HISTORIC WINDOW TECHNICIAN
WORK PROCESS SCHEDULE

Description: Clean, maintain, repair, preserve, restore, rehabilitate, reconstruct, and deconstruct historic window systems and units using hand and power tools and equipment.

Term: Time-based (estimated 6,000 hours) it is intended that after a combination of 6,000 hours of on-the-job learning (OJL) including a minimum of 450 hours of related instruction, the apprentice will demonstrate competence in the skills outlined below. Select apprentices will be able to demonstrate competence and receive advanced placement in the program.

On-The-Job Learning: Apprentices will receive training in the various work experiences listed below. The order in which this training is given will be determined by the flow of work on-the-job and will not necessarily be in the order listed. The times allotted to these various processes are the estimated times which the average apprentice will require to learn each phase of the occupation. They are intended only as a guide to indicate the quality of the training being provided and the ability of the apprentice to absorb this training in an average amount of time. The suggested related instruction supplements OJL, follows the work processes schedule.

Competencies

6000 Hours

I. Historic Preservation Fundamentals		**250**
I.1	Document existing structure with photographs and field measurements.	
I.2	Create field sketches.	
I.3	Research and record the structure's history using primary and secondary documents.	
I.4	Assess the pathology and safety of sites and structures.	
I.5	Adhere to local, state, and federal regulations regarding historic resource management.	

II. Construction Fundamentals		**1000**
II.1	Perform accurate construction math relevant to the worksite.	
II.2	Draft and sketch field drawings and production plans.	
II.3	Read, understand, and apply architectural plans, specifications, drawings, sketches, and codes.	

III. Safety Rules and Practices		**500**
III.1	Demonstrate proper and safe use and maintenance of hands tools, including but not limited to hammers, planes, chisels, screw drivers, hand saws, and punches.	
III.2	Demonstrate proper and safe use and maintenance of field power tools, including but not limited to table saws, miter saws, grinders, sanders, generators, impact drivers, drills, and reciprocating saws.	
III.3	Demonstrate proper and safe use and maintenance of shop tools, including but not limited to table saws, shapers, planers, drum sanders, column sanders, miter saws, band saws, routers, and dust collectors.	
III.4	Employ safe lifting and carrying practices.	

III.5 Use correct personal protection equipment and procedures, including but not limited to hard hats, goggles, gloves, proper clothing, suits, respirators, hearing protection, and fall protection.
III.6 Erect, construct and modify staging, ladders, scaffolding and work platforms.
III.7 Maintain proper Hazardous Communication Program.
III.8 Apply Material Safety Data information to material use.
III.9 Recognize hazardous materials and mitigate, following related safety protocols for those materials, including but not limited to lead and asbestos (certification required).
III.10 Mitigate site hazards through appropriate use of air shields and barriers, filters, ground covers, and erosion control.
III.11 Maintain orderly, clean, and organized job and work sites.
III.12 Properly and safely load, stack, and strap materials into truck beds, closed trailers, and/or flatbed trailers according to best practices.
III.13 Adhere to applicable local, state and federal regulations (EPA [environmental], DOT [moving vehicle] and OSHA [worker safety]).
III.14 Safely drive pickup trucks.
III.15 Safely hitch, drive, and reverse trailers for pick-up trucks.
III.16 Demonstrate first aid for occupational hazards.

IV. Building Systems **2000**

IV.1 Maintain, preserve, restore, rehabilitate, reconstruct, and deconstruct historic window operation systems.
IV.2 Maintain, preserve, restore, rehabilitate, reconstruct, and deconstruct historic window boxes.
IV.3 Maintain, preserve, restore, rehabilitate, reconstruct, and deconstruct historic window sashes.

V. Material Skills **2000**

V.1 Fully and partially remove finishes from various substrates.
V.2 Apply different finishes to various substrates following best practices.
V.3 Cut, shape, sand, and clean historic and modern wooden materials.
V.4 Employ a variety of joinery methods to join lumber cuts, including but not limited to mortises and tenons, dowels, adhesives, nails, screws, and clamps.
V.5 Cut, shape, buff, and clean historic and modern metals.
V.6 Employ a variety of methods to join metals, including but not limited to soldering, welding, and fasteners.
V.7 Cut and clean historic and modern glass.
V.8 Mix and cleanly apply different putties, epoxies, and caulking materials.
V.9 Safely identify and manage hazardous materials on site and in the shop.
V.10 Use, select, and substitute proper materials to meet the requirements for strength, durability, appearance, and safety.

VI. Project and Business Management **250**

VI.1 Maintain inventories of tools, supplies, and materials.
VI.2 Estimate project materials and labor.
VI.3 Create schedules and take-offs.
VI.4 Create project and business plans.

Related Instruction

450 hours

I. Historic Preservation Fundamentals			**75**
I.A	Historical Preservation Fundamentals	15	
I.B	Structural Theory and Pathology	15	
I.C	Historic Research and Documentation	15	
I.D	Architectural History	15	
I.E	History	15	
II. Construction Fundamentals			**90**
II.A	Math	30	
II.B	Reading and Literacy	30	
II.C	Drafting and Blueprint Reading	30	
III. Safety Rules and Practices			**75**
III.A	Professional Tool Use and Safety	15	
III.B	OSHA 30	30	
III.C	LeadSafe RRP	16	
III.D	First Aid	9	
IV. Building Systems			**120**
IV.A	Windows, Doors, and Millwork	30	
IV.B	Carpentry of Buildings	30	
IV.C	Weatherization	15	
IV.D	Framing	15	
V. Material Skills and Science			**60**
V.A	Wood	15	
V.B	Finishes	15	
V.C	Metals	15	
V.D	Glass	15	
VI. Project and Business Management			**30**
VI.A	Project and Small Business Management	15	
VI.B	Project Estimating	15	