

**Appendix A**  
**Work Process Schedule**

**OCCUPATION Title: Construction Craft Laborer**

**O\*NET-SOC CODE:** 47-2061.00

**RAPIDS CODE:** 0661HY

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

**1. TERM OF APPRENTICESHIP**

The term of the occupation shall be approximately two years with an OJL attainment of 4,000 - 5,100 hours supplemented by the required hours of related instruction.

**2. RATIO OF APPRENTICES TO JOURNEYWORKERS**

**INSERT RATIO** as covered in the Collective Bargaining Agreement.

**3. APPRENTICE WAGE SCHEDULE**

Apprentices shall be paid a progressively increasing schedule of wages based on a percentage of the current journeyworker wage rate, or as per the CBA

	% of the journey worker rate
0 – 999 hours	_____
1,000 – 1,999 hours	_____
2,000 – 2,999 hours	_____
3,000 – 3,999 hours	_____
4,000 – 5,100 hours	_____

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

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

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

**Appendix A**  
**WORK PROCESS SCHEDULE**  
**Construction Craft Laborer**  
**O\*NET-SOC CODE: 47-2061.00      RAPIDS CODE: 0661HY**

The following list of general and specialty tasks represent skills required by a Construction Craft Laborer (CCL) in a high performance industry. The skills required of a CCL are diverse and many. They work on buildings, highways and heavy construction sites; tunnel and shaft excavations; demolition and environmental remediation sites. CCLs may be removing asbestos or lead-based paint from buildings. CCLs also erect and disassemble scaffolding, they load and unload building materials, tend numerous machines and work with other trades including carpenters, plasters, operating engineers and masons. CCLs also clear and prepare highway work zones, install traffic barricades, markers, and control traffic. They install sewer, water and storm drain pipes and place concrete and asphalt on roads. Other highly specialized tasks include operating laser equipment to place pipes, operating air, electric and pneumatic tools. CCLs also operate a variety of equipment including pavement breakers jackhammers, earth tampers, concrete, mortar and plaster mixers, electric and hydraulic boring machines, torches, small mechanical hoists, laser beam equipment, and surveying and measuring equipment. In general, the skills represent competencies in managing and understanding resources, information, technology, systems, and interpersonal relations.

The following general skills should be mastered by all Construction Craft Laborers.

	<b>APPROXIMATE HOURS</b>
I.      General Skills	1,600-2,100 hours
A. <u>Site/Project Preparation and Maintenance</u>	600-800 hours
• clearing, bucking, and falling	
• transportation, dismantling, and stockpiling of scaffolding	
• and work platforms	
• grading and compaction	
• layout and staking protocols	
• rigging & signaling for work traditionally performed by CCLs	
• site preparation, clean-up, and security	
B. <u>Tools, Equipment, and Materials</u>	600-800 hours
• tool, equipment, and material recognition and preparation	
• hand electric, gas, diesel, pneumatic, and power tool	
• equipment use and maintenance	
• tool, equipment, and material storage and security	
C. <u>Safety</u>	400-500 hours
• confined space safety	
• flagging, signing, and traffic safety awareness	
• hazard material recognition	
• trench and excavation safety	

II. Specific Skills 2,400 - 3,000 hours

We expect the apprentice to gain experience in each of the following specific groups.

A. Environmental Remediation: 800-1000 hours

In each of the following categories CCLs contain, remove, and dispose of hazardous materials (Asbestos, Lead, Radiation, and other hazardous materials) from buildings, superfund sites, from underground and ground soil.

Asbestos Abatement  
Hazardous Waste Abatement  
Lead Abatement  
Petro-Chemical Abatement  
Radiation Remediation

B. Building Construction: 800-1000 hours

CCLs prepare the base, place forms, prepare the surface and place concrete, work with other trades such as masons and carpenters, lay various pipe; drain, sewer and water. CCLs also use numerous electric, pneumatic, and gasoline powered tools in building construction.

Concrete-Example: perform any mixing, placement, vibration of concrete build and place forms, remove and clean forms

Landscaping - CCLs plant, maintain grounds, erect landscaping forms, prune trees and plants including mowing and all maintenance involved with landscaping.

