

## **Hussmann Services Corporation**

- ✓ NSAC Requirement Checklist
- ✓ Individual Non-Joint (INJ) Standards of Apprenticeship
- ✓ Appendices A-Work Process Schedules and Related Instruction Outlines (see Individual Packets)
- ✓ Appendix B Apprenticeship Agreement
- ✓ Appendix C Affirmative Action Plan
- ✓ Appendix D Qualifications and Selection Procedures



#### 2018 Hussmann INJ Standards of Apprenticeship NSAC Checklist

Standards Placement	29 CFR, NRS 610, and NAC 610 Required Provisions
Foreword p. ii	<ol> <li>Skilled Occupation: The employment and training of the Apprentice in a skilled occupation. NRS 610.202, 5 and NRS 610.144 3(a)</li> </ol>
Section VII p. 4; and Appendix A	<ol> <li>Term: A term of apprenticeship of not less than 2,000 hours of work experience, consistent with training requirements as established by practice in the trade. NRS 610.144 3 (b)</li> </ol>
	Type of Occupation: The term of apprenticeship, which for an individual apprentice may be measured either through the completion of the industry standard for on-the-job learning (time-based approach), the attainment of competency (competency-based approach), or a blend of the time-based and competency-based approaches (hybrid approach). 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. The competency-based approach measures skill acquisition through the individual apprentice's successful demonstration of acquired skills and knowledge, as verified by the program sponsor. Programs utilizing this approach must still require apprentices to complete an on-the-job learning component of Registered Apprenticeship. The program standards must address how on-the-job learning will be integrated into the program, describe competencies, and identify an appropriate means of testing and evaluation for such competencies. The hybrid approach measures the individual apprentice's skill acquisition through a combination of specified minimum number of hours of on-the-job learning and the successful demonstration of competency as described in a work process schedule. The determination of the appropriate approach for the program standards is made by the program sponsor, subject to approval by the Registration Agency of the determination as appropriate to the apprenticeable occupation for which the program standards are registered. 29 CFR 29.5 (b)
Section VII p. 4; Section XII p.6; and Appendix A	3) Work Processes: An outline of the processes in which the apprentice will receive supervised experience and training on the job, and the allocation of the approximate time to be spent in each major process. NRS 610.144 3 (c)
Section XIII p.6; and Appendix A	4) Related Instruction: Provisions for organized, related and supplemental instruction in technical subjects (and the costs thereof) related to the trade with a minimum of 144 hours for each year of apprenticeship, given in a classroom or through trade, industrial or correspondence courses of equivalent value or other forms of study approved by the State Apprenticeship Council. NRS 610.144 3 (d); NAC 610.433



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Section X p.5; and Appendix A	5) Wages: A progressively increasing, reasonable and profitable schedule of wages to be paid to the apprentice consistent with the skills acquired, not less than that allowed by federal or state law or regulations or by a collective bargaining agreement. Employers shall pay a beginning wage for apprentices which is at least 35 percent of the rate for journeymen in the same trade, or Minimum and Reasonable and profitable wage for apprentice in construction industry.  NRS 610.144 3 (e); NAC 610.480, NAC 610.485
Section VIII p.5; and Appendix A	6) Periodic Review and Evaluation: Provisions for a periodic review and evaluation of the apprentice's progress in performance on the job and related instruction and the maintenance of appropriate records of such progress. NRS 610.144 3 (f)
Section VI p.4; and Appendix A	7) Ratio: A numeric ratio of apprentices to journeymen consistent with proper supervision, training, safety, continuity of employment and applicable provisions in collective bargaining agreements, in language that is specific and clear as to its application in terms of job sites, workforces, departments or plants. NRS 610.144 3 (g)
Section VIII p.5	8) <b>Probationary Period</b> : A probationary period that is reasonable in relation to the full term of apprenticeship, with full credit given for that period toward the completion of the full term of apprenticeship. A probationary period includes both on-the-job training and related instruction and cannot exceed 25% of the length of the program. <b>NRS 610.144 3 (h); NAC 610.442</b>
Section XIV p. 7	9) <b>Safety:</b> Provisions for adequate and safe equipment and facilities for training and supervision and for the training of apprentices in safety on the job and in related instruction. <b>NRS 610.144 3 (i)</b>
Section IV p.3; and Appendix D	10) Minimum Qualifications: The minimum qualifications required by a sponsor for persons entering the program, with an eligible starting age of not less than 16 years. NRS 610.144 3 (j); NAC 610.815 to 610.860, Inclusive
Section V p.4; and Appendix B	11) Apprenticeship Agreement: Provisions for the placement of an apprentice under a written agreement as required by this chapter, incorporating directly or by reference the standards of the program. NRS 610.144 3(k)
Section XI p.6; and Appendix D	12) Credit for Previous Experience: Provisions for the granting of advanced standing or credit to all applicants on an equal basis for previously acquired experience, training or skills, with commensurate wages for each advanced step granted. NRS 610.144 3(I)
Section XXI p. 10	13) <b>Transfer of Training</b> : Provisions for the transfer of the employer's training obligation when the employer is unable to fulfill his or her obligation under the agreement to another employer under the same or a similar program with the consent of the apprentice and the local joint apprenticeship committee or sponsor of the program. <b>NRS 610.144 3(m)</b>
Section VI p.4	14) Qualified Trainers and Supervision: Provisions for the assurance of qualified training personnel and adequate supervision on the job. NRS 610.144 3(n)
Section XVI p. 8	15) <b>Completion Certificate</b> : Provisions for the issuance of an appropriate certificate evidencing the successful completion of an apprenticeship. NRS <b>610.144 3(o)</b>



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Section XXV p. 13	16) Registration Agency: An identification of the OWINN as the agency for registration of the program. NRS 610.144 3 (p)
Section XIX p. 9	17) Modifications: Provisions for the registration of agreements and of modifications and amendments thereto. NRS 610.144 (q)
Section XVII p. 8	18) Registration/Cancellation/Deregistration: Provisions for notice to the State Apprenticeship Director of persons who have successfully completed the program and of all cancellations, suspensions and terminations of agreements and the causes therefor. NRS 610.144 (r)
Section VIII p.5	<ol> <li>Probationary Period Termination: Provisions for the termination of an agreement during the probationary period by either party without cause. NRS 610.144 (s)</li> </ol>
Section II p. 3; and Appendix D	<ul> <li>Equal Employment Opportunity: Compliance with 29 CFR part 30; an affirmative action plan complying with 29 CFR 30.4; a method of selection or apprentices authorized by 29 CFR 30.5. A statement that the program will be conducted, operated and administered in conformity with the applicable provisions of 29 C.F.R. Part 30 or a state plan for equal opportunity in employment in apprenticeships adopted pursuant to 29 C.F.R. Part 30 and approved by the Department of Labor.</li> <li>(Five or more apprentices) For programs registered after January 18, 2017, the initial written affirmative action plan (Appendix C) for such programs must be completed within 2 years of registration. The written affirmative action plan must be updated every time the sponsor completes workforce analyses required by CFR 30.5(b) and 30.7(d) Less than five apprentices encouraged, but not required</li> <li>NRS 610.144 2; NRS 610.144 3 (t); NAC 610.510 through 610.990, Inclusive, 29 CFR 30.4</li> </ul>
Section XX p. 9; Appendix B; and Appendix D	21) Person to Receive Complaints: The name and address of the appropriate authority under the program to receive, process and make disposition of complaints. NRS 610.144 3(u)
Section XV p.7; and Appendix D	22) <b>Records Maintenance</b> : Provisions for the recording and maintenance of all records concerning apprenticeships as may be required by the State Apprenticeship Council and applicable laws. <b>NRS 610.144 3(v); NAC 610.910</b>
	ALL DOCUMENTS HAVE BEEN CHECKED FOR SPELLING, FORMATTING, GRAMMAR, (INCLUDING TABLE OF CONTENTS), ETC.



#### STANDARDS OF APPRENTICESHIP

#### **DEVELOPED BY**

#### **Hussmann Services Corporation**

## FOR ALL OCCUPATIONS IDENTIFIED IN APPENDICES A

**APPROVED BY** 

OFFICE OF WORKFORCE INN	IOVATION FOR THE NEW APPRENTICESHIP COU	NEVADA AND THE NEVADA STATE NCIL
Erin Hast	ty, Nevada State Apprenti	iceship Director
	REGISTRATION DATE:	

REGISTERED AS PART OF THE NATIONAL APPRENTICESHIP ACT IN ACCORDANCE WITH THE BASIC STANDARDS OF APPRENTICESHIP

ESTABLISHED BY THE US DEPARTMENT OF LABOR, THE OFFICE OF WORKFORCE INNOVATION FOR THE NEW NEVADA, AND THE NEVADA STATE APPRENTICESHIP COUNCIL

REGISTRATION NUMBER: \_\_\_\_\_





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#### **FOREWORD**

These group non-joint **Hussmann Services Corporation** apprenticeship standards have as their objective the training of numerous apprenticeable occupations skilled in all phases of various industries. **Hussmann Services Corporation** acting as sponsor, recognize that in order to accomplish this, there must be well-developed on-the-job learning combined with related instruction.

Pursuant to Title 29, CFR part 29.4 and NRS 610.202 these occupations are apprenticeable because each meet the following criteria:

- (a) Involve skills that are customarily learned in a practical way through a structured, systematic program of on-the-job supervised learning;
- (b) Be clearly identified and commonly recognized throughout an industry;
- (c) Involve the progressive attainment of manual, mechanical or technical skills and knowledge which, in accordance with the industry standard for the occupation, would require the completion of at least 2,000 hours on on-the-job learning to attain; and
- (d) Require related instruction to supplement the on-the-job learning.

This recognition has resulted in the development of these standards of apprenticeship. They were developed in accordance with the basic standards recommended by the U.S. Department of Labor, Office of Apprenticeship, as well as the Nevada Office of Workforce Innovation for the New Nevada (OWINN) and the Nevada State Apprenticeship Council, as a basis from which the sponsor can work to establish an apprenticeship training program that meets the particular needs of the area.



#### **SECTION I - PROGRAM ADMINISTRATION**

Program Sponsors are responsible for the administration of all aspects of a Registered Apprenticeship program. Sponsor means any person, association, committee, or organization operating an apprenticeship program and in whose name the program is (or is to be) registered or approved. Sponsors, at their discretion, may establish an Apprenticeship and Training Committee (ATC) to carry out the responsibilities and duties required of a Program Sponsor as described in these Standards of Apprenticeship. If an ATC is established by the Program Sponsor, a list of the membership and the areas of expertise they represent must be provided to the Registration Agency. While the Office of Apprenticeship recommends that Program Sponsors utilize the services of an ATC, a Sponsor may also elect to administer the program without the services of an ATC.

#### **Responsibilities of the Sponsor**

- A. Cooperate in the selection of apprentices as outlined in this program.
- B. Ensure that all apprentices are under written apprenticeship agreements.
- C. Ensure in writing an employer agrees to pay the applicable apprenticeship wage and the costs of the training assessed to the apprentice, as defined in Section XIII.
- D. Review and recommend apprenticeship activities in accordance with this program.
- E. Establish the minimum standards of education and experience required of apprentices.
- F. Register the local apprenticeship standards with the Registration Agency.
- G. Hear and resolve all complaints of violations of apprenticeship agreements.
- H. Arrange evaluations of apprentices' progress in manipulative skills and technical knowledge.
- I. Maintain records of all apprentices, showing their education, experience, and progress in learning the occupation.
- J. Certify to the Registration Agency that apprentices have successfully completed their apprenticeship program.
- K. Notify, within 45 days, the Registration Agency of all new apprentices to be registered, credit granted, suspensions for any reason, reinstatements, extensions, completions and cancellations with explanation of causes.
- L. Supervise all the provisions of the local standards and be responsible, in general, for the successful operation of the standards by performing the duties here listed. Cooperate with public and private agencies, which can be of assistance in obtaining publicity to develop public support of apprenticeship. Keep in contact with all parties concerned, including apprentices, employers, and journeyworkers.
- M. Provide each apprentice with a copy of these standards, along with any applicable written rules and policies. Require the apprentice to sign an acknowledgment receipt of same. Follow this procedure whenever revisions or modifications are made to the rules and policies.
- N. When notified that an apprentice's related instruction or on-the-job progress is found to be unsatisfactory, the sponsor will determine whether the apprentice should continue in a probationary status and may require the apprentice to repeat a process or series of processes before advancing to the next wage classification. Should it be found in the



course of this determination that the apprentice does not have the ability or desire to continue the training to become a journeyworker, the sponsor will, after the apprentice has been given adequate assistance and opportunity for corrective action, terminate the apprenticeship agreement, as provided in NRS 610.180 and 29 CFR § 29.7(h)(1)(2)(i) and (ii).

O. The employer will provide each registered apprentice with continuous employment sufficient to provide the opportunity for completion of his or her apprenticeship program. If the sponsor is unable to fulfill its training and/or employment obligation in conformance with these standards, the sponsor will, per Section XXI of these standards and with the apprentice's consent, make a good-faith effort to facilitate a transfer of the apprentice to another registered employer for completion of the apprenticeship.

If conditions of business make it necessary to temporarily suspend the period of apprenticeship, apprentices suspended for this reason will be given the opportunity to resume their active apprenticeships before any additional apprentices are employed. The suspension and reinstatement of apprentices shall be done in relation to retention of the most advanced apprentice and in accordance with the company policy for breaks in seniority.

#### Suggested Structure of the Apprenticeship and Training Committee (ATC) - Optional

- A. Members of the ATC will be selected by the groups they represent.
- B. Membership will be composed of an equal number of representatives of the employer(s) and of the employees represented but does not have a bona fide collective bargaining agent(s).

#### **Suggested Administrative Procedures**

- A. The ATC will elect a chairperson and a secretary and will determine the time and place of regular meetings. Meetings will be held as frequently as needed to effectively manage the program. Written minutes of the meetings will be kept.
- B. The chairperson and secretary will have the power to vote on all questions affecting the apprenticeship program.
- C. The offices of chairperson and secretary will rotate (insert frequency) among members of the ATC.
- D. The ATC will invite a representative designated by the Council to serve as a consultant to the committee.
- E. The ATC will notify the State Apprenticeship Council via the Registration Agency, of any termination or agreement within 10 days.
- F. The ATC will be comprised of an equal number of representatives of management and labor and any public representatives whom they select.

