

## DRAFT – June 18, 2018

### FACILITIES SERVICES JOB FAMILY – FACILITIES SERVICES TRADES SPECIALIST

**JOB FAMILY CONCEPT:** The Facilities Services job family is responsible for all aspects of facilities services work activities and includes entry level labor, skilled crafts and trades, supervisors and management. This job family keeps our campuses and institutes fully functional. Facilities Services roles provide facilities services to the University community.

#### **FACILITIES SERVICES TRADES SPECIALIST**

The Facilities Services Trades Specialist role specializes in one or more skilled trade(s). The Facilities Services Trades Specialist roles have gained their specialty following an apprenticeship and/or obtaining a licensure/certification. The levels of the Facilities Services Trades Specialist are distinguished based on the complexity of work, level of supervision received and the degree of independence. Levels also increase as the depth of expertise of a single specialty increases or as the breadth of multiple specialties increase.

The **Facilities Services Trades Specialist** role is distinguished from the **Facilities Services Assistant** role in that it has primary responsibility for performing specialized skilled trade services, typically following an apprenticeship, or obtaining a licensure/certification.

The **Facilities Services Trades Specialist** role is distinguished from the **Facilities Services Supervisor** role in that it the primary focus is on a specialized skilled trade and not supervision of units and employees.

#### **FACILITIES SERVICES TRADES SPECIALIST I**

##### Typical Functions

- Under general supervision performs skilled trades work at an experienced level.
- Responsible for experienced skill in one specialty area or knowledgeable and skilled in multiple specialty areas.
- Responsible for troubleshooting and diagnosing systems.
- Inspects and performs various maintenance, repair and construction tasks for compliance with applicable work orders, regulations, codes and professional practices.
- Performs preventive and corrective maintenance on building components, vehicles, specialized equipment, and related systems.
- Operates hand and power tools.
- Reads, interprets, and uses blueprints/schematics, instructions, manuals or shop drawings to understand specifications of work.
- Checks completed work for adherence to designated dimensions and specifications.
- Ensures codes and standards are met.
- Maintains accurate records of assignments, servicing and repairs.
- Demonstrates appropriate work methods to other employees including proper safety measures.
- Assists with training and provides technical guidance to others.
- Assists contractors on projects and assignments.
- May assist with estimating cost of materials.
- May recommend products and equipment needed to complete work order.

**DRAFT – June 18, 2018**Typical functions for Specialist 1 HVAC work: (3-5 years of experience required)

- Installs, repairs, maintains, adjusts, overhauls, cleans, repairs, and services refrigeration and air conditioning equipment such as refrigerated storage boxes, window air conditioning units, refrigerated water coolers, ventilation systems and force air heating systems.
- Performs preventive maintenance on air conditioning, refrigeration and ventilation systems.
- Assists in the repair and overhaul of pumps and air compressors.
- Modifies and adjusts systems and units to include thermostats and control systems.
- Fabricates, assembles, installs, and repairs sheet metal products and equipment.
- Perform sheet metal work to include pattern layout, cutting, bending, fabricating and installing.
- Selects gauge and type of sheet metal, marks layout outline and dimensions, sets up and operates fabricating equipment and machines, and shapes and forms metal to proper fit.

Typical functions for Specialist 1 carpentry work (3-4 years of experience required):

- Performs general commercial construction work, including layout in the repair, renovation, and maintenance of buildings and structures.
- Performs general commercial construction work in the maintenance, repair and renovation of floors, roofs, stairways, partitions, windows and screens.
- Installs and replaces doors, windows, partitions, glass, roofing materials, ceiling and floor tile, constructs door jambs, and partition walls.
- Installs and maintains office furnishings.
- Operates woodworking machines to saw, plain, drill or mortise lumber for doors, cabinets, shelves, molding, and related fixtures.
- Building forms; pours concrete; ties rebar; and assists with basic masonry work.
- Constructs and repairs cabinets, countertops, shelves and other office furnishings; assembles including hardware, trims and finishes.
- Reproduces moldings and simple woodturnings.

Typical functions for Specialist 1 electrical work (3-4 years of experience required):

- Performs general electrical work on electrical systems, facilities, appliances, and related electronic controls.
- Tests, adjusts, sequences, synchronizes, and aligns systems and equipment to include AC and DC power supplies, main power control panels, circuit breakers, transformers, motors, generators, lighting equipment, fire alarm systems, clock and bell systems, and related electronic controls and devices.
- Determines methods and sequence of operations required to locate, design, install, repair and modify electrical systems.
- Diagnoses and corrects malfunctions in equipment and circuits. Cuts, threads, bends, and installs conduit; pulls wire; and ties in panels to support construction and maintenance.
- Disassembles, cleans, repairs and reassembles a variety of electrical appliance and equipment following established procedures.