Mason Tending- Tend brick masons including; Mix grout, erect and dismantle all scaffolding, stack block and brick, operate fork lifts, maintain worksite.

Pipe Laying- Prepare trench and sub-base for pipe (under the laborers jurisdiction) place pipe and seal joints. Repair pipe (under the laborers jurisdiction) and replace soil and fill followed by compaction.

PipeLine – Prepare worksite, clearing of right of way, fence building, string out and set up pipe, apply pipe coating, lower pipe into trench, final clean-up and pipe testing.

- C. Heavy/Highway Construction: 800-1000 hours
- CCLs work in all aspects of tunnel construction they also drill and set explosives and blast for tunnel and highway projects. CCLs will set grade, place concrete and asphalt on highways, streets and parking lots. Laying of storm, sewer and some water pipe is also the work of the CCL. Asphalt-Raking, placement, compaction and preparation of the base and clean-up and maintenance of tools and equipment.
- Drilling and Blasting- Operation, use and maintenance of both pneumatic and oil driven drilling eqt., preparing, loading and setting of explosives.
- Pipe Laying - Prepare trench and sub-base for pipe (under the laborers jurisdiction) place pipe and seal joints. Repair pipe (under the laborers jurisdiction) and replace soil and fill followed by compaction
- Tunnel and Shaft – Drilling with numerous hardrock drills, securing the surfaces of tunnels, removing the waste and operation and maintaining of drilling eqt.

TOTAL HOURS - 4,000 – 5,100

**RELATED INSTRUCTION OUTLINE**  
**Construction Craft Laborer**  
**O\*NET-SOC CODE: 47-2061.00      RAPIDS CODE: 0661HY**

Core Curriculum: Required off-site classroom instruction

Blue Print Reading: Be able to understand, interpret and follow the directions on both building and highway blue prints.	80 – hours
Craft Orientation: Understand the nature of the CCL trade and the work and skills of the trade. Understand what union membership is and the benefits of belonging to a union.	8 – hours
First Aid/CPR: Students will both study and practice basic first-aid and cardio-pulmonary resuscitation and be tested on their skills.	8 – hours
General Construction: Students will study and practice the use of many skills of the trade including; soil compaction equipment, rigging signaling, cutting torch, basic pipe laying methods and trench safety concrete placement techniques and scaffold erection are also taught in this course.	80 – hours
Hazard Communication: Identifying hazardous materials and taking the necessary precautions when coming in contact with some of the many chemicals used in the industry. Understanding MSDS's.	4 – hours
OSHA Safety: The 30 hour OSHA course covers the safety needs of the construction industry. An individual will be able to identify hazards and take action to correct those hazards and keep one safe and free from accidents and injury.	32 – hours

**SUB-TOTAL HOURS** **212 - hours**

\*Specific Skills Elective Curriculum: Depending on the work in the geographic jurisdiction apprentices will choose from the following:

Asbestos Abatement: A student will be able to identify asbestos, where to find asbestos and understand the danger related to this deadly product. The student will also practice containment and the use of negative air practices for safe removal and disposal. Use of glove-bags will also be practiced using proper techniques. Respiratory protection and protective clothing is covered in this class as it relates to keeping one safe.	40 – hours
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Asphalt:	40 – hours
The student will understand the safety pre-cautions necessary when working with, raking and placing asphalt. The student will practice the preparation of the surface, having the tools ready, and cleaning of the tools and machinery. The patching of pot-holes and cracks will be practiced along with proper raking techniques.	
Concrete:	80 – hours
Students will learn the safety and dangers of working with concrete products. Students will also study and practice the proper placement, vibration and striking off of concrete slabs and walls. Also, students will form walls and slabs for concrete placement.	
Foreman Preparedness:	40 – hours
Communication techniques, estimating, blueprint reading, time management, dealing with people, correcting negative behavior and scheduling are all part of this class for advanced tradesmen.	
Hazardous Waste Worker:	80 – hours
Students will understand the dangers and hazards of the many chemicals on Super Fund sites and other areas found on the construction projects. Clean-up and remediation is practiced in a mock training exercise. The decontamination of individuals is practiced by all students in this class. Respiratory protection, protective clothing and air monitoring is covered in this class as it relates to keeping one safe.	
Lead Abatement:	40 – hours
The student will learn about the history, dangers and health effects of lead and the many past uses found in buildings, housing, bridges and ships. Safe containment, medical check-ups, removal, bagging, testing and disposal are all part of this class. Respiratory protection and protective clothing is covered in this class as it relates to keeping one safe.	
Line and Grade:	80 – hours
Math equations and use of various measuring devices are used in this class. Lasers and transit and levels are studied and used in setting the grade for flat ground, hills and varying elevations.	
Mason Tending:	80 – hours
Scaffold erection, safety, stacking of block brick and mortar on scaffolding along with proper mixes of mortar for masons are all covered in this class. In addition the use of all wheel fork lifts are used extensively using the MSA training manual and test.	
Pipe Laying:	80 – hours