## SECTION II - EQUAL OPPORTUNITY PLEDGE - NRS 610.144 and 29 CFR §§ 29.5(b)(21) and 30.3(b)

The sponsor will not discriminate against apprenticeship applicants or apprentices based race, color, religion, national origin, sex (including pregnancy and gender identity), sexual orientation,



genetic information, or because they are an individual with a disability or a person 40 years old or older. The sponsor will take affirmative action to provide equal opportunity in apprenticeship and will operate the apprenticeship program as required under NRS 610.144 and 29 CFR § 30.

## <u>SECTION III - AFFIRMATIVE ACTION PLAN AND SELECTION PROCEDURES</u> - NRS 610.144 and 29 CFR §§ 29.5(b)(21), 30.4, and 30.5

Within 2 years of program registration sponsors with 5 or more registered apprentices are required to adopt an affirmative action plan (Appendix C) and selection procedures (Appendix D), which will become part of these standards of apprenticeship. However, the Office of Apprenticeship encourages the development of these two plans for all programs regardless of apprentice numbers. For programs with fewer than 5 apprentices, these plans are not required, and the sponsor may continue to select apprentices in conformance with its current human resources and equal employment opportunity hiring policies.

## <u>SECTION IV - QUALIFICATIONS FOR APPRENTICESHIP</u> - NRS 610.144 and 29 CFR § 29.5(b)(10)

Applicants will meet the following minimum qualifications. These qualification standards, and the score required on any standard for admission to the applicant pool, must be directly related to job performance, as shown by a statistical relationship between the score required for admission to the pool and performance in the apprenticeship program:

#### A. Age

Minimum qualifications required by the sponsor for persons entering the apprenticeship program, with an eligible starting age not less than 16 years.

#### B. <u>Education</u>

A high school diploma, General Educational Development (GED) equivalency or other high school equivalency credential is required. Applicant must provide an official transcript(s) for high school and any post–high school education. Applicant must submit the GED certificate or other high school equivalency credential if applicable.

#### 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 screening for the current illegal use of drugs required by the employer on acceptance into the program and prior to being employed.

#### D. Aptitude Test

When required by an employer, each applicant must pass any aptitude test given by the employer which will be used as one factor in the selection process.

#### E. Others

As deemed appropriate and required by the employer.



## <u>SECTION V - APPRENTICESHIP AGREEMENT</u> - NRS 610.150, NRS 610.160 and 29 CFR §§ 29.3(d), 29.3(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 will be covered by a written apprenticeship agreement (Appendix B) which can be submitted electronically through the Registered Apprenticeship Partners Information Data System (RAPIDS), using the Apprentice Electronic Registration process by the sponsor and the apprentice and approved by and registered with the Registration Agency. Such agreement will contain a statement making the terms and conditions of these standards a part of the agreement as though expressly written therein. The sponsor shall provide a copy of the apprenticeship agreement to the apprentice, the Registration Agency, and the employer. An additional copy will be provided to the veteran's state approving agency for those veteran apprentices desiring access to any benefits to which they are entitled.

Prior to signing the apprenticeship agreement, each selected applicant will be given an opportunity to read and review these standards, the sponsor's written rules and policies, and the apprenticeship agreement. The State Apprenticeship Council, via the Registration Agency will be advised within 45 days of the execution of each apprenticeship agreement and will be given all the information required for registering the apprentice.

## <u>SECTION VI - SUPERVISION OF APPRENTICES AND RATIOS</u> - NRS 610.144 and 29 CFR § 29.5(b)(14) and 29 CFR § 29.5(b)(7)

No apprentice shall work without proper or adequate supervision of the journeyworker.

For the purpose of these apprenticeship standards, adequate or proper supervision of the apprentice means the apprentice is under the supervision of a fully qualified journeyworker or supervisor at all times who is responsible for making work assignments, providing on-the-job learning (OJL), and ensuring safety at the worksite.

To adequately or properly supervise an apprentice does not mean the apprentice must be within eyesight or reach of the supervisor, but that the supervisor knows what the apprentice is working on; is readily available to the apprentice; and is making sure the apprentice has the necessary instruction and guidance to perform tasks safely, correctly, and efficiently.

The sponsor shall establish a numeric ratio of apprentices to fully proficient workers (journeyworkers) consistent with proper supervision, training, safety, and continuity of employment throughout the apprenticeship. The ratio language must be specific and clearly described as to its application to the jobsite, workforce, department, or plant. The ratio of apprentices to fully proficient workers (journeyworkers) will be as noted in each Appendix A.

#### SECTION VII - TERM OF APPRENTICESHIP - 29 CFR § 29.5(b)(2)

The term of the occupation will be time-based, hybrid, or competency-based (selection based on the occupation) with an OJL attainment of supplemented by the required hours of related instruction as stated on the Work Process Schedules and Related Instruction Outlines (Appendix A).

The sponsor may utilize a career lattice as a pathway for apprentices to move upward in the organization, which may or may not include interim credential leading to the Certificate of Completion of Apprenticeship or career lattice credential, if applicable.



## <u>SECTION VIII - PROBATIONARY PERIOD</u> - NRS 610.150, NRS 610.144, and 29 CFR §§ 29.5(b)(8) and 29.5(b)(20)

Every applicant selected for apprenticeship will serve a probationary period. The probationary period cannot exceed 25 percent of the length of the program or 1 year, whichever is shorter.

During the probationary period, either the apprentice or the sponsor may terminate the apprenticeship agreement, without stated cause, by notifying the other party in writing. The records for each probationary apprentice will be reviewed prior to the end of the probationary period. Records may 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 evaluated as satisfactory after a review of the probationary period will be given full credit for the probationary period and continue in the program.

After the probationary period, the apprenticeship agreement may be cancelled at the request of the apprentice or may be suspended or cancelled by the sponsor for reasonable cause after documented due notice to the apprentice and a reasonable opportunity for corrective action. In such cases, the sponsor will provide written notice to the apprentice and to the State Apprenticeship Council via the Registration Agency of the final action taken.

#### **SECTION IX - HOURS OF WORK**

Apprentices will generally work the same hours as fully proficient workers (journeyworkers), except that no apprentice will be allowed to work overtime if it interferes with attendance in related instruction classes. Apprentices who do not complete the required hours of OJL during a given segment will have the term of that segment extended until they have accrued the required number of hours of training.

#### SECTION X - APPRENTICE WAGE PROGRESSION - NRS 610.144 and 29 CFR § 29.5(b)(5)

Apprentices will be paid a progressively increasing schedule of wages and fringe benefits 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 fully proficient or journeyworker status, the sponsor will evaluate all progress to determine whether advancement has been earned by satisfactory performance in OJL and in related instruction courses. In determining whether satisfactory progress has been made, the sponsor will be guided by the work experience and related instruction records and reports.

The progressive wage schedule and fringe benefits will be an increasing percentage of the fully proficient or journeyworker wage rate. The percentages that will be applied to the applicable fully proficient or journeyworker rate are shown on the attached Work Process Schedules and Related Instruction Outlines (Appendix A). In no case will the starting wages of apprentices be less than that required by any minimum wage law that may be applicable, or 35% of the rate for journeyworkers/fully competent workers in a non-construction trade and the minimum reasonable and profitable wage for an apprentice in the construction industry.



## SECTION XI - CREDIT FOR PREVIOUS EXPERIENCE - NRS 610.140 and 29 CFR §§ 29.5(b)(12) and 30.4(c)(8)

The sponsor may grant credit toward the term of apprenticeship to new apprentices. Credit will be based on demonstration of previous skills or knowledge equivalent to those identified in these standards.

Apprentice applicants seeking credit for previous experience gained outside the supervision of the sponsor must submit the request at the time of application and furnish such records, affidavits, and other documents to substantiate the claim. An applicant who is a veteran and who wishes to receive consideration for military training and/or experience must submit a DD-214. Applicants requesting credit for previous experience who are selected into the apprenticeship program will start at the beginning wage rate. The request for credit will be evaluated and a determination made by the sponsor during the probationary period, when actual on-the-job and related instruction performance can be examined. Prior to completion of the probationary period, the amount of credit to be awarded will be determined after review of the apprentice's previous work and training/education record and evaluation of the apprentice's performance and demonstrated skill and knowledge during the probationary period.

An apprentice granted credit will be advanced to the wage rate designated for the period to which such credit accrues. The State Apprenticeship Council, via the Registration Agency will be advised of any credit granted and the wage rate to which the apprentice is advanced. The granting of advanced standing will be uniformly applied to all apprentices.

#### SECTION XII - WORK EXPERIENCE - NRS 610.144 and 29 CFR § 29.5(b)(3)

During the apprenticeship, the apprentice will receive OJL and related instruction in all phases of the occupation necessary to develop the skill and proficiency of a skilled journeyworker. The OJL will be under the direction and guidance of the apprentice's supervisor.

#### SECTION XIII - RELATED INSTRUCTION - NRS 610.144 and 29 CFR § 29.5(b)(4)

Every apprentice is required to participate in coursework related to the job as outlined in Appendix A, with a minimum of 144 hours of related instruction is required for each year of the apprenticeship. Apprentices agree to take such courses as the sponsor deems advisable. The sponsor will secure the instructional aids and equipment it deems necessary to provide quality instruction. Although the apprentice shall not pay for costs of training, the sponsor may require apprentice to pay the costs of his or her books, tools and any license required to work in occupation. In cities, towns, or areas having no vocational schools or other schools that can furnish related instruction, the sponsor may require apprentices to complete the related instruction requirement through electronic media or other instruction approved by the Registration Agency.

Apprentices **will not** be paid for hours spent attending related instruction classes. The sponsor will inform each apprentice of the availability of college credit (if applicable).

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Any apprentice who is absent from related instruction will satisfactorily complete all coursework missed before being advanced to the next period of training. In cases of failure of an apprentice to fulfill the obligations regarding related instruction without due cause, the sponsor will take appropriate disciplinary action and may terminate the apprenticeship agreement after due notice to the apprentice and opportunity for corrective action.

To the extent possible, related instruction will be closely correlated with the practical experience and training received on the job. The sponsor will monitor and document the apprentice's progress in related instruction classes.

The sponsor will secure competent instructors whose knowledge, experience, and ability to teach will be carefully examined and monitored. The sponsor may require the instructors to attend instructor training to meet the requirements of NRS 610.144 and 29 CFR § 29.5(b)(4)(i)(ii) or state regulations.

#### SECTION XIV - SAFETY AND HEALTH TRAINING - NRS 610.144 and 29 CFR § 29.5(b)(9)

All apprentices will receive instruction in safe and healthful work practices both on the job and in related instruction that are in compliance with the Occupational Safety and Health Administration standards promulgated by the Secretary of Labor under 29 U.S.C. 651 et seq., as amended, or state standards that have been found to be at least as effective as the federal standards.

## <u>SECTION XV - MAINTENANCE OF RECORDS</u> - NRS 610.144 and 29 CFR §29.5(b)(6), 29.5(b)(23), and 30.8

Program sponsors are responsible for maintaining, at a minimum, the following records:

- summary of the qualifications of each applicant;
- basis for evaluation and for selection or rejection of each applicant;
- records pertaining to interview;
- the original application;
- records of each apprentice's OIL:
- related instruction reviews and evaluations;
- progress evaluations;
- record of job assignments, promotions, demotions, layoffs, or terminations, rates of pay; and
- any other actions pertaining to the apprenticeship.

Program sponsors will also maintain all records relating to apprenticeship applications (whether selected or not), including, but not limited to, the sponsor's outreach, recruitment, interview, and selection process. Such records will clearly identify minority and female (minority and nonminority) applicants and must include, among other things, the basis for evaluation and for selection or rejection of each applicant. For a complete list of records that each sponsor is required to maintain under NRS 610.144 (please refer to NAC 610.910) and 29 CFR § 30 (please refer to 29 CFR § 30.8).

All such records are the property of the sponsor and will be maintained for a period of 5 years from the date of last action. They will be made available to the Registration Agency upon request.



## <u>SECTION XVI - CERTIFICATE OF COMPLETION OF APPRENTICESHIP</u> - NRS 610.120 and 29 CFR § 29.5(b)(15), and Circular 2015-02

Upon satisfactory completion of the requirements of the apprenticeship program as established in these Standards, the Sponsor will so certify to the Registration Agency and request the awarding of a Certificate of Completion of Apprenticeship to the completing apprentice(s). Such requests may be completed electronically using the Registered Apprenticeship Partners Information Data System (RAPIDS) or in writing using the supplied U. S. Department of Labor, ETA, Office of Apprenticeship, Application for Certification of Completion of Apprenticeship Form in (Appendix B), accompanied by the appropriate documentation for both on-the-job learning and the related instruction as may be required by the Registration Agency.

#### **Certificate of Training**

A Certificate of Training may be requested from and issued by the U.S. Department of Labor's Office of Apprenticeship, Office of the Administrator (the Registration Agency), only for a registered apprentice who has been certified by the sponsor as having successfully met the requirements to receive an interim credential as identified in these standards. The Registration Agency may require that a record of completed OJL and related instruction for the apprentice accompany such requests.

## <u>SECTION XVII - NOTICE TO REGISTRATION AGENCY</u> - NRS 610.160 and 29 CFR §§ 29.3(d), 29.3(e), and 29.5(b)(19)

The State Apprenticeship Council, via the Registration Agency must be notified within 45 days of any apprentice action - e.g., registered, reinstated, extended, modified, granted credit, completed, transferred, suspended, canceled - and a statement of the reasons therefor.

## <u>SECTION XVIII - REGISTRATION, CANCELLATION, AND DEREGISTRATION</u> - NRS 610.095, NRS 610.180, and 29 CFR §§ 29.5(b)(18), 29.8(a)(2), and 29.8(b)(8)

These standards will, upon adoption by the sponsor, be submitted to the State Apprenticeship Council for approval. Such approval will be acquired before implementation of the program.

The sponsor reserves the right to discontinue at any time the apprenticeship program set forth herein. The sponsor will notify the State Apprenticeship Council via Registration Agency within 30 days in writing of any decision to cancel the program.

The State Apprenticeship Council may initiate deregistration of these standards for failure of the sponsor to abide by the provisions herein. Such deregistration will be in accordance with the Registration Agency's regulations and procedures.

The sponsor will notify each apprentice of the cancellation of the program and the effect of same. If the apprenticeship program is cancelled at the sponsor's request, the sponsor will notify the apprentice(s) within 15 days of the date of the State Apprenticeship Council's acknowledgment of the sponsor's request. If the State Apprenticeship Council orders the deregistration of the apprenticeship program, the sponsor will notify the apprentice(s) within 15 days of the effective date of the order. This notification will conform to the requirements of NAC 610 and 29 CFR § 29.8.



