



Bock Consulting

Job Analysis

Job Title	Sign Writer – Aviation Sign Shop	Worker	_____
DOT Number	970.381-026	Claim Number	_____
Employer	Port of Seattle	Employer Phone #	(206) 787-4005
Employer Contact	John R. Biddinger	Date of Analysis	September 22, 2011

Job of Injury Previous Job New Job 8 Hours Per Day 5 Days Per Week

Job Description, Essential Functions, Tasks and Skills:



The Port of Seattle is a municipal corporation created on September 5, 1911 by the voters of King County. The Port of Seattle is divided into operating divisions, plus other departments that support the divisions and the broad mission of the Port: 1) Aviation Division, 2) Capital Development Division, 3) Real Estate Division, and 4)

Seaport Division.

The Aviation Division owns and operates Seattle-Tacoma International Airport. Sea-Tac Airport is the nation's 17th busiest airport, handling more than 31.5 million passengers in 2010. The Facilities and Infrastructure group within Aviation Division maintains a Sign Shop at Sea-Tac Airport which is used to create and update most of the non-advertising signage used throughout the airport.

This job analysis is for an individual working as a Sign Writer in the Sign Shop.

Essential Functions:

A Sign Writer uses computers and graphic design software to print/transfer designs created by graphic artists/others onto media to physically create the signs and decals that will be used in and around the properties managed by the Aviation Division, including Sea-Tac Airport. This may include creating everything from large posters, to identification decals for Port vehicles, to small stickers and decals. It was estimated that 80% of a shift for a Sign Writer is spent in the Sign Shop.



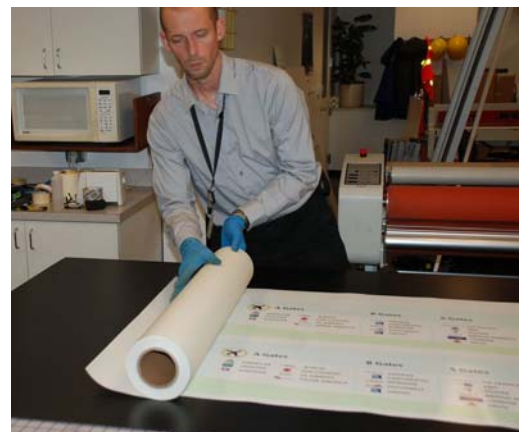


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Note: A Sign Writer will generally work alone in the Sign Shop. Therefore, a Sign Writer should be able to complete all assigned tasks without help from others.

Examples of Tasks assigned to the Sign Writer:

- Meet/connect with manager on a daily basis.
- Receive and or review written or oral instructions about assigned work tasks.
- Maintain and update spreadsheet containing job list.
- Request supplies and or materials needed for projects.
- Prepare and or review job hazard analysis, as needed.
- Identify design or graphic to produce. Work is generally completed on Windows-based computers.
- Operate computerized sign-making equipment to print text and images, or cut text and graphics from vinyl rolls.
- Prepare surface upon which the sign or graphic will be applied. Text and graphics may be applied to metal, plastic, painted, wooden, or other types of substrates.
- Prepare and apply graphics, decals and/or lettering to prepared substrates.
- Deliver signs, as requested.
- Install signs/decals, or assist with sign installation, as requested. Note: For larger signs, or signs that need to be mounted using tools, Aviation Maintenance Carpenters install the signs.
- Remove stickers and decals from vehicles.
- May remove graffiti/stickers from signs or walls.
- Clean and maintain equipment and supplies.
- Ensure that materials and supplies are stored and disposed of properly.
- Send and respond to electronic mails.
- Attend weekly staffing meeting, monthly safety meetings and periodic meetings with Stakeholders.
- Complete all required forms and documents.
- Rarely (perhaps once a year), a Sign Writer may be called upon to produce and help implement





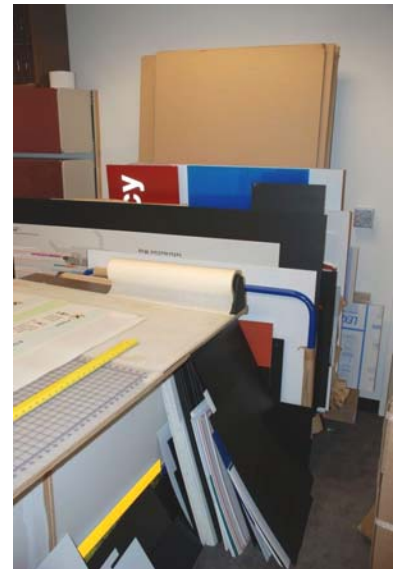
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signage on very short notice, within a very short period of time, to address changes in airport regulations, or inform travelers/others of mechanical breakdowns and or detours.