Trench safety, shoring and placement of various pipe including; sewer, water, plastic and ductile. Rigging and signaling is also covered along with the repair of various pipe.

Radiation Remediation: 32 – hours

Working safely and protecting oneself while working in and around radiological contaminated sites is practiced in a mock training area. Respiratory protection and protective clothing is covered in this class as it relates to keeping one safe.

Underground Storage Tank Removal: 32 – hours

Safe removal of underground storage tanks including; trench safety, hazardous waste contaminants, and personal protection are all covered in this class.

**SUB- TOTAL HOURS 624-hours**

**TOTAL HOURS 836-hours**

\* The apprentice will complete 220 (or more) additional hours of related training from these elective courses.

**Appendix A**  
**Work Process Schedule**

**OCCUPATION TITLE: Home Performance Laborer**

**O\*NET-SOC CODE: 47-4099.03**

**RAPIDS CODE: 2004**

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

**1. TERM OF APPRENTICESHIP**

The term of the occupation shall be no greater than **two years** with an OJL attainment of 2,000 hours supplemented by the required hours of related instruction.

**2. RATIO OF APPRENTICES TO JOURNEYWORKERS**

**(INSERT RATIO)** as covered in the **Collective Bargaining Agreement**.

**3. APPRENTICE WAGE SCHEDULE**

Apprentices shall be paid a progressively increasing schedule of wages based on a percentage of the current journey worker wage rate, or as per the CBA.

	% of the journey worker rate
0 – 499 hours	_____
500 to 999 hours	_____
1,000 to 1,499 hours	_____
1,500 to 2,000 hours	_____

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

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

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

**Appendix A**  
**WORK PROCESS SCHEDULE and RELATED INSTRUCTION OUTLINE**  
**Home Performance Laborer**  
**O\*NET-SOC CODE: 47-4099.03      RAPIDS CODE: 2004**

The following list of core and concentrations areas represent skills and knowledge required by a Home Performance Laborer (HPL) in the energy efficiency and residential industry. The skills required of a HPL are diverse and many. They work on protecting a building and its interior from the elements, new housing construction, housing retro-fit, remodel and perform services that improve the energy efficiency and performance of the home. HPLs also perform green landscaping and environmental remediation.

The following skill areas need to be satisfied by the HPL apprentice to develop the competencies and knowledge needed to obtain the expertise in the Core components. All HPL apprentices must complete the Related Instruction hours and On-the-Job Learning hours for the following Core Skills. (The Related Instruction descriptions follow the skills descriptions.) To complete the apprenticeship program, HPL apprentices must also complete the Related Instruction and On-the-Job Learning in 2 of the concentration areas that follow the Core Skills.

**Core Skills for the Home Performance Laborer:**

**RELATED INSTRUCTION: 8 hours**  
**ON-THE-JOB LEARNING: 10 hours**

Industry Orientation  
Industry Orientation introduces participants to the construction industry and prepares those seeking a career as a HPL for a successful career. Emphasis is placed on developing good work habits, being productive on the job, working under a collective bargaining agreement, being aware of growth areas in construction employment, and background information on the Laborers' International Union of North America and its related funds.

**RELATED INSTRUCTION: 40 hours**  
**ON-THE-JOB LEARNING: 20 hours**

Construction Math  
Construction Math introduces students to the basic math skills needed to perform calculations related to distance, area, volume, angles, weight and measurement on construction projects. Participants are provided instruction and an ample opportunity to measure objects, calculate and perform basic math functions including addition, subtraction, multiplication, and division of whole and fractional numbers; measure and estimate volumes, convert fractions to decimals, (and decimals to fractions). In addition participants learn practical applications of the Pythagorean theorem, formulas for calculating perimeters, area, volume, and the use and function of square roots.