#### SECTION XIX - AMENDMENTS AND MODIFICATIONS - NRS 610.150 and 29 CFR § 29.5(b)(18)

These standards may be amended or modified at any time by the sponsor provided that no amendment or modification adopted will alter any apprenticeship agreement in force at the time without the consent of all parties. Such amendment or modification will be submitted to the State Apprenticeship Council 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.

## <u>SECTION XX - ADJUSTING DIFFERENCES; COMPLAINT PROCEDURE</u> – NRS 610.180 and 29 CFR § 29.5(b)(22), 29.7(k), and 30.11

The sponsor will have full authority to enforce these standards. Its decision will be final and binding on the employer, the sponsor, and the apprentice, unless otherwise noted below.

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

#### NRS 610.180 and 29 CFR § 29.7(k)

The sponsor will hear and resolve all complaints of violations concerning the apprenticeship agreement and the registered apprenticeship standards for which written notification is received within 10 days of the alleged violations. The sponsor will make such rulings as it deems necessary in each individual case within 30 days of receiving the written notification. Either party to the apprenticeship agreement may consult with the State Apprenticeship Council for an interpretation of any provision of these standards over which differences occur. The name and address of the appropriate authority to receive, process, and dispose of complaints, as specified in Appendix B:

Donald Elliott Hussmann Services Corporation 4020 West Ali Baba Lane, Unit B Las Vegas, NV 89118 Donald.elliott@hussmann.com 303-489-1586

#### NRS 610.180 and 29 CFR § 30.11

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 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 State Apprenticeship Council, via Registration Agency or, at the apprentice or applicant's election, with the private review body established by the program sponsor (if applicable).

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 provided in NRS 610.144 and 29 CFR § 30.



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 body designated by the program sponsor to review such complaints, any referral of such complaint by the complainant to the State Apprenticeship Council 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 by the State Apprenticeship Council for good cause shown.

Complaints of discrimination and failure to follow equal opportunity standards in the apprenticeship program may be filed and processed under NRS 610.180 and 29 CFR § 30 and the procedures set forth above. The sponsor shall provide written notice of its complaint procedure to all applicants for apprenticeship and all apprentices.

## <u>SECTION XXI - TRANSFER OF AN APPRENTICE AND TRAINING OBLIGATION</u> - NRS 610.090 and 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 committees or program sponsors and must comply with the following requirements:

- i. The transferring apprentice must be provided a transcript of related instruction and OJL 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.

The apprentice must receive credit from the new sponsor for the training already satisfactorily completed.

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

Apprentices, having read these standards formulated by the sponsor, agree to all the terms and conditions contained herein and agree to abide by the sponsor's rules and policies, including any amendments, and to serve such time, perform such manual training, and study such subjects as the sponsor may deem necessary to become a skilled journeyworker.

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

- A. 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 sponsor.
- B. Develop and practice safe working habits and work in such a manner as to assure his/her personal safety and that of fellow workers.
- C. Work for the employer to whom the apprentice is assigned for the duration of the apprenticeship, unless the apprentice is reassigned to another employer or the apprenticeship agreement is terminated by the sponsor.



#### **SECTION XXIII - TECHNICAL ASSISTANCE**

Technical assistance, such as that from the U.S. Department of Labor's Office of Apprenticeship, the Office of Workforce Innovation for the New Nevada, and vocational schools, may be requested to advise the sponsor.

The sponsor is encouraged to invite representatives from industry, education, business, private organizations, and public agencies to provide consultation and advice for the successful operation of its training program.

#### SECTION XXIV - CONFORMANCE WITH FEDERAL AND STATE LAWS AND REGULATIONS

No Section of these Standards of Apprenticeship shall be construed as permitting violation of any Federal or Nevada State Law or Regulation.



#### **SECTION XXV - DEFINITIONS**

<u>APPRENTICE</u>: Any individual employed by the employer meeting the qualifications described in the standards of apprenticeship who has signed an apprenticeship agreement with the local sponsor providing for training and related instruction under these standards and who registers with the Registration Agency.

<u>APPRENTICE ELECTRONIC REGISTRATION (AER)</u>: An electronic tool that allows for instantaneous transmission of apprentice data for more efficient registration of apprentices and provides program sponsors with a faster turnaround on their submissions and access to their apprenticeship program data.

**APPRENTICESHIP AGREEMENT:** The written agreement between the apprentice and the sponsor setting forth the responsibilities and obligations of all parties to the apprenticeship agreement with respect to the apprentice's employment and training under these standards. Each apprenticeship agreement must be registered with the Registration Agency.

**APPRENTICESHIP TRAINING COMMITTEE (ATC):** Those persons designated by the sponsor to act as agents for the sponsor in the administration of the program. A non-joint committee, which may also be known as a unilateral committee or (if it includes workers' representatives) a group non-joint committee, has employer representatives but does not have a bona fide collective bargaining agent as a participant.

<u>CAREER LATTICE</u>: Career lattice apprenticeship programs include occupational pathways that move an apprentice laterally or upward within an industry. These programs may or may not include an interim credential leading to the Certificate of Completion of Apprenticeship credential.

<u>CERTIFICATE OF COMPLETION OF APPRENTICESHIP</u>: The credential issued by the Registration Agency to those registered apprentices certified and documented as having successfully completed the apprentice training requirements outlined in these standards of apprenticeship.

<u>CERTIFICATE OF TRAINING</u>: A credential that may be issued by the U.S. Department of Labor's Office of Apprenticeship, or by Office of Workforce Innovation for the New Nevada administrator to those registered apprentices whom the sponsor has certified in writing to the Registration Agency as having successfully met the requirements to receive an interim credential.

<u>COMPETENCY-BASED OCCUPATION</u>: An occupation using an apprenticeship approach that requires the attainment of manual, mechanical, or technical skills and knowledge, as specified by an occupation standard and demonstrated by an appropriate written and hands-on proficiency measurement.

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



**EMPLOYER:** Any person or organization employing an apprentice, whether or not such person or organization is a party to an apprenticeship agreement with the apprentice. A person, business, or company signatory to this sponsor's standards that is responsible for providing hours of work, supervision, wages, and/or benefits to apprentices in its employ as registered under these standards.

**HYBRID OCCUPATION:** An occupation using an apprenticeship approach that measures the individual apprentice's skill acquisition through a combination of a specified minimum number of hours of on-the-job learning and the successful demonstration of competency as described in a work process schedule.

**INTERIM CREDENTIAL:** A credential issued by the Registration Agency, upon request of the appropriate sponsor, as certification of competency attainment by an apprentice.

**IOB CORPS CENTER:** Any of the federally funded Job Corps centers throughout the U.S. and Puerto Rico. Job Corps serves youths and young adults 16-24 years of age. Sponsors that wish to hire Job Corps graduates who are trained in any occupation covered under these standards and who meet the minimum qualifications for apprenticeship may do so via the direct entry provision described in Appendix D: Qualifications and Selection Procedures.

**JOURNEYWORKER/FULLY-COMPETENT WORKER:** A worker who has attained a level of skills, abilities, and competencies recognized within an industry as mastery of the skills and competencies required for the occupation. These terms 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.

<u>O\*NET-SOC CODE</u>: 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.

<u>ON-THE-JOB LEARNING (OJL)</u>: Tasks learned on-the-job in which the apprentice must become proficient before a completion certificate is awarded. The learning must be through structured, supervised work experience.

**PROVISIONAL REGISTRATION:** The 1-year initial provisional approval of newly registered programs that meet the required standards for program registration, after which program approval may be made permanent, continued as provisional, or rescinded following a review by the Registration Agency, as provided for in NAC 610.357 and 29 CFR §§ 29.3(g) and (h).

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

**REGISTRATION AGENCY and FIELD REPRESENTATIVE:** The U.S. Department of Labor's Office of Apprenticeship or the Office of Workforce Innovation for the New Nevada that has responsibility for registering apprenticeship programs and apprentices, providing technical assistance, conducting reviews for compliance with 29 CFR § 29 and 30, and conducting quality assurance assessments.



The field representative shall mean the person designated by Office of Apprenticeship to service this program.

The Registration Agency and field representative identified are:

Office of Workforce Innovation for the New Nevada (OWINN), Erin Hasty, Nevada State Apprenticeship Director, (702) 486-8080;

and

U.S. Department of Labor, Office of Apprenticeship, Region VI, Colleen Henry, State Director, (702) 388-6771.

**RELATED INSTRUCTION:** An organized and systematic form of instruction designed to provide the apprentice with 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:** Any person, association, committee, or organization that operates an apprenticeship program and in whose name the program is registered. That assumes the full responsibility for administration and operation of the apprenticeship program. The sponsor, for purposes of these standards, means Hussmann Services Corporation.

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

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

**TIME-BASED OCCUPATION:** An occupation using an apprenticeship approach that 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.

**TRANSFER:** A shift of apprenticeship registration 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 committees or program sponsors.

**YOUTHBUILD:** A youth and community development program that addresses core issues facing low-income communities: housing, education, employment, crime prevention, and leadership development. In YouthBuild programs, low-income young people ages 16-24 work toward their high school diploma or General Educational Development (GED) equivalency, learn job skills and serve their communities by building affordable housing, and transform their own lives and roles in society. Sponsors that wish to hire YouthBuild students who are trained in any occupation covered under these standards and who meet the minimum qualifications for apprenticeship may do so via the direct entry provision described in Appendix D: Selection Procedures.



#### SECTION XXVI - OFFICIAL ADOPTION OF APPRENTICESHIP STANDARDS

Hussmann Services Corporation, hereb	y adopts these standards of apprenticeship
on this $21$ day of $501$ , 2018.	

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

Signature of Sponsor (designee)

**Donald Elliott** 

Hussmann Services Corporation 4020 West Ali Baba Lane, Unit B

Las Vegas, NV 89118



## **Appendix B**

### **APPRENTICESHIP AGREEMENT**

#### **AND**

## APPLICATION FOR CERTIFICATION OF COMPLETION OF APPRENTICESHIP

DEVELOPED IN COOPERATION WITH THE
US DEPARTMENT OF LABOR, THE OFFICE OF WORKFORCE INNOVATION FOR THE NEW
NEVADA, AND THE NEVADA STATE APPRENTICESHIP COUNCIL



## Program Registration and Apprenticeship Agreement



THE OFFICE OF WORKFORCE INNOVATION FOR THE NEW NEVADA, AND THE NEVADA STATE APPRENTICESHIP COUNCIL

				APPREN'	TICE REGI	STRAT	ION - SEC	TION II	OMB No	. 1205-022	23 Expires: 0	01/31/2020	
Warning: This agreement d CFR, Part 5 for the employr assisted construction proje from the Office of App Apprenticeship Agency sho PART A: TO BE COMPLE	ment of ects. C erentices wn belo	the ap current ship ( w. (Ite	prentice certifica OA) or n 24)	on Federally itions must b the recogr	financed or oe obtained nized State	Stand in the Oppo agree to the	lards incorp e selection rtunity Stan ment may b registration	orated as par and training dards in Title be terminated agency, in co	rt of this Agreen g of the appre e 29 CFR Part by either of the compliance with 1	nent. The sentice in a 30, and Exparties, citinities, CFI	sponsor will no accordance wi accutive Order ng cause(s), w R, Part 29	ot discriminate ith the Equal 11246. This	
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(No., Street, City, State, Zi	in Code	Telen	hone Nur	mber)		1	o Ethnio (	roup (Mark	ono)		☐ Veteran		
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2. Date of Birth (Mo., Day, Y	r.)		3. Sex ☐ Mal	(Mark one)	emale		b Race (M	lark one or n	nore)		grade or less		
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7b. Career Connection (Marl	k one) (I			, —				☐ Technic	cal Training Sch	nool 🗌 N	lilitary Vetera	ns	
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8. Signature of Apprentice				Date		9. Sig	nature of P	arent/Guard	ian (if minor)		Date		
PART B: SPONSOR: EXC	EPT FC	R ITE	MS 6, 7,	8, 10a 10c,	REMAIND	ER OF	ITEMS RE	POPULATE	D FROM PRO	GRAM RE	GISTRATION		
1. Sponsor Program No.									rocesses liste	d in 2b (	Occupation Co	ode:	
Sponsor Name and Address	(No. St	reet, C	ity, Coun	ity, State, Zip	Code)	the standards are part of this agreement).  2b.1. Interim Credentials					dentials		
						5 · · · · · · · · · · · · · · · · · · ·				Onl	Only applicable to Part B, 3.b.		
Hussmann Services Co	-					Enter Occupation ar					and 3.c. (Mark one) ☐ Yes ☐ No		
4020 West Ali Baba La	ne, Ur	nit B				3. Occupation Training 4. Term					robationary P	'	
Las Vegas, NV 89118						Approach (Mark one) 4. Term (Hrs., Mos., Yrs.)					s., Mos., Yrs.)		
						3a. ☐ Time-Based							
						3b. ☐ Competency-Based							
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(Number of Hours Per Yea				d 🔲 Will Not		J. 1011			ADDRESS OF RTI		S) HERE		
10. Wages: (Instructions on	reverse)	)											
10a. Pre-Apprenticeship Hoւ	urly Wag	ge \$		10b. Appr	entice's Ent	try Hou	rly Wage \$		10c. Journ	eyworker's	Hourly Wage	e \$	
Check Box	Perio	od 1	2	3	4		5	6	7	8	9	10	
10d. Term ☐ Hrs., ☐ Mos., or ☐Yrs.													
10e. Wage Rate													
(Mark one) % $\square$ or \$ $\square$													
11. Signature of Sponsor's F	Represei	ntative	(s)	Date	Signed				of Sponsor De	esignee to	Receive Com	plaints	
							(If app Don Elliott	licable)					
10.01 1 10 1 5			′ `	D 1	0: 1			Services Corp	oration				
12. Signature of Sponsor's Representative(s)  Date Signed							4020 West	Ali Baba Lane	e, Unit B, Las Ve		18		
									89-1586 CONT	ACT EMAIL:			
PART C: TO BE COMPLET	ΓED BY	REGIS	TRATIO	N AGENCY			onaid.elli טיין	ott@hussma	IIII.COITI				
Registration Agency and A					];	2. Sign	ature (Regi	stration Age	ncy)		3. Date Reg	istered	
4 Amman# - 1325 C	li iia- l-	/D - f' ''									1		
<ol> <li>Apprentice Identification N</li> </ol>	umber	(Defini	ion on re	everse):									

#### 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 connection (definitions follow). Enter "None" if no career connection applies.