Necessary skills and abilities include:

- Knowledge of methods, materials and equipment used in the sign and graphics trade.
- Working knowledge of Windows-based computers, related accessories, keyboarding, data input techniques, Microsoft Office applications, and electronic mail software.
- Knowledge of graphics-related software (such as Adobe Illustrator, Onyx, and Gerber Scientific Omega Graphics).
- Working knowledge of design techniques and principles.
- Skills in the application and use of coatings, films, equipment, and materials used to create signs, graphics and decals.
- Skills in printer and plotter operations. Knowledge of machines and tools, including their uses, repair, and maintenance.
- Must be have strong attention to detail when completing tasks
- Must be able to work independently without immediate, direct supervision.
- Must be flexible and able to work in a dynamic environment.
- Must be able to think creatively and apply common sense solutions to work-related issues.





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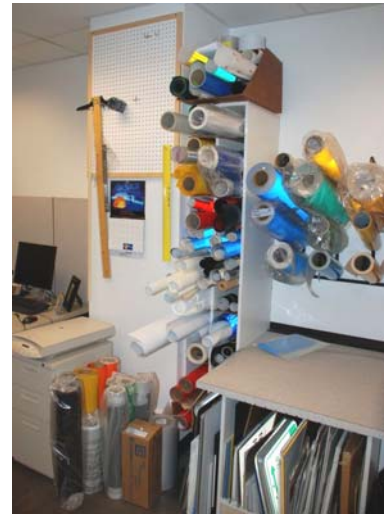
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Machinery, Tools, Equipment, Personal Protective Equipment:

Sign Writers use a variety of tools and equipment to accomplish their assigned tasks:

- Windows-based computers and software (Adobe Illustrator, Onyx, and Gerber Scientific Omega Graphics).
- Computer printers. Vinyl cutters. Laminators.
- Transfer paper. Rolls of colored vinyl. Squeegee. Stencils. Masking tape. Double sided tape. Scissors.
- Tape measure. Pliers. Wrenches. Drill. Scraper with razor blade.
- Sheets of aluminum, sheets of plastic (PVC or polystyrene), corrugated plastic (Corex, etc.), Dibond composite panels, and foam core (classified as “substrates”).
- Ladders (6’ and 8’). Manlift.
- Wheeled carts.
- Metal/plastic sheet shear.
- Office equipment, such as desks, chairs, file cabinets, work tables, shelving units, storage cabinets, photocopying machine, facsimile machine, and other items.
- General office supplies, including reams of paper, file folders, pens and pencils, ruler, stapler, notepads, document organizers, and laser/copy machine toners.

Personal protective equipment (PPE) may include: face shields, safety glasses, goggles, respirators, ear/hearing protection, gloves, and dust masks. Workers are required to wear safety vests when working in the field. When working in a construction zone, workers are required to wear a hardhat, eye protection, ear protection, and a safety vest.





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Education / Training:

The Facilities and Infrastructure group generally seeks Journeyman level employees for Sign Writers. Journey-level status can be obtained through the completion of an approved apprenticeship program, or equivalent experience. Sign Writers must be members of the Sign Painters Union (Local #1094), or join within 30 days of employment.

Training and or enough hands-on experience with computers to have a significant knowledge of Windows-based computers, related accessories, and graphic design software. Working knowledge of keyboarding, data entry techniques, Microsoft Office applications, and electronic mail software is also required.