**RELATED INSTRUCTION: 80 hours**  
**ON-THE-JOB LEARNING: 200 hours**

Safety  
Confined Space Awareness is designed to train workers to identify confined spaces and provide instruction regarding the types of hazards associated with confined space entry.

First Aid/CPR instruction provides the basic knowledge for non-medical personnel to provide assistance to an injured person prior to the arrival of professional medical assistance.

Hearing Protection training instructs HPLs on the noises associated with building construction, their sources, harmful effects, and methods to reduce exposure. Participants obtain an understanding of OSHA's occupational noise exposure, its debilitating effects, and control options.

Lockout/Tagout training introduces trainees to the control of hazardous energy and procedures and requirements of locking out and tagging out of electrical and mechanical equipment.

The OSHA Construction Safety and Health program is designed to meet the requirements for OSHA's 10-hour and 30-hour training programs. The program provides safety and health information as it relates to the many hazards found on construction projects and offers insight into their mitigation.

#### Hazard Communication

RELATED INSTRUCTION: 8 hours  
ON-THE-JOB LEARNING: 20 hours

Hazard Communication introduces HPLs to the Occupational Safety and Health Hazard Communication Standard, as it applies to the construction industry. Training focuses on the guidelines for recognizing and protecting oneself from exposure to hazardous substances, including identifying chemical hazards and the proper use of container labels, placards, and material safety data sheets.

#### Personal Protective Equipment

##### Fire Protection

##### Electrical Safety

##### Ladder Safety

##### Tool Identification, Inspection, Safety and Use

RELATED INSTRUCTION: 80 hours  
ON-THE-JOB LEARNING: 100 hours

##### Material Handling

General Construction training introduces participants to a wide variety of concepts, tools, and skills that are important to successfully begin a career as a HPL. Participants receive instruction on the work and role of a HPL, commonly encountered safety issues, measurement in residential construction, safe hand and power tool operation, and materials frequently used in construction. Each topic is presented in a separate module, several of which require students to perform tasks or demonstrate skills being taught. Special emphasis is placed on following proper procedures and developing safe work habits.

The OSHA Construction Safety and Health program is designed to meet the requirements for OSHA's 10-hour and 30-hour training programs. The program provides safety and health information as it relates to the many hazards found on construction projects and offers insight into their mitigation.

Fall Protection

Fall Protection Awareness provides an overview of applicable OSHA standards, types of protective devices and their uses, and fall protection program requirements.

RELATED INSTRUCTION: 8 hours  
ON-THE-JOB LEARNING: 10 hours

Scaffold User

Scaffold User training is designed to address the needs of workers required to perform job tasks from scaffolding. Participants receive instruction in identifying the hazards associated with scaffold use, regulations pertaining to scaffolds, and proper work methods. The course includes the use of a specialized pre-built scaffold system designed for student inspection, participant discussion, and interactive exercises to enhance training.

RELATED INSTRUCTION: 8 hours  
ON-THE-JOB LEARNING: 10 hours

Introduction to Green for Residential

This training introduces participants to the techniques and processes and procedures associated with green construction projects. Topics covered include:

- Definitions of Green
- Green Rating Systems
- Green Construction Procedures
- Overview of Alternate Energy Sources

RELATED INSTRUCTION: 8 hours  
ON-THE-JOB LEARNING: 30 hours

**RELATED INSTRUCTION HOURS: 240**  
**ON-THE-JOB LEARNING HOURS: 400**

**Appendix A**  
**WORK PROCESS SCHEDULE and RELATED INSTRUCTION OUTLINE**  
**HOME PERFORMANCE LABORER CONCENTRATIONS**  
**O\*NET-SOC CODE: 47-4099.03      RAPIDS CODE: 2004**

Below are the five concentration areas (Weatherization, Sustainable Building, Deconstruction/Retrofit, Green Landscaping and Green Remediation) of the Home Performance Laborer (HPL) and the corresponding skills, knowledge and Related Instruction descriptions. To complete the HPL Apprenticeship Program, an HPL Apprentice must satisfy the Related Instruction and On-the-Job Learning hours in **two** of the specific concentration areas.