**Pre-Apprenticeship.** A program or set of strategies designed to prepare individuals to enter and succeed in a Registered Apprenticeship program which has or have a documented partnership(s) with a Registered Apprenticeship program(s).

**Technical Training School.** Graduates trained in an occupation from a technical training school related to an occupation registered by the program sponsor and who meet the minimum qualifications for Registered Apprenticeship.

Military Veterans. Veterans that completed a military technical training school and/or elect to participate in the Building and Construction Trades Helmets to Hardhats Program or trained in an occupation while in the military related to an occupation

registered by the program sponsor and who meet the minimum qualifications for Registered Apprenticeship.

Job Corps. Graduates trained in an occupation from a federally funded Job Corps center related to an occupation registered

by the program sponsor and who meet the minimum qualifications for Registered Apprenticeship.

YouthBuild. Graduates trained in an occupation from a federally funded YouthBuild program related to an occupation registered by the sponsor and who meet the minimum qualifications for Registered Apprenticeship.

**HUD/STEP-UP.** Applicants who successfully participated in the U.S. Department of Housing and Urban Development Step-Up program and received an apprenticeship experience which meets the minimum qualifications for Registered Apprenticeship.

Career Center Referral. Includes career center participants referred to the Registered Apprenticeship Program and/or apprentice(s) that receive workforce system funded services that support their participation in a Registered Apprenticeship program. This may include the use of individual training accounts and/or on-the-job training reimbursements.

**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.

#### 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.). Under 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 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.
- 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>	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6
Hrs., Mos., Yrs.	1000 Hrs. 1000 Hrs.					
%	55	60	65	70	80	90

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

<u>Term</u>	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7	Period 8
Hrs., Mos., Yrs.	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.

\*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.

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.

Persons are not required to respond to this collection of information unless it displays a currently valid OMB control number. Public reporting burden for this collection of information is estimated to average five minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. The obligation to respond is required to obtain or retain benefits under 29 USC 50. Send comments regarding this burden or any other aspect of this collection of information including suggestions for reducing this burden to the U.S. Department of Labor, Office of Apprenticeship, 200 Constitution Avenue, N.W., Room N-5311, Washington, D.C. 20210 (Paperwork Reduction Project 1205-0023.)



**Sponsor Information** 

THE OFFICE OF WORKFORCE INNOVATION FOR THE NEW NEVADA, AND THE NEVADA STATE APPRENTICESHIP COUNCIL APPLICATION FOR CERTIFICATION OF COMPLETION OF APPRENTICESHIP

(If required please type or print all information, attach additional apprentices on separate sheet)
(This Application is optional, for Sponsor utilizing Electronic Registration)

Sponsor:	Program #:					
Address:	Contact Name:					
City, State, Zip:	Phone:					
Apprentice Information						
Full Name of						
	ted on the ETA 671 or in RAPIDS)					
Apprentice						
Registration						
Number:						
Occupation:						
Term:						
Registration Date:						
Date of Completion:						
Completion Wage:						
Related Instruction Certification						
Related Instruction Hours completed:						
Related Instruction Furnished By:						
Teacher(s) or Director(s) of Related Instruction	Teacher(s) or Director(s) of Related Instruction Certifying to above information:					
Name: Address:						
Request for Certificate						
On behalf of the above named sponsor, I hereb						
application has satisfactorily completed and wor						
apprenticeship program as registered with t						
recommend the issuance of the <b>Certificate of Co</b>	mpletion of Apprenticeship					
	ъ.,					
Sponsor's Signature:	Date:					
Title						
Title:						
Office of Appropriate use only						
Office of Apprentice use only:						
Date Entered in RAPIDS (if required):	<del></del>					
Date Certificate Sent:						



THE OFFICE OF WORKFORCE INNOVATION FOR THE NEW NEVADA, AND THE NEVADA STATE APPRENTICESHIP COUNCIL APPLICATION FOR CERTIFICATION OF COMPLETION OF APPRENTICESHIP

(If required please type or print all information, attach additional apprentices on separate sheet)
(This Application is optional, for Sponsor utilizing Electronic Registration)

#### Authentication of Requests for Certificate of Completion of Apprenticeship

Where the Office of Apprenticeship is the Registration Agency, issuance of a Certificate of Completion of Apprenticeship to apprentices upon satisfactory completion of the requirements of the apprenticeship program as established in these Standards, the sponsor certifies to the Registration Agency and requests the awarding of a Certificate of Completion of Apprenticeship to the completing apprentice(s). Such requests are completed either electronically using the Register Apprenticeship Partner Information System (RAPIDS) or in writing using with the use of this form from the sponsor to the appropriate field office.

#### **General Guidance**

The sponsor will verify that the apprentice has completed all requirements of apprenticeship including a signed copy of transcripts from the sponsor, provider or sponsor of the related instruction. The field office representative shall have in evidence an electronic or written Application for Certification of Completion of Apprenticeship.

When a large number of apprentices are completing at the same time from the same occupation, one application form from the sponsor can be used with an attached list of pertinent information for the completing apprentices. When the sponsor has more than one occupation or more than one employer, the sponsor should complete separate forms for each occupation and employer, follow the procedure above.

The occupation identified, must be the occupation title as listed in the most current List of Officially Recognized Apprenticeable Occupations. For sponsors who use a slightly different occupational title, OA staff may use the sponsor's title as long as the officially recognized occupational title is included in parenthesis under the sponsor's occupational title. Please see attached "sample" for reference.

The term "journeyman, journeyworker, journeyperson, etc." should not be included in the occupational title. These terms are used to describe a level of competency rather than an occupational title.

In rare instances where a program sponsor may utilize such a term above in their occupational title and that terminology is consistently used within their organization and training materials, OA staff may use that terminology on the sponsor's occupational title as long as the officially recognized occupational title is listed in parenthesis under the sponsor's title. The practice of using a level of competency in the occupational title should be discouraged when possible.

The sponsor's name on the Certificate of Completion of Apprenticeship shall be as it is registered and approved in their apprenticeship standards.

The date completed shall be the date of completion as indicated on the request form.

#### <u>Issuance of Replacement OA Certificate of Completion of Apprenticeship</u>

Replacement certificate requests shall be verified with undeniable proof that an original certificate was either issued or requested by the sponsor. This shall be verified through OA's records or the program sponsor's records. In the event a field office has no proof, yet a program sponsor does, or vice versa, a copy of that proof shall be sent to the field office and included in the program folder. The term "**Replacement Certificate**" shall be printed on the certificate.

The Certificate of Completion of Apprenticeship shall not be used for any other purpose than completion of a Registered Apprenticeship program.



## **Appendix C**

# AFFIRMATIVE ACTION PLAN ADOPTED BY

#### **Hussmann Services Corporation**

THIS COMPONENT IS UNDER DEVELOPMENT IN ACCORDANCE WITH TITLE 29, CODE OF FEDERAL REGULATIONS (CFR) § 30.4 (e)(1)(i). APPENDIX WILL BE DEVELOPED WHEN PROGRAM SPONSOR REACHES THE REQUIRED FIVE (5) APPRENTICES FOR ADOPTING SUCH PLANS.

DEVELOPED IN COOPERATION WITH THE
US DEPARTMENT OF LABOR, THE OFFICE OF WORKFORCE INNOVATION FOR THE NEW
NEVADA, AND THE NEVADA STATE APPRENTICESHIP COUNCIL
AS REQUIRED UNDER TITLE 29, CODE OF FEDERAL REGULATIONS, PART 30

APPROVED BY
OFFICE OF WORKFORCE INNOVATION FOR THE NEW NEVADA AND THE NEVADA STATE
APPRENTICESHIP COUNCIL

Erin Hasty, Nevada State Apprenticeship Director
APPROVAL DATE:
REGISTRATION NUMBER:





#### **SECTION I - INTRODUCTION**

The sponsor enters this affirmative action plan (AAP) in good faith to promote equality of opportunity in its registered apprenticeship program. If women and/or minorities are underutilized in the apprenticeship program, the sponsor seeks to increase the recruitment of qualified women and/or minorities for possible selection into the apprenticeship program. The sponsor hereby adopts the equal opportunity pledge located in Section II and the AAP.

This AAP is a supplement to the apprenticeship standards. Any changes made by the sponsor to the AAP will become part of this written AAP, once approved by the Registration Agency.

#### SECTION II - EQUAL OPPORTUNITY PLEDGE - 29 CFR §§ 29.5(b)(21) and 30.3(b)

The sponsor commits to the following equal opportunity pledge:

"The sponsor will not discriminate against apprenticeship applicants or apprentices based on race, color, religion, national origin, sex (including pregnancy and gender identity), sexual orientation, genetic information, or because they are an individual with a disability or a person 40 years old or older. The sponsor will take affirmative action to provide equal opportunity in apprenticeship and will operate the apprenticeship program as required under 29 CFR § 30."

#### **SECTION III - ANALYSES AND GOALS**

To ensure full utilization of minorities and women in the apprenticeship program, the sponsor will conduct analyses to determine whether minorities and/or females are being underutilized and, if they are, will establish appropriate goals for the full utilization of minorities and/or women in apprenticeship. To determine whether underutilization exists, the sponsor will analyze at least the following five factors:

- (1) The size of the working age minority and female (minority and nonminority) population in the program sponsor's labor market area;
- (2) The size of the minority and female (minority and nonminority) labor force in the program sponsor's labor market area;
- (3) The percentage of minority and female (minority and nonminority) participation as apprentices in the particular occupation as compared with the percentage of minorities and women (minority and nonminority) in the labor force in the program sponsor's labor market area;
- (4) The percentage of minority and female (minority and nonminority) participation as journeyworkers employed by the employer or employers participating in the program as compared with the percentage of minorities and women (minority and nonminority) in the sponsor's labor market area and the extent to which the sponsor should be expected to correct any deficiencies through the achievement of goals for the selection of apprentices; and
- (5) The general availability of minorities and women (minority and nonminority) with present or potential capacity for apprenticeship in the program sponsor's labor market area.



Underutilization exists if there are fewer minorities and/or women in the registered occupation(s) in the sponsor's apprenticeship program than would reasonably be expected in view of all relevant factors. If the sponsor detects underutilization of minorities and/or women in its apprenticeship program in the registered occupation(s), it will establish goals for the selection of minority and/or female applicants. (For further instructions, see the attached affirmative action plan workforce analysis worksheet.) The sponsor will make good-faith efforts to meet its goals.

#### SECTION IV - OUTREACH AND POSITIVE RECRUITMENT- 29 CFR § 30.4(c) and NRS 610.144

The sponsor will undertake appropriate outreach and positive recruitment efforts that would reasonably be expected to increase minorities' and women's participation in apprenticeship by expanding the opportunities of minorities and women to become eligible for apprenticeship selection. The sponsor will set forth the specific steps it intends to take under each selected effort below. The sponsor will undertake a significant number of activities to enable it to meet its obligations under  $29 \text{ CFR } \S 30.4(c)$ .

- A. The sponsor will disseminate information concerning the nature of the apprenticeship, requirements for admission to apprenticeship, availability of apprenticeship opportunities, sources of apprenticeship applications, and its equal opportunity policy to the following:
  - Registration Agency
  - Women's centers
  - Local schools
  - Employment service offices
  - Other outreach programs and community organizations, including those that can effectively reach minorities and women
  - Newspapers, including those that are circulated in minority communities and among women
  - Social media outlets (Facebook, Twitter, Instagram, LinkedIn, etc.)

	<ol> <li>2.</li> </ol>	
		disseminate the above information regularly, not less than semiannually.
В.		The sponsor will participate in annual workshops conducted by employment service agencies for the purpose of familiarizing school, employment service, and other appropriate personnel with the apprenticeship program and current opportunities.
C.		The sponsor will cooperate with local school boards and vocational educational systems to develop programs for preparing students to meet the standards and criteria required to qualify for entry into the apprenticeship program.
D.		The sponsor will communicate its equal opportunity policy internally in such a manner as to foster understanding, acceptance, and support of the policy among the sponsor's various officers, supervisors, employees, and members and to encourage such persons to take the necessary action to aid in meeting its obligation under 29 CFR § 30.



#### 2018 Hussmann INJ Standards of Apprenticeship

E.		The sponsor will engage in programs such as outreach for the positive recruitment and preparation of potential applicants for apprenticeships; where appropriate and feasible,
		such programs will provide for pretesting experience and training. In initiating and conducting these programs, the sponsor may be required to work with other sponsors and appropriate community organizations. The sponsor will also initiate programs to prepare women and encourage women to enter traditionally male programs.
F.		The sponsor will encourage the establishment and utilization of programs of pre- apprenticeship, preparatory occupational training, or others designed to afford related work experience or prepare candidates for apprenticeship. The sponsor will make appropriate provisions in its AAP to assure that those who complete such programs are afforded full and equal opportunity for admission into the apprenticeship program.
G.		The sponsor will utilize journeyworkers to assist in the implementation of its AAP.
Н.		The sponsor will grant advance standing or credit based on previously acquired experience, training, skills, or aptitude for all applicants equally.
I.		The sponsor will take other appropriate action to ensure that the recruitment, selection, employment, and training of apprentices during their apprenticeship will be without discrimination because of race, color, religion, national origin, or sex (e.g., general publication of apprenticeship opportunities and advantages in advertisements, industry reports, articles, etc.; use of present minority and women apprentices and journeyworkers as recruiters; career counseling; periodic auditing of AAPs and activities; and development of reasonable procedures to ensure equal employment opportunity, including reporting systems, on-site reviews, and briefing sessions).
For each item checked in Section IV, describe in detail each specific step that the sponsor will undertake to fulfill that outreach and recruitment step:		
		(Add pages as necessary)

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

The sponsor will make an annual review of its current AAP and its overall effectiveness and will institute any revisions or modifications warranted. The review will analyze the affirmative action steps (independently and collectively) taken by the sponsor to evaluate their effectiveness in ensuring equal opportunity in all aspects of apprenticeship, including recruitment, selection, employment, and training. The sponsor will continually monitor these processes in order to identify and address any barriers to equal opportunity. This may require that the sponsor identify the need for new affirmative action efforts and/or deletion of ineffective existing activities. All changes to the AAP must be submitted to the Registration Agency for approval.



