and coils
- Troubleshoot electrical problems with confidence

## C. GENERAL REPAIR/MODERNIZATION

1000 hrs

### 1. REROPING, RECABLING

- Safety Procedures
- Inspecting for defective rope, selector tape & cable
- Staging and routing ropes, tapes & cables
- Shackling and socketing

### 2. DOOR OPERATOR & RELATING EQUIPMENT

- Safety Procedures
- Passenger & freight door, gate repairs and replacements
- Door Operators, repair, replace and adjustments
- Door protective devices and troubleshooting

### 3. TRAVELING CABLE

- Safety Procedures
- Repair and replacement of traveler in existing hoistways

### 4. MOTORS, GENERATORS, BEARINGS, SHEAVES, DRIVERS

- Safety Procedures
- Cleaning and lubrication
- Testing and replacing motors, generators, bearings, sheaves and drivers
- Turn and undercut a commutator
- Test shunt and series field coils
- Learn how to check bearings and replace

### 5. ESCALATORS, MOVING WALKS & SIMILAR EQUIPMENT

- Safety Procedures
- Repair/replace equipment
- Clean and lubricate
- Maintenance on equipment

**TOTAL HOURS:**

**6800 hrs**

## ADDENDUM B

### APPRENTICESHIP CLASS OUTLINE YEAR 1

1. Apprentice Program Overview (4 Hours)
  - a. Purpose
  - b. Structure
  - c. Rules and Regulations
    - Attendance
    - Examinations
    - Probationary Period
    - Grades
  - d. Safety for Probationary Employees
  - e. Study Habits and Learning Techniques
  
2. Tools for Success (16 Hours)  
( Soft Skills For The Construction Industry)
  - Module 1. First Impressions: Starting Your New Job
  - Module 2. Building a Strong Relationship with Your Supervisor
  - Module 3. Teamwork: Getting Along with Your Co-Workers
  - Module 4. Diversity in the Workplace
  - Module 5. Communication Skills I: Listening and Speaking
  - Module 6. Communication Skills II: Reading and Writing
  - Module 7. Managing Stress
  - Module 8. Thinking Critically and Solving Problems
  - Module 9. Resolving Conflict
  - Module 10. Giving and Receiving Criticism
  - Module 11. Sexual Harassment
  - Module 12. Drug and Alcohol Abuse on the Job
  
3. NEIEP Module (12 Hours)
  1. Safety for Elevator Constructors
    - Unit 1. Introduction to Safety
      - a. Video with class
    - Unit 2. Safety during Construction and Modernization
      - a. Video with class
    - Unit 3. Safety during Maintenance and Repairs

Unit 4. Alcohol and Other Drugs

4. NEIEP - MTRS: Customer Relations Series (8 Hours)
  - CR-01 Customer Focus
    - a. Video with class
  - CR-02 Presentation
    - a. Video with class
  - CR-03 Communications
    - a. Video with class
  - CR-04 Dealing with Customers
    - a. Video with class
5. NEIEP Module 2. Fundamentals of Print Reading (16 Hours)
  - Unit 1. Introduction to Installation Drawings
  - Unit 2. Detail Drawings and Material Specifications
6. NEIEP Module 3. Material Handling, Rigging and Hoisting (16 Hours)
  - Unit 1. Tools and Material Handling
  - Unit 2. Rigging and Hoisting
7. NEIEP Module 4. Pit Structures (16 Hours)
  - Unit 1. Pit Structures  
Welding Basics
8. NEIEP Module 5. Guide Rails ( 8 Hours)
  - Unit 1. Introduction to Guide Rails
  - Unit 2. Installation of Guide Rails
9. NEIEP Module 6. Machine Room and Overhead Installation (12 Hours)
  - Unit 1. Machine and Sheave Installation
  - Unit 2. Elevator Control Equipment Installation
10. NEIEP Module 7. Car and Counterweight Assembly and Roping (24 Hours)
  - Unit 1. Car and Counterweight Assembly
  - Unit 2. Elevator Rope and Roping

NEIEP-MTRS Reroping Series

RO-1. Inspecting for Defective Rope  
a. Video with class

RO-2. Staging and Routing Ropes  
a. Video with class

RO-3. Shackling and Socketing  
a. Video with class

Unit 3. Elevator Cab Modernization and Floor Refinishing

- |     |  |            |
|-----|--|------------|
| 11. | Review of Year 1 Work                      | ( 4 Hours) |
| 12. | Final Exam, Year 2 and Basic Math Overview | ( 8 Hours) |

**Total**

**144 Hours**

APPRENTICESHIP INSTRUCTION OUTLINE YEAR 2  
Consists of Module 8, 18 and Meters course

1. Arithmetic Review	( 8 Hours)
2. Basic Electricity Introduction	(12 Hours)
3. Understanding the Relationship between Voltage, Current, and Resistance	(16 Hours)
4. Basic Electrical Circuit Components	( 8 Hours)
5. Series and Parallel Resistive Circuits	(16 Hours)
6. Magnetism and Electromagnetism	(12 Hours)
7. DC Generators and Motors	(12 Hours)
8. Alternating Current Theory	( 8 Hours)
9. Transformers	( 8 Hours)
10. AC Motor Theory	( 8 Hours)
11. Measuring AC and DC Voltages	( 4 Hours)
12. Measuring AC and DC Current	( 4 Hours)
13. Measuring Resistance	( 4 Hours)
14. Generator and Motor Theory	( 4 Hours)
15. Components of DC Generators and Motors	( 4 Hours)
16. Types and of DC Generators and Motors	(12 Hours)
17. Maintenance and Service	( 4 Hours)
<b>Total</b>	<b>144 Hours</b>

### Apprenticeship Class Outline Year 3

1. Comprehensive Industry Construction Training (10 Hours)
  2. NEIEP Module 11. Construction Wiring (28 Hours)
    - Unit 1. Planning, Piping and Wiring
    - Unit 2. Piping Machine Room and Hoistway
    - Unit 3. Traveling Cables
    - Unit 4. Wiring the Hoistway and Machine Room
    - Unit 5. Piping and Wiring the Car
    - Unit 6. Start-Up Procedures
  3. NEIEP Module 12. Doors and Operators (40 Hours)
    - Unit 1. Introduction to Passenger and Freight Entrances
    - Unit 2. Passenger Elevator Door and Entrance Installations
    - Unit 3. Cab Assembly and Door Operators
      - a. Door Operator Lab
    - Unit 4. Freight Elevator Doors and Gates
    - Unit 5. Dumbwaiters
  4. NEIEP Module 13. Hydraulics (28 Hours)
    - Unit 1. Drilling and Casing the Jack Hole
    - Unit 2. Installing and Servicing the Jack
    - Unit 3. Piping and Temporary Operation
    - Unit 4. Basic Hydraulic Theory
  5. NEIEP Module 14. Escalators and Moving Walks (28 Hours)
    - Unit 1. Escalator Safety and General Installation Procedures
      - a. Video with class
    - Unit 2. Escalator Components and Installation Procedures
      - a. Video with class
    - Unit 3. Moving Walk Components and Installation Procedures
      - a. Video with class
  6. Year 4 Overview - Final Exam (10 Hours)
- Total 144 Hours**

## Apprenticeship Class Outline Year 4

1. NEIEP Module 10. Circuit Tracing (64 Hours)  
Circuit Tracing Lab #1

Unit 1. Introduction to Circuit Tracing

- a. Checking Resistance with a Meter
- b. Measuring Voltage with a Meter
- c. Measuring Current with a Meter
- d. Video with class

Unit 2. Relays and Timers

- a. Basic Relay Components
- b. Simple Relay Circuits
- c. Set/Reset Relays
- d. Electrical Interlocking
- e. Relay Control Using Diodes
- f. Self-Holding Circuits
- g. Off-Delay and On-Delay Timing Circuits
- h. Video with class

Unit 3. Power and Power Control

- a. Video with class

Unit 4. Logic Controls

- a. Logic Reasoning Applied to Circuits
- b. Troubleshooting from Common Point on a De-Energized Circuit
- c. Troubleshooting Using Point to Point Voltage Checks on an Energized Circuit
- d. Understanding Relay Logic
- e. Troubleshooting Faulted Circuits
- f. Video with class

Unit 5. Constant Pressure and Single Automatic Push Button Systems

Unit 6. 4 Stop Hydraulic Controller Lab

- a. Collective Systems
- b. Fundamental Troubleshooting Methods
- c. Five Step Troubleshooting Model
- d. Circuit Descriptions with Normal Lab Operation and Faulted Lab Operation
- e. Power Control
- f. Selector Circuits
- g. Call Registration
- h. Direction Selection
- i. Starting and Acceleration
- j. Stopping
- k. Door Operation
- l. Call Cancellation

Unit 7. Variable Voltage Selective-Collective Control Systems

2. NEIEP Module 15. Basic Elevator Solid State Electronics (48 Hours)

Unit 1. Capacitors and Capacitance

- a. Capacitor Charge and Discharge
- b. Capacitor Time Constants
- c. Capacitors Appear to Pass AC Current
- d. Video with Class

Unit 2. Inductors and Inductance

- a. Current Lags Voltage in an Inductive Circuit
- b. An Inductor Impedes AC but Passes DC
- c. Video with Class

Unit 3. Diodes

- a. Testing Diodes
- b. Half-Wave Rectifier
- c. Full-Wave Bridge Rectifier
- d. Zener Regulator Experiment
- e. Video with Class

Unit 4. Transistors and Thyristors

- a. Biasing a Transistor
- b. Infrared Light Ray Detector
- c. Testing Transistors
- d. Testing SCRs
- e. Using SCRs as a Switch
- f. Video with Class

Unit 5. Analog Integrated Circuits

- a. Regulated Bipolar Power Supply
- b. Adjustable 12-Volt Bipolar Power Supply
- c. Universal Op-Amp Board Experiments
- d. Video with Class

Unit 6. Digital Integrated Circuits

- a. Gate Logic
- b. Door Open Pilot Logic

3. NEIEP Mechanics Exam Review Course (24 Hours)

4. Final Exam ( 8 Hours)

**Total 144 Hours**

**ADDENDUM C**  
**AFFIRMATIVE ACTION PLAN**  
**and**  
**SELECTION PROCEDURES**

**ADOPTED BY**

*(INSERT NAME OF JAC)*

**AS REQUIRED UNDER TITLE 29, CODE OF FEDERAL REGULATIONS, PART 30**  
**AMENDED MAY 12, 1978**

**DEVELOPED IN COOPERATION WITH THE**  
**BUREAU OF APPRENTICESHIP AND TRAINING**  
**U. S. DEPARTMENT OF LABOR**

**APPROVED BY** \_\_\_\_\_  
**REGISTRATION AGENCY**

**DATE APPROVED:** \_\_\_\_\_

## **SECTION I - PREAMBLE**

In order to conform with Title 29, Code of Federal Regulations (CFR) Part 30 - Equal Employment Opportunity in Apprenticeship and [applicable state law or regulation], [The JAC] hereby adopts the following nondiscriminatory pledge and affirmative action plan. The JAC enters this plan with good faith for the purpose of promoting equality of opportunity into its registered apprenticeship program.

This plan is a supplement to the apprenticeship standards. It may be amended at a later date as experience dictates. Any changes made by the JAC shall become part of this written plan, once approved by the registration agency.

## **SECTION II - EQUAL OPPORTUNITY PLEDGE**

In compliance with Section 30.3(b) of Title 29, CFR Part 30, as amended May 12, 1978, the JAC commits to the following Equal Opportunity Pledge:

The recruitment, selection, employment, and training of apprentices during their apprenticeship, shall be without discrimination because of race, color, religion, national origin, or sex. The sponsor will take affirmative action to provide equal opportunity in apprenticeship and will operate the apprenticeship program as required under Title 29 of the Code of Federal Regulations, Part 30.

## **SECTION III - AFFIRMATIVE ACTION PLAN**

In order to allow positive recruitment and full utilization of minorities and women in the apprenticeship program, the JAC pledges to the procedures and methods covered in Section IV.