Per the Dictionary of Occupational Titles (DOT): 970.381-026 Painter, Sign

Specific Vocational Preparation (SVP): 7 (From two to four years)



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COGNITIVE AND BEHAVIORAL ELEMENTS/DEMANDS

Frequency Definitions:	
Continuously = Occurs 66-100% of the time.	Occasionally = Occurs 1-33% of the time
Frequently = Occurs 33-66% of the time.	Rarely = May occur less than 1% of the time.
Never = Does not ever occur.	
Comprehension	
Articulating and comprehending information in conversations.	Continuously
Reading, comprehending, and using written materials.	Frequently
Understanding and solving problems involving math and using the results.	Occasionally
Using technology/instruments/tools & information systems.	Continuously
Working with two and three dimensional formats.	Continuously
Remembering	
Remembering spoken instructions.	Continuously
Remembering written instructions.	Frequently
Remembering visual information.	Continuously
Recalling information incidental to task at hand.	Continuously
Memorizing facts or sequences.	Frequently
Remembering simple instructions.	Continuously
Remembering detailed instructions.	Continuously
Learning & Processing	
Effectively learning and mastering information from classroom training.	Rarely
Effectively learning and mastering information from on-the-job training.	Continuously
Learning from past directions, observations, and/or mistakes.	Continuously
Using common sense in routine decision making.	Continuously
Recognizing and anticipating potential hazards and taking precautions.	Continuously
Thinking critically and making sound decisions.	Occasionally
Integrating ideas and data for complex decisions.	Occasionally
Determining and following precise sequences.	Frequently
Coordinating and compiling data and information.	Occasionally
Analyzing, synthesizing data and information.	Rarely
Tasking and Planning	
Performing repetitive or short-cycle work.	Continuously
Working under specific instructions.	Continuously
Completing complex tasks.	Frequently
Directing, controlling, or planning for others as necessary for basic tasks.	Occasionally
Directing, controlling, or planning for others as necessary for complex tasks.	Rarely
Multi-tasking.	Continuously
Planning, prioritizing, and structuring daily activities.	Continuously



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Use Appropriate Behavior for Professional Work Environment		
	Receiving criticism and accepting limits appropriately.	Frequently
	Maintaining emotional control and organization under increased stress.	Continuously
	Maintaining socially appropriate affect, temperament, and behavior.	Continuously
	Monitoring own quality of performance and altering behaviors to correct mistakes or improve outcome.	Continuously
	Working independently and/or unsupervised.	Continuously
	Adapting to frequent interruptions, changes in priorities, or changes in work location.	Frequently
	Responding effectively to emergency situations.	Rarely

Frequency Designations: Required Beneficial Not Necessary		
Maintaining Attendance and An Assigned Work Schedule		
	Maintaining predictable and reliable attendance each work shift.	Beneficial
	Being punctual.	Beneficial
	Taking rest periods at set times or only at times determined by breaks in job responsibilities.	Not Necessary
	Adjusting to a flexible schedule of work days and or shifts.	Beneficial



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PHYSICAL DEMANDS

N/A: Not Applicable
S: Seldom (1-10% of the time)
O: Occasional (10-33% of the time)
F: Frequent (33%-66% of the time)
C: Constant (Over 66% of the time)
WNL: Within Normal Limits (talking, hearing, etc.)
STRENGTH: Sedentary Light Medium Heavy Very Heavy
 Frequency Comments

Sitting	F	It was estimated that a Sign Writer works at a computer up to 3 hours per day. While sitting on a stool while at a work/drawing table, participating in meetings, or driving vehicle to off-site location.
Standing	O	Interchange with Walking. Frequency depends on assigned tasks. While gathering materials and supplies, cleaning substrate, applying backing paper/film, applying decals/stickers, and removing decals/stickers, guiding items through large laminator, installing or assisting with installation. The work surfaces on the primary Sign Shop worktables are 36" high. Standing may be on carpet, cement, asphalt, or tile, and potentially on dirt/mud on construction sites.
Walking	F	Interchange with Standing. Frequency depends on assigned tasks. To gather materials and supplies, moving between work areas in the shop, and guiding items through large laminator. Will walk to various locations throughout Sea-Tac Airport, or outside to parking areas to apply decals to vehicles. Walking may be over carpet, cement, asphalt, or tile, and potentially on dirt/mud on construction sites.
Lifting (up to 10 pounds)	F	While lifting designs, notes, documents, printed/cut graphics, substrate used to make most signs, completed signs, spray bottles, squeegees, office supplies, smaller or partially used vinyl rolls, scrapers, screwdrivers, and other hand tools.
Lifting (10 to 50 pounds)	S	While lifting whole rolls of vinyl (15 lbs), printer paper (est. 15-20 lbs), and laminating films (up to 35 pounds). While lifting tool bucket (est. 25 lbs). While lifting larger parts or whole sheets (4'x8') of substrate (up to 50 pounds).
Carrying (up to 10 pounds)	F	While carrying designs, notes, documents, printed/cut graphics, substrate used to make most signs, completed signs, spray bottles, squeegees, office supplies, smaller or partially used vinyl rolls, scrapers, screwdrivers, and other hand tools.
Carrying (10 to 50 pounds)	S	While carrying whole rolls of vinyl (15 lbs), printer paper (est. 15-20 lbs), and laminating films (up to 35 pounds). While lifting tool bucket (est. 25 lbs). While carrying larger parts or sheets (4'x8') of substrate (up to 50 pounds).