#### **SECTION VI - OFFICIAL ADOPTION OF AFFIRMATIVE ACTION PLAN**

Hussmann Services Corporation hereby officially adopt this Affirmative Action Plan on this 27 day of 501, 2018.

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

Signature of Sponsor (designee)

**Donald Elliott** 

**Hussmann Services Corporation** 

4020 West Ali Baba Lane, Unit B

Las Vegas, NV 89118

Donald.elliott@hussmann.com



## 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. OCCUPATIONA	AL INFORMAT	ION					
Occupation Title:							
RAPIDS Code:		O*NE	ET-SOC Code:				
Type of Selection Methods	od Used:	Selection on basis Random selection Selection from poor Alternative selecti	from pool of e ol of current er				
Labor Market Area Des	cription:	State SM	A Cou	nty			
C. LABOR MARKI	ET AREA AND	OCCUPATIONAL I	PARTICIPATION	ON DATA			
C.1. Total Labor Force i	n Labor Mark	et Area*					
	Nui	nber of women:		% of labor force			
	Numb	er of minorities:		% of labor force			
C.2. Working Age Popu	lation in Labo	Market Area*					
	Nui		% of labor force				
	Numb	er of minorities:		% of labor force			
C.3. Apprentice Particip	oation in Occu	pation in National A	apprenticeship	System*			
	Number of women: % of apprentices						
	Numb	er of minorities:		% of apprentices			
C.4. General Availability of Minorities and Women with the Present or Potential Capacity for Apprenticeship in relevant Labor Market Area**							
	Number of women:						
Number of minorities:							
D. SPONSOR'S WORKFORCE DATA							
D.1. Total Number of Journeyworkers Employed							
	Nı		% of work force				
Number of minorities: % of work							
D.2. Total Percentage o	f Apprentices	or of Applicant Poo	l (Depending o	n Selection Method Used)			
Percen	_	n apprentices or 1 applicant pool:		%			
Percent	_	y apprentices or n applicant pool:		%			



### 2018 Hussmann INJ Standards of Apprenticeship

E.	ADDITIONAL RESOURCE DATA FOR CONSIDERAT	ΓΙΟΝ 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****		

### F. DETERMINATION OF UTILIZATION

Analysis	Yes	No
Minority underutilization:		
Female underutilization:		

•	OF	0	100	N 10	100	ATO
G.	SE	וו)י	NS(	JK'S	(+0)	<b>ALS</b>

The program sponsor proposes and agrees to make a good-faith effort to attain the goal of selecting \_\_\_\_\_\_ % minorities and/or \_\_\_\_\_\_ % women during the next EEO review cycle. These goals will not be used to discriminate against any qualified applicant based on 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	Registration Agency
Sponsor's Signature	Registration Agency Signature
Typed Name	Typed Name
Title	Title
 Date Signed	 Date Signed

### Resources for obtaining labor market information:

- \* http://bls.gov/
- \*\* Program sponsors may use any reasonable method to propose the entries for "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 for "Apprentice Participation in Occupation."
- \*\*\* RAPIDS data available from Registration Agency.
- \*\*\*\* http://www.census.gov/eeo2000/index.html



### **Instructions for 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 within a particular occupational title.

- <u>Part A</u> The sponsor information section may be prepared by the sponsor representative or servicing Registration Agency representative.
- Part B Occupational information must 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 The sponsor must use the most current and discrete statistical data available in determining availability estimates for the labor market area specified 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 and other training institutions. Where possible, the Registration Agency has provided examples of appropriate sources of data.

For the purpose 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 16 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 29 CFR § 30.5(b)(1) or (2), the data in D.2 must reflect the pool of eligible applicants from which selections are made. If the sponsor utilizes either selection method 29 CFR § 30.5(b)(3) or (4), the data in D.2 must reflect the apprentices currently registered in the program.
- <u>Part E</u> Additional resource data for consideration in establishing reasonable goals will be provided by the Registration Agency. These 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 sponsor will determine and record whether minorities and/or women are underutilized.
- Part G If the sponsor's analyses determine that minorities and/or women are underutilized, the sponsor, utilizing the resource data found in Parts C, D, and E, will establish goals that are reasonable in consideration of the results that could be expected from its good-faith efforts to make its overall affirmative action program successful. The Registration Agency will assess the proposed goals for minorities and/or women and, if they are found to be reasonable and attainable, will approve the sponsor's goals. The Registration Agency will not approve proposed goals for minorities and/or women that are lower than the current participation rates in the program.



### **Appendix D**

## QUALIFICATIONS AND SELECTION PROCEDURES

### **ADOPTED BY**

### **Hussmann Services Corporation**

DEVELOPED IN COOPERATION WITH THE
US DEPARTMENT OF LABOR, THE OFFICE OF WORKFORCE INNOVATION FOR THE NEW
NEVADA, AND THE NEVADA STATE APPRENTICESHIP COUNCIL

OFFICE OF WORK	APPROVED BY FORCE INNOVATION FOR THE NEW NEVADA AND THE NEVADA STATE APPRENTICESHIP COUNCIL
	Erin Hasty, Nevada State Apprenticeship Director
	APPROVAL DATE:
	REGISTRATION NUMBER:

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 § 60-3) or 29 CFR § 30. Note that selection procedures may need to be modified to provide reasonable accommodations to qualified individuals with disabilities.





### **SECTION I - MINIMUM QUALIFICATIONS**

Applicants will meet the following minimum qualifications. These qualification standards, and the score required on any standard for admission to the applicant pool, must be directly related to job performance, as shown by a statistical relationship between the score required for admission to the pool and performance in the apprenticeship program:

### A. Age

Minimum age qualification required by the sponsor for persons entering the apprenticeship program, with an eligible starting age not less than 16 years.

### B. <u>Education</u>

A high school diploma, General Educational Development (GED) equivalency or other high school equivalency credential may be required. Applicant must provide an official transcript(s) for high school and any post-high school education. Applicant must submit the GED certificate or other high school equivalency credential if applicable.

### C. <u>Physical</u>

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 any physical agility test, fitness test, or screen for the current illegal use of drugs required by the employer on acceptance into the program and prior to being employed.

#### D. Aptitude Test

When required by an employer, each applicants must pass any aptitude test given by the employer which will be used as one factor in the selection process.

### E. Others

As appropriate.

### **SECTION II - APPLICATION PROCEDURES**

- A. Applicants will be accepted throughout the year or as specified by the employer. Every person requesting an application will have one made available upon signing the applicant log.
- B. All applications will be identical in form and requirements. The application form will 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, ethnicity, and sex and the progress by dates and final disposition of each application.

- C. Before completing the application, each applicant will be required to review the Apprenticeship Standards and will be provided information about the program. If the applicant has any additional questions on the qualifications or needs additional information to complete the application, it will be provided by the sponsor.
- D. Receipt of the properly completed application form along with required supporting documents (driver's license, birth certificate, or other acceptable proof of age; copy of high school diploma, GED certificate, or other acceptable documentation of education) will constitute the completed application.
- E. Completed applications will be checked for minimum qualifications. Applicants deficient in one or more qualifications or requirements or making false statements on their applications will be notified in writing of their disqualification and of the appeal rights available to them. No further processing of such applications will be taken.
- F. Applicants meeting the minimum qualifications and submitting the required documents will be notified where and when to appear for an interview (if applicable).

### **SECTION III - SELECTION PROCEDURES (EXAMPLES)**

### *Sponsor must select one (1) of the following:*

1. Alternative selection methods

The sponsor may select apprentices by any other method, including its present selection method, provided that the sponsor meets the requirements listed in 29 CFR § 30.5(b)(4).

2. Selection on basis of rank from pool of eligible applicants

The sponsor may select apprentices from a pool of eligible applicants on the basis of the rank order of their scores on one or more qualification standards where there is a significant statistical relationship between rank order of scores and performance in the apprenticeship program. The selection of any qualification standards beyond minimum legal working age, the use of oral interviews, the notification of applicants, and the establishment of goals for the admission of minorities and women (minority and nonminority) into the pool of eligibles must proceed in accordance with the requirements of 29 CFR § 30.5(b)(1). The method of rating is listed by each employer.

### 3. Random selection from pool of eligible applicants

The sponsor may select apprentices from a pool of eligible applicants on a random basis. The method of random selection is subject to approval by the U.S. Department of Labor. Supervision of the random selection process shall be by an impartial person or persons selected by the sponsor but not associated with the



administration of the apprenticeship program. The time and place of the selection, and the number of apprentices to be selected, shall be announced. The place of the selection shall be open to all applicants and the public. The names of apprentices drawn by this method shall be posted immediately following the selection at the program sponsor's place of business.

### 4. Selection from pool of current employees

The sponsor may select apprentices from an eligibility pool of the workers already employed by the program sponsor or by the sponsor's established promotion policy. The sponsor adopting this method of selecting apprentices shall establish goals for the selection of minority and female apprentices, unless the sponsor concludes, in accordance with the provisions of 29 CFR §§ 30.4(d), (e), and (f) that it does not have deficiencies in terms of underutilization of minorities and/or women (minority and nonminority) in the apprenticeship of journeyworker occupations represented by the program.

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

Sponsors that 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 include only 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 sponsor will award credit for previous experience in accordance with Section XII of these standards and will pay each apprentice at the wage rate commensurate with his or her 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 are as follows:

### Sponsor must select the one's they will use

A.	A youth who has completed a Job Corps training program in any occupation covered in these standards and who meets the minimum qualifications of the apprenticeship program may be admitted directly into the program, or if no apprentice opening is available, the Job Corps graduate may be placed at the top of the current applicant ranking list and given first opportunity for placement. The sponsor will evaluate the Job Corps training received to grant appropriate credit on the term of apprenticeship. Entry of Job Corps graduates will be done without regard to race, color, religion, national origin, or sex. (Note: This is a method of direct entry into the apprenticeship program)
	the apprenticeship program.)

B. A youth who has completed a YouthBuild training program in any occupation covered in these standards and who meets the minimum qualifications of the apprenticeship program may be admitted directly into the program, or if no apprentice opening is available, the YouthBuild graduate may be placed at the top of the current applicant ranking list and given first opportunity for placement.



The sponsor will evaluate the YouthBuild training received to grant appropriate credit on the term of apprenticeship. Entry of YouthBuild graduates will be done without regard to race, color, religion, national origin, or sex. (Note: This is a method of direct entry into the apprenticeship program.)

- C. A military veteran who is registered with the Helmets to Hardhats program or has 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 specific industry may be given direct entry into the apprenticeship program. The sponsor shall evaluate the military training received for granting appropriate credit on the term of apprenticeship and the appropriate wage rate. The sponsor will determine what training requirements the veteran needs to meet to ensure he or she receives all necessary training for completion of the apprenticeship program. 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. Entry of military veterans shall be done without regard to race, color, religion, national origin, or sex. (Note: This is a method of direct entry into the apprenticeship program.)
- D. A former inmate of the U.S. Department of Justice Bureau of Prisons (BOP) who has participated in or successfully completed a specific BOP apprenticeship program may be given direct entry into the apprenticeship program. Sponsors agreeing to admit such individuals into apprenticeship must do so without regard to present minimum qualifications, eligibility lists, or scores on written apprenticeship entrance tests. Entry into the program by this method shall be done without regard to race, color, religion, national origin, or sex. (Note: This is a method of direct entry into the apprenticeship program.)
- E. A senior citizen who has completed a Senior Community Service Employment Program (SCSEP) pre-apprenticeship training program in any health care occupation covered in these standards and who meets the minimum qualifications of the apprenticeship program may be admitted directly into the program, or if no apprentice opening is available, the SCSEP graduate may be placed at the top of the current applicant ranking list and given first opportunity for placement. The sponsor will evaluate the SCSEP training received to grant appropriate credit on the term of apprenticeship. Entry of SCSEP graduates will be done without regard to race, color, religion, national origin, or sex. (Note: This is a method of direct entry into the apprenticeship program for the health care industry.)
- F. An individual who has completed a structured pre-apprenticeship training program that meets the requirements outlined in Training and Employment Notice 13-12, Defining a Quality Pre-Apprenticeship Program and Related Tools and Resources, in any occupational area covered in these standards of apprenticeship and who meets the minimum qualifications of the apprenticeship program may be admitted directly into the program. The candidate shall provide official documentation confirming that he or she fulfilled the specific requirements of the pre-apprenticeship program, such as completion/graduation certificates, transcripts, notarized letters of confirmation, and sworn statements.



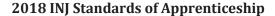
The sponsor will evaluate the training received to grant appropriate credit on the term of apprenticeship. Entry of pre-apprenticeship candidates shall be done without regard to race, color, religion, national origin, or sex. (Note: This is a method of direct entry into the apprenticeship program.)

### **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 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 State Apprenticeship Council, via Registration Agency or, at the apprentice or applicant's election, with the private review body established by the sponsor (if applicable).
- B. The complaint will be in writing and will be signed by the complainant. It must include the name, address, and telephone number of the person allegedly discriminated against, the sponsor involved, and a brief description of the circumstances of the failure to apply equal opportunity standards.
- C. 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. In the case of a complaint filed directly with the review body designated by the sponsor 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 by the State Apprenticeship Council for good cause shown.
- D. Complaints of discrimination and failure to follow equal opportunity standards in the apprenticeship program may be filed and processed under 29 CFR § 30 and the procedures as set forth above.
- E. The sponsor will provide written notice of its complaint procedure to all applicants for apprenticeship and all apprentices.

### **SECTION VI - MAINTENANCE OF APPLICATION AND SELECTION RECORDS**

The sponsor 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 29 CFR § 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 affirmative action plan for the prompt achievement of full and equal opportunity in apprenticeship, including all data and analyses made pursuant to the requirements of 29 CFR  $\S$  30.4. Each sponsor also must maintain evidence that its qualification standards have been validated in accordance with the requirements set forth in 29 CFR  $\S$  30.5(b). If applicants are interviewed during the selection process, adequate records include a brief summary of each interview and the conclusions on each of the specific factors - e.g., motivation, ambition, and willingness to accept direction - that are part of the total judgment.

Records will be maintained for 5 years from the date of last action and made available upon request to the U.S. Department of Labor or other authorized representative.



### SECTION VII - OFFICIAL ADOPTION OF SELECTION PROCEDURES

<b>Hussmann Services</b>			adopts these	Qualifications	and Selection
Procedures on this <u>_</u>	27 day of	JULY	, 2018.		