Typical functions for Specialist 1 locksmith work (3-4 years of experience required):

- Performs skilled work involved with maintaining locks and keys.

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- Prepares, installs and repairs common locking devices such as cylindrical, tubular, rim, and mortise locks and devices.
- Installs and adjust door closers and thresholds; shimming hinges as required.
- Repairs locking hardware of furnishings such as desks, files, and display cases.
- Replaces utility or service truck locks.
- Duplicates and services tubular and double bitted keys and cam locks.
- Disassembles commercial plugs with or without key.
- Masters keys to commercial plugs and bitting.
- Performs limited lock picking and automotive servicing.

Typical functions for Specialist 1 heavy equipment operation and repair work (3 years of experience required):

- Operates specialized heavy equipment.
- Operates vans, trucks, backhoes, front end loaders, dump trucks, bobcats, skid steers, snow plows, tractors, forklifts, trenchers.
- Assists in maintenance, repair, renovation and hauling operations.
- Loads and unloads heavy equipment.
- May operate crane and aerial lifts.

OR

- Performs repairs and routine maintenance on heavy equipment.
- Performs emergency repairs on heavy equipment including backhoes, front end loaders, dump trucks, bobcats, skid steers, snow plows, tractors, aerial lifts, forklifts, and trenchers.

Typical functions for Specialist 1 light equipment repair work (3-5 years of experience required):

- Performs repairs and routine maintenance on light equipment and machinery.
- Performs emergency repairs on light equipment such as mowers, weed eaters, blowers, multipurpose vacuums, chain saws, hedge trimmers, utility carts, pressure washers, snow removal equipment.

Typical functions for Specialist 1 welding work (3 years of experience required):

- Performs general to advanced welding activities using herliarc, shielded metal arc, and ozy-axetylene welding equipment.
- Performs welding, soldering, and smoothing of surfaces on copper and stainless steel to include manual welding and semi-automatic welding.
- Welds for equipment fabrication.
- Performs welding, soldering, and smoothing of surfaces on copper and stainless steel to include manual welding and semi-automatic welding.

Typical functions for Specialist 1 plumbing work (3-5 years of experience required):

- Performs general to advanced plumbing and heating duties including layout, repair and installation.

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- Cuts, threads, lays, connects, insulates, and color codes water, sewage, drainage, gas, air, vacuum, and low pressure steam lines and installs plumbing fixtures. Installs, connects, and tests sewer lines, solders and joins PVC pipes, plumbing systems, and installs boilers and related equipment following plumbing and ADA codes.
- Diagnoses and corrects plumbing breakdowns by repairing or replacing such items as broken, leaky or corroding lines, pumps and air, water, steam and gas valves both above and below ground.
- Performs repair work on clogged sewer lines and sanitary plumbing equipment such as urinals, water closets and drinking fountains.
- Checks, maintains and repairs air lines, heating, pipes, regulators, meters and gauges.

Typical functions for Specialist 1 sanitation work (4 years of experience required)

- Applies chemical solutions and sets mechanical traps to kill pests with minimal supervision.
- Treats termite-infested and fungus-damaged wood in buildings.
- Examines building to determine means of reaching areas, cuts openings in buildings and cores holes in concrete to gain access to infested areas and apply treatments.
- Measures area and calculates chemical mixtures.
- Reports structural, electrical or mechanical problems to supervisor.

Typical functions for Specialist 1 painting work (3-4 years of experience required):

- Prepares, patches and repairs walls, buildings, ceilings, and other building components and paints them.
- Prepares arch surfaces, handrails and other areas to meet deadlines, interior and exterior.
- Paints furnishings, handrails, and other areas as needed both interior and exterior.
- May assist with sign painting and finishing.
- Finishes dry wall.
- Repairs damaged veneers. Finishes and refinishes caseworks, millwork and architectural doors.

Typical functions for Specialist 1 preventive maintenance work (3-4 years of experience required):

- Performs preventive maintenance on all mechanical /electrical systems in buildings.
- Inspects buildings and equipment; detects and identifies needed repairs, performs quality assurance inspections to ensure equipment is operating at optimal level.
- Installs new systems and components.
- May perform preventive maintenance in a specialty area.

Typical functions for Specialist 1 steam plant work (1-3 years of experience required):

- Repair boilers, pumps, compressors, feeders, turbines, motors and other equipment.
- Fabricates parts and equipment for use in repair.
- Inspects and calibrates equipment.
- Operates folk lifts and other equipment.

Typical functions for Specialist 1 landscaping work (2-5 years of experience required):

- Performs tree care work, including pruning and removal using rope and saddle climbing or aerial lifts to access tree canopies.