**WEATHERIZATION**

Weatherization Technician/Installer      RELATED INSTRUCTION: 80 hours  
ON-THE-JOB LEARNING: 700 hours  
Weatherization Technician/Installer training is designed to provide qualified individuals with the skills and knowledge necessary to be a safe, competent, and productive member of a weatherization crew. Participants are introduced to the basics of building science and the complex ways buildings and their systems interact with each other and the outside environment. Instruction includes the methods and materials needed to properly seal the building envelope; how to seal, repair, and insulate leaky or damaged ductwork; the specifics of various types of insulation, their properties, and where and how they are best installed; and, how to interpret blower door tests and infrared images to assess the success or failure of a weatherization project.

Installing Exterior Doors and Windows  
Installing Insulation and Vapor Barriers      RELATED INSTRUCTION: 40 hours  
Patching and Repairing Drywall      ON-THE-JOB LEARNING: 40 hours  
This training introduces participants to the process and procedures for installing insulation, vapor barriers, exterior doors, windows and repairing drywall.

Lead Renovation, Repair and Painting (RRP)      RELATED INSTRUCTION: 16 hours  
ON-THE-JOB LEARNING: 40 hours  
Lead Renovator training prepares participants to perform renovation work using lead safe work practices. The course meets all Occupational Safety and Health Administration (OSHA) and Environmental Protection Agency (EPA) training requirements under 29 CFR Part 1926.1101 and 40 CFR Part 745.225 respectively. The course is mandatory for all workers conducting renovation activities where lead-based paint is present in target housing and child occupied facilities.

Asbestos Awareness      RELATED INSTRUCTION: 8 hours  
ON-THE-JOB LEARNING: 10 hours  
Asbestos Awareness trains HPLs to recognize and identify components and areas of a structure, which may consist of asbestos containing materials. Participants receive instruction on the history of asbestos, health effects associated with exposure, and procedures to avoid disturbing asbestos containing materials.

### Mold Awareness

Mold Awareness instructs HPLs on the identification and health hazards, associated with the exposure to mold as well as other microbial contamination.

RELATED INSTRUCTION: 8 hours  
ON-THE-JOB LEARNING: 10 hours

**RELATED INSTRUCTION HOURS: 152**  
**ON-THE-JOB LEARNING HOURS: 800**

## **SUSTAINABLE BUILDING**

### Materials, Plans, Specifications, and Codes

This training presents basic elements of print reading and provides experience in print reading for residential construction, light commercial and heavy commercial construction. Course content includes coverage in the areas of green building technology and construction, sustainable energy systems, the latest print production technology, and expanded building trade roles, materials, and methods. The course also introduces participants to the challenge of interpreting information from various locations in a set of prints in heavy commercial construction.

RELATED INSTRUCTION: 40 hours  
ON-THE-JOB LEARNING: 50 hours

### Flooring Systems

#### Wall and Roof Framing

#### Exterior Finishing – Walls and Roof

#### Installing Exterior Doors and Windows

#### Installing Insulation and Vapor Barriers

#### Installing Drywall

Sustainable Construction introduces apprentices to the many facets of the residential construction process and provides the core skills, knowledge, and aptitude necessary to construct homes safely and efficiently through a series of six (6) one-week courses. This program is designed to start with an introduction to residential construction that will focus on Hand and Power Tools, Performing Basic Carpentry, and the importance of Building Materials, Plans, Specifications, and Codes in the residential construction industry.

RELATED INSTRUCTION: 60 hours  
ON-THE-JOB LEARNING: 650 hours

1. Introduction to Sustainable Construction: This training introduces apprentices to the many facets of the sustainable residential construction process and provides the core skills, knowledge, and aptitude necessary to construct homes safely and efficiently.
2. Concrete Forming and Flooring Systems: This training introduces apprentices to the concrete forming procedure for residential foundations and slabs on grade as well as the construction of flooring systems.
3. Installing Exterior Finishing Walls and Roofs: This training introduces apprentices to the process and procedures for installing exterior wall and roof finishing.
4. Installing Insulation, Vapor Barriers, Drywall, and Installing Exterior Doors and Windows: This training introduces apprentices to the process and procedures for installing insulation, vapor barriers, drywall, exterior doors and windows.
5. Roof Framing: This training introduces apprentices to the process and

6. Wall Framing: This training introduces apprentices to the process and procedures for framing interior and exterior walls on sustainable construction projects.