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

Signature of Sponsor (designee)

**Donald Elliott** 

Hussmann Services Corporation 4020 West Ali Baba Lane, Unit B

Las Vegas, NV 89118

Donald.elliott@hussmann.com



### **Hussmann Services Corporation**

**A1** – Installation-Refrigeration Mechanic

O-NET Code: 49-9021.02 RAPIDS Code: 0666 Time-based Apprenticeship Program

- ✓ Form 5910 Application for Approval On-the-Job
   Training & Apprenticeship
- √ NSAC Checklist
- ✓ Appendix A1 Work Process Schedule & RTI Outline

### STATE OF NEVADA

### **Nevada State Apprenticeship Council**

### APPLICATION FOR APPROVAL ON THE JOB TRAINING & APPRENTICESHIP

Program Name_ Hussmann Services C	rogram NameProgram #Program #									
Address 4020 West Ali Baba Lane	, Unit B		City_L	as Vegas	State	/ZipNV, 89	0118_ <sub>T</sub>	elephone_303	-489-1	586
Contact Person_ Donald Elliott		т	itleSite/ Tra	aining Lead	lerTyp	e of Program	n:TB		Sic	: Code
EIN#	Er	nail Addre	ess: donald.e	elliott@hus	smann.cor	m				
A. Wage Increase B. Revision of Standards C. New Occupation C. Vinew Program	ype of Prog   Individual   XIndividual   Group   Group   If Union E	ual Union ual Non U Union Non Unio	Inion	A. No.	y Workers JW 5 of Employ			Pay Period (0	ly onthly es (Mor	nths)
TRADE INFORMATION										
Occupation (use separate form for each occupation)	Term (Ou hours)	IT	RTI (Classroom hours)	# Of Jowerker		# Of Apprentice Training	es in	Journey worker Hourl Rate		Days per Veek
Installation- Refrigeration Mechanic	6000		432	5		1		\$20.00		5
HOURLY APPRENTICE WAGES BY PR	ERIOD (Excl	uding Ber	nefits) Top Lin	ne Dollar Ar	nounts Bo	ttom Line Pe	ercentaç	ges		
Occupation	1st	2 <sup>ND</sup>	3RD	4тн	5 <sup>TH</sup>	6 <sup>тн</sup>	7тн	8тн	9тн	10 <sup>TH</sup>
Installation-Refrigeration Mechanic	\$ 14.00	<b>\$</b> 16.00		\$	\$	\$	\$	\$	\$	\$
	%	%	%	%	%	%	9/	%		% %
July 27, 2018 Elliot										
Date				Signa	ture of Pro	gram Coord	inator			
DO NOT WRITE BELOW THIS LINE										
Approved:										
Disapproved:	_			Secre	tary Direct	tor of Apprer	nticeship	)		Date



### 2018 Hussmann INJ Standards of Apprenticeship NSAC Appendix A Checklist

A1: -Installation Refrigeration ONET: 49.9021.02 RAPIDS CODE 0666

TMCC Standards Placement	29 CFR, NRS 610, and NAC 610 Required Provisions
Appendix A p. 2	<ol> <li>Term: A term of apprenticeship of not less than 2,000 hours of work experience, consistent with training requirements as established by practice in the trade. NRS 610.144 3 (b)</li> </ol>
	<b>Type of Occupation:</b> The term of apprenticeship, which for an individual apprentice may be measured either through the completion of the industry standard for on-the-job learning (time-based approach), the attainment of competency (competency-based approach), or a blend of the time-based and competency-based approaches (hybrid approach). <b>29 CFR 29.5 (b)</b>
Appendix A p. 4	3) Work Processes: An outline of the processes in which the apprentice will receive supervised experience and training on the job, and the allocation of the approximate time to be spent in each major process. NRS 610.144 3 (c)
Appendix A p. 7	4) Related Instruction: Provisions for organized, related and supplemental instruction in technical subjects (and the costs thereof) related to the trade with a minimum of 144 hours for each year of apprenticeship, given in a classroom or through trade, industrial or correspondence courses of equivalent value or other forms of study approved by the State Apprenticeship Council. NRS 610.144 3 (d); NAC 610.433
Appendix A p. 2	5) Wages: A progressively increasing, reasonable and profitable schedule of wages to be paid to the apprentice consistent with the skills acquired, not less than that allowed by federal or state law or regulations or by a collective bargaining agreement. Employers shall pay a beginning wage for apprentices which is at least 35 percent of the rate for journeymen in the same trade, or Minimum and Reasonable and profitable wage for apprentice in construction industry.  NRS 610.144 3 (e); NAC 610.480, NAC 610.485
Appendix A p. 2	6) <b>Periodic Review and Evaluation:</b> Provisions for a periodic review and evaluation of the apprentice's progress in performance on the job and related instruction and the maintenance of appropriate records of such progress. <b>NRS 610.144 3 (f)</b>
Appendix A p. 2	7) Ratio: A numeric ratio of apprentices to journeymen consistent with proper supervision, training, safety, continuity of employment and applicable provisions in collective bargaining agreements, in language that is specific and clear as to its application in terms of job sites, workforces, departments or plants. NRS 610.144 3 (g)
	ALL DOCUMENTS HAVE BEEN CHECKED FOR SPELLING, FORMATTING, GRAMMAR, (INCLUDING TABLE OF CONTENTS), ETC.



### **Appendix A-1**

# WORK PROCESS SCHEDULE AND RELATED INSTRUCTION OUTLINE

**Installation-Refrigeration Mechanic** 

O*NET-SOC CODE: _	49.9021.02	RAPIDS CODE:	0666
	APPROVED		
OFFICE OF WORKFORCE INN			NEVADA STATE
	APPRENTICESHIP	COUNCIL	
Erin Hast	y, Nevada State App	renticeship Director	
	REGISTRATION DAT	`E:	
REG	SISTRATION NUMBER	R:	

DEVELOPED IN COOPERATION WITH THE
US DEPARTMENT OF LABOR, THE OFFICE OF WORKFORCE INNOVATION FOR THE NEW
NEVADA, AND THE NEVADA STATE APPRENTICESHIP COUNCIL



5.

6.

### **Appendix A-1**

## WORK PROCESS SCHEDULE Installation-Refrigeration Mechanic 0\*NET-SOC CODE: 49-9021.02 RAPIDS CODE: 0666

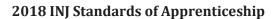
This schedule is attached to and a part of these Standards for the above identified occupation.

1.	TYP	E OF OCCUPATION				
		Time-based		Competency-based		Hybrid
2.	TER	M OF APPRENTICES	HIP			
	the p	position, which would	be expe	oe defined by the attainm ected to occur within app mum of <b>144</b> hours of rela	roximately 6	, <b>000</b> hours
3.	RAT	IO OF APPRENTICES TO	O JOURN	NEYWORKERS		
		apprentice to journey _ journeyworker/fully		/fully-competent worker etent worker(s).	ratio is: <u>1</u> a <sub>l</sub>	oprentice(s)
4.	APP	RENTICE WAGE SCHED	ULE			
	An apprentice minimum starting wage will be at least \$\frac{14.00}{2}\$ per hour. Apprentices shall be paid a progressively increasing schedule of wages based on either a percentage or a dollar amount of the current hourly journeyworker/fully-competent worker wage. A journeyworker/fully-competent worker minimum wage will be at least \$\frac{20.00}{2}\$.					
	3-Year Term:					
	1 <sup>st</sup> 2 <sup>nd</sup> 3 <sup>rd</sup>	12 months = \$1 12 months = \$1 12 months = \$1	6.00			
	At completion of the three year apprenticeship program the apprentice will be paid the full journeywork rate. Periodic review and evaluation of the apprentice's on-the- job learning and related technical instruction will be conducted in alignment with the wage schedule established.					

**RELATED INSTRUCTION OUTLINE** (See attached Related Instruction Outline)

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

**WORK PROCESS SCHEDULE** (See attached Work Process Schedule)





The sponsor may modify the related instruction to meet local needs prior to submitting these Standards to the appropriate Registration Agency for approval.

### **Appendix A-1**

### **WORK PROCESS SCHEDULE Installation-Refrigeration Mechanic**

O\*NET-SOC CODE: <u>49.9021.02</u> RAPIDS CODE: <u>0666</u>

The term of the occupation shall be defined by the attainment of all competencies, both technical and behavioral, of the position, which would be expected and approximated to occur within \_\_6000 \_\_ hours of OJL, supplemented by a minimum of \_\_144 \_\_ hours of related instruction per year of apprenticeship.

### **Apprenticeship Competencies - Technical**

Item	Work Processes	Approx. Hours
A	<ol> <li>SAFETY</li> <li>Job safety &amp; health</li> <li>Use and care of personal protection equipment. ( PPE )</li> </ol>	
	3. Use and care of tools	4000
	4. Rigging and signaling	1000
	5. Use of man-lifts and snorkel	
	6. Lock out & Tag out program	
	7. Safe handling and storage of refrigerants and compressed gases.	
В	REFRIGERATION AND AIR CONDITIONING	
	1. Principles of refrigeration	
	2. Refrigeration system types and designs	
	3. Refrigeration plans, specifications and legends.	
	4. System piping layout	
	5. Brazing, silver soldering, soft soldering and nitrogen purging.	
	<ul><li>Insulating and mitering pipe insulation</li><li>Fabrication and installation of pipe hangers, brackets and supports</li></ul>	
	<ul><li>7. Fabrication and installation of pipe hangers, brackets and supports</li><li>8. Installing overhead and underground refrigeration piping.</li></ul>	4500
	9. Receiving and setting display cases, walk-in boxes and other	
	refrigeration equipment.	
	10. Installing condensing units, compressor racks, evaporator coils and	
	condensers.	
	11. Pressure testing and evacuating refrigeration systems.	
	12. Refrigeration system operating and safety devices	
	13. Start-up, charging, adjustment, commissioning of refrigerant systems.	
С	ELECTRICITY	
	1. Basic electricity	
	2. Testing and recording instruments	
	3. Wiring diagrams and circuits	500
	4. Switches, controls and internal components	
	5. Solid state fundamentals	
	6. Installation, testing and trouble shooting	
	Total hours (approximate)	6000

The above on-the-job-learning (OJL) work process competencies are intended as a guide. It need not be followed in any particular sequence, and it is understood that some adjustments may be necessary in the hours allotted for different work experience. In all cases, the apprentice is to receive sufficient experience to make them fully competent and use good workmanship in all work processes, which are a part of the industry. In addition, the apprentice shall be fully instructed in safety and OSHA requirements.

### **Apprenticeship Competencies - Behavioral**

In addition to mastering all of the essential technical competencies, an apprentice must consistently demonstrate at an acceptable level the following behavioral competencies in order to complete the apprenticeship.

Item #	Behavioral Competencies
1.	Participation in team discussions/meetings
2.	Focus in team discussions/meetings
3.	Focus during independent work
4.	Openness to new ideas and change
5.	Ability to deal with ambiguity by exploring, asking questions, etc.
6.	Knows when to ask for help
7.	Able to demonstrate effective group presentation skills
8.	Able to demonstrate effective one-on-one communication skills
9.	Maintains an acceptable attendance record
10.	Reports to work on time
11.	Completes assigned tasks on time
12.	Uses appropriate language
13.	Demonstrates respect for patients, co-workers and supervisors
14.	Demonstrates trust, honesty and integrity
15.	Requests and performs work assignments without prompting
16.	Appropriately cares for personal dress, grooming and hygiene
17.	Maintains a positive attitude
18.	Cooperates with and assists co-workers
19.	Follows instructions/directions
20.	Able to work under supervision
21.	Able to accept constructive feedback and criticism
22.	Able to follow safety rules
23.	Able to take care of equipment and work place
24.	Able to keep work area neat and clean
25.	Able to meet supervisor's work standards
26.	Able to not let personal life interfere with work
27.	Adheres to work policies/rules/regulations

### **RELATED INSTRUCTION OUTLINE Installation-Refrigeration Mechanic**

0\*NET-SOC CODE: <u>49-9021.02</u> RAPIDS CODE: <u>0666</u>

The following is a set of courses to be delivered by subject matter experts.

Related Technical Instruction (RTI) - This instruction shall include, but not be limited to, at least <a href="https://dx.ncbi.org/144">144</a> hours per year for each year of the apprenticeship. The related theoretical education listed below is tightly integrated with real work product. The curriculum is defined as a variety of courses, around which the exams, projects, and certifications are based. By defining the RTI this way, all competencies required of the students are met through project work.

**Related instruction** - This instruction shall include, but not be limited to, at least 432 hours during the apprenticeship, as described below:

Program Year	APPROXIMATE HOURS
YEAR I Safety I Basics of Refrigeration Construction Rack Systems Pipefitting and Welding Refrigeration Piping Electrical Basics 1	144
YEAR II Safety II Installing Display Cases Electrical Basics 2 Electrical Measurement Blueprint Reading	144
YEAR III Safety III EMS Basics E2 and Danfoss Systems HVACR Refrigeration Code/ ASHRAE 15 & 34 HVACR Electrical Code	144
Total Minimum Hours	432
COURSE TOPIC DESCRIPTIONS	Hours

**Safety I (30 Hours):** This course covers over 30 hours of OSHA standards, policies, and procedures in construction and general industry. These courses are delivered through the Hussmann Institute Online platform.

This class reviews key worker safety and health topic and identifies common workplace hazards to help prevent accidents and injuries. This class includes module quizzes to test apprentice understanding of topics, and a removable employee receipt page for easy documentation.

### This course also features modules on the following key topics:

- Confined Space Entry
- Electrical Safety
- o First Aid and Bloodborne Pathogens
- Hazard Communication
- o Lockout/Tagout
- o Respiratory Protection
- o Slips, Trips and Falls
- Violence in the Workplace
- And more

**Basics of Refrigeration (15 Hours):** This course provides and overview of the basic refrigeration process used in mechanical refrigeration and air conditioning systems.

#### Students learn:

- Safety in refrigeration
- Key principles of thermodynamics
- An explanation of sensible and latent heat
- British Thermal Units
- The pressure temperature relationship
- Using a Pressure Temperature Chart (PT)
- Basic Refrigeration system: Compressor, Condenser, Evaporator and Metering Device
- Superheat and Sub-cooling
- Common components and functions of Thermal Expansion Valve

**Construction (20 Hours):** This course provides an overview of the various materials used in refrigeration construction and installation.

- Safety in construction
- Basic construction tools
- Pipe hanger
- Refrigerant pipe
- Pipe insulation
- Refrigerated fixture installation
- Refrigerated fixture drain

**Rack Systems (15 Hours):** This course provides an overview of various refrigeration conventional and parallel rack systems.