## **SECTION IV - OUTREACH AND POSITIVE RECRUITMENT (PLEASE SEE CHECKLIST)**

The JAC's affirmative action plan includes the following "checked" outreach and positive recruitment efforts that would reasonably be expected to increase minority and women's participation in apprenticeship by expanding the opportunity of minorities and women to become eligible for apprenticeship selection. **Once those efforts have been checked, the JAC shall set forth the specific steps they intend to take under each identified effort.** The JAC will identify **a significant number of activities** in order to enable it to meet its obligation under Title 29, CFR Part 30.4(c).

A. An announcement of apprenticeship openings must be disseminated thirty (30) days in advance of the earliest date for application at each interval to the following agencies/organizations:

- Registration Agency
- Women's Organizations/Centers
- Local Schools
- Employment Service Centers
- One Stop Centers
- Vocational Education Schools

- Other Organizations/Centers (which can effectively reach minorities and women)
- Newspapers (which are circulated in the minority community and among women)

The announcement shall include the nature of the apprenticeship, requirements for mission to apprenticeship, availability of apprenticeship opportunities, sources of apprenticeship applications, and the JAC's equal opportunity policy. Applications will be taken for no less than a two (2) week period.

- B. Participation in annual workshops conducted by employment service agencies for the purpose of familiarizing school, employment service and other appropriate personnel with the apprenticeship program and current opportunities.
- C. Cooperation with school boards and vocational educational systems to develop programs for preparing students to meet the standards and criteria required to qualify for entry into the apprenticeship program.
- D. Internal communication of the JAC's equal opportunity policy should be conducted in such a manner to foster understanding, acceptance, and support among the JAC's various officers, supervisors, employees, and members, and to encourage such persons to take the necessary action to aid in meeting its obligation under Title 29, CFR Part 30.
- E. Engaging in programs such as outreach for the positive recruitment and preparation of potential applicants for apprenticeships; where appropriate and feasible, such programs shall provide for pre-testing experience and training. In initiating and conducting these programs, the JAC may be required to work with other sponsors and appropriate community organizations. The JAC shall also initiate programs to prepare women and encourage women to enter traditionally male programs.
- F. Encouraging the establishment and utilization of programs of pre-apprenticeship, preparatory trade training, or others designed to afford related work experience or prepare candidates for apprenticeship. The JAC shall make appropriate provisions in its affirmative action plan to assure that those who complete such programs are afforded full and equal opportunity for admission into the apprenticeship program.
- G. Utilizing mechanics to assist in the implementation of affirmative action in the apprenticeship program.
- H. Granting advance standing or credit on the basis of previously acquired experience, training, skills, or aptitude for all applicants equally.
- I. Other appropriate action to ensure that the recruitment, selection, employment, and training of apprentices during their apprenticeship shall be without discrimination because of race, color, religion, national origin, or sex (e.g., general publication of apprenticeship opportunities and advantages in advertisements, industry reports, articles, etc., use of present minority and



## **SECTION V - SELECTION OF APPRENTICES**

- I. The employer shall select apprentices from a pool of applicants created in the manner set forth below:
  - A. Contractors covered by Executive Order 11246 may elect to select apprentices in accordance with the provisions and goals and timetables of their current affirmative action plan, provided that such plan is currently approved by the OFCCP and a copy of such plan is on file with the JAC.
  - B. Contractors electing not to follow paragraph (a) above shall select their apprentices from a pool of applicants created in the manner set forth below.
  
- II. **APPLICANT POOL**
  - A. Applications: Applications will be accepted once the JAC determines a need and determines the approximate number of apprentices necessary to fill the projected employment needs of the employer.
  - B. Every person requesting an application shall be recorded on the applicant log and shall be furnished an application package which will include:
    1. Apprenticeship Application.
    2. Information relating to work in the trade as an apprentice.
  - C. Individuals receiving applicant packages shall return the completed information, including copies of the applicant's birth certificate, high school diploma or G.E.D. in no more than sixty days. Any individual who fails to return the information after sixty days shall be noted on the applicant log as being ineligible for consideration at this time.
  - D. Any individual who meets the eligibility requirements and who returns a completed package within sixty days of its receipt shall be considered an applicant and eligible for testing and interview.
  - E. Interviews shall be conducted at the discretion of JAC; however, no interview shall be conducted with less than seven days notice, via certified mail, to all applicants.
  - F. Notices shall also be sent to applicants who have previously been interviewed and ranked, advising them of the opportunity to re-interview, provided they can demonstrate tangible evidence of activities which have enhanced their qualifications for the job.
  - G. In the event any applicant fails to respond to said notices, they shall be removed from the pool of applicants and notation of such shall be made on the applicant log.

### III. TESTING AND INTERVIEWING AND PRE-QUALIFICATIONS

- A. All applicants shall be given an examination, if one is available, designed to test the applicant's reading and math skills and aptitude for employment in the elevator industry, which shall be scored on a pass fail basis. A score of 70% is the minimum passing grade. Applicants not passing the test will not be interviewed and will be removed from the pool of applicants.
- B. Applicants passing the test shall be eligible to be interviewed, consistent with the JAC's projected employment needs.
- C. Interviews shall be conducted by a committee consisting of at least two individuals, one from the employer and one from the IUEC.
- D. Each interview session shall be scheduled to provide time to adequately cover each interview grading area.
- E. The interview committee shall have in its possession for review with regard to each applicant: an application form, high school diploma or G.E.D. Certificate and proof of age.
- F. After a brief introduction, the committee will ask questions of the applicant with the purpose of finding out as much as possible about the applicant as an individual and about the applicant's capacity to participate in apprenticeship.
- G. Questions for the interview and for purposes of evaluation will be on topics related to job performance such as: work experience, school record, mechanical abilities, and motivation.
- H. Answers to questions must be recorded during the interview to produce a record for the applicant's file.
- I. All applicants must be asked the same questions.
- J. Applicants scoring 69 points and below will not be considered for apprenticeship.

IV. APPRENTICE SELECTION

- A. JAC shall notify, via certified mail, all individuals interviewed of the results of the interview, including their score and ranking. The individuals interviewed shall be placed into four tiers based upon their composite score as follows:

Tier 1                    96 - 100 points

Tier 2                    90 - 95 points

Tier 3                    80 - 89 points

Tier 4                    70 - 79 points

Placement Process

1. Unemployed apprentices will be placed prior to selecting new apprentices, according to program policy.
2. Applicants will be placed in order of their rank in the pool of eligibles according to the following procedure:
  - a. Employers may select an applicant by rank in descending order from Tier 1 until the tier is exhausted.
  - b. When Tier 1 is exhausted, employers may select an applicant by rank in descending order from Tier 2 until the tier is exhausted.
  - c. When Tier 2 is exhausted, employers may select an applicant by rank in descending order from Tier 3 until the tier is exhausted.
  - d. When Tier 3 is exhausted, employers may select an applicant by rank in descending order from Tier 4 until the tier is exhausted.
3. Applicants not selected shall remain on the ranked list for a period of two years.
4. Final approval or rejection of an application submitted by the JAC will be made by the JAC which will review the applicant's eligibility for entry into the program and the availability of apprentices and mechanics in the applicant's geographic area. If the application is rejected, the applicant will be notified of the rejection and the reason there for, by certified mail and a return receipt requested, by the JAC.

EXCEPTIONS:

For those contractors seeking to employ apprentices on projects covered by a regulatory agency set aside, selection may be made outside of tier order if necessary to meet the goals and timetables established for apprentices by the contracting agency bid specifications for affirmative action purposes. A copy of the bid specifications dealing with the set aside shall be submitted and retained by the committee.

An individual who signs an authorization card during an organizing effort wherein more than 50 percent of the employees have signed, whether or not the employer becomes signatory, an individual not qualifying as a mechanic shall be evaluated by the committee and indentured at the appropriate period of apprenticeship based upon previous work experience and related training provided they meet current minimum qualifications.

#### **SECTION VI - COMPLAINT PROCEDURE**

Any apprentice or applicant for apprenticeship who believes that he or she has been discriminated against on the basis of race, color, religion, national origin, or sex with regard to apprenticeship, or that equal opportunity standards have not been followed, has 180 days from the date of the alleged discrimination to register a complaint. The complaint shall be in writing and shall be signed by the complainant. It must include the name, address and telephone number of the person allegedly discriminated against, and a brief description of the circumstances of the failure to apply the equal opportunity standards. Complaints may be registered with the U. S. Department of Labor, Bureau of Apprenticeship and Training, and the Registration Agency if other than BAT, or the Equal Employment Opportunity Commission (EEOC). The written complaint procedure with names and addresses of the organization to which complaints may be filed, will be provided to all applicants and apprentices.

#### **SECTION VII - ANNUAL REVIEW OF AFFIRMATIVE ACTION PLAN**

The JAC will make an annual review of its current affirmative action plan and its overall effectiveness and institute any revisions or modifications warranted. All changes to the JAC affirmative action plan must be submitted to the registration agency for approval before implementation.

#### **SECTION VIII - MAINTENANCE OF RECORDS**

The JAC or its designee will maintain, for a period of five (5) years from the date of the last action, all records relating to: apprentice applications (regardless of outcome); the employment and training of apprentices and information relevant to the operation of the program. This includes, but is not limited to, records on the recruitment application and selection of apprentices, periodic advancements, disciplinary action, promotion, demotion, layoffs, terminations, rates of pay, hours of on-the-job training and related instruction, evaluations and other pertinent data. The records pertaining to individual applicants, selected or rejected, shall be maintained in such manner as to permit identification of minorities and women (minority and non-minority).

All apprenticeship records will be made available upon request of the U. S. Department of Labor, Bureau of Apprenticeship and Training and/or the applicable registration agency.

**SECTION IX - ADOPTION OF AFFIRMATIVE ACTION PLAN & SELECTION PROCEDURES**

The (Name of JAC) hereby adopts this affirmative action plan. This plan shall remain in effect until it is updated by the JAC based on the need to modify or revise the plan to insure greater success in the recruitment, selection and retention of minorities and women.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Name

**AFFIRMATIVE ACTION PLAN**  
**WORKFORCE ANALYSIS**

Occupational Title: \_\_\_\_\_ RAIS Code: \_\_\_\_\_

Sponsor: \_\_\_\_\_ DOT Code: \_\_\_\_\_

Address: \_\_\_\_\_ O\*NET Code: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone: \_\_\_\_\_ Type of selection method used: \_\_\_\_\_

Labor Market Area: \_\_\_\_\_

---

**STATISTICAL AREA LABOR FORCE ANALYSIS**

Total Work Force:

Women: \_\_\_\_\_ ( \_\_\_\_\_ %) of Work Force

Minority: \_\_\_\_\_ ( \_\_\_\_\_ %) of Work Force

---

**SPONSOR'S STATISTICAL DATA**

**Mechanics:**

Total Mechanics:

Women: \_\_\_\_\_ ( \_\_\_\_\_ %) of Mechanics

Minority: \_\_\_\_\_ ( \_\_\_\_\_ %) of Mechanics

**Apprentices:**

Total Apprentices:

Women: \_\_\_\_\_ ( \_\_\_\_\_ %) of Apprentices

Minority: \_\_\_\_\_ ( \_\_\_\_\_ %) of Apprentices

---

**DETERMINATION OF UTILIZATION**

Minority Underutilization: Yes \_\_\_ No \_\_\_\_\_

Female Underutilization: Yes \_\_\_ No \_\_\_\_\_

**SPONSOR'S GOALS:**

The sponsor agrees to take affirmative action with the goal of selecting % \_\_\_\_\_ minorities and % women during the next year or hiring period.

Estimated Number of new apprentices to be hired during the next year:

\_\_\_\_\_  
Sponsor's Signature

\_\_\_\_\_  
Approved by Agency

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date

## **ADDENDUM D**

Add sample apprenticeship agreement here.