Trench Protection RELATED INSTRUCTION: 8 hours  
ON-THE-JOB LEARNING: 40 hours  
Trench and Excavation Safety focuses on standards for building protective systems in trenches and excavations. Participants will also discuss how to install different kinds of protective systems to protect themselves and others in the event that trenches or excavations cave in.

Scaffold Builder – Tools and PPE  
Frame, Pump Jack and Baker Rolling RELATED INSTRUCTION: 40 hours  
ON-THE-JOB LEARNING: 60 hours  
Scaffold Builder training is designed to address the needs of HPLs that are responsible for building scaffolding on the job site or are required to perform job tasks while using scaffolding. Designed to meet the training requirements of 29 CFR Part 1926.454, the comprehensive program also includes use of a specialized pre-built scaffold system. The program also includes participant discussion, interactive exercises, and extensive hands-on training.

**RELATED INSTRUCTION HOURS: 148  
ON-THE-JOB LEARNING HOURS: 800**

## **DECONSTRUCTION/RETROFIT**

Lead Renovation, Repair and Painting (RRP) RELATED INSTRUCTION: 16 hours  
ON-THE-JOB LEARNING: 40 hours  
Lead Renovation training prepares participants to perform renovation work using lead safe work practices. The course meets all Occupational Safety and Health Administration (OSHA) and Environmental Protection Agency (EPA) training requirements under 29 CFR Part 1926.1101 and 40 CFR Part 745.225 respectively. The course is mandatory for all workers conducting renovation activities where lead-based paint is present in target housing and child occupied facilities.

Asbestos Awareness RELATED INSTRUCTION: 8 hours  
ON-THE-JOB LEARNING: 10 hours  
Asbestos Awareness trains HPLs to recognize and identify components and areas of a structure, which may consist of asbestos containing materials. Participants receive instruction on the history of asbestos, health effects associated with exposure, and procedures to avoid disturbing asbestos containing materials.

Mold Awareness RELATED INSTRUCTION: 8 hours  
ON-THE-JOB LEARNING: 10 hours  
Mold Awareness instructs HPLs on the identification and health hazards, associated with the exposure to mold as well as other microbial contamination.

### Materials, Plans, Specifications, and Codes

RELATED INSTRUCTION: 40 hours

ON-THE-JOB LEARNING: 30 hours

This training presents basic elements of print reading and provides experience in print reading for residential construction, light commercial and heavy commercial construction. Course content includes coverage in the areas of green building technology and construction, sustainable energy systems, the latest print production technology, and expanded building trade roles, materials, and methods. The course also introduces participants to the challenge of interpreting information from various locations in a set of prints in heavy commercial construction.

### Installing Interior and Exterior Doors

### Installing Replacement Windows

### Installing Insulation and Vapor Barriers

### Installing Drywall

### Wood Building Materials, Fasteners, and Adhesives

### Hand and Power Tools for Carpentry

RELATED INSTRUCTION: 60 hours

### Interior Finishing and Interior Stair Finishing

ON-THE-JOB LEARNING: 160 hours

Retro-fit/remodel introduces apprentices to the many facets of the residential remodel and reconstruction process and provides the core skills, knowledge, and aptitude necessary to remodel/retro-fit homes safely and efficiently through a series of six (6) one-week courses. This program is designed to start with an introduction to residential construction that will focus on Hand and Power Tools, Performing Basic Carpentry, and the importance of Building Materials, Plans, Specifications, and Codes in the residential construction industry.

1. Introduction to Sustainable Construction: This training introduces apprentices to the many facets of the sustainable residential construction process and provides the core skills, knowledge, and aptitude necessary to construct homes safely and efficiently.
2. Installing Exterior Finishing Walls and Roofs: This training introduces apprentices to the process and procedures for installing exterior wall and roof finishing.
3. Installing Insulation, Vapor Barriers, Drywall, and Installing Exterior Doors and Windows: This training introduces apprentices to the process and procedures for installing insulation, vapor barriers, drywall, exterior doors and windows.
4. Roof Framing: This training introduces apprentices to the process and procedures for framing roofs on sustainable construction projects.
5. Wall Framing: This training introduces apprentices to the process and procedures for framing interior and exterior walls on sustainable construction projects.
6. Installing Interior Finishes: This training introduces apprentices to the process and procedures for installing interior finishing including stair finishing.

### Concrete Repair

RELATED INSTRUCTION: 40 hours

ON-THE-JOB LEARNING: 40 hours

Concrete training prepares apprentices to work safely and productively in this potentially hazardous field. Safety issues associated with the mixing, forming, placement, and curing of concrete materials as well as the associated skills are covered in depth. Through instructor facilitated and extensive hands-on training, the HPL becomes

familiar with construction math and measurements, project planning, and site preparation. Other topics important to a concrete worker, such as forming, placing, finishing, and sawing are covered in detail. Appropriate cleanup procedures and concrete repair are also covered in the program.

### Deconstruction

Deconstruction training teaches apprentices to systematically disassemble a structure in a manner where the building's materials are efficiently reused and recycled. Participants completing training will be aware of the safety precautions to take to control deconstruction hazards. Additional topics include the overall planning of the deconstruction job, including the methods to be used to bring the structure down, the equipment necessary to do the job, and the measures to be taken to perform the work safely.

RELATED INSTRUCTION: 40 hours  
ON-THE-JOB LEARNING: 430 hours

### Scaffold Builder – Tools and PPE, Frame, Pump Jack and Baker Rolling

Scaffold Builder training is designed to address the needs of HPLs that are responsible for building scaffolding on the job site or are required to perform job tasks while using scaffolding. Designed to meet the training requirements of 29 CFR Part 1926.454, the comprehensive program also includes use of a specialized pre-built scaffold system. The program also includes participant discussion, interactive exercises, and extensive hands-on training.

RELATED INSTRUCTION: 40 hours  
ON-THE-JOB LEARNING: 40 hours

### Carpet Installation Wood and Tile Floor Installation

The training covers beginner through advanced terms and technologies. Apprentices will learn all of the step-by-step installation procedures for installing carpet, wood and tile floors. Training will include: measuring for carpet, stretch-in carpet procedures, hand sewing, glue down carpet, steps, non-stretchable carpets, carpeting around posts and over ledges. Wood and tile floor installation will include flooring material types and grades; preparing the underlayment; planning the layout; wood floor sanding; and applying various finishes.

RELATED INSTRUCTION: 40 hours  
ON-THE-JOB LEARNING: 40 hours

**RELATED INSTRUCTION HOURS: 292**  
**ON-THE-JOB LEARNING HOURS: 800**

## **GREEN LANDSCAPING**

### Materials, Plans, Specifications, and Codes

RELATED INSTRUCTION: 40 hours

ON-THE-JOB LEARNING: 50 hours

This training presents basic elements of print reading and provides experience in print reading for residential construction, light commercial and heavy commercial construction. Course content includes coverage in the areas of green building technology and construction, sustainable energy systems, the latest print production technology, and expanded building trade roles, materials, and methods. The course also introduces participants to the challenge of interpreting information from various locations in a set of prints in heavy commercial construction.

### Planting and Lawn Installation

RELATED INSTRUCTION: 40 hours

ON-THE-JOB LEARNING: 250 hours

Training presents the proper methods of installing a lawn and a wide array of turf grasses, groundcovers, and lawn treatments. The program offers detailed procedures for lawn installation including lawn repair methods such as reseeding, installing sod, and plugging a lawn. Lawn maintenance is also discussed, including mowing, watering, aerating, de-thatching, and prevention and control of weeds and diseases.

### Pruning

RELATED INSTRUCTION: 40 hours

ON-THE-JOB LEARNING: 100 hours

The training introduces the process of pruning everything from ornamental trees and bushes to common shrubs and discusses the timing and techniques that results in successful pruning for healthy growth. Pruning training also gives specific methods for pruning hundreds of species from the cold climates to the tropics and covers plant types from ornamental bushes, evergreens, ornamental vines, and edible fruit and nut trees to houseplants. Upon completion of the training, apprentices will know about pruning: why you need to prune, when to do it and what tools are required.