#### Students learn:

- Safety in conventional and parallel rack systems
- Compressor types
- Defrost systems
- Oil management systems
- Piping configurations
- Components
- Compound systems

**Pipe Fitting and Welding (25 Hours):** This course provides an overview of refrigeration system pipe fitting and welding procedures.

#### Students learn:

- Safety in pipefitting and welding
- Pipe measurement
- Pipe preparation
- Brazing and soft soldering temperatures
- Acetylene/Oxygen torch set up
- Brazing techniques
- Filler metals
- Dissimilar metals

**Refrigeration Piping (25 Hours):** This course provides an overview of refrigeration piping.

### Students learn:

- Safety in refrigeration piping
- Refrigerant piping types and applications
- Refrigerant piping sizes
- Refrigerant pipe fittings and types
- PVC piping types and applications
- PVC piping sizes
- PVC pipe fittings and types
- Refrigerant pipe insulations types
- Refrigerant pipe support
- Refrigerant pipe installation best practices
- Mechanical fittings and applications

**Electrical Basics 1 (15 Hours):** This course provides an overview of basic electricity.

- Safety in electrical basics
- Basic electrical theory

- Alternating current
- Parallel circuits
- Resistive, inductive and capacitive circuits
- Ohm's Law

**Safety II (20 Hours):** This course provides 20 hours of instructor led overview of SAFESTART critical error reduction techniques.

### Students will learn through a series of modules on reducing errors, including:

- Introduction & Overview
- Eyes on Task Mind on Task
- Line-of-fire Balance/Traction/Grip
- Rushing Frustration Fatigue Complacency
- Critical Error Reduction Techniques

**Installing Display Cases (35 Hours):** This course provides an overview of proper display case installation.

#### Students learn:

- Safety in installing display cases
- Installing best practices
- Receiving/Unloading cases
- Importance of leveling
- Start-up checks and procedures

**Electrical Basics 2 (35 Hours):** This course provides an overview of basic electrical circuits and components.

### Students learn:

- Safety in electrical basics
- Single Phase Motors
- Three Phase Motors
- Motor control circuits
- Motor circuit components
- Schematic and wiring diagrams

**Electrical Measurement (15 Hours):** This course provides an overview of electrical measurements using various electrical measuring devices.

- Safety in electrical measurement
- Electrical measuring instruments
  - o Volt Ohm Meter
  - o Amperage Meter
  - o Mega-Ohm Meter
- Taking different types of readings
  - o Volt readings

- o Ohm readings
- o Current readings
- o Millivolt readings

**Blueprint Reading (25 Hours):** This course provides an overview of Blueprint reading as it pertains to commercial refrigeration install.

### Students learn:

- Safety in blueprint reading for commercial refrigeration install
- RS Engineering sheets
- Fixture plan review
- Refrigerant piping take-off's
- Floor pan symbols
- Specialty parts orderings

**Safety III (20 Hours):** This course provides 20 hours of instructor led overview on the continuation of SAFESTART critical error reduction techniques.

### Students will learn through a series of modules on reducing errors, including:

- Introduction & Overview
- Eves on Task Mind on Task
- Line-of-fire Balance/Traction/Grip
- Rushing Frustration Fatigue Complacency
- Critical Error Reduction Techniques

**EMS Basics (31 Hours):** This course provides a basic overview of Energy Management Systems.

### Students learn:

- Safety in Energy Management Systems
- EMS overview
- Controller components and functions
- Hardware and software overview
- Network communications
- Troubleshooting

**E2** and Danfoss Systems (31 Hours): This course provides a basic overview of Emerson CPC E2 and Danfoss controllers as they pertain to refrigeration.

- Safety in Emerson CPC E2 and Danfoss controllers
- Components of systems
- Programming
- Troubleshooting
- Energy Management

**HVACR Refrigeration Code/ ASHRAE 15 & 34 (31 Hours)**: This course provides a basic overview of HVACR codes along with ASHRAE Standards 15 & 34 as they pertain to refrigeration install and service.

### Students learn:

- Safety in ASHRAE Standards 15 & 34
- Mechanical Code

**HVACR Electrical Code (31 Hours):** This course provides a basic overview of HVACR Electrical codes as they pertain to refrigeration install and service.

- Safety in HVACR Electrical Code
- NFPA 70 National Electrical Code 2017



### **Hussmann Services Corporation**

**A2** – Service Refrigeration Mechanic

O-NET Code: 49-9021.02 RAPIDS Code: 0666
Time-based Apprenticeship Program

- ✓ Form 5910 Application for Approval On-the-Job
   Training & Apprenticeship
- √ NSAC Checklist
- ✓ Appendix A2 Work Process Schedule & RTI Outline

### STATE OF NEVADA

### Nevada State Apprenticeship Council

### APPLICATION FOR APPROVAL ON THE JOB TRAINING & APPRENTICESHIP

rogram NameHussmann Services CorporationProgram #										
Address 4020 West Ali Baba Land	e , Unit B		Cityl	Las Vegas	State	/Zip_ NV, 89	118 <sub>T</sub>	Telephone_303	-489-158	6
Contact Person Donald Elliott		T	itleSite/Tr	aining Lead	derTyp	e of Progran	n:TB		Sic C	ode
EIN#	_ En	nail Addre	ess: donald.	elliott@hus	smann.coi	m				
A. Wage Increase B. Revision of Standards C. New Occupation	Type of Program: (Check One) A.			A. No.	Journey Workers (JW) A. No. JW <sup>5</sup> B. No. of Employers 1			Pay Period (Circle One)  Weekly Bi-Weekly Semi Monthly Pay Increases (Months)  1 6 12 X Other		
TRADE INFORMATION								I		
Occupation (use separate form for each occupation)	Term (OJT RTI (Classroom hours)			# Of Journey # Of workers # App		Journey worker Hourly Rate		1,0000000	Days per Week	
Service Refrigeration Mechanic	6000	6000 432		5	5 1			\$20.00		5
HOURLY APPRENTICE WAGES BY F	PERIOD (Excl	uding Bei	nefits) Top Lir	ne Dollar A	mounts Bo	ottom Line Pe	ercentaç 71H	ges 8TH	дтн	10тн
Service Refrigeration Mechanic	\$ 14.00	\$16.00	11.50	\$	\$	\$	\$	\$	\$	\$
Service Iverligeration Mechanic	%	%		%	%	%	9	% %	%	%
July 27,2048 Dmarl Ellio#										
Date				Signa	ture of Pro	gram Coord	linator			
		DO NO	T WRITE I	BELOW	THIS LIN	IE				
Approved:	_									
Disapproved:				Secre	tary Direct	tor of Apprer	nticeship	0		Date



## 2018 Hussmann INJ Standards of Apprenticeship NSAC Appendix A Checklist A2: -Service Refrigeration Mech. ONET: 49.9021.02 RAPIDS CODE 0666

TMCC Standards Placement	29 CFR, NRS 610, and NAC 610 Required Provisions
Appendix A p. 2	<ol> <li>Term: A term of apprenticeship of not less than 2,000 hours of work experience, consistent with training requirements as established by practice in the trade. NRS 610.144 3 (b)</li> </ol>
	<b>Type of Occupation:</b> The term of apprenticeship, which for an individual apprentice may be measured either through the completion of the industry standard for on-the-job learning (time-based approach), the attainment of competency (competency-based approach), or a blend of the time-based and competency-based approaches (hybrid approach). <b>29 CFR 29.5 (b)</b>
Appendix A p. 4	3) Work Processes: An outline of the processes in which the apprentice will receive supervised experience and training on the job, and the allocation of the approximate time to be spent in each major process. NRS 610.144 3 (c)
Appendix A p. 7	4) Related Instruction: Provisions for organized, related and supplemental instruction in technical subjects (and the costs thereof) related to the trade with a minimum of 144 hours for each year of apprenticeship, given in a classroom or through trade, industrial or correspondence courses of equivalent value or other forms of study approved by the State Apprenticeship Council. NRS 610.144 3 (d); NAC 610.433
Appendix A p. 2	5) Wages: A progressively increasing, reasonable and profitable schedule of wages to be paid to the apprentice consistent with the skills acquired, not less than that allowed by federal or state law or regulations or by a collective bargaining agreement. Employers shall pay a beginning wage for apprentices which is at least 35 percent of the rate for journeymen in the same trade, or Minimum and Reasonable and profitable wage for apprentice in construction industry.  NRS 610.144 3 (e); NAC 610.480, NAC 610.485

Placement	Required Provisions
Appendix A p. 2	2) <b>Term:</b> A term of apprenticeship of not less than 2,000 hours of work experience, consistent with training requirements as established by practice in the trade. <b>NRS 610.144 3 (b)</b>
	<b>Type of Occupation:</b> The term of apprenticeship, which for an individual apprentice may be measured either through the completion of the industry standard for on-the-job learning (time-based approach), the attainment of competency (competency-based approach), or a blend of the time-based and competency-based approaches (hybrid approach). <b>29 CFR 29.5 (b)</b>
Appendix A p. 4	3) Work Processes: An outline of the processes in which the apprentice will receive supervised experience and training on the job, and the allocation of the approximate time to be spent in each major process. NRS 610.144 3 (c)
Appendix A p. 7	4) Related Instruction: Provisions for organized, related and supplemental instruction in technical subjects (and the costs thereof) related to the trade with a minimum of 144 hours for each year of apprenticeship, given in a classroom or through trade, industrial or correspondence courses of equivalent value or other forms of study approved by the State Apprenticeship Council. NRS 610.144 3 (d); NAC 610.433
Appendix A p. 2	5) Wages: A progressively increasing, reasonable and profitable schedule of wages to be paid to the apprentice consistent with the skills acquired, not less than that allowed by federal or state law or regulations or by a collective bargaining agreement. Employers shall pay a beginning wage for apprentices which is at least 35 percent of the rate for journeymen in the same trade, or Minimum and Reasonable and profitable wage for apprentice in construction industry.  NRS 610.144 3 (e); NAC 610.480, NAC 610.485
Appendix A p. 2	6) <b>Periodic Review and Evaluation:</b> Provisions for a periodic review and evaluation of the apprentice's progress in performance on the job and related instruction and the maintenance of appropriate records of such progress. <b>NRS 610.144 3 (f)</b>
Appendix A p. 2	7) Ratio: A numeric ratio of apprentices to journeymen consistent with proper supervision, training, safety, continuity of employment and applicable provisions in collective bargaining agreements, in language that is specific and clear as to its application in terms of job sites, workforces, departments or plants. NRS 610.144 3 (g)
	ALL DOCUMENTS HAVE BEEN CHECKED FOR SPELLING, FORMATTING, GRAMMAR, (INCLUDING TABLE OF CONTENTS), ETC.



### **Appendix A-2**

## WORK PROCESS SCHEDULE AND

## RELATED INSTRUCTION OUTLINE SERVICE REFRIGERATION MECHANIC

O\*NET-SOC CODE: <u>49.9021.02</u> RAPIDS CODE: <u>0666</u>

APPROVED BY
OFFICE OF WORKFORCE INNOVATION FOR THE NEW NEVADA AND THE NEVADA STATE
APPRENTICESHIP COUNCIL

Erin Hasty, Nevada State Apprenticeship Director

REGISTRATION DATE: \_\_\_\_\_

REGISTRATION NUMBER: \_\_\_\_\_

DEVELOPED IN COOPERATION WITH THE
US DEPARTMENT OF LABOR, THE OFFICE OF WORKFORCE INNOVATION FOR THE NEW
NEVADA, AND THE NEVADA STATE APPRENTICESHIP COUNCIL



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### **Appendix A-2**

## WORK PROCESS SCHEDULE Service Refrigeration Mechanic 0\*NET-SOC CODE: 49-9021.02 RAPIDS CODE: 0666

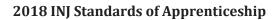
This schedule is attached to and a part of these Standards for the above identified occupation.

1.	TYPI	E OF OCCUPATION				
		Time-based		Competency-based		Hybrid
2.	TER	M OF APPRENTICES	HIP			
	the p	osition, which would	l be expe	oe defined by the attainmected to occur within app mum of <b>144</b> hours of rela	roximately <b>6</b>	<b>,000</b> hours
3.	RATI	IO OF APPRENTICES T	O JOURN	NEYWORKERS		
		apprentice to journey _ journeyworker/full		/fully-competent worker etent worker(s).	ratio is: <u>1</u> ap	oprentice(s)
4.	APPI	RENTICE WAGE SCHE	DULE			
	An apprentice minimum starting wage will be at least \$\frac{14.00}{2}\$ per hour. Apprentices shall be paid a progressively increasing schedule of wages based on either a percentage or a dollar amount of the current hourly journeyworker/fully-competent worker wage. A journeyworker/fully-competent worker minimum wage will be at least \$\frac{20.00}{2}\$.					
	3-Ye	ear Term:				
	$\begin{array}{c} 1^{st} \\ 2^{nd} \\ 3^{rd} \end{array}$	12 months = \$1 12 months = \$1 12 months = \$1	16.00			
	full learn	journeywork rate. Per	riodic re	prenticeship program the view and evaluation of uction will be conducted	the apprentice	e's on-the-job

**RELATED INSTRUCTION OUTLINE** (See attached Related Instruction Outline)

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

**WORK PROCESS SCHEDULE** (See attached Work Process Schedule)





The sponsor may modify the related instruction to meet local needs prior to submitting these Standards to the appropriate Registration Agency for approval.



### **Appendix A-2**

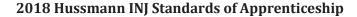
### WORK PROCESS SCHEDULE Service Refrigeration Mechanic

**O\*NET-SOC CODE:** <u>49.9021.02</u> RAPIDS CODE: <u>0666</u>

The term of the occupation shall be defined by the attainment of all competencies, both technical and behavioral, of the position, which would be expected and approximated to occur within 6000 hours of OJL, supplemented by a minimum of 144 hours of related instruction per year of apprenticeship.

### **Apprenticeship Competencies - Technical**

Item	Work Processes	Approx. Hours
A	SAFETY	
	1. Job safety & health	
	2. Use and care of tools	983
	3. Rigging and signaling	703
	4. Pipe materials, fittings, valves, hangers, supports and fasteners	
	5. Soldering, brazing, threading and make up	
В	Heating Systems	
	1. Principles of heating	
	2. Heat loss factors	807
	3. Combustion & heating fuels	
	4. Controls & valves	
С	REFRIGERATION AND AIR CONDITIONING	
	1. Principles of refrigeration	
	2. Heat transfer	
	3. Refrigerants, properties and characteristics	
	4. Defrost Systems, Hot Gas, Electric & Off time	
	5. Oil system types, operation and diagnostics	2564
	6. Leak detection	
	7. Compressors & condensers	
	8. Evaporators, metering devices, desiccants and dryers	
	9. Refrigeration system piping	
	10. Refrigeration system operating and safety devices	
D	ELECTRICITY	
	1. Basic electricity	
	2. Testing and recording instruments	
	3. Wiring diagrams and circuits	1646
	4. Switches, controls and internal components	
	5. Solid state fundamentals	
	6. Installation, testing and trouble shooting	
	Total hours (approximate)	6000





The above on-the-job-learning (OJL) work process competencies are intended as a guide. It need not be followed in any particular sequence, and it is understood that some adjustments may be necessary in the hours allotted for different work experience. In all cases, the apprentice is to receive sufficient experience to make them fully competent and use good workmanship in all work processes, which are a part of the industry. In addition, the apprentice shall be fully instructed in safety and OSHA requirements.



### **Apprenticeship Competencies - Behavioral**

In addition to mastering all of the essential technical competencies, an apprentice must consistently demonstrate at an acceptable level the following behavioral competencies in order to complete the apprenticeship.

Item #	Behavioral Competencies
1.	Participation in team discussions/meetings
2.	Focus in team discussions/meetings
3.	Focus during independent work
4.	Openness to new ideas and change
5.	Ability to deal with ambiguity by exploring, asking questions, etc.
6.	Knows when to ask for help
7.	Able to demonstrate effective group presentation skills
8.	Able to demonstrate effective one-on-one communication skills
9.	Maintains an acceptable attendance record
10.	Reports to work on time
11.	Completes assigned tasks on time
12.	Uses appropriate language
13.	Demonstrates respect for patients, co-workers and supervisors
14.	Demonstrates trust, honesty and integrity
15.	Requests and performs work assignments without prompting
16.	Appropriately cares for personal dress, grooming and hygiene
17.	Maintains a positive attitude
18.	Cooperates with and assists co-workers
19.	Follows instructions/directions
20.	Able to work under supervision
21.	Able to accept constructive feedback and criticism
22.	Able to follow safety rules
23.	Able to take care of equipment and work place
24.	Able to keep work area neat and clean
25.	Able to meet supervisor's work standards
26.	Able to not let personal life interfere with work
27.	Adheres to work policies/rules/regulations



## RELATED INSTRUCTION OUTLINE Service Refrigeration Mechanic O\*NET-SOC CODE: <u>49-9021.02</u> RAPIDS CODE: <u>0666</u>

The related instruction has been developed in cooperation with the employer as part of the apprenticeship. The following is a set of courses to be delivered by subject matter experts.

Related Technical Instruction (RTI) - This instruction shall include, but not be limited to, at least <a href="144">144</a> hours per year for each year of the apprenticeship. The related theoretical education listed below is tightly integrated with real work product. The curriculum is defined as a variety of classes, around which the exams and projects are based. By defining the RTI this way, all competencies required of the students are met through project work.

Program Year	APPROXIMATE
	HOURS
	144

#### YEAR I

Safety I
Basics of Refrigeration
Hussmann Products
Intro to Welding and Pipefitting
Regulating Valves
Gauge Sets
Preventative Maintenance
Intro to Leak Checking
Basic Electricity
Supermarket Construction
Welding and Pipefitting II

YEAR II 144

Safety II

Single Compressor Systems

Defrost Methods, Components, and Troubleshooting

**HVAC** Preventative Maintenance and

Troubleshooting

**Evacuation Principles and Procedures** 

**Electrical Measurement** 

**Electrical Motors and Components** 

Blueprint Reading/Engineering Information

**Compressor Operations** 

Supermarket Preventative Maintenance

Three Phase Motors and VFD's

Rack Systems

**Rack Controls** 

**Ambient Controls** 



Refrigerant Flow Oil systems

**YEAR III** 144

Safety III

**Advanced Defrost and Compressor Troubleshooting EMS Basics** E2 and Danfoss Systems HVACR Refrigeration Code/ ASHRAE 15 & 34

**HVACR** Electrical Code

**Total Minimum Hours** 

### COURSE TOPIC DESCRIPTIONS

**Number of Hours** 

432

**Safety I (30 Hours):** This course covers over 30 hours of OSHA standards, policies, and procedures in construction and general industry. These courses are delivered through the Hussmann Institute Online platform.

This class reviews key worker safety and health topic and identifies common workplace hazards to help prevent accidents and injuries. This class includes module guizzes to test apprentice understanding of topics, and a removable employee receipt page for easy documentation.

### This course also features modules on the following key topics:

- Confined Space Entry
- Electrical Safety
- First Aid and Bloodborne Pathogens
- Hazard Communication
- Lockout/Tagout
- o Respiratory Protection
- Slips, Trips and Falls
- Violence in the Workplace
- And more

**Basics of Refrigeration (15 Hours):** This course provides and overview of the basic refrigeration process used in mechanical refrigeration and air conditioning systems.

- Safety in refrigeration
- Key principles of thermodynamics



- An explanation of sensible and latent heat
- British Thermal Units
- The pressure temperature relationship
- Using a Pressure Temperature Chart (PT)
- Basic Refrigeration system: Compressor, Condenser, Evaporator and Metering Device
- Superheat and Sub-cooling
- Common components and functions of Thermal Expansion Valve

**Hussmann Products (10 Hours)**: The course provides an overview of the Hussmann products offered to our customers. Students will learn basic safety for Hussmann products and about our products. Students will leave class with a thorough understanding and deep knowledge of the products Hussmann supplies.

**Intro to Welding and Pipefitting (10 Hours):** This course provides an overview of refrigeration piping.

### Students will learn:

- Safety in welding and pipefitting
- Refrigerant piping types and applications
- Refrigerant piping sizes
- Refrigerant pipe fittings and types
- PVC piping types and applications
- PVC piping sizes
- PVC pipe fittings and types
- Refrigerant pipe insulations types
- Refrigerant pipe support
- Refrigerant pipe installation best practices
- Mechanical fittings and applications

**Regulating Valves (10 Hours)**: This course provides an overview of the refrigeration system flow control or regulating valves.

### Students will learn:

- Safety in regulating valves
- Basic regulating valves
  - o High side valves
  - o Low side valves
- Thermostatic Expansion Valves

**Gauge Sets (10 Hours):** This course provides an overview of gauge manifold set operation.



### Students will learn:

- Safety in gauge sets
- Gauge set description
- Gauge set service operations

**Preventative Maintenance (10 Hours):** This course provides an overview of HVAC/R preventative maintenance.

### Students will learn:

- Safety in preventative maintenance
- Preventative maintenance on parallel rack refrigeration systems
- Preventative maintenance on conventional refrigeration systems
- Preventative maintenance on HVAC equipment
- PM for supermarkets and small format stores

**Intro to Leak Checking (10 Hours):** This course provides an overview of refrigerant leak checking.

### Students will learn:

- Safety in leak checking
- Types of leak detectors
- Electronic leak detectors
- Leak detection procedures

**Electrical Basics (15 Hours):** This course provides an overview of basic electricity.

### Students will learn:

- Safety in electrical basics
- Basic electrical theory
- Alternating current
- Parallel circuits
- Resistive, inductive and capacitive circuits
- Ohm's Law

**Supermarket Construction (10 Hours):** This course provides an overview of the various materials used in refrigeration construction and installation.

- Safety in supermarket construction
- Basic construction tools
- Pipe hanger
- Refrigerant pipe



- Pipe insulation
- Refrigerated fixture installation
- Refrigerated fixture drain

**Welding and Pipefitting II (15 Hours):** This course is a continuation of pipefitting and welding and provides students with an overview of refrigeration system pipe fitting and welding procedures.

### Students will learn:

- Safety in welding and pipefitting in refrigeration systems
- Pipe measurement
- Pipe preparation
- Brazing and soft soldering temperatures
- Acetylene/Oxygen torch set up
- Brazing techniques
- Filler metals
- Dissimilar metals

**Safety II (20 Hours):** This course provides 20 hours of instructor led overview of SAFESTART critical error reduction techniques.

### Students will learn through a series of modules on reducing errors, including:

- Introduction & Overview
- Eves on Task Mind on Task
- Line-of-fire Balance/Traction/Grip
- Rushing Frustration Fatigue Complacency
- Critical Error Reduction Techniques

**Single Compressor Systems (5 Hours):** This course provides an overview of single compressor systems.

- Safety in single compressor systems
- Types of compressors
- Compressors and motors
- Condensers
- Receiver
- Expansion device
- Evaporator
- Standard controls



**Defrost Methods, Components, and Troubleshooting (8 Hours):** This course provides an overview of refrigeration system defrost methods, components and troubleshooting.

### Students will learn:

- Safety in defrost methods
- Understanding defrost
- Defrosting methods
- Manual defrost clocks
- Basic troubleshooting
- Ice buildup problems
- Frost buildup problems
- Reverse air defrost

**HVAC Preventative Maintenance and Troubleshooting (8 Hours)**: This course provides an overview of HVAC preventative maintenance and troubleshooting.

### Students will learn:

- Safety in HVAC preventative maintenance and troubleshooting
- Preventative maintenance
- Troubleshooting strategies and procedures
- Psychometrics basics

**Evacuation Principles and Procedures (5 Hours)**: This course provides an overview of refrigeration system evacuation principles and procedures.

### Students will learn:

- Safety in evacuation
- Vacuum pumps
- Evacuation procedures
- Recovery procedures
- GreenChill requirements

**Electrical Measurement (15 Hours):** This course provides and overview of electrical measurements using various electrical measuring devices.

- Safety in electrical measurements
- Electrical measuring instruments
  - o Volt Ohm Meter
  - o Amperage Meter
  - o Mega-Ohm Meter



- Taking different types of readings
  - o Volt readings
  - o Ohm readings
  - o Current readings
  - o Millivolt readings

**Electrical Motors and Components (8 Hours)**: This course provides an overview of basic electrical circuits and components.

### Students will learn:

- Safety in electrical circuits and components
- Single Phase Motors
- Motor control circuits
- Motor circuit components
- Schematic and wiring diagrams

**Blueprint Reading/ Engineering Information (10 Hours):** This course provides a basic overview of Blueprint reading as it pertains to commercial refrigeration install and service.

### Students will learn:

- Safety in blueprint reading for commercial refrigeration install
- RS Engineering sheets
- Fixture plan review
- Refrigerant piping take-off's
- Floor pan symbols
- Specialty parts ordering

**Compressor Operations (8 Hours):** This course provides an overview of typical compressor operations.

### Students will learn:

- Safety in compressor operations
- Operating parameters
- Compression ratio
- Compound compressors
- Compressor unloading
- Servicing compressors

**Supermarket Preventative Maintenance (8 Hours)**: This course provides an overview of preventative maintenance specific to small format and supermarket HVACR.



- Safety in preventative maintenance
- Supermarket leak checking
- Leak check review
- Parallel rack maintenance
- Conventional system maintenance
- Self-contained equipment maintenance

Three Phase Motors and Variable Frequency Drive's (VFD) (5 Hours): This course provides an overview of three phase motors and VFD's.

### Students will learn:

- Safety in motors and VFDs
- Three phase motors
- Induction process
- Intro to variable frequency drives (Inverters)
- Troubleshooting
- Programming

**Rack Systems (15 Hours):** This course provides an overview of various refrigeration conventional and parallel rack systems.

### Students will learn:

- Safety in rack systems
- Compressor types
- Defrost systems
- Oil management systems
- Piping configurations
- Components
- Compound systems

**Rack Controls (8 Hours)**: This course serves as an introduction and provides an overview of refrigeration parallel rack controls.

- Safety in rack controls
- Intro to rack controls
- Time delay relays
- Computer interfaces
- Phase loss monitors
- Three phase motor control



**Ambient Controls (8 Hours):** This course provides an overview of ambient controls for refrigeration systems.

### Students will learn:

- Safety in ambient control
- Ambient conditions
- Low ambient controls
  - Hold back valve
  - Split condenser
  - Fan speed control

**Refrigerant Flow (7 Hours):** This course provides an overview of refrigeration system refrigerant flow.

### Students will learn:

- Safety in refrigerant flow
- System flow
- Ambient sub-cooling
- Mechanical sub-cooling
- Floating head pressure
- Receiver levels
- Hot gas defrost

**Oil Systems (7 Hours)**: This course provides an overview of refrigeration systems oil systems.

### Students will learn:

- Safety in oil systems
- Net oil pressure
- Oil system regulation
- Oil pressure differential valve
- Oil management

**Safety III (20 Hours):** This course provides 20 hours of instructor led overview on the continuation of SAFESTART critical error reduction techniques.

### Students will learn through a series of modules on reducing errors, including:

- Introduction & Overview
- Eyes on Task Mind on Task
- Line-of-fire Balance/Traction/Grip



- Rushing Frustration Fatigue Complacency
- Critical Error Reduction Techniques

**Advanced Defrost and Compressor Troubleshooting (5 Hours):** This course provides an advanced overview of refrigeration system defrost and compressor troubleshooting.

### Students will learn:

- Safety in refrigeration system defrost and compressor troubleshooting
- Electric defrost
- Hot gas defrost
- Kool gas defrost
- Service issues and repairs
- Troubleshooting guide
- Emerson, Copeland, and Bitzer troubleshooting and repair

**EMS Basics (31 Hours):** This course provides a basic overview of Energy Management Systems.

### Students will learn:

- Safety in EMS
- EMS overview
- Controller components and functions
- Hardware and software overview
- Network communications
- Troubleshooting

**E2** and Danfoss Systems (31 Hours): This course provides a basic overview of Emerson CPC E2 and Danfoss controllers as they pertain to refrigeration.

### Students will learn:

- Safety in Emerson CPC E2 and Danfoss controllers
- Components
- Programming
- Troubleshooting
- Energy Management

**HVACR Refrigeration Code/ ASHRAE 15 & 34 (31 Hours):** This course provides a basic overview of HVACR codes along with ASHRAE Standards 15 & 34 as they pertain to refrigeration install and service.

- Safety in ASHRAE 15 & 34 install and service
- Mechanical Code



**HVACR Electrical Code (31 Hours):** This course provides a basic overview of HVACR Electrical codes as they pertain to refrigeration install and service.

- Safety in HVACR code and refrigeration install and service
- NFPA 70 National Electrical Code 2017