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Pushing/Pulling	F	While using squeegees, hand tools, small power tools, and or scrapers with a force of 1-5 lbs for up to 20 minutes at a time. Rolling out laminating film. Guiding signs through laminator. Opening drawers, opening printers and or vinyl cutter, separating signs, pulling off backing paper from graphics, gathering supplies from storage areas/shelves, and pulling rolls of vinyl from storage racks.			
Climbing Stairs/Ladders	S	The Sign Shop is located on the Mezzanine of Sea-Tac Airport. The shop can be accessed using stairs or an elevator. Worker may work from a 6' or 8' ladder, or use a manlift reach elevated work areas.			
Working at Heights/Balancing	S	While working on a ladder or in a manlift.			
Bending at Waist	F	While working on signs/project at a work table (36" high), applying decals, performing computer work, reaching for items stored around computer station, working on tasks or gathering supplies at or below waist level.			
Bending Neck	F	Neck movements are needed to perform many of the tasks assigned and completed. While working on signs on a work table, performing computer work, designing and laying out signs, applying decals, and cleaning substrate. While working from a ladder or manlift, or driving.			
Crouching/Kneeling/Squatting	S	Potentially while working on tasks, or gathering supplies and materials, at or below waist level. Potentially while working on large signs/banners on the ground. On most occasions, the worker can alternate kneeling with bending or squatting, based on preference.			
Reaching (up to shoulder height)	F	The primary Sign Shop worktables are 36" high, which allows work to be completed at approx. waist level. Reaching may be needed to clean substrate, pick up supplies/tools on the work surface, apply and squeegee decals to substrate, apply decals on and remove decals from vehicles, potentially install or assist with installation of signs (from ground, ladder, or manlift), and work on signs placed on the ground. Reaching also while working at a computer, retrieving printouts, and gathering supplies and materials.			
Reaching (above shoulder height)	S	While pulling rolls of vinyl from storage racks, gathering supplies and materials stored at above shoulder height, and potentially installing or assisting with installation of signs (from ground, ladder, or manlift).			
Driving	S	While driving vehicle to off-site installation site, or moving a vehicle that needs to have decals applied or removed.			
Foot Controls	S	While driving vehicles and using large laminator.			
Repetitive Motion	S	The variety of tasks assigned to a Sign Writer generally minimizes repetitive motion, although some tasks may require repetitive actions for short periods of time.			
Handling/Grasping	F	50	% Pinch Grasp	50	% Whole Hand Grasp



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Fine Finger Manipulation	F	While writing, cleaning substrate, picking up supplies/tools, applying and squeegeeing decals, applying decals onto and removing decals from vehicles, installing or helping to install signs, gathering supplies and materials, cutting/trimming, masking, and manipulating decals/graphics.
Keyboarding	F	It was estimated that a Sign Writer works at a computer up to 3 hours per day while printing and or editing designs, updating the spreadsheet containing Shop's job list, creating and responding to electronic mail, and placing orders for materials.
Talking	O	While interacting with supervisors, co-workers, and potentially the public when out of the shop.
Hearing	F	While interacting with supervisors, co-workers, and potentially with the public when out of the shop. While listening for potential hazards when in the shop or in the field.
Seeing	C	Visual abilities would be considered important in this position.
Writing	S	While taking notes or marking up designs.
Normal Job Site Hazards	F	Sharp knives, scissors, and tools. Pinch points when using laminