

**REVISED**

**NATIONAL  
GUIDELINES FOR  
APPRENTICESHIP STANDARDS**

developed jointly by

**INTERNATIONAL BROTHERHOOD OF BOILERMAKERS,  
IRON SHIPBUILDERS, BLACKSMITHS, FORGERS  
AND HELPERS  
AND  
EMPLOYERS IN THE FIELD ERECTION AND REPAIR INDUSTRY**

and the

**BOILERMAKERS  
NATIONAL JOINT APPRENTICESHIP  
BOARD**

for the occupation of

**BOILERMAKER**

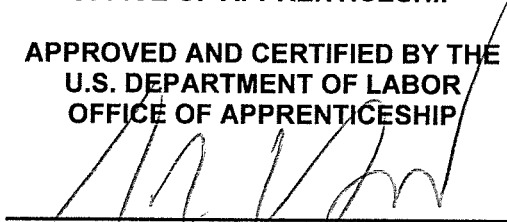
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**DEVELOPED IN COOPERATION WITH THE  
U.S. DEPARTMENT OF LABOR  
OFFICE OF APPRENTICESHIP**

**APPROVED AND CERTIFIED BY THE  
U.S. DEPARTMENT OF LABOR  
OFFICE OF APPRENTICESHIP**

BY:

  
\_\_\_\_\_  
**JOHN V. LADD, ADMINISTRATOR  
OFFICE OF APPRENTICESHIP**

CERTIFICATION DATE: June 25, 2014

CERTIFICATION NUMBER: 79306

## FOREWORD

The Boilermakers National Joint Apprenticeship Board (the Board) recognizes the need for structured training programs to maintain the high level of skill and competence demanded in the construction industry.

Registered apprenticeships are the most practical and sound training system available to meet that need, to develop individuals into skilled journeyworkers, and to ensure industry an adequate supply of skilled workers.

Title 29, Code of Federal Regulations (CFR), 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's, Office of Apprenticeship, or by a State Apprenticeship Agency recognized by the Office of Apprenticeship as the appropriate body in that State for approval of local apprenticeship programs for Federal purposes. Title 29, CFR, 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 Guidelines for Apprenticeship Standards (National Guideline Standards) is to provide policy and guidance to Area Joint Apprenticeship Committees in developing Standards of Apprenticeship for approval and registration. These National Guideline Standards, developed by the Boilermakers National Joint Apprenticeship Board are certified by the U. S. Department of Labor's, Office of Apprenticeship, as substantially conforming to the requirements of Title 29, CFR parts 29 and 30. State Apprenticeship Agencies recognized by the Office of Apprenticeship to register local programs, and/or local laws and regulations, may impose additional requirements that must be addressed in the local apprenticeship standards.

**The "Agreement and Declaration of Trust for Boilermakers' Area Apprenticeship Fund" addresses apprenticeship areas which cover multiple states. Area Apprenticeship Committees are recognized in the trust to operate a particular multi-state area. In order to standardize the apprenticeship programs in these areas covered by the U.S. Department of Labor, Office of Apprenticeship (as the Registration Agency) these Apprenticeship Standards will be registered for each area, e.g., Western States (which covers 11 western states). State Apprenticeship Agency's (SAA) may require registration in SAA States within those areas.**

## **NATIONAL JOINT APPRENTICESHIP BOARD**

The Board shall be composed of an equal number representing the Union and the Employers' Association, preferably, at least a total of sixteen (16). It will be the Board's responsibility to formulate an efficient and comprehensive apprentice training program in the field erection and repair industry, striving to constantly improve the quality of the program.

The Board shall elect a Chairperson and a Secretary. When the Chairperson represents the Union, the Secretary shall represent the Employers and vice-versa. The length of the term of these offices shall be determined by the Board. All members and officers of this Board have the right to vote on matters pertaining to apprenticeship.

The Board shall determine the number of scheduled meetings necessary, and special meetings may be called by the Chairperson at the request of any member, with due notice to all members. It is suggested that a representative of the Registration Agency be invited to attend these meetings. A majority of both the Union and the Employer members of the Board will constitute a quorum. In cases of a vote, an equal number will be cast by the Employer and the Union.

### **Duties of the National Joint Apprenticeship Board:**

The Board is charged with developing National Guideline Standards and having them certified by the U. S. Department of Labor, Office of Apprenticeship for use by Area Joint Apprenticeship Committees.

The duties of the Board include:

- To determine, adopt and amend from time to time National Guideline Standards, which shall be followed by each Area Joint Apprenticeship Committee, except as variations are granted by the Board and approved by the Registration Agency.
- Review and approve the Apprenticeship Standards submitted by Area Joint Apprenticeship Committees.
- Review and grant variations from the National Guideline Standards to any Area Joint Apprenticeship Committee within its apprenticeship and training area so long as such variations still leave the program in that apprenticeship and training area or portion thereof, in compliance with the National Guideline Standards or applicable Federal and/or State regulations.
- Act in advisory capacity to Area Joint Apprenticeship Committees and interpret the meaning and purpose of any clauses contained within the National Guideline Standards.
- Meet on call of the Chairperson to review the progress of apprenticeship in the industry.

- Settle appeals of decisions rendered by the Area Joint Apprenticeship Committees.
- In general, to encourage and enforce the adoption and application at the area level of sound apprentice training practices.

**DEVELOPMENT OF STANDARDS OF APPRENTICESHIP BY AREA JOINT APPRENTICESHIP COMMITTEES:**

Standards of Apprenticeship are provided in Attachment No. 1 and are intended for use by Area Joint Apprenticeship Committees. They provide for an explanation of the section and language that must be used in the local Standards. The Apprenticeship Standards must meet the requirements of the Registration Agency and any applicable State or Federal regulations.

**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 Procedures that are approved by the Registration Agency as part of the Standards of Apprenticeship.

The written Affirmative Action Plan must include the following sections which are explained in more detail in the samples attached:

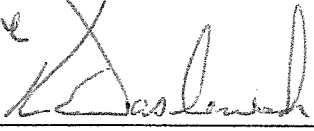
- A. Utilization analysis and establishment of goals and timetables
- B. Outreach activities and commitments
- C. Provision for internal review and self-audit

The Selection Procedures must address how selection will occur, the complaint procedure for both apprentices and applicants, and recordkeeping requirements.

Representatives of the Registration Agency are available to assist the Area Joint Apprenticeship Committee 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 Board for review and approval prior to submitting them to the Registration Agency for registration.

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

The International Brotherhood of Boilermakers, Iron Shipbuilders, Blacksmiths, Forgers and Helpers and Employers in the Field Erection and Repair Industry, and The Boilermakers National Joint Apprenticeship Board hereby officially adopt these National Guidelines for Apprenticeship Standards on this 3 Day of ~~May~~, 2014.

*June*  
  
\_\_\_\_\_  
Signature  
Employer Sponsor

  
\_\_\_\_\_  
Signature  
Union Sponsor

ATTACHMENT NO. 1

**STANDARDS OF APPRENTICESHIP**

**DEVELOPED BY**

**(PUT NAME OF COMMITTEE HERE)  
AREA JOINT APPRENTICESHIP COMMITTEE**

for the occupation of

**BOILERMAKER**

O\*NET-SOC CODE: 47-2011.00

RAPIDS CODE: 0040

**APPROVED BY**

**(NAME OF REGISTRATION AGENCY)**

*These “model” National Guidelines for Apprenticeship Standards are an example of how to develop apprenticeship standards that will comply with 29 CFR parts 29 and 30 when tailored to a sponsor’s apprenticeship program. These model Standards do not create new legal requirements or change current legal requirements. The legal requirements related to apprenticeship that apply to registered apprenticeship programs are contained in 29 U.S.C. 50 and 29 CFR parts 29 and 30. Every effort has been made to ensure that the information in the model Apprenticeship Standards is accurate and up-to-date.*

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## FOREWORD

These **(Name of Area Joint Apprenticeship Committee (AJAC))** Apprenticeship Standards have as their objective the training of Boilermakers skilled in all phases of the erection and repair industry who will be a credit to the industry. It has been recognized by the Union and the Employers that to accomplish this there must be a well developed on-the-job learning (OJL) and related instruction program.

This recognition has resulted in the development of these Apprenticeship Standards. They were developed in accordance with the basic standards recommended by the U.S. Department of Labor's Office of Apprenticeship as a basis from which the AJAC can work to establish an apprenticeship training program that meets the particular needs of its area.

Since these Standards were drawn to provide uniform coverage for all States in the **(Insert Name of Area)**, it is understood there may be some areas of conflict with provisions of the various State Apprenticeship laws. Local applications of these Area Apprenticeship and Training Standards in states having State Apprenticeship Agencies should be adapted to meet the Standards of Apprenticeship in such States.

It is the desire of the Union, the Employers and the **(Name of AJAC)**, to cooperate with the National Joint Apprenticeship Board and all who are interested in the training of Boilermaker apprentices. The goal is to ensure that apprentices who apply themselves to learn the occupation will be given the opportunity to become highly skilled journeyworkers.



## **DEFINITIONS**

**APPRENTICE:** An individual meeting the qualifications described in the Standards of Apprenticeship who has signed an Apprenticeship Agreement with the Area Joint Apprenticeship Committees 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 AJAC, acting as agent for the employer, 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.

**APPRENTICESHIP AREAS:** Defined as outlined in the "Agreement and Declaration of Trust for Boilermakers' Area Apprenticeship Fund" (4/26/96) as periodically amended from time to time.

**AREA COORDINATOR:** The Area Coordinator has oversight responsibilities of the apprenticeship program in an area as delegated by the AJAC.

**AREA JOINT APPRENTICESHIP COMMITTEE:** The AJAC created for each of the Apprenticeship areas comprised of an equal number of representatives appointed by the union and by the Employer in whose name these Standards of Apprenticeship will be registered. Sometimes may be referred to as "Area Committee" in this document.

**CERTIFICATE OF COMPLETION OF APPRENTICESHIP:** The Certificate of Completion of Apprenticeship 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 Union and signatory employers that sets forth the terms and conditions of employment.

**ELECTRONIC MEDIA:** Media that utilize electronics or electromechanical energy for the end user (audience) to access the content; and includes, but is not limited to, electronic storage media, transmission media, the Internet, extranet, lease lines, dial-up lines, private networks, and the physical movement of removable/transportable electronic media and/or interactive distance learning.

**EMPLOYER:** The term “Employer,” as used herein, shall mean and include: Any person, firm, association, partnership or corporation who or which has signed or signs, or on whose behalf a committee of Employers has signed or hereafter signs, one or more collective bargaining agreements with the International Union and/or any Local Union or Unions thereof, requiring such Employer to contribute to the Boilermakers Apprenticeship and Training Funds.

**GENDER CLAUSE:** Wherever used in these Standards, the masculine noun and pronoun shall be understood to include masculine and feminine gender.

**INTERNATIONAL BROTHERHOOD OF BOILERMAKERS, IRON SHIP BUILDERS, BLACKSMITHS, FORGERS AND HELPERS:** The terms “Local Unions” and “Local Union,” as used herein, shall mean such of the Local Lodges of the International Union as have members for whom Employers (as the term “Employers” is defined herein) are making or are required to make contributions to the Boilermakers Apprenticeship and Training Funds. The term “Union” shall mean and include both the International Union and its Local Unions.

**JOURNEYWORKER:** A worker who has attained a level of skill, abilities and competencies recognized within an industry as having mastered the skills and competencies required for the occupation. (Use of the term may also refer to a mentor, technician, specialist or other skilled worker who has documented sufficient skills and knowledge of an occupation, either through formal apprenticeship or through practical on-the-job experience and formal training.)

**LOCAL COMMITTEE:** Assists the Area Coordinator in the supervision and administration of these Apprenticeship Standards in their Local Lodge area. The Local Committee, which may also be referred to as the Administrative Committee, acts for and on behalf of the AJAC during the interim period between regular meetings of the AJAC to assure the effectiveness and success of the apprenticeship program.

**NATIONAL JOINT APPRENTICESHIP BOARD (the Board):** Charged with the development of National Guidelines for Apprenticeship Standards, Affirmative Action Plan, and Selection Procedures and having them certified by the U. S. Department of Labor, Office of Apprenticeship, for use by AJACs. The Board is also charged with submitting subsequent revisions and/or amendments of the above to the Registration Agency.

**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 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.

**ON-THE-JOB LEARNING:** Tasks learned on-the-job which the apprentice must be proficient before a completion certificate is granted. The learning must be through structured, supervised work experience.

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

**REGISTERED APPRENTICESHIP PARTNERS INFORMATION DATA SYSTEM (RAPIDS):** The Federal system which provides for the automated collection, retention, updating, retrieval and summarization of information related to apprentices and apprenticeship programs.

**REGISTRATION AGENCY:** Means the U.S. Department of Labor, Office of Apprenticeship or a recognized State Apprenticeship Agency that has responsibility for registering apprenticeship programs and apprentices; providing technical assistance; conducting reviews for compliance with Title 29, CFR parts 29 and 30 and quality assurance assessments.

**RELATED INSTRUCTION:** An organized and systematic form of instruction designed to provide the apprentice with the knowledge of the theoretical and technical subjects related to the apprentice's occupation. Such instruction may be given in a classroom, through occupational or industrial courses, or by correspondence courses of equivalent value, electronic media, or other forms of self-study approved by the Registration Agency.

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

**STANDARDS OF APPRENTICESHIP:** This entire document including all appendices and attachments hereto, and any future modifications or additions approved by the Registration Agency.

**SUPERVISOR OF APPRENTICES:** An individual designated by the program sponsor to supervise or have charge and direction of an apprentice.

**TRANSFER:** A shift of apprenticeship agreement from one program to another or from one employer within a program to another employer within that same program, where there is agreement between the apprentice and the affected apprenticeship committee or program sponsor.

**TIME-BASED OCCUPATION:** The time-based approach measures skill acquisition through the individual apprentice's completion of at least 2,000 hours of on-the-job learning as described in a work process schedule.

**UNION:** Means the International Brotherhood of Boilermakers, Iron Ship Builders, Blacksmiths, Forgers and Helpers and any of its affiliated Local Unions party to an appropriate labor agreement between the parties.

## **SECTION I - PROGRAM ADMINISTRATION**

### **AREA JOINT APPRENTICESHIP TRAINING COMMITTEE**

The **(Insert Name of the AJAC)** shall be composed of an equal number from the Union (representing those employees covered by a collective bargaining agreement(s)) and the Employers' Association, preferably, at least a total of six. Where no employer association exists, a committee may be formed with volunteers from that area.

The Area Committee shall elect a Chairperson, Vice-Chairperson, Secretary and Assistant Secretary. When the Chairperson represents the Employers, the Secretary shall represent the Union, and when the Secretary represents the Union, the Assistant Secretary shall represent the Employers, or vice versa. The length of term of these offices shall be determined by the Area Committee. All members and officers of the Area Committee have the right to vote on matters pertaining to apprenticeship.

The selection of representatives and method of selecting the representatives for the Union shall be the sole responsibility of the Union. The selection of representatives and the method of selection of the representatives from the Employers shall be the sole responsibility of the Employers.

There shall be quarterly meetings of the Area Administrative Committee with the full Area Committee meeting annually, and special meetings may be called by the Chairperson, with due notice to all members. A representative of the Registration Agency may be invited to attend these meetings. A majority of both the Union and the Employers members of the Area Committee will constitute a quorum. In cases of vote, an equal number will be cast by the Employer and Union.

The Administrative Committee shall be composed of the elected officers. The Administrative Committee will meet quarterly to handle routine business and other matters as may be referred to it by the Area Committee. Such matters shall remain the responsibility of the Area Committee.

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

- A. Carry out the Apprenticeship Program within its area in accordance with the Apprenticeship Standards and any variances approved by the Board and registered by the Registration Agency prior to being put into effect.
- B. Determine the need for new apprentices, including when apprenticeship openings will be available and select apprentices in accordance with the Selection Procedures attached hereto and made a part of the Apprenticeship Standards.

- C. Initiate and sign all Apprenticeship Agreements for apprentices and forward them to the Registration Agency for approval and registration. In addition, notify the Registration Agency and other appropriate parties of the cancellation, suspension, extension, reinstatement, or completion of apprentices.
- D. Arrange required on-the-job learning (OJL) and related instruction for apprentices that will provide them with the diversity of training delineated in the Work Process Schedule and Related Instruction Outline (Appendix A).
- E. Monitor and evaluate apprentices' progress, including the review of apprentices' records to ensure apprentices are fulfilling their responsibilities under the program. The AJAC will review, approve and document all apprentice actions including hours, content, and progress of training on-the-job and in related instruction; step progressions; disciplinary actions; poor evaluations; successful completions; cancellations; and any other performance or attendance-related issues.
- F. Prepare and submit any reports concerning its apprenticeship program that may be desirable or legally required by the Registration Agency; the International Brotherhood of Boilermakers, Iron Ship Builders, Blacksmiths, Forgers and Helpers and any participating employer organization.
- G. Hear and resolve all complaints regarding Apprenticeship Agreement violations.
- H. Certify the apprentice has completed both the required OJL and related instruction, and submit such certification to the Registration Agency with request for issuance of the Certificate of Completion of Apprenticeship.
- I. Annually review the Affirmative Action Plan, good faith efforts, and Selection Procedures, updating the Affirmative Action Plan and goals/timetables, and modifying the Affirmative Action Plan and Selection Procedures as a result of the review, when appropriate. Such review will include an analysis of the Local AJAC's success in meeting its goals, the good faith efforts made, and the impact each element of the Affirmative Action Plan had on meeting its goal.
- J. Maintain all records relating to the recruitment, selection, employment and training of apprentices for a minimum of five (5) years from the last date of action.
- K. Provide apprentices with a copy of the written rules and policies and the apprentice will sign an acknowledgment receipt of same. This procedure will be followed whenever revisions or modifications are made to the rules and policies.

**AREA COORDINATOR:** The Area Coordinator is responsible for those areas delegated to the AJAC. The following outlines some of the responsibilities of the Area Coordinator:

- Notify the AJAC when the apprentice roster approaches depletion.
- Disseminate apprenticeship opening announcements semi-annually.
- Work with the Local Committees to establish dates and times when applications will be accepted by the Local Committees.
- Send notices to the Registration Agency, and appropriate local, county, State, minority and women's group organizations informing them of the application opening announcement. Also send notices to area employers to be posted at the job site(s).
- Provide sufficient application forms to the Local Committees.
- Supervise Local Committees in the screening and selection procedures.
- Complete the Applicant Roster showing the final disposition of all applicants.
- Accept and respond to inquiries from prospective applicants.
- Coordinate "good faith efforts" outlined in the Affirmative Action Plan with the AJAC and local Committee Representative and insures all participation is documented.

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

### **Title 29 CFR 29.5(b)(21) and 30.3(b)**

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

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

### **Title 20 CFR 29.5(b)(21) and 30.4**

The AJAC will adopt an Affirmative Action Plan and Selection Procedures as required under Title 29, CFR part 30. It will be attached as Appendix C & D.

**SECTION IV - QUALIFICATIONS FOR APPRENTICESHIP**  
**Title CFR 29.5(b)(10)**

Applicants shall meet the following minimum qualifications:

A. Age

All applicants shall be at least eighteen (18) years of age. Applicants are required to submit reliable proof of age.

B. Education

Applicants shall be high school graduates or provide proof of equivalent educational attainment, such as successful completion of GED. Applicant must provide an official transcript(s) for high school and post high school education and training. All GED records must be submitted if applicable.

Applicants must submit a DD-214 to verify military training and/or experience if they are a veteran and wish to receive consideration for such training/experience.

C. Physical

Applicants will be physically capable of performing the essential functions of the apprenticeship program, with or without a reasonable accommodation, and without posing a direct threat to the health and safety of the individual or others.

Applicants will pass a screen for the current illegal use of drugs on acceptance into the program within forty-eight (48) hours after signing the apprenticeship agreement and prior to being employed. Applicants shall be subject to subsequent tests for drug/alcohol use on an annual, random, reasonable suspicion, and per cause basis thereafter.

D. Aptitude Testing

Effective January 1, 2014, all applicants will be tested for aptitude and competency in skills areas which have been validated as necessary for successful completion of the apprenticeship program. Necessary skills areas have been determined by subject matter experts from the apprenticeship program in conjunction with workforce assessment provider ACT, Inc. The apprenticeship program has determined that aptitude testing is representative of the important aspects of performance in the industry.



Applicants are expected to attain a minimum passing score of at least 4 (out of a possible range of 3 – 7) on each of three job-related skills assessment areas in order to obtain a Career Readiness Certificate:

Reading for Information: A measurement of skills people use when they read and use written text in order to do a job;

Applied Mathematics: A measurement of skills people use when they apply mathematical reasoning, critical thinking, and problem-solving techniques to work-related problems;

Locating Information: A measurement of the skills utilized when working with workplace graphics such as charts, graphs, tables, forms, flowcharts, diagrams, floor plans, maps, and instrument gauges.

E. Reliable Transportation

Upon application to the Program, an applicant must demonstrate that he/she has access to reliable transportation. For purposes of this requirement, the term reliable transportation shall mean any form of transportation that permits the apprentice to attend work and any required classroom instruction held in the geographic jurisdiction of the Program.

**SECTION V - SELECTION OF APPRENTICES**  
**Title 29 CFR 30.5**

Selection into the apprenticeship program will be in accordance with the Selection Procedures made a part of these standards. (Appendix D)

**SECTION VI - APPRENTICESHIP AGREEMENT**  
**Title 29 CFR 29.3(d) and (e) and 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 (Appendix B) signed by the AJAC 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.

Prior to signing the Apprenticeship Agreement, each selected applicant will be given an opportunity to read and review these Standards, the AJAC's written rules and policies and the Apprenticeship Agreement and the sections of the Collective Bargaining Agreement (CBA) that pertain to apprenticeship.

The Registration Agency will be advised within forty-five (45) days of the execution of each Apprenticeship Agreement and will be given all the information required for registering the apprentice.

**SECTION VII - RATIO OF APPRENTICES TO JOURNEYWORKERS**  
**Title 29 CFR 29.5(b)(7)**

To ensure that adequate journeyworkers are available to assist in the training of apprentices, adequate supervision is provided on the job, adequate opportunities for apprentices to learn all aspects of the occupation are available, and to ensure workplace safety and provide for continuity of employment, the AJAC has established a numeric ratio of apprentices to journeyworkers consistent with proper supervision, training, safety, and continuity of employment and applicable provisions in collective bargaining agreements, except where such ratios are expressly prohibited by the collective bargaining agreements. The ratio of apprentices to journeyworkers will be **one (1) apprentice to every five (5) journeyworkers**.

**SECTION VIII - TERM OF APPRENTICESHIP**  
**Title 29 CFR 29.5(b)(2)**

The term of the apprenticeship shall generally be four years with an (OJL) attainment of 6000 hours supplemented by the required minimum of 576 hours of related instruction over a period of reasonably continuous employment, including the probationary period, as stated on the Sample Work Process Schedule and Related Instruction Outline (Appendix A). Full credit will be given for the probationary period.

An apprentice, who, by exceptional aptitude or as a result of past education and/or practical experience, achieves the desired level of competency in a phase of the apprenticeship program in less than the time designated, may be advanced to the next phase.

**SECTION IX - PROBATIONARY PERIOD**  
**Title 29 CFR 29.5(b)(8), (b)(20)**

Each applicant selected for apprenticeship shall serve a probationary period of 1,500 hours of OJL, or one year, whichever is shorter. The probationary period cannot exceed twenty-five (25) percent of the length of the program, or one-year (1), whichever is shorter.

During the probationary period either the apprentice or the AJAC may terminate the Apprenticeship Agreement, without stated cause, by notifying 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 regarding progression made in both the OJL and related instruction and any disciplinary action taken during the probationary period.

Any probationary apprentice considered to be unsatisfactory after a review of the probationary period shall have his/her Apprenticeship Agreement canceled before the expiration of the probationary period, by means of written notice to the apprentice and to the Registration Agency.

Each probationary apprentice evaluated as satisfactory after a review of the probationary period 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 or canceled by the AJAC for reasonable cause after documented due notice to the apprentice and a reasonable opportunity for corrective action. In such cases, the AJAC will provide written notice to the apprentice and to the Registration Agency of the final action taken.

#### **SECTION X - HOURS OF WORK**

Apprentices shall generally work the same hours as journeyworkers, except that no apprentice shall be allowed to work overtime if it interferes with attendance in related instruction classes. In assigning work to the apprentice, due consideration shall be given to the diversity of training necessary to develop his/her skills.

#### **SECTION XI - APPRENTICE WAGE PROGRESSION** **Title 29 CFR 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. Before an apprentice is advanced to the next segment of training or to journeyworker status, the AJAC shall evaluate all progress to determine whether advancement has been earned by satisfactory on-the-job learning and in related instruction classes. In determining whether satisfactory progress has been made, the AJAC shall be guided by the work experience and related instruction records and reports.

The progressive wage schedule shall be an increasing percentage of the journeyworker wage rate as established in the applicable CBA. The percentages that will be applied to the applicable journeyworker rate are shown on the attached Sample Work Process Schedule and Related Instruction Outline (Appendix A). In no case will the starting wages of apprentices be less than that required by any applicable minimum wage law.

**SECTION XII - CREDIT FOR PREVIOUS EXPERIENCE**  
**Title 29 CFR 29.5(b)(12)**

Should it be determined that there exists a shortage of qualified welders in the occupation and/or a low number of applicants applying for the program, the AJAC shall have discretion to provide Credit for Previous Experience and advanced standing to applicants with welding qualifications, subject to the grant of a variance by the Boilermakers National Joint Apprenticeship Board. Applicants that have welding experience or training will have priority selection over those with no welding qualification or training.

Upon application to the program, the applicant will be required to furnish the AJAC with a self-assessment of their Boilermaker related skills, using the Work Process Schedule of the National Standards as found in Appendix A as a guide. The applicant must compile a portfolio of knowledge, skills, and past work experience that will demonstrate competency. The portfolio shall contain references from past employers, welding certificates and qualifications, and past training such as vocational and/or technical schools. If apprentices have worked for Boilermaker contractors and have had contributions paid into the Boilermakers National Pension Fund, a copy of the reported pension hours must be included in the applicant's portfolio. Duplicate copies of the original documents must be submitted as they will be retained by the AJAC.

If the AJAC finds, upon examining the records of applicants, that they have had previous practical or theoretical experience in the occupation, it shall grant them advanced standing on the term of apprenticeship, subject to review before the end of the probationary period and subject to the approval of the Boilermakers National Joint Apprenticeship Board. The amount of credit shall be determined for each work process in which the apprentice has demonstrated skill and be based on the approximate number of training hours designated for those work processes.

The granting of advanced standing must be uniformly applied to all apprentices and the AJAC must ensure that credit for previous experience is fairly and equitably applied to all apprentices. In no event shall any combination of on-the-job hours and credit granted for previous experience reduce the required minimum of five hundred seventy-six (576) hours of related study necessary for completion of the program.

**SECTION XIII - WORK EXPERIENCE**  
**Title 29 CFR 29.5(b)(3) and 30.8**

During the apprenticeship the apprentice shall receive such OJL and related instruction in all phases of the occupation necessary to develop the skill and proficiency of a skilled journeyworker. The OJL shall be under the direction and guidance of qualified journeyworkers. The Work Processes for the Boilermaker are covered in the attached Work Process Schedule and Related Instruction Outline(s) (Appendix A).

**SECTION XIV - RELATED INSTRUCTION**  
**Title 29 CFR 29.5(b)(4)**

During each segment of training each apprentice is required to complete classes in subjects related to the job as outlined in Appendix A. The term of apprenticeship shall be a minimum of 144 hours of related instruction for each year of the apprenticeship. Related instruction shall be structured to teach apprentices applied academics in subject areas that are not adequately or effectively taught on the job, but that are critical to job performance.

Where it is found impractical to establish related instruction classes, the AJAC shall require the apprentices to attend a regional or local training center for instruction in the theoretical and technical subjects related to the Boilermaker occupation.

Hours spent in related instruction and the classroom after regular working hours shall not be considered hours worked. Apprentices shall not be allowed to work overtime when such work will interfere with their attendance at related instruction classes and/or related studies.

If the apprentice fails to fulfill his/her obligations regarding the classroom instruction without due cause, the AJAC shall take appropriate disciplinary action.

To the extent possible, related instruction shall be closely correlated with the practical experience and training received on-the-job.

The AJAC shall monitor and document the apprentice's progress in related instruction classes.

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

**SECTION XV - SAFETY AND HEALTH TRAINING**  
**Title 29 CFR 29.5(b)(9)**

All apprentices shall receive instruction in safe and healthful work practices both on-the-job and in related instruction that is in compliance with the Occupational Safety and Health Standards promulgated by the Secretary of Labor under Public Law 29 U.S.C. 651 et seq., as amended, dated December 29, 1970, and subsequent amendments to that law or State Standards that have been found to be at least as effective as the Federal Standards.

Apprentices will be taught that accident prevention is very largely a matter of education, vigilance, and cooperation and that they should strive at all times to conduct themselves in their work to ensure their own safety and that of their fellow workers.

**SECTION XVI - SUPERVISION OF APPRENTICES**  
**Title 29 CFR 29.5(b)(14)**

The employer shall be responsible for the training of the apprentice on-the-job. The supervisor of the apprentice(s) designated by the employer shall, with the advice and assistance of the AJAC, be responsible for the apprentice's work assignment ensuring the apprentice is working under the supervision of a skilled journeyworker, evaluation of work performance, and completion and submittal of progress reports to the AJAC.

No apprentice will be allowed to work without journeyworker supervision.

**SECTION XVII - RECORDS AND EXAMINATIONS**  
**Title 29 CFR 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 every month. This record will be included in each apprentice's record file maintained by the Area Coordinator on behalf of the AJAC.

Before each period of advancement, or at any other time when conditions warrant, the AJAC 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 AJAC 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. In such cases, the JATC will initiate a performance improvement plan with the apprentice.

Should it be found that the apprentice does not have the ability or desire to continue the training to become a journeyworker, the AJAC will, after the apprentice has been given adequate assistance and opportunity for corrective action, terminate the Apprenticeship Agreement.

Written records of progress evaluations and corrective and final actions shall be maintained by the AJAC. The Registration Agency will be notified of all cancellations.

**SECTION XVIII - MAINTENANCE OF RECORDS**  
**Title 29 CFR 29.5(b)(23) and 30.8(e)**

The AJAC shall maintain for a period of five (5) years from the date of last action, all records relating to apprentice applications (whether selected or not), the employment and training of apprentices, and any other information relevant to the operation of the program. This includes, but is not limited to, records on the recruitment, application and selection of apprentices, and records on the apprentice's job assignments, promotions, demotions, layoffs, terminations, rates of pay and 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 upon request to the Registration Agency, or the appropriate State Apprenticeship Agency.

**SECTION XIX - CERTIFICATE OF COMPLETION OF APPRENTICESHIP**  
**Title 29 CFR 29.5(b)(15)**

Upon satisfactory completion of the requirements of the apprenticeship program as established in these Standards, the AJAC 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 OJL and the related instruction as may be required by the Registration Agency.

**SECTION XX - NOTICE TO REGISTRATION AGENCY**  
**Title 29.3(d) and (e) and 29.5(b)(19)**

The AJAC shall notify the Registration Agency within forty-five (45) days of all new apprentices to be registered, credit granted, suspensions for any reason, reinstatements, extensions, modifications, completions, and cancellations and termination of Apprenticeship Agreements and causes.

**SECTION XXI - CANCELLATION AND DEREGISTRATION**  
**Title 29 CFR 29.5(b)(18) and 29.8(a)(2)**

These Apprenticeship Standards will, upon adoption by the AJAC, be submitted to the Registration Agency for approval. Such approval will be acquired before implementation of the program.

The AJAC 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 AJAC 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 AJAC will notify each apprentice of the cancellation and the effect of same. This notification will conform to the requirements of Title 29, CFR part 29.8.

## **SECTION XXII - AMENDMENTS OR MODIFICATIONS**

### **Title 29 CFR 29.5(b)(18)**

These Standards of Apprenticeship may be amended or modified at any time by the AJAC, after review and approval of the Boilermakers National Joint Apprenticeship Board, 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.

Such amendment(s) or modification shall be submitted to the Registration Agency for approval and registration prior to being placed in effect. A copy of each amendment or modification adopted will be furnished to each apprentice to whom the amendment or modification applies.

## **SECTION XXIII - ADJUSTING DIFFERENCES/COMPLAINT PROCEDURE**

### **Title 29 CFR 29.5(b)(22), 29.7(k) and 30.11**

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 29.7(k)**

- A. For issues regarding wages, hours, working conditions, and other issues covered by the CBA, apprentices may seek resolution through the applicable Grievance and Arbitration Articles of the CBA.
- B. In cases of dissatisfaction between the employer and the apprentice, either has the right of appealing to the Local Committee for such action and adjustment of such matters (not related to EEO) as comes within this Program. If either party feels an adverse decision has been rendered in his/her case by the Local Committee, it shall be the duty of the aggrieved party involved to appeal the matter to the AJAC.
- C. The JATC will 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 these Standards over which differences occur.

#### **Title 29 CFR 30.11**

Any apprentice or applicant for apprenticeship who believes he/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/her selection have not been followed in the operation of an apprenticeship program may personally, or through an authorized representative, file a complaint with the Registration Agency, or, at the apprentice's or applicant's election, with a private review body (if established by the AJAC), or they may directly contact the Federal Equal Employment Opportunity Commission (EEOC).

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 review bodies designated by the program sponsors to review such complaints, any reference of such complaint by the complainant to the Registration Agency 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 Registration Agency for good cause shown.

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 the equal opportunity standards.

Complaints of harassment in the apprenticeship program may be filed and processed under Title 29, CFR, part 30, and the procedures as set forth above.

The AJAC shall provide each applicant and apprentice with this complaint procedure and the names and addresses of the local, State and Federal contacts for receiving complaints.

#### **SECTION XXIV - COLLECTIVE BARGAINING AGREEMENTS** **Title 29 CFR 29.11**

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

Nothing in this part or in any apprenticeship agreement will operate to invalidate:

- (a) Any apprenticeship provision in any collective bargaining agreement between employers and employees establishing higher apprenticeship standards; or
- (b) Any special provision for veterans, minority persons, or women in the standards, apprentice qualifications or operation of the program, or in the apprenticeship agreement, which is not otherwise prohibited by law, Executive Order, or authorized regulation.

**SECTION XXV - TRANSFER OF AN APPRENTICE AND TRAINING OBLIGATION**  
**Title 29 CFR 29.5(13)**

The transfer of an apprentice between apprenticeship programs and within an apprenticeship program must be based on agreement between the apprentice and the affected apprenticeship committee or program sponsors, and must comply with the following requirements:

- i. The transferring apprentice must be provided a transcript of related instruction and on-the-job learning by the committee or program sponsor;
- ii. Transfer must be to the same occupation; and
- iii. A new apprenticeship agreement must be executed when the transfer occurs between the program sponsors.

If the Sponsor is unable to fulfill his/her training obligation due to lack of work or failure to conform to these Standards the Sponsor will make every effort to refer the apprentice with his/her consent to another employer, Registration Agency or One Stop for placement into another registered apprenticeship program. From time to time, where necessary to adequately man a work assignment in a particular location, it may be required to bring in apprentices from other Local Unions within an apprenticeship program and/or from other area programs. This will provide the apprentice an opportunity for continuous employment and completion of their apprenticeship program, which may not be attainable by binding an apprentice to the exclusive jurisdiction of one Local Union at all times. The apprentice must receive credit from the new employer for the training already satisfactorily completed.

**SECTION XXVI - RESPONSIBILITIES OF THE APPRENTICE**

Apprentices, having read these Standards formulated by the AJAC and signed an Agreement with the AJAC, agree to all the terms and conditions contained therein and agree to abide by the AJAC's rules and policies, including any amendments, serve such time, perform such manual training, and study such subjects as the AJAC may deem necessary to become a skilled Boilermaker.

In signing the Apprenticeship Agreement, apprentices assume the following responsibilities and obligations under the apprenticeship program:

- A. Perform diligently and faithfully the work of the occupation and other pertinent duties assigned by the AJAC and the employer in accordance with the provisions of these Standards.
- B. Respect the property of the employer and abide by the working rules and regulations of the employer, union and the AJAC.

- C. Attend and satisfactorily complete the required hours in the OJL and in related instruction in subjects related to the occupation as provided under these Standards.
- D. Maintain and make available such records of work experience and training received on-the-job and in related instruction as may be required by the AJAC.
- E. Develop and practice safe working habits and work in such a manner as to assure his/her personal safety and that of other workers.
- F. Work for the employer to whom the apprentice is assigned for the completion of apprenticeship, unless reassigned to another employer or the Apprenticeship Agreement is terminated by the AJAC.

### **SECTION XXVII - TECHNICAL ASSISTANCE**

Technical Assistance such as that from the U.S. Department of Labor, Office of Apprenticeship, State Apprenticeship Agencies, and vocational schools - may be requested to advise the Sponsor.

The Sponsor is encouraged to invite representatives from industry, education, business, private and/or public agencies to provide consultation and advice for the successful operation of their training program.

**SECTION XXVIII - APPROVAL OF LOCAL STANDARDS**

The *(Insert Name of AJAC)* Apprenticeship Standards shall be subject to approval by the Boilermakers National Joint Apprenticeship Board.

**SECTION XXIX – OFFICIAL ADOPTION OF APPRENTICESHIP STANDARDS**

The *(Insert Name of Area Joint Apprenticeship Committee)* hereby adopts these Apprenticeship Standards on this \_\_\_\_\_ Day of *(Insert Month/Year)*.

**REPRESENTING (NAME OF AJAC):**

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Typed/Printed Name

\_\_\_\_\_  
Typed/Printed Name

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Typed/Printed Name

# **APPENDIX A**

## **WORK PROCESS SCHEDULE AND RELATED INSTRUCTION OUTLINE BOILERMAKER**

**WORK PROCESS SCHEDULE  
BOILERMAKER  
O\*NET-SOC CODE: 47-2011.00 RAPIDS CODE: 0040**

This Trade Schedule is attached to and a part of the Apprenticeship Standards for the above identified trade.

**1. TERM OF APPRENTICESHIP**

The term of apprenticeship shall be a period of four (4) years (not less than 6,000 hours) of on-the-job learning supplemented by the required minimum of 576 hours of related instruction.

**2. RATIO OF APPRENTICES TO JOURNEYWORKERS**

Each local lodge is required to register apprentices quarterly to meet a one (1) apprentice to five (5) journeyworker ratio based on man hours worked within the Local using the man-hours of the preceding year.

**3. APPRENTICE WAGE SCHEDULE**

Apprentices shall be paid a progressively increasing schedule of wages based on a percentage of the current journeyworker wage rate per the collective bargaining agreement.

**4. SCHEDULE OF WORK EXPERIENCE (See attached Work Process Schedule.)**

The Area Joint Apprenticeship Committee may modify the work processes to meet local needs prior to submitting these Standards to the appropriate Registration Agency for approval.

**5. SCHEDULE OF RELATED INSTRUCTION (See attached Related Instruction Outline.)**

**WORK PROCESS SCHEDULE  
BOILERMAKER  
O\*NET-SOC CODE: 47-2011.00 RAPIDS CODE: 0040**

The following are the major phases of the Boilermaker occupation in the field erection and repair industry. The work processes include the application of these operations on tank and water tower construction and repair, refinery construction and repair, boiler erection and repair, nuclear reactors, and reactor/boiler components erection and repair, and any other work related to the trade.

| <b><u>ON-THE-JOB LEARNING</u></b>  | <b><u>APPROX. HOURS</u></b> |
|--|-----------------------------|
| I. Care and maintenance of tools and equipment                                 | <b>100</b>                  |
| A. Learning names of tools and equipment                                       |                             |
| B. Learning the use of tools and equipment                                     |                             |
| C. Care and Maintenance  |                             |
| D. Handing out tools and inventory   |                             |
| II. Rigging and Bull Gang  | <b>1000</b>                 |
| A. Unloading and handling  |                             |
| B. Use of Hoisting Equipment   |                             |
| 1. Come-along  |                             |
| 2. Chain falls   |                             |
| 3. Erecting and dismantling derricks and cranes                                |                             |
| 4. Working with derricks and cranes  |                             |
| 5. Use of signals and safety   |                             |
| C. Use of Tackle   |                             |
| 1. Block and tackle  |                             |
| 2. Chokers, cables and slings  |                             |
| 3. Proper use of knots and splicing  |                             |
| 4. Proper use of clamps  |                             |
| 5. Safety  |                             |
| D. Moving pieces   |                             |
| 1. Rollers   |                             |
| 2. Levers  |                             |
| 3. Use of tackle, come-along and chain falls                                   |                             |
| 4. Safety  |                             |
| III. General Erection  | <b>1000</b>                 |
| A. Steel Erection in our jurisdiction  |                             |
| 1. Designating location of members   |                             |
| 2. Raising in place  |                             |
| 3. Use of spud-wrench, bull, and drift-pins, jacks, wedges, clips, and saddles |                             |
| 4. Alignment   |                             |
| a. Use of level, plumb, tape and rule  |                             |

- 5. Connecting
  - a. Drilling, reaming, chipping, caulking and grinding
  - b. Bolting up
  - c. Welding (tack)
  - d. Riveting
- B. Setting drums and headers
  - 1. Use of hoisting equipment and tackle
  - 2. Use of water level, plumb and measuring devices
- IV. Tube Installations 400
  - A. Entering
    - 1. Use of come-along and entering devices
    - 2. Lipping
  - B. Setting and Aligning
    - 1. Use of spacers
    - 2. Use of strong-backs
  - C. Getting proper stock
    - 1. Signals (sound and light)
    - 2. Come-along
    - 3. Piece of stock
    - 4. Boiler code
  - D. Rolling
    - 1. Use of erectors' guides, or
    - 2. Proper selection of the following:
      - a. Expanders, rollers, pins, and mandrels
    - 3. Use of rolling machines
      - a. Pneumatic, electric and ratchet
      - b. Lubricants
    - 4. Use of gauges and signals
    - 5. Heavy tube sheets
    - 6. Entering and connecting baffles
    - 7. Testing
      - a. Visual
      - b. Water (use of hydrostatic pump)
      - c. Air
      - d. Use of gauges
- V. Use of Blueprint and layout 400
  - A. Use of prints to designate the following:
    - 1. Locating parts at unloading
    - 2. Moving parts to job location
    - 3. Parts to be hoisted into position
    - 4. Use of bench mark
    - 5. Symbols



|  |              |
|--|--------------|
| B. Layout  |              |
| 1. Use of precision measuring devices  |              |
| 2. Marking for correction, re-cutting and fitting  |              |
| 3. Directing, cutting, and fitting of parts  |              |
| 4. Geometric measuring of parts, tube holes, etc.  |              |
| 5. Working with foreman  |              |
| VI. Welding and Cutting  | <b>3000</b>  |
| A. Any and all forms of electric welding   |              |
| 1. Proper adjustment of machines   |              |
| 2. Application and use of electrodes on all metals, ferrous and non-ferrous                            |              |
| 3. Metal Spraying and hard facing  |              |
| B. Acetylene   |              |
| 1. Proper adjustment, gauges and torch   |              |
| 2. Selection of tips   |              |
| 3. Handling of torch and application   |              |
| a. Ferrous and non-ferrous metals  |              |
| C. Cutting   |              |
| 1. Acetylene   |              |
| 2. Arc (cutting and gouging)   |              |
| 3. Machine Methods   |              |
| 4. Adjusting and operating of equipment  |              |
| a. Ferrous   |              |
| b. Non-ferrous   |              |
| VII. Nuclear Plant Construction – Reactors   | <b>100</b>   |
| A. Theory - Types  |              |
| 1. Power   |              |
| 2. Propulsion  |              |
| 3. Heating   |              |
| B. Research  |              |
| C. Problems peculiar to Atomic Energy  |              |
| 1. Those elements which would not be covered in other sections, i.e., radiation, radiation protection, |              |
| 2. Requirements for joints of high integrity   |              |
| <b>TOTAL HOURS</b>   | <b>6,000</b> |

**RELATED INSTRUCTION OUTLINE  
BOILERMAKER  
O\*NET-SOC CODE: 47-2011.00 RAPIDS CODE: 0040**

The following is the related instruction that apprentices receiving training will be expected to successfully complete. A minimum of 576 hours is required during the program.

**CURRICULUM SOURCE TEXT REFERENCE:**

Text prepared by the Boilermakers National Apprenticeship Program Kansas City, Kansas

|  | <b>Total Hours</b> |
|--|--------------------|
| <b><u>YEAR 1 - 144 HOURS</u></b>               | 144                |
| I. Rigging and Boilermaker Safety - Lesson 1-1 |                    |
| A. Protective Clothing                         |                    |
| B. Safety with Lifting Equipment               |                    |
| C. Safety with Ladders and Staging             |                    |
| D. Safety with Tools                           |                    |
| E. Fire Prevention and Control                 |                    |
| II. Applied Math I - Lesson 1-2                |                    |
| A. The Language of Math                        |                    |
| B. Counting                                    |                    |
| C. Place Value                                 |                    |
| D. Addition and Subtraction                    |                    |
| E. Multiplication and Division                 |                    |
| F. Multiples and Factors                       |                    |
| G. Negative Factors                            |                    |
| H. Other Number Concepts                       |                    |
| I. Operating with Signed Numbers               |                    |
| J. Axioms and Laws                             |                    |
| III. Applied Math II - Lesson 1-3              |                    |
| A. Fractions                                   |                    |
| B. Types of Fractions                          |                    |
| C. Operations with Fractions                   |                    |
| D. Decimal Fractions                           |                    |
| E. Equivalent Decimals                         |                    |
| F. Operation with Decimals                     |                    |
| IV. Applied Math III - Lesson 1-4              |                    |
| A. Proportion                                  |                    |
| B. Percentage                                  |                    |
| C. Changing a Percent to a Decimal             |                    |
| D. The Three Percentage Cases                  |                    |
| E. Fractional Percents                         |                    |

- F. Calculating with Approximate Numbers
  - G. Prime Numbers
  - H. Exponents and Radicals
- V. Applied Math IV - Lesson 1-5
- A. Basics of Algebra
  - B. Multiplication
  - C. Division
  - D. Basics of Plane Geometry
  - E. Basics of Solid Geometry
  - F. Triangulation (Trigonometry)
- VI. Applied Math V - Lesson 1-6
- A. Measuring
  - B. Review of Decimals
  - C. Angular Measurements
  - D. Formulas and Equations in Review
  - E. Signs of Operations
  - F. Graphs
  - G. Math Aids
- VII. Applied Metric Math - Lesson 1-7
- A. Metrics (SI) in the United States
  - B. Advantages of Metrics
  - C. Metric (SI) Conversions
  - D. Metrics (SI) in Shop or Field
  - E. Metrics for the Boilermaker/Welder
  - F. The Transition Period and the Future of Metrics
- VIII. Rigging: Basic Principles - Lesson 1-8
- A. Basic Rigging Concepts
  - B. Simple Tools
- IX. Rigging: Ropes - Lesson 1-9
- A. Wire Rope
  - B. Fiber Rope
  - C. Chains
- X. Rigging: Tools - Lesson 1-10
- A. Slings
  - B. Rigging Hardware
  - C. Reeving
  - D. Hoists and Winches
  - E. Skids, Rollers, Jacks and Cribbing
  - F. Ladders and Scaffolding
- XI. Rigging: Cranes and Other Lifting Equipment - Lesson 1-11
- A. Mobile Cranes
  - B. Tower Cranes
  - C. Monorails and Underhung Cranes
  - D. Derricks

- E. Hoists
- F. Overhead Cranes
- G. Helicopter Cranes

- XII. Rigging: Equalizing and Distributing Loads - Lesson 1-12
  - A. Distributing Weight to the Rigging
  - B. Basic Methods of Equalizing and Distributing Loads
  - C. Strength and Stability During Operation

**YEAR 2 - 144 HOURS**

- I. Mechanical Drawing: Tools and Lettering - Lesson 2-1
  - A. Equipment
  - B. Drafting Materials
  - C. Basic Techniques of Drafting
  - D. Lettering
  - E. Styles of Lettering
  - F. Characteristics of Good Lettering
  - G. Tools of Lettering
  
- II. Mechanical Drawing: Geometric Construction - Lesson 2-2
  - A. Methods of Bisecting a Straight Line
  - B. Bisecting an Arc
  - C. Drawing Perpendicular Lines
  - D. Drawing a Line Parallel to Another Given Line
  - E. Methods of Dividing a Line into Equal Parts
  - F. Drawing and Bisecting an Angle
  - G. Trisecting an Acute Angle
  - H. Finding the Center of a Circle
  - I. Bisecting an Angle with an Inaccessible Vertex
  - J. Constructing a Triangle Given Its three Sides
  - K. Polygon Construction Tangency
  - L. Constructing Tangent Lines and Arcs
  - M. Geometric Solids
  
- III. Mechanical Drawing: Orthographic - Lesson 2-3
  - A. Theory of Projection and Drawings
  - B. Theory of Orthographic Projection
  - C. Multi-View Line Projection
  - D. Surface Projection
  - E. Line Description
  - F. Orthographic Drawing Techniques
  - G. Projecting the Views on Paper
  - H. Sections
  - I. Reading Orthographic Drawings
  - J. Conventional Procedures on Orthographic Drawings
  - K. Accepted Violations of True Projection
  - L. Treatment of Unimportant Intersections
  - M. Aligned Views
  - N. Conventional Procedure for Radially Arranged Features
  - O. Representations of Fillets and Rounds

- P. Conventional Breaks
  - Q. Conventional Method of Alternative Positions
  - R. Conventional Representation
  - S. The Orthographic Drawing Plate
- IV. Mechanical Drawing: Isometric and Oblique - Lesson 2-4
- A. Pictorial Drawing
  - B. Isometric Projection
  - C. Isometric Drawing
  - D. Oblique Projection
  - E. Oblique Drawings
- V. Mechanical Drawing: Dimensioning - Lesson 2-5
- A. Theory of Dimensioning
  - B. The Language of Dimensioning
  - C. Units of Measurement Used in Dimensioning
  - D. Standard Dimensioning Practices
  - E. Dimensioning Application
  - F. Dimensioning Special Views
  - G. Limit Dimensioning
  - H. Welding Symbols
- VI. Mechanical Drawing: Field Sketching - Lesson 2-6
- A. Sketching Materials
  - B. Sketching Guidelines
  - C. Beginning Line Exercises
  - D. Multi view Orthographic Sketches
  - E. Orthographic Projection for Sketching
  - F. Pictorial Sketching
  - G. Oblique Sketches
  - H. Perspective Sketching
- VII. Layout Procedures and Techniques - Lesson 2-7
- A. Hammers, Sledges, and Mauls
  - B. Struck or Hammered Tools
  - C. Cutting Hand Tools
  - D. Taps and Dies
  - E. Screwdrivers
  - F. Holding Tools
  - G. Miscellaneous Hand Tools
- VIII. Boilermaker Hand Tools - Lesson 2-8
- A. Layout Tools
  - B. Layout Work
- IX. Boilermaker Power Tools - Lesson 2-9
- A. Electric Powered Tools
  - B. Air (Pneumatic Tools)
  - C. Tube Tools and Their Functions

- X. Construction Materials I - Lesson 2-10
  - A. Basic Construction Material
  - B. Metal Production
  - C. Metal - Processing Methods
  
- XI. Construction Materials II - Lesson 2-11
  - A. Mechanical Properties
  - B. Chemical Properties of Metals
  - C. Physical Properties of Metals
  - D. Fiberglass Reinforced Plastics
  
- XII. Blueprint Reading: Structural - Lesson 2-12
  - A. Structural Steel
  - B. Structural Drawings
  - C. Drawing Structural Steel Shapes
  - D. Connectors
  - E. Connections

**YEAR 3 - 144 HOURS**

- I. Boiler Systems and Components I - Lesson 3-1
  - A. The Boiler
  - B. Fire Tube Boilers
  - C. Water Tube Boilers
  - D. Water Tube Boiler Components
  - E. Fuels and Fuel Burning Systems
  
- II. Boiler Systems and Components II - Lesson 3-2
  - A. Boiler Circulation
  - B. Shop Assembled Boilers
  - C. Systems for the Pulp and Paper Industry
  - D. By Product Fueled Boilers
  - E. Waste Heat Boilers
  
- III. Nuclear Power - Lesson 3-3
  - A. The Principles of Nuclear Energy
  - B. Nuclear Fuels
  - C. Nuclear Reactors
  - D. Health Physics and Radiation Protection
  
- IV. Tanks, Vessels, and Other Components - Lesson 3-4
  - A. Field Erected Storage Tanks
  - B. Basic Construction Techniques
  - C. Stacks and Liners
  
- V. Blueprint Reading: Boilermaker - Lesson 3-5
  - A. Erection Plans
  - B. How Blueprints are Made

- VI. Boiler: Installation - Lesson 3-6
  - A. Field Inspection
  - B. Shop Fabrication
  - C. Site Preparation
  - D. Erecting Structural Steel Supports
  - E. Installing the Steam Drum
  - F. Installing Upper Headers
  - G. Installing Down comers
  - H. Installing Superheater and Reheater Modules
  - I. Installing Waterwalls
  - J. Installing the Windbox
  - K. Installing the Suction-Manifold
  - L. Installing the Preheater and Economizer
  - M. Installing Ductwork
  - N. Installing the Lower Waterwalls
  - O. Additional Construction
  - P. Preparing the Boiler for Testing
  - Q. Cleanliness of Boiler Components
  - R. Hydrostatic Testing
  - S. Installing Insulation and Casing
  
- VII. Boiler: Repair and Maintenance - Lesson 3-7
  - A. Repairs
  - B. Alterations
  - C. Fiberglass Reinforced Plastics
  
- VIII. Welding and Cutting: Basic - Lesson 3-8
  - A. Weldable Metals
  - B. The Welding Processes
  - C. Oxyfuel Gas Welding
  - D. Arc Welding
  - E. Resistance Welding
  - F. Thermit Welding
  - G. Brazing and Braze Welding
  - H. Soldering
  - I. Electron Beam Welding
  - J. Laser Beam Welding
  - K. Cutting Processes
  - L. Welded Joint Design
  - M. Types of Welds
  - N. Welding Position
  - O. Welders and Welding Operators
  
- IX. Welding and Cutting: Blueprint Reading - Lesson 3-9
  - A. Welding Symbols
  - B. Nonpreferred Symbols
  - C. Nondestructive Testing Symbols
  
- X. Welding and Cutting: Safety - Lesson 3-10
  - A. General Welding and Cutting Safety
  - B. The Welding Environment

- C. Fire Prevention and Protection
  - D. Tool and Equipment Usage
  - E. Other Safety Considerations
  - F. Safety in Welding and Cutting Processes
  - G. Gases Used in Arc Processes
  - H. First Aid
- XI. Metallurgy: Welding - Lesson 3-11
    - A. Fundamentals of Metallurgy
    - B. Structure of Metal
    - C. Metallurgy and Heat Treating
    - D. Metallurgy of the Welded Metal
    - E. Welding Stresses, Warpage, Distorting, and Cracks
  - XII. Metallurgy: Weldability of Metals - Lesson 3-12
    - A. Classifying Code Systems for Metals
    - B. Identification of Metals
    - C. Filler Materials
    - D. Welding Characteristics of Metals and Alloys

**YEAR 4 - 144 HOURS**

- I. Arc Welding: Equipment - Lesson 4-1
  - A. Power Sources
  - B. Arc Welding Consumables
- II. Arc Welding: Shielded Metal I - Lesson 4-2
  - A. Shielded Metal Arc Welding Procedure
  - B. Weld Joints
- III. Arc Welding: Shielded Metal II - Lesson 4-3
  - A. Heat Effects in Shielded Metal Arc Welding
  - B. Shielded Metal Arc Welding of Ferrous Metals
  - C. Shielded Metal Arc Welding of Nonferrous Metals
  - D. Troubleshooting when Welding with the SMAW Process
- IV. Arc Welding: Gas Tungsten (TIG) - Lesson 4-4
  - A. Gas Tungsten Arc Welding Techniques
  - B. Metals and Gas Tungsten Arc Welding
- V. Arc Welding: Gas Metal (Metal Inert Gas) - Lesson 4-5
  - A. Process Variations-Metal Transfer
  - B. Gas Metal Arc Welding Equipment
  - C. Consumables Used in Gas Metal Arc Welding
  - D. GMAW Process Variables
  - E. Weld Bead Characteristics
  - F. Welding Procedures
  - G. Welding Conditions
  - H. MIG Weld Defects-Their Causes and How to Correct Them
  - I. MIG Spot Welding
  - J. Vapor Shielded Arc Welding



- VI. Arc Welding: Other Processes - Lesson 4-6
  - A. Submerged Arc Welding
  - B. Flux Cored Arc Welding
  - C. Plasma Arc Welding
  
- VII. Cutting: Oxyfuel I - Lesson 4-7
  - A. Equipment and Supplies
  - B. Manual Cutting Procedures
  - C. Cutting in Steel Plate
  - D. Machine Torch Cutting
  
- VIII. Cutting: Oxyfuel II - Lesson 4-8
  - A. Quality of Cutting
  - B. Miscellaneous Uses of the Oxyfuel Gas Flames
  - C. Oxyfuel Gas Welding
  
- IX. Cutting: Arc -Lesson 4-9
  - A. Air Carbon Arc Cutting (AAC)
  - B. Carbon Arc Cutting (CAC)
  - C. Oxygen Arc Cutting (OAC)
  - D. Plasma Arc Cutting (PAC)
  - E. Metal Arc Cutting (MAC)
  
- X. Welding: Special Applications and Techniques - Lesson 4-10
  - A. Stud Welding
  - B. Tube and Pipe Welding
  - C. Field Erection of Pressure Vessels and Boilers
  - D. Field-Welded Storage Tanks
  - E. One-Side Welding
  - F. Underwater Welding and Cutting
  - G. Weld Repair and Surfacing
  
- XI. Welding: Design, Testing, and Inspection - Lesson 4-11
  - A. The Design of Welded Joints
  - B. Testing
  
- XII. Welding: Performance Qualifications - Lesson 4-12
  - Codes and Specifications

## **APPENDIX B**

### **APPRENTICESHIP AGREEMENT U.S. Department of Labor Employment and Training Administration**



APPRENTICE REGISTRATION-SECTION II

OMB No. 1205-0223 Expires: 04/30/2015

**Warning:** This agreement does not constitute a certification under Title 29, CFR, Part 5 for the employment of the apprentice on Federally financed or assisted construction projects. Current certifications must be obtained from the Office of Apprenticeship (OA) or the recognized State Apprenticeship Agency shown below. (Item 24)

The program sponsor and apprentice agree to the terms of the Apprenticeship Standards incorporated as part of this Agreement. The sponsor will not discriminate in the selection and training of the apprentice in accordance with the Equal Opportunity Standards in Title 29 CFR Part 30, and Executive Order 11246. This agreement may be terminated by either of the parties, citing cause(s), with notification to the registration agency, in compliance with Title 29, CFR, Part 29

**PART A: TO BE COMPLETED BY APPRENTICE. NOTE TO SPONSOR: PART A SHOULD ONLY BE FILLED OUT BY APPRENTICE.**

|  |  |  |  |  |
|--|--|--|--|--|
| 1. Name (Last, First, Middle) and Address<br><br>(No., Street, City, State, Zip Code, Telephone Number)              |  | *Social Security Number<br><br>- -   | Answer Both A and B (Voluntary)<br>(Definitions on reverse)  | 5. Veteran Status (Mark one)<br><input type="checkbox"/> Non-Veteran<br><input type="checkbox"/> Veteran   |
| 2. Date of Birth (Mo., Day, Yr.)   | 3. Sex (Mark one)<br><input type="checkbox"/> Male <input type="checkbox"/> Female |  | 4. a. Ethnic Group (Mark one)<br><input type="checkbox"/> Hispanic or Latino<br><input type="checkbox"/> Not Hispanic or Latino<br><br>b. Race (Mark one or more)<br><input type="checkbox"/> American Indian or Alaska native<br><input type="checkbox"/> Asian<br><input type="checkbox"/> Black or African American<br><input type="checkbox"/> Native Hawaiian or other Pacific Islander<br><input type="checkbox"/> White | 6. Education Level (Mark one)<br><input type="checkbox"/> 8th grade or less<br><input type="checkbox"/> 9th to 12th grade<br><input type="checkbox"/> GED<br><input type="checkbox"/> High School Graduate or Greater<br><input type="checkbox"/> Post Secondary or Technical Training |
| 7a. Employment Status (Mark one)<br><input type="checkbox"/> New Employee <input type="checkbox"/> Existing Employee |  | 7b. Career Linkage or Direct Entry (Mark one) (Instructions on reverse)<br><input type="checkbox"/> Job Corps <input type="checkbox"/> YouthBuild <input type="checkbox"/> School-to-Registered Apprenticeship <input type="checkbox"/> HUD/STEP-UP <input type="checkbox"/> Direct Entry: _____ |  |  |
| 8. Signature of Apprentice<br><br>Date   |  | 9. Signature of Parent/Guardian (if minor)<br><br>Date   |  |  |

**PART B: SPONSOR: EXCEPT FOR ITEMS 6, 7, 8, 10a. -10c, REMAINDER OF ITEMS REPOPULATED FROM PROGRAM REGISTRATION.**

|  |  |   |                            |  |  |
|--|--|---|----------------------------|--|--|
| 1. Sponsor Program No.   |  | 2a. Occupation (The work processes listed in the standards are part of this agreement).   |                            | 2b. Occupation Code:<br>2b.1. Interim Credentials<br>Only applicable to Part B, 3.b. and 3.c. (Mark one)<br><input type="checkbox"/> Yes <input type="checkbox"/> No |  |
| Sponsor Name and Address (No. Street, City, County, State, Zip Code) |  | 3. Occupation Training Approach (Mark one)<br>3a. <input type="checkbox"/> Time-Based<br>3b. <input type="checkbox"/> Competency-Based<br>3c. <input type="checkbox"/> Hybrid | 4. Term (Hrs., Mos., Yrs.) | 5. Probationary Period (Hrs., Mos., Yrs.)  |  |
| 9a. Related Instruction (Number of Hours Per Year)                   |  | 9b. Apprentice Wages for Related Instruction<br><input type="checkbox"/> Will Be Paid <input type="checkbox"/> Will Not Be Paid   |                            | 9c. Related Training Instruction Source  |  |
| 10. Wages: (Instructions on reverse)                                 |  | 10a. Pre-Apprenticeship Hourly Wage \$ _____  |                            | 10b. Apprentice's Entry Hourly Wage \$ _____   |  |
| 10c. Journeyworker's Hourly Wage \$ _____                            |  | 10d. Term<br><input type="checkbox"/> Hrs., <input type="checkbox"/> Mos., or <input type="checkbox"/> Yrs.   |                            | 10e. Wage Rate (Mark one) % <input type="checkbox"/> or \$ <input type="checkbox"/>  |  |
| 11. Signature of Sponsor's Representative(s)<br><br>Date Signed      |  | 13. Name and Address of Sponsor Designee to Receive Complaints (If applicable)  |                            |  |  |
| 12. Signature of Sponsor's Representative(s)<br><br>Date Signed      |  |   |                            |  |  |

| Check Box   | Period 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|----------|---|---|---|---|---|---|---|---|----|
| 10d. Term<br><input type="checkbox"/> Hrs., <input type="checkbox"/> Mos., or <input type="checkbox"/> Yrs. |          |   |   |   |   |   |   |   |   |    |
| 10e. Wage Rate (Mark one) % <input type="checkbox"/> or \$ <input type="checkbox"/>                         |          |   |   |   |   |   |   |   |   |    |

**PART C: TO BE COMPLETED BY REGISTRATION AGENCY**

|  |                                    |                    |
|--|------------------------------------|--------------------|
| 1. Registration Agency and Address                           | 2. Signature (Registration Agency) | 3. Date Registered |
| 4. Apprentice Identification Number (Definition on reverse): |                                    |                    |

**Program Definitions and/or Instructions:**

**Part A**

**Item 4.a. Definition - Ethnic Group:**

**Hispanic or Latino.** A person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race. The term, "Spanish origin," can be used in addition to "Hispanic or Latino."

**Item 4.b. Definitions - Race:**

**American Indian or Alaska Native.** A person having origins in any of the original peoples of North and South America (including Central America), and who maintains tribal affiliation or community attachment.

**Asian.** A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam.

**Black or African American.** A person having origins in any of the black racial groups of Africa. Terms such as "Haitian" or "Negro" can be used in addition to "Black or African American."

**Native Hawaiian or Other Pacific Islander.** A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.

**White.** A person having origins in any of the original peoples of Europe, the Middle East, or North Africa.

**Item 7b. Instructions:**

Indicate any career linkage (definitions follow) or direct entry. Enter "None" if no career linkage or direct entry applies.

**Career linkage** includes participation in programs that provided employment, training and other services to adults, youth and dislocated workers. Funds for these activities are provided by the U.S. Department of Labor/Employment and Training Administration (U.S. DOL/ETA) to states and local communities.

**One-Stop Referral.** Includes Workforce Investment Act (WIA) and Employment Services (ES) participants referred to the Registered Apprenticeship program and/or apprentices that receive WIA funded services that support their participation in their Registered Apprenticeship program.

**Trade Adjustment Assistance.** Includes trade-affected workers who have become unemployed as a result of increased imports or shifts in production out of the United States.

**Job Corps.** Youth ages 16-24 years usually receiving services in a residential setting.

**YouthBuild.** Program transferred from the U.S. Department of Housing and Urban Development (HUD) to U.S. DOL/ETA in September 2006. It assists youth ages 16-24 to obtain education and skill training and advance toward post-secondary education and career pathways in construction and other high growth, high demand occupations while building affordable housing in their communities.

**School-to-Registered Apprenticeship.** Program designed to allow high school youth ages 16 - 17 to enter a Registered Apprenticeship program and continue after graduation with full credit given for the high school portion.

**HUD/STEP-UP.** Developed in conjunction with HUD. The program provides the actual apprenticeship experience and the framework for moving into high-skill Registered Apprenticeship.

**Direct Entry.** A graduate from an accredited technical training school, Job Corps training program, Youth Build Program, or a participant in a military apprenticeship program, any of which training is specifically related to the occupation and incorporated in the Registered Apprenticeship standards. Also, insert the name of the program.

**Part B**

**Item 2.b.1. Interim Credentials.** Based on program standards that utilize the competency-based or hybrid training approach, and, upon request of the program sponsor, the credentials are issued as certificates by the Registration Agency. Interim credentials provide certification of competency attainment by an apprentice.

**Item 3. Occupation Training Approach.** The program sponsor decides which of the three training methods to use in the program as follows:

- 3.a. Time-Based Training Approach - apprentice required to complete a specific number of hours of on-the-job learning (OJL) and related training instruction (RTI).
- 3.b. Competency-Based Training Approach - apprentice required to demonstrate competency in defined subject areas and does not require any specific hours of OJL or RTI; or
- 3.c. Hybrid-Training Approach - apprentice required to complete a minimum number of OJL and RTI hours and demonstrate competency in the defined subject areas.

**Item 4. Term (Hrs., Mos., Yrs.).** Based on the program sponsor's training approach. See Part B, Item 4. Available in the terms of the Apprenticeship Standards.

**Item 5. Probationary Period (Hrs. Mos., Yrs.)** Probation period cannot exceed 25 percent of the length of the program or one year, whichever is shorter.

**Item 7. Term Remaining (Hrs., Mos., Yrs.).** After Part B, Item 6., Credit for Previous Experience (Hrs., Mos., Yrs.) is determined by the program sponsor. The Term Remaining (Hrs., Mos., Yrs.) in Part B, Item 7., for the apprentice to complete the apprenticeship is based on the training approach indicated above in Part B, Item 3. The term remaining is available in the terms of the Apprenticeship Standards.

**Item 10. Wage Instructions:**

10a. Pre-Apprentice hourly wage: sponsor enters the individual's hourly wage in the quarter prior to becoming an apprentice.

10b. Apprentice's entry hourly wage (hourly dollar amount paid): sponsor enters this apprentice's entry hourly wage.

10c. Journeyworker's wage: sponsor enters wage per hour.

10d. Term: sponsor enters in each box the apprentice schedule of pay for each advancement period based on the program sponsor's training approach. See Part B, Item 3., and is available in the terms of the Apprenticeship Standards.

10e. Percent or dollar amount: sponsor marks one.

**Note:** 10c. If the employer is signatory to a collective bargaining agreement, the journeyworker's wage rate in the applicable collective bargaining agreement is identified. Apprenticeship program sponsors not covered by a collective bargaining agreement must identify a minimum journeyworker's hourly wage rate that will be the basis for the progressive wage schedule identified in Item 10e. of this agreement.

10d. The employer agrees to pay the hourly wage rate identified in this section to the apprentice each period of the apprenticeship based on the successful completion of the training approach and related instructions outlined in the Apprenticeship Standards. The period may be expressed in hours, months, or years.

10e. The wage rates are expressed either as a percent or in dollars and cents of the journeyworker's wage depending on the industry.

**Example (Time-based approach) - 3 YEAR APPRENTICESHIP PROGRAM**

| <u>Term</u>      | <u>Period 1</u> | <u>Period 2</u> | <u>Period 3</u> | <u>Period 4</u> | <u>Period 5</u> | <u>Period 6</u> |
|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| hrs., mos., yrs. | 1000 hrs.       | 1000 hrs.       | 1000 hrs.       | 1000 hrs.       | 1000 hrs.       | 1000 hrs.       |
| %                | 55              | 60              | 65              | 70              | 80              | 90              |

**Example (Time-based approach) - 4 YEAR APPRENTICESHIP PROGRAM**

| <u>Term</u>      | <u>Period 1</u> | <u>Period 2</u> | <u>Period 3</u> | <u>Period 4</u> | <u>Period 5</u> | <u>Period 6</u> | <u>Period 7</u> | <u>Period 8</u> |
|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| hrs., mos., yrs. | 6 mos.          | 6 mos.          | 6 mos.          | 6 mos.          | 6 mos.          | 6 mos.          | 6 mos.          | 6 mos.          |
| %                | 50              | 55              | 60              | 65              | 70              | 75              | 80              | 90              |

**Item 13.** Identifies the individual or entity responsible for receiving complaints (Code of Federal Regulations, CFR, Title 29 part 29.7(k)).

**Part C.**

**Item 4. Definition:** The Registered Apprenticeship Partners Information Data System (RAPIDS) encrypts the apprentice's social security number and generates a unique identification number to identify the apprentice. It replaces the social security number to protect the apprentice's privacy.

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\*The submission of your social security number is requested. The apprentice's social security number will only be used to verify the apprentice's periods of employment and wages for purposes of complying with the Office of Management and Budget related to common measures of the Federal job training and employment programs for measuring performance outcomes and for purposes of the Government Performance and Results Act. The Office of Apprenticeship will use wage records through the Wage Record Interchange System and needs the apprentice's social security number to match this number against the employers' wage records. Also, the apprentice's social security number will be used, if appropriate, for purposes of the Davis Bacon Act of 1931, as amended, U.S. Code Title 40, Sections 276a to 276a-7, and Title 29 CFR 5, to verify and certify to the U.S. Department of Labor, Wage and Hour Division, that you are a registered apprentice to ensure that the employer is complying with the geographic prevailing wage of your occupational classification. Failure to disclose your social security number on this form will not affect your right to be registered as an apprentice. Civil and criminal provisions of the Privacy Act apply to any unlawful disclosure of your social security number, which is prohibited.

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The collection and maintenance of the data on ETA-671, Apprentice Registration – Section II Form, is authorized under the National Apprenticeship Act, 29 U.S.C. 50, and CFR 29 Part 29.1. The data is used for apprenticeship program statistical purposes and is maintained, pursuant to the Privacy Act of 1974 (5 U.S.C. 552a.), in a system of records entitled, DOL/ETA-4, Registered Apprenticeship Partners Information Management Data System (RAPIDS) at the U.S. Department of Labor, Office of Apprenticeship,. Data may be disclosed to a State Apprenticeship Agency to determine an assessment of skill needs and program information, and in connection with federal litigation or when required by law.

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**APPENDIX C**

**AFFIRMATIVE ACTION PLAN**

**ADOPTED BY**

**(NAME OF AREA JOINT APPRENTICESHIP COMMITTEE)**

AS REQUIRED UNDER TITLE 29, CODE OF FEDERAL REGULATIONS, PART 30  
AMENDED MAY 12, 1978 (OR SITE STATE LAWS/REGULATIONS)

DEVELOPED IN COOPERATION WITH THE  
U. S. DEPARTMENT OF LABOR  
OFFICE OF APPRENTICESHIP

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

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

## **SECTION I – PREAMBLE**

In order to conform to Title 29, Code of Federal Regulations (CFR) Part 30 - Equal Employment Opportunity in Apprenticeship, the Area Joint Apprenticeship Committee, hereby adopts the following nondiscriminatory pledge and Affirmative Action Plan (AAP). The Area Joint Apprenticeship Committee enters into this AAP with good faith for the purpose of promoting equality of opportunity into its registered apprenticeship program. The Area Joint Apprenticeship Committee seeks to increase the recruitment of qualified women and/or minorities for possible selection into the apprenticeship program in the event women and/or minorities are underutilized in the apprenticeship program

This AAP is a supplement to the Apprenticeship Standards. It may be amended at a later date as experience dictates. Any changes/revisions made by the Area Joint Apprenticeship Committee shall first be reviewed and approved by the National Joint Apprenticeship Board before they are submitted to the Registration Agency for approval.

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

In compliance with Section 30.3(b) of Title 29, CFR part 30, as amended May 12, 1978, the Area Joint Apprenticeship Committee 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 Area Joint Apprenticeship Committee 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 Area Joint Apprenticeship Committee pledges to the procedures and methods covered in Section IV. Affirmative Action also includes an analysis of the workforce in the areas in which this AAP operates at the time the AAP is executed. The purpose of the analysis is to determine the minority and female labor force in the each Local area as provided by (State Labor Market Analysis Division). Once the labor force is determined, the Area Joint Apprenticeship Committee can determine if deficiencies exist in terms of underutilization of minorities and/or women in the Boilermaker occupation. If underutilization exists, the Area Joint Apprenticeship Committee will attach goals and timetables (See attached Affirmative Action Plan Workforce Analysis Worksheet) for the selection of minority and/or females (minority and nonminority) applicants into the apprenticeship program by the **local area committee**.

## **SECTION IV - OUTREACH AND POSITIVE RECRUITMENT**

The Area Joint Apprenticeship Committee pledges to engage in various outreach and positive recruitment activities by employing the following approach:

The Area Joint Apprenticeship Committee’s AAP 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**

**Area Joint Apprenticeship Committee will set forth the specific steps they intend to take under each identified effort.**

The Area Joint Apprenticeship Committee will identify a **significant number of activities** in order to enable it to meet its obligation under Title 29, CFR part 30.4(c).

The Area Coordinator will be responsible for disseminating an announcement of apprenticeship openings semi-annually to the following agencies/organizations located in the area covered by the program:

- Registration Agency
- Community organizations in the geographic area from which the work force is normally drawn for the available work
- Job Corps Centers in the area
- Local School Districts in the geographic area from which the work force is normally drawn for the available work
- One Stop Centers (Employment Service Offices) in the geographic area from which the work force is normally drawn for the available work
- Press Releases and/or advertisements in newspapers and news media circulated in the minority and women's communities
- BNAP website
- Helmets to Hardhats website

The announcement shall include the nature of the Boilermaker Apprenticeship Program, the availability of apprenticeship opportunities, the sources for apprenticeship applications, the minimum qualifications required, required documentation, if applicable, and the equal opportunity policy of the Area Joint Apprenticeship Committee.

Applications will be accepted year round, but no less than once a month.

The Area Coordinator, Area Committee members, and Local Committee will also undertake positive recruitment activities which include:

- Assist guidance counselors at local schools in career counseling to encourage interest in the Boilermaker Apprenticeship Program.
- Actively participate in workshops conducted by employment service agencies (one-stop centers) for the purpose of familiarizing school employment service and other appropriate personnel about the Boilermakers Apprenticeship Program and the opportunities.
- Cooperate with school boards and vocational education systems to develop programs for preparing students to meet the minimum requirements for entry into the Apprenticeship Program.
- Seek the voluntary participation of both women and minority apprentices and journeyworkers in recruitment efforts undertaken by the Area Coordinator.
- Internally communicate the sponsor's equal opportunity policy in order to foster understanding, acceptance, and support among supervisors and



employees in order to aid the Area Joint Apprenticeship Committee in meeting its positive recruitment obligations.

- Participate in community programs for the positive recruitment and preparation of potential minority and female applicants for apprenticeship.
- Utilize journeyworkers to assist in the implementation of sponsor's affirmative action program.

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

The Area Joint Apprenticeship Committee shall review its affirmative action plan, including goals and timetable for **each local area**, annually and make appropriate changes to the extent necessary to obtain maximum effectiveness.

The Area Joint Apprenticeship Committee will make an annual review of its current AAP and its overall effectiveness and institute any revisions or modifications warranted. The review will analyze (independently and collectively) the affirmative action steps taken by the Area Joint Apprenticeship Committee for evaluating the positive impact, as well as the adverse impact in the areas of outreach and recruitment, selection, employment, and training. They will work diligently to identify the cause and effect that result from their affirmative action measures. The Area Joint Apprenticeship Committee will continually monitor these processes in order to identify the need for a new affirmative action effort and/or deletion of ineffective existing activity (ies). All changes to the AAP must be submitted to the Registration Agency for approval. The Area Joint Apprenticeship Committee will continually monitor the participation rates of minorities and women in the apprenticeship program in an effort to identify any type of underutilization. If underutilization exists, correction action will be immediately implemented. The goals and timetables also will be reviewed periodically as determined by the Registration Agency and updated where necessary.

**SECTION VI - OFFICIAL ADOPTION**

The (Insert Name of Area Joint Apprenticeship Committee) hereby officially adopts this Affirmative Action Plan on this \_\_\_\_\_ Day of (Insert Month/Year).

\_\_\_\_\_  
Signature – Chairperson

\_\_\_\_\_  
Date

\_\_\_\_\_  
Typed/Printed Name

\_\_\_\_\_  
Signature – Secretary

\_\_\_\_\_  
Date

\_\_\_\_\_  
Typed/Printed Name

*Sponsor(s) may designate the appropriate person(s) to sign the Standards on their behalf.*

**REGISTERED BY THE REGISTRATION AGENCY:**

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Typed/Printed Name

## AFFIRMATIVE ACTION PLAN WORKFORCE ANALYSIS WORKSHEET

### A. SPONSOR INFORMATION

|                      |  |             |
|----------------------|--|-------------|
| Program Number:      |  |             |
| Name of Sponsor:     |  |             |
| Address:             |  |             |
| City/State/Zip Code: |  |             |
| Contact Person:      |  |             |
| Phone Number:        |  | FAX Number: |
| E-Mail Address:      |  |             |

### B. OCCUPATIONAL INFORMATION

|                                |  |                 |
|--------------------------------|--|-----------------|
| Occupational Title: *          |  |                 |
| RAPIDS Code:                   |  | O*NET-SOC Code: |
| Type of selection method used: |  |                 |
| Labor Market Area description: |  |                 |

### C. LABOR MARKET AREA & OCCUPATIONAL PARTICIPATION DATA

|  |  |                  |
|--|--|------------------|
| <b>C.1 Total Labor Force in Labor Market Area *</b>  |  |                  |
| Number of Women:   |  | % of labor force |
| Number of Minorities:  |  | % of labor force |
| <b>C.2 Working Age Population in Labor Market Area *</b>   |  |                  |
| Number of Women:   |  | % of labor force |
| Number of Minorities:  |  | % of labor force |
| <b>C.3 Apprentice Participation in Craft/Occupation in National Apprenticeship System **</b>   |  |                  |
| Number of Women:   |  | % of apprentices |
| Number of Minorities:  |  | % of apprentices |
| <b>C.4 The General Availability of Minorities and Women with the Present or Potential Capacity for Apprenticeship in Program Sponsor's Labor Market Area. **</b> |  |                  |
| Number of Women:   |  |                  |
| Number of Minorities:  |  |                  |

Resources for obtaining labor market information.

\* RAPIDS Data available from Registration Agency.

\*\* Program Sponsors may use any reasonable method for determining the general availability of minorities and women with the present or potential capacity for apprenticeship, including relying on the data recorded in Section C.1 for "Total Labor Force", C.2 for "Working Age Population", and C.3 "Apprentice Participation in Particular Occupation" to propose the entries for "The General Availability of Minorities and Women."

**D. SPONSOR'S WORKFORCE DATA**

|   |  |                 |
|---|--|-----------------|
| D.1 Total Number of Journey/Craft Workers Employed:   |  |                 |
| Number of Women:  |  | % of work force |
| Number of Minorities:   |  | % of work force |
| D.2 Total Percentage of Apprentices or of Applicant Pool (depending on selection method used) |  |                 |
| Numerical percentage of Women apprentices or women in applicant pool:                         |  | %               |
| Numerical percentage of Minority apprentices or minorities in applicant pool:                 |  | %               |

**E. ADDITIONAL RESOURCE DATA FOR CONSIDERATION IN ESTABLISHING GOALS**

| Industry Source Data   | Minority rate of participation | Female rate of participation |
|--|--------------------------------|------------------------------|
| E.1 Registered Apprenticeship Partners Information Data System (RAPIDS): * |                                |                              |
| E.2 EEOC Occupational Employment Data: **                                  |                                |                              |

\* Data available from Registration Agency

\*\* <http://www.eeoc.gov/eeoc/statistics/employment/jobpat-eeo1/index.cfm>

**F. DETERMINATION OF UTILIZATION**

| Analysis                   | Yes | No |
|----------------------------|-----|----|
| Minority Underutilization: |     |    |
| Female Underutilization:   |     |    |

**G. SPONSOR'S GOALS:**

The program sponsor proposes and agrees to make a good faith effort to attain the goal of selecting \_\_\_\_\_ % minorities and \_\_\_\_\_ % women during the next EEO Review cycle. These goals will not be used to discriminate against any qualified applicant on the basis of race, color, religion, national origin or sex.

The number of new apprentices to be hired during the next year (or selection period) is estimated to be: \_\_\_\_\_

**H. REGISTRATION AGENCY APPROVAL:**

**Sponsor**

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

\_\_\_\_\_  
Typed Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date Signed

**Registration Agency**

\_\_\_\_\_  
Registration Agency Signature

\_\_\_\_\_  
Typed Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date Signed

## **Instructions for preparing and completing this worksheet**

The purpose of this workforce analysis worksheet is to establish a benchmark against which the demographic composition of the sponsor's apprenticeship program can be compared. The sponsor must separately determine the availability of minorities and women for each occupational title represented by the program. In determining availability, the sponsor must consider, at the very least, the factors identified at 29 CFR 30.4(e) in order to determine whether barriers to equal employment opportunity may exist with a particular occupational title.

Part A The Program Sponsor information section may be prepared by the sponsor representative or servicing Registration Agency Representative.

Part B Occupational information will be taken from the registered program standards, and may be prepared by the sponsor representative or servicing Registration Agency Representative. A Workforce Analysis Worksheet must be completed for each occupational title identified.

Part C Sponsors must use the most current and discrete statistical data available in determining availability estimates for the labor market area specified by the sponsor in Part B. Census data is one example of an appropriate source of statistical information. Other sources include data from local job service offices and data from colleges or other training institutions. Where possible, the Registration Agency has provided examples of appropriate sources of data.

For purposes of this section, the term "labor force" is defined to include both those individuals who are employed and those who are unemployed but looking for employment. The term "working age population" means persons ages 15 years and over whether or not they are currently in the labor force or looking for employment.

Part D The Program Sponsor must provide current workforce data as described in Part D. If the sponsor utilizes either Selection Method §30.5(b) (1) or (2), the data in D-2 will be reflective of the "pool" from which selections will be made. If the sponsor utilizes the Selection Method under §30.5(b) (3) or (4), the data in D-2 will be reflective of the current apprentices registered in the program.

Part E Additional Resource Data for consideration in establishing reasonable goals will be provided by the Registration Agency. This data will provide a snapshot of the national labor force for the given occupation title.

Part F Utilizing the data found in Parts C, D and E, the Program Sponsor is to determine if minorities and/or women are underutilized and must check the appropriate response.

Part G If the Program Sponsor's analysis determines that minorities and/or women are underutilized, the Sponsor, utilizing the resource data found in Parts C, D and E, will establish goals which are reasonable in consideration of the results which could be expected from its good faith efforts to make its overall affirmative action program successful. The Registration Agency will review and access the proposed goals and if found to be reasonable and attainable, will acknowledge receipt of the Sponsors goals for minorities and/or women.

Proposed goals for minorities and/or women that are lower than the current participation rate under the Program Sponsor will not be approved.

# APPENDIX D

## SELECTION PROCEDURES

### ADOPTED BY

**(NAME OF AREA JOINT APPRENTICESHIP  
COMMITTEE)**

DEVELOPED IN COOPERATION WITH THE  
U. S. DEPARTMENT OF LABOR  
OFFICE OF APPRENTICESHIP

APPROVED BY: \_\_\_\_\_  
REGISTRATION AGENCY

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

The certification of this selection procedure is not a determination that, when implemented, it meets the requirements of the Uniform Guidelines on Employee Selection Procedures (41 CFR Part 60-3) or Title 29, CFR Part 30.

## **SECTION I - MINIMUM QUALIFICATIONS (EXAMPLES)**

Applicants shall meet the following minimum qualifications:

A. Age

All applicants shall be at least eighteen (18) years of age. Applicants are required to submit reliable proof of age.

B. Education

Applicants shall be high school graduates or provide proof of equivalent educational attainment, such as successful completion of GED. Applicant must provide an official transcript(s) for high school and post high school education and training. All GED records must be submitted if applicable.

Applicants must submit a DD-214 to verify military training and/or experience if they are a veteran and wish to receive consideration for such training/experience.

C. Physical

Applicants will be physically capable of performing the essential functions of the apprenticeship program, with or without a reasonable accommodation, and without posing a direct threat to the health and safety of the individual or others.

Applicants will pass a screen for the current illegal use of drugs on acceptance into the program within forty-eight (48) hours after signing the apprenticeship agreement and prior to being employed. Applicants shall be subject to subsequent tests for drug/alcohol use on an annual, random, reasonable suspicion, and per cause basis thereafter.

D. Aptitude Test

Effective January 1, 2014, all applicants will be tested for aptitude and competency in the skills deemed necessary for successful completion of the apprenticeship program. Necessary skills areas have been determined by subject matter experts from the apprenticeship program in conjunction with workforce assessment provider ACT, Inc. The apprenticeship program has determined that aptitude testing is representative of the important aspects of performance in the industry.

Applicants are expected to attain a minimum passing score of at least 4 (out of a possible range of 3 – 7) on each of three job-related skills assessment areas in order to obtain a Career Readiness Certificate:

Reading for Information: A measurement of skills people use when they read and use written text in order to do a job;

Applied Mathematics: A measurement of skills people use when they apply mathematical reasoning, critical thinking, and problem-solving techniques to work-related problems;

Locating Information: A measurement of the skills utilized when working with workplace graphics such as charts, graphs, tables, forms, flowcharts, diagrams, floor plans, maps, and instrument gauges.

E. Reliable Transportation

Upon application to the Program, an applicant must demonstrate that he/she has access to reliable transportation. For purposes of this requirement, the term reliable transportation shall mean any form of transportation that permits the apprentice to attend work and any required classroom instruction held in the geographic jurisdiction of the Program.

**SECTION II - APPLICATION PROCEDURES**

- A. Applications shall be accepted year round, but at least once a month at the Local level by the Local Apprentice Representative. All persons requesting an application shall have one made available upon signing the applicant log.
- B. All applications shall be identical in form and requirements. The application form shall be numbered in sequence corresponding with the number appearing on the applicant log so that all applications can be accounted for. Columns will be provided on the applicant log to show race/ethnic and gender identification and the progress by dates and final disposition of each application.
- C. Before completing the application, each applicant will be required to read the Apprenticeship Standards and will be informed of the basic qualifications and documents needed to complete the application.
- D. Receipt of the properly completed application form, along with required supporting documents, (proof of age, driver's license, birth certificate or other acceptable documentation; copy of high school diploma, GED Certificate or other acceptable documentation) if applicable, shall constitute the completed application.



- E. The Local Area Representative will review the applications received from applicants, checking for completeness.
- F. Completed applications, including the Applicant Log, will be forwarded to the Area Coordinator who will check all applications to ensure they meet the minimum age requirement. Applicants deficient in one or more qualifications or requirements or making false statements on their application will be notified in writing by the Area Coordinator of their disqualification. The applicant will also be notified of the appeal rights available to them. No further processing of the application will be taken.

### **SECTION III - SELECTION PROCEDURES**

- A. The Area Joint Apprenticeship Committee will utilize referrals from the Helmets to Hardhats Program. Veterans who meet the requirements for entry into the Helmets to Hardhats Program will be eligible for referral to the Area Joint Apprenticeship Committee upon verification from the Helmets to Hardhats Program that the veteran(s) has a transferable skill in an apprenticeable occupation. Referrals from the Helmets to Hardhats Program will be done pursuant to the procedures established by the Helmets to Hardhats Program. Supervision of the selection process shall be done by the Helmets to Hardhats Program. Entry of veterans into the Program will be done without regard to race, color, religion, national origin, or sex.
- B. After exhaustion of the pool of eligible applicants as outlined in subparagraph A above, the Area Joint Apprenticeship Committee will utilize Selection Method #2 (Random Selection from Pool of Eligible Applicants), until formal implementation of aptitude testing as described in Section I.B above as a minimum qualification effective June 1, 2013. This will include selection of individuals with welding qualifications in accordance with Exhibit "D-1" attached.
- C. The Area Coordinator will send the applicants a letter informing them of their placement on the Random Selection Applicant Roster.
- D. The Area Coordinator will provide the Local Committee with the final Applicant Roster based on the outcome of the random selection process.
- E. Effective January 1, 2014, Selection Method #2 above shall be enhanced by the required attainment of a passing score on an aptitude test sufficient to earn the applicant a Career Readiness Certificate, before the individual is admitted to the pool of eligible applicants. The aptitude test shall be certified as having a significant statistical relationship between the score on the aptitude test required for admission to the pool of eligibles, and performance in the apprenticeship program.
- F. As openings for the registration of new apprentices occur, applicants will be notified of selection by telephone. It shall be the responsibility of the applicant to keep the Local Area Committee informed of their current mailing address and phone number. The Local Area Committee should inform the Area Coordinator of any changes received for applicant addresses/phone numbers.

- G. If the applicant cannot be reached by phone within two (2) days, a "Certified Letter, Return Receipt Requested," will be sent. If no response is received in ten (10) working days from the written notice of selection, the applicant's name will be removed from the list. Only one certified notice will be mailed.
- H. Qualified applicants remaining on a preceding eligibility pool will automatically be carried forward on the new eligibility pool and placed above those from the current pool of eligible's for a period of two (2) years, unless the applicant has been removed from the list by their own written request or following failure to respond to an apprentice opening. Applicants who were not placed during the two (2) year period they were in the eligibility pool will be required to reapply.

#### **SECTION IV. - DIRECT ENTRY**

Area Joint Apprenticeship Committees who wish to invoke the direct entry provision may do so without regard to the existing selection procedure or minimum qualifications used for entry into the apprenticeship program. Individuals selected into the apprenticeship program via direct entry shall only include those individuals described below who have received training or employment in an occupation directly or indirectly related to the occupation(s) registered in these Standards. The Area Joint Apprenticeship Committees will award Credit for Previous Experience in accordance with Section XII of these Standards, and will pay the apprentice(s) at the wage rate commensurate with their skill attainment. The Credit for Previous Experience shall be awarded without regard to race, color, religion, national origin or sex. The methods for direct entry shall include the following:

- A. Military Veterans who completed military technical training school and/or participated in a registered apprenticeship program or related occupation while in the military in the occupations registered in the boilermaker industry may be given direct entry into the apprenticeship program through the Helmets to Hardhats Program. Veterans who meet the requirements for entry into the Helmets to Hardhats Program will be eligible for referral to the Area Joint Apprenticeship Committee upon verification from the Helmets to Hardhats Program that the veteran(s) has a transferable skill in an apprenticeable occupation. Referrals from the Helmets to Hardhats Program will be done pursuant to the procedures established by the Helmets to Hardhats Program. Supervision of the selection process shall be done by the Helmets to Hardhats Program. Entry of veterans into the Program will be done without regard to race, color, religion, national origin, or sex.

#### **SECTION V - COMPLAINT PROCEDURE**

- A. Any apprentice or applicant for apprenticeship who believes that he/she has been discriminated against on the basis of race, color, religion, national origin, or gender, with regard to apprenticeship or that the equal opportunity standards with respect to his/her selection have not been followed in the operation of an apprenticeship program, may personally or through an authorized representative, file a complaint with the Registration Agency or, at the apprentice or applicant's election, with the private review body established by the Area Joint Apprenticeship Committee (if applicable), or with the Equal Employment Opportunity Commission.

- B. The complaint must be filed not later than 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 bodies designated by the Area Joint Apprenticeship Committee to review such complaints, any referral of such complaint by the complainant to the Registration Agency must occur within the time limitation stated above or 30 days from the final decision of such review body, whichever is later. The time may be extended with good cause shown.
- C. The complaint must 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 Area Joint Apprenticeship Committee involved, and a brief description of the circumstances of the failure to apply the equal opportunity standards.
- D. The Area Joint Apprenticeship and Training Committee shall provide the applicant with the complaint procedures.
- E. Complaints of harassment in the apprenticeship program may be filed and processed under Title 29, CFR, part 30, and the procedures as set forth above.

#### **SECTION VI - MAINTENANCE OF RECORDS**

All records, including Announcement of Openings, Apprentice Applicant Logs, Applications and all supporting documents for each processing cycle, Test Results, Ranking Lists, and other records relating to the selection and employment of apprentices shall be retained for a period of five (5) years and made available upon request to the Registration Agency.