### Installing an Irrigation System

RELATED INSTRUCTION: 40 hours

ON-THE-JOB LEARNING: 200 hours

Training includes information on how to select, install, and maintain the right system(s) for the landscaping needs and discusses how to plan watering zones appropriate to the climate and landscape varieties. Through instructor facilitated and extensive hands-on training, the HPL becomes familiar with the processes needed to assemble and install a new drip, trickle, or sprinkler system for lawns, shrubs or gardens.

### Installing a Retaining Wall

RELATED INSTRUCTION: 40 hours

### Brick Pavers Walk or Patio Installation

ON-THE-JOB LEARNING: 200 hours

This training provides the apprentice with all the information needed to integrate popular hardscape design into the overall home landscape. Included are processes for building retaining walls, flagstone and tile patios, and brick, mortar, and concrete walks and patios.

**RELATED INSTRUCTION HOURS: 200**

**ON-THE-JOB LEARNING HOURS: 800**

## **GREEN REMEDIATION**

### Asbestos Abatement

Asbestos Abatement Worker training prepares HPLs to work safely and productively on asbestos abatement projects. The program is designed to exceed Occupational Safety and Health Administration (OSHA) and Environmental Protection Agency (EPA) training requirements under 29 CFR Part 1926.1101 and 40 CFR Part 763 respectively. Apprentices receive extensive instruction and hands-on training on work area preparation, decontamination facility construction and use, abatement techniques, and cleanup procedures. Special emphasis is placed on following proper procedures and developing safe work habits.

RELATED INSTRUCTION: 40 hours  
ON-THE-JOB LEARNING: 100 hours

### Lead Abatement

Lead Abatement Worker training prepares HPLs to work safely and productively on lead abatement projects. The course meets all Occupational Safety and Health Administration (OSHA) and Environmental Protection Agency (EPA) training requirements under 29 CFR Part 1926.62 and 40 CFR Part 745.225 respectively. The course is mandatory for all workers conducting lead-based paint activities in target housing and child occupied facilities.

RELATED INSTRUCTION: 40 hours  
ON-THE-JOB LEARNING: 50 hours

### Lead Renovation, Repair and Painting (RRP)

Lead Renovation training prepares apprentices to perform renovation work using lead safe work practices. The course meets all Occupational Safety and Health Administration (OSHA) and Environmental Protection Agency (EPA) training requirements under 29 CFR Part 1926.1101 and 40 CFR Part 745.225 respectively. The course is mandatory for all workers conducting renovation activities where lead-based paint is present in target housing and child occupied facilities.

RELATED INSTRUCTION: 16 hours  
ON-THE-JOB LEARNING: 250 hours

### Microbial

Microbial Remediation training instructs HPLs on the health hazards, personal protective equipment requirements, and remediation processes and techniques associated with the removal of mold as well as other microbial contamination.

RELATED INSTRUCTION: 16 hours  
ON-THE-JOB LEARNING: 250 hours

### Hazardous Waste

Hazardous Waste Worker training prepares HPLs to work safely and productively on hazardous waste remediation projects. The program meets all Occupational Safety and Health Administration (OSHA) training requirements under 29 CFR Part 1910.120 – Hazardous Waste Operations and Emergency Response. Training is mandatory for all workers conducting hazardous waste remediation activities on all Environmental Protection Agency (EPA) National Priorities Listed (NPL) hazardous waste sites as well as all state, local, county, city, public, and private hazardous waste sites.

RELATED INSTRUCTION: 80 hours  
ON-THE-JOB LEARNING: 60 hours

Water Damage /Fire Restoration

RELATED INSTRUCTION: 40 hours

ON-THE-JOB LEARNING: 90 hours

Training prepares apprentices to properly evaluate the loss, test damaged materials, select the optimum restoration alternative, coordinate with insurance professionals, and ultimately, to restore property and contents to a pre-loss condition. Training will also increase the apprentice's ability to remove excess water efficiently, to promote efficient evaporation and to establish the dehumidification conditions necessary to stop on-going damage.

**RELATED INSTRUCTION HOURS: 232**

**ON-THE-JOB LEARNING HOURS: 800**