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- *Perform preventive maintenance and emergency repairs to irrigation system including winterization.*
- *Designs and installs new irrigation systems.*
- *Monitors controls and settings for irrigation system.*

### Complexity and Decision Making Authority

Incumbents are experienced in their trade and make decisions on how best to complete a task based on their knowledge. Incumbents are mentored by more experienced specialists or supervisors. Work is generally monitored for progress and may be checked for completeness and adherence to standards, specifications and codes. Complex situations are referred to supervisor or more experienced specialist. Assignments are basic to moderate in complexity.

### Knowledge, Skills, and Abilities

Knowledge of trade in area of specialty. Knowledge of safe work practices. Skills in area of specialty. Math skills. Basic computer skills. Communication skills. Ability to meet the physical requirements of the job. Ability to use hand and power tools. Ability to solve problems.

### Education/Experience

High school diploma or the equivalent. Minimum three years related experience required in specialty area. Experience may be gained by trade school or apprenticeship.

### License/Certification

May require licensure or certification in specialty area. Commercial Driver's License may be required.

## **FACILITIES SERVICES TRADES SPECIALIST 2**

### Typical Functions

- Under broad supervision performs skilled trades at an expert level.
- Completes more difficult, technical and complex assignments.
- Responsible for expert, experienced skill in one specialty area or knowledgeable and skilled in multiple specialty areas.
- Provides technical guidance and direction to designated personnel and reviews completed work.
- Maintains records and prepares reports on repairs/service/condition.
- Makes recommendations on how to best complete a project or complex repair.
- Orders or pulls supplies needed for job.
- Assists with cost estimates.
- Responsible for delivery of materials to work site.
- Monitors and adjust systems and equipment to ensure efficient operation.
- Inspects buildings, structures and systems.
- Corrects complex unsafe/dangerous conditions.
- Creates shop drawings; may develop drawings, diagrams and graphic displays.
- Coordinates with appropriate parties to complete work.
- Services and repairs antique structures and outdated systems.
- Assists with the development and implementation of preventive maintenance schedule.
- Assists with enforcing safety regulations.
- Mentors others.

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- May assign and oversee work and assist in checking completed work.
- May be assigned to a project from start to completion.
- May be responsible for a system overhaul.
- May fabricate parts or materials.

### Typical functions for Specialist 2 HVAC work: (6-7 years of experience required)

- Installs, repairs, maintains, overhauls, cleans, and services various types of refrigeration and air conditioning equipment.
- Oversees and repairs various types of refrigeration and air conditioning equipment to include gas, electronic, steam heating, and boilers.
- Repairs and overhauls pumps and air compressors.
- Fabricates, assembles, installs, and repairs advanced sheet metal products and equipment.
- Transfers and layouts outlines and dimensions to sheet metal.
- Solders component parts for assembly.
- Uses triangulation formulas to layout complex sheet metal fittings.

### Typical functions for Specialist 2 carpentry work (6-9 years of experience required):

- Performs highly skilled general commercial construction work, including layout in the repair, renovation, and maintenance of buildings and structures.
- Performs basic masonry work including block, brick, precast, stone and tile and commercial masonry including the layout of block and brick corners.
- Installs and repairs asphalt and rubber roofs.
- Lay out floors, doors, walls, footers and roofs.
- Constructs and repairs cabinets, countertops, shelves, doors, windows and other wooden articles; assembles including hardware, trims and finishes.
- Duplicates complicated moldings.
- Constructs complicated casework per drawings
- Repairs antique furniture, repairs inlay, replaces or applies new veneers and laminates to furniture.

### Typical functions for Specialist 2 electrical work (6-9 years of experience required):

- Installs, maintains, and repairs electrical systems, facilities, appliances and related electronic controls and devices including complex and technical assignments.

### Typical functions for Specialist 2 line installation work (4 years of experience required)

- Constructs, installs, maintains and repairs high voltage overhead underground power lines and support facilities.
- Installs, inspects, and maintains sports facility lighting.
- Inspects and repairs equipment to maintain proper working order.

### Typical functions for Specialist 2 locksmith work (6 years of experience required):

- Performs code cutting from depth and spacing records using code machine to originate desired keys.
- Performs advanced lock picking skills, bypass methods, and alternate entry into doors.

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- Limited automotive openings.
- Duplicates and originates difficult keys.
- Services all types of furniture locks.
- Mortises doors for commercial mortise hardware.
- Installs surface mounted vertical rod devices.
- Installs, services, and programs electronic stand along combination locks.
- Originates simple sub master changes for both interchangeable cores and other standard commercial key systems.