The Area Joint Apprenticeship Committee will keep adequate records including a summary of the qualifications of each applicant, the basis for evaluation and for selection or rejection of each applicant, the records pertaining to interviews of applicants, the original application for each applicant, information relative to the operation of the apprenticeship program, including, but not limited to, job assignment, promotion, demotion, layoff, or termination, rates of pay or other forms of compensation or conditions of work, hours including hours of work and, separately, hours of training provided, and any other records pertinent to a determination of compliance with these regulations, at 29 CFR, part 30, as may be required by the U.S. Department of Labor. The records pertaining to individual applicants, selected or rejected, will be maintained in such manner as to permit the identification of minority and women (minority and nonminority) participants.

Each sponsor must retain a statement of its AAP for the prompt achievement of full and equal opportunity in apprenticeship, including all data and analysis made pursuant to the requirements of Title 29, CFR part 30.4. The sponsor also must maintain evidence that its qualification standards have been validated in accordance with the requirements set forth in Title 29, CFR part 30.5(b).

**SECTION VII - OFFICIAL ADOPTION OF SELECTION PROCEDURES**

The (Insert Name of Area Joint Apprenticeship Committee) hereby officially adopts these Selection Procedures on this \_\_\_\_\_ Day of (Insert Month/Year).

\_\_\_\_\_  
Chairperson

\_\_\_\_\_  
Date

\_\_\_\_\_  
Typed/Printed Name

\_\_\_\_\_  
Secretary

\_\_\_\_\_  
Date

\_\_\_\_\_  
Typed/Printed Name

*Sponsor(s) may designate the appropriate person(s) to sign the Standards on their behalf.*

## EXHIBIT D - 1

### **BOILERMAKERS NATIONAL APPRENTICESHIP PROGRAM (BNAP) SELECTION PROCEDURES FOR ADVANCEMENT OF APPLICANTS WITH WELDING QUALIFICATIONS:**

Due to the shortage of qualified welders in the Boilermaker Construction Trade and the low number of apprentice applicants applying for the program, the Board of Trustees for the Boilermakers National Joint Apprenticeship Program approved the following Selection Procedures on November 12, 1997:

- Step 1 Area Coordinator notifies the appropriate agencies, etc. Area Coordinator is to use the Announcement Notice. [Exhibit #D-2, D-3]
- Step 2 Applicants are notified by letter of the date(s) and location(s) to review BNAP film concerning the Boilermakers Apprenticeship Program and collect any information not submitted at the time the applicant made application such as proof of birth, high school diploma, GED, welding data.
- Step 3 Area Coordinator completes random selection form. [Exhibit #D-4, D-5]
- Step 4 Each group of applicants based on qualifications or training is assigned a number [Exhibit #D-6] for random selection.
- Step 5 Effective January 1, 2014, the random selection procedure shall be enhanced by requiring the attainment of a passing score on an aptitude test sufficient to earn the applicant a Career Readiness Certificate, before the individual will be admitted into the pool of eligible applicants. The aptitude test shall be certified as having a significant statistical relationship between the score on the aptitude test required for admission to the pool of eligibles, and performance in the apprenticeship program.
- Step 6 The Area Coordinator is to notify each applicant as to his/her place on the list.
- Step 7 Applicants are to be registered into the program starting with group one [1], number one [1].

## Area Letter Head

### **ANNOUNCEMENT OF BOILERMAKER APPRENTICESHIP OPENINGS:**

The Boilermaker occupation includes the fabrication, installation, modification and repair of boilers, hydro dams, tanks, pressure vessels, furnaces and associated equipment such as stacks, platforms in fossil and nuclear power plants, petroleum refinement, chemical plants, paper mills, steel mills and food and beverages plants. The skills required of a construction boilermaker consists of reading blueprints, rigging of heavy loads, burning, welding, layout, fit up, fabrication metal parts, often working in confined spaces or high places in excess of 100 feet.

### **BASIC QUALIFICATIONS:**

- 1] At least eighteen [18] years of age.
- 2] Capable of performing the work covered by the Boilermaker Trade.
- 3] Complete a comprehensive six thousand [6,000] hour comprehensive training program.
- 4] Complete forty-eight [48] Related Studies course, and attend classroom instruction on personal time.
- 5] Drug/alcohol test within forty-eight [48] hours after signing the apprenticeship agreement and on an annual, random, reasonable suspicion and per cause basis thereafter.
- 6] Graduated from high school or GED.
- 7] Legal right to live and work in the United States.
- 8] Abide by State and Area Apprenticeship Standards and Rules.
- 9] Travel long distances for employment and training.
- 10] Effective January 1, 2014, all applicants will be tested for aptitude and competency in the skills deemed necessary for successful completion of the apprenticeship program. Necessary skills areas have been determined by subject matter experts from the apprenticeship program in conjunction with workforce assessment provider ACT, Inc. The apprenticeship program has determined that aptitude testing is representative of the important aspects of performance in the industry.

Applicants are expected to attain a minimum passing score of at least 4 (out of a possible range of 3 -7) on each of three job-related skills assessment areas in order to obtain a Career Readiness Certificate:

- A. Reading for Information: A measurement of skills people use when they read and use written text in order to do a job;
  - B. Applied Mathematics: A measurement of skills people use when they apply mathematical reasoning, critical thinking, and problem-solving techniques to work-related problems;
  - C. Locating Information: A measurement of skills utilized when working with workplace graphics such as charts, graphs, tables, forms, flowcharts, diagrams, floor plans, maps, and instrument gauges.
- 11] An applicant must demonstrate that he/she has access to reliable transportation, which for purposes of the apprenticeship program shall mean

any form of transportation that permits the apprentice to attend work and any required classroom instruction held in the geographic jurisdiction of the Program.

**APPLICATIONS - WHEN AND WHERE TO APPLY:**

Applicants who meet the above requirements may apply for the apprenticeship program by filling out an application at: Location(s) \_\_\_\_\_ on \_\_\_\_\_, **(insert date)** and ending on \_\_\_\_\_ **(insert date)** between the hours of \_\_\_\_\_ **(insert time)** until \_\_\_\_\_ **(insert time)**, and \_\_\_\_\_ **(insert time)**, and \_\_\_\_\_ **(insert time)** Monday thru Friday.

**NOTE:** Applicants must provide copies of proof of Birth Certificate, Baptismal Certificate, DD-214 Military, voter's registration and High School Diploma or GED Certificate when making application. Duplicate copies of the original documents must be submitted as they will be kept by the Area Apprenticeship Committee.

**WELDING QUALIFICATION:** Applicants that have welding experience or training will have priority selection over those with no welding qualifications or training. Applicants must provide copies of proof of welding qualifications and/or training [Qualifications, Certifications, Welding Diploma, etc.] when making application.

Duplicate copies of the original documents must be submitted as they will be kept by the Area Apprenticeship Committee.

Selection of apprentices under this program is made on the basis of qualifications alone, as set forth in the approved selection procedures of the Boilermakers National Joint Apprenticeship Board for the Boilermaker Trade. All applications are afforded equal opportunity without regard to race, religion, color, sex, national origin, age or disability.

Question regarding this program may be directed to: \_\_\_\_\_ **(insert name)**, Area Coordinator at \_\_\_\_\_ **(insert phone number)**.

**BOILERMAKERS NATIONAL APPRENTICESHIP PROGRAM  
APPLICANT RANDOM SELECTION FORM**

THE FORM IS TO BE COMPLETED BY THE AREA COORDINATOR AND FILED WITH THE APPLICANT'S APPLICATION AND PROOF OF QUALIFICATIONS AND/OR TRAINING. CHECK ON ONE QUALIFICATION. EXAMPLE: IF APPLICANT HAS PROOF OF TIG [ROOT] SMAW, 6G POSITION AND SMAW PLATE OVERHEAD [OPEN BUTT], CHECK ONLY THE TIG [ROOT] SMAW, 6G POSITION.

Local (Insert Local Number)

Date

Name: \_\_\_\_\_

SSN: \_\_\_\_\_

**WELDING QUALIFICATIONS**

**PIPE/TUBE POOL #1**

- TIG [root]-SMAW, 6G Position [Inclined fixed (45° +- 5°) and not rotated during welding]
- SMAW open butt 6G Position [Inclined fixed (45° +- 5°) and not rotated during welding]
- SMAW with backing ring 6G Position [Inclined fixed (45° +- 5°) and not rotated during welding]
- TIG [root]-SMAW 5G Position [horizontal fixed (+-15°) and not rotated during welding]
- SMAW open butt 5G Position [horizontal fixed (+- 15°) and not rotated during welding]
- SMAW with backing ring 5G Position [horizontal fixed (+- 15°) and not rotated during welding]
- TIG [root]-SMAW, 2G Position [Vertical fixed (+- 15°) and not rotated during welding]
- SMAW open butt 2G Position [Inclined fixed (+-15°) and not rotated during welding]
- SMAW with backing ring 2G Position [Inclined fixed (+- 15°) and not rotated during welding]
- TIG [root]-SMAW, 1G Position [horizontal (+-15°) and rotated during welding]
- SMAW open butt 1G Position [horizontal fixed (+-15°) rotated during welding]
- SMAW with backing ring 1G Position [horizontal fixed (+-15°) and rotated during welding]

**PLATE POOL #2**

- SMAW Plate Overhead [open butt] 4G Position
- SMAW Plate Overhead [backing strip] 4G Position
- SMAW Plate Vertical [open butt] 3G Position
- SMAW Plate Vertical [backing strip] 3G Position
- SMAW Plate Horizontal [open butt] 2G Position
- SMAW Plate Horizontal [backing strip] 2G Position
- SMAW Plate Flat [open butt] 1G Position
- SMAW Plate Flat [backing strip] 1G Position
- MIG Plate Overhead [open butt] 4G Position
- MIG Plate [backing strip] 4G Position
- MIG Plate Vertical [open butt] 3G Position
- MIG Plate Vertical [backing strip] 3G Position
- MIG Plate Horizontal [open butt] 2G Position
- MIG Plate Horizontal [backing strip] 2G Position
- MIG Plate Flat [open butt] 1G Position
- MIG Plate Flat [backing strip] 1G Position



VO-TEC/WELDING SCHOOLS POOL #3

Attended a registered welding school. Advancement is based on hours of training received at the school.

NO QUALIFICATIONS POOL #4

Applicant has no experience or training.

\_\_\_\_\_  
COORDINATORS SIGNATURE AND DATE

\_\_\_\_\_  
APPLICANTS SIGNATURE AND DATE

**BOILERMAKERS NATIONAL APPRENTICESHIP PROGRAM  
 APPLICANT RANDOM NUMBER  
 ROSTER BY GROUP AND RANKING AFTER DRAWING**

Local (Insert Local Number)

Date

EXAMPLE:

TIG [root] – SMAW, 6G Position [Inclined fixed (45°+5°) and not rotated during welding.]

|             |            |          |         |               |
|-------------|------------|----------|---------|---------------|
| Name: _____ | SSN. _____ | Number 1 | Group 1 | Ranking No. 2 |
| Name: _____ | SSN. _____ | Number 2 | Group 1 | Ranking No. 3 |
| Name: _____ | SSN. _____ | Number 3 | Group 1 | Ranking No. 1 |

SMAW PLATE HORIZONTAL [BACKING STRIP] 2G POSITION

|             |            |          |         |               |
|-------------|------------|----------|---------|---------------|
| Name: _____ | SSN. _____ | Number 1 | Group 2 | Ranking No. 5 |
| Name: _____ | SSN. _____ | Number 2 | Group 2 | Ranking No. 2 |
| Name: _____ | SSN. _____ | Number 3 | Group 2 | Ranking No. 1 |
| Name: _____ | SSN. _____ | Number 4 | Group 2 | Ranking No. 6 |
| Name: _____ | SSN. _____ | Number 5 | Group 2 | Ranking No. 3 |
| Name: _____ | SSN. _____ | Number 6 | Group 2 | Ranking No. 4 |

Attended a registered welding school. Advancement is based on hours of training received at the school.

|             |            |          |         |               |
|-------------|------------|----------|---------|---------------|
| Name: _____ | SSN. _____ | Number 1 | Group 3 | Ranking No. 3 |
| Name: _____ | SSN. _____ | Number 2 | Group 3 | Ranking No. 4 |
| Name: _____ | SSN. _____ | Number 3 | Group 3 | Ranking No. 2 |
| Name: _____ | SSN. _____ | Number 4 | Group 3 | Ranking No. 1 |
| Name: _____ | SSN. _____ | Number 5 | Group 3 | Ranking No. 5 |

Applicant has no Qualification or training.

|             |            |           |         |                |
|-------------|------------|-----------|---------|----------------|
| Name: _____ | SSN. _____ | Number 1  | Group 4 | Ranking No. 9  |
| Name: _____ | SSN. _____ | Number 2  | Group 4 | Ranking No. 7  |
| Name: _____ | SSN. _____ | Number 3  | Group 4 | Ranking No. 5  |
| Name: _____ | SSN. _____ | Number 4  | Group 4 | Ranking No. 2  |
| Name: _____ | SSN. _____ | Number 5  | Group 4 | Ranking No. 6  |
| Name: _____ | SSN. _____ | Number 6  | Group 4 | Ranking No. 10 |
| Name: _____ | SSN. _____ | Number 7  | Group 4 | Ranking No. 3  |
| Name: _____ | SSN. _____ | Number 8  | Group 4 | Ranking No. 1  |
| Name: _____ | SSN. _____ | Number 9  | Group 4 | Ranking No. 8  |
| Name: _____ | SSN. _____ | Number 10 | Group 4 | Ranking No. 4  |

\_\_\_\_\_  
 Coordinators Signature and Date

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