### Typical functions for Specialist 2 welding work (6 years of experience required):

- Performs and coordinates welding activities using herliarc, shielded metal arc, and ozy-axetylene cutting torches and plasma cutters.
- Makes repairs and welds to mild steel, aluminum, stainless steel, aluminum piping, stainless steel piping and cast iron.
- Designs layouts; positions, clamps, and assembles work pieces in jigs or fixtures.
- Uses advanced welding methods such as TIG, MIG, Stick, Brazing and Soldering.

### Typical functions for Specialist 2 plumbing work (6-7 years of experience required):

- Performs advanced plumbing and heating duties including layout, repair and installation.

### Typical functions for Specialist 2 sanitation work (6 years of experience required)

- Performs advanced extermination work.
- May inspect for, test, record and remove asbestos on campus; works with contracted companies to do so.
- Performs advanced pest control work identifying weeds, insects and other pests and mixing exterminating agents such as herbicides, insecticides, and fungicides.

### Typical functions for Specialist 2 painting work (6-9 years of experience required):

- Performs specialized and advanced painting work.
- Preps cabinets, casework and millwork.
- Uses multiple methods of painting including a variety of spray equipment and is expert with numerous finishes and surfaces including metal.
- Patches, replaces, and paints architectural surfaces such as plaster and stucco.
- Blends colors for paints and stains.
- Repairs and replaces inlay. Replaces or applies new veneers and laminates to furniture.
- Services and repairs shop equipment.

### Typical functions for Specialist 2 preventive maintenance work (6 years of experience required):

- Performs advanced preventive on equipment and related systems.

### Typical functions for Specialist 2 steam plant work:

- Checking boiler controls.

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- Troubleshooting operator problems.
- Performs daily maintenance on precipitator, boiler controls and electrical equipment.

### Complexity and Decision Making Authority

Incumbents have advanced experienced in their trade and make decisions on how best to complete a task based on their knowledge. Assignments are moderate to complex in difficulty.

### Knowledge, Skills, and Abilities

Advanced knowledge of trade in area of specialty. Advanced knowledge of safe work practices. Advanced skills in area of specialty. Math and algebraic skills. Effective oral and written communication skills. Ability to use hand and power tools. Ability to lay out components of an entire project start to finish. Ability to solve complex problems.

### Education/Experience

High school diploma or the equivalent. Four to six years experience in trade area of specialty. Experience may include trade school. May require computer experience.

### License/Certification

May require licensure or certification in specialty area. Commercial Driver's License may be required.

## **FACILITIES SERVICES TRADES SPECIALIST 3**

### Typical Functions

- Under broad supervision performs a highly specialized skilled trade at an expert level or advance knowledge and skills in multiple specialty areas.
- Performs extensive diagnosis.
- Coordinates work to be performed.
- Leads on projects or assignments.
- Responsible for continuity of systems and projects.
- Provides advanced technical training and advice.
- Provides cost estimates.
- Develops drawings, diagrams and graphic displays.
- Inspects repairs.
- Inspects systems regularly for safety.
- Designs, constructs, modifies equipment including electronic, electrical, and mechanical equipment.
- Recommends new systems.
- Prepares reports on system overhauls, detailing work done.

### Typical functions for Specialist 3 HVAC work (7-8 years of experience required):

- Maintains, adjusts, modifies, overhauls, services, and repairs heavy-duty air conditioning and refrigeration equipment including industrial commercial, centrifugal, reciprocating, and screw chillers to include starters and associate equipment.
- Adjusts and repairs hydronic systems, all types of pneumatic, electric and electronic controls.
- Fabricates and installs heavy rigging.



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- Reads and interprets pressure, temperature, and gauge readings to determine if repairs are needed.
- Calibrates safety controls, operating devices, gauges, and thermometers; makes settings and adjustments.

### Typical functions for Specialist 3 line installation work (6 years of experience required)

- Installs, operates, and maintains high voltage distribution system.
- Maintains electrical service to campus properties.
- Responsible for continuity of projects.
- Inspects equipment regularly to maintain safety of campus community.

### Complexity and Decision Making Authority

Assignments are complex and specialized.

### Knowledge, Skills, and Abilities

Advanced knowledge of highly specialized trade. Advanced knowledge of safe work practices. Advanced skills in area of specialty. Math skills. Effective oral and written communication skills. Ability to use hand and power tools. Ability to coordinate advanced systems or multiple interrelated systems. Ability to solve specialized and complex problems.

### Education/Experience

High school diploma or the equivalent. Minimum six years experience in trade area of specialty. May require licensure or certification in specialty area. May require computer experience.

### License/Certification

May require licensure or certification in specialty area. Commercial Driver's License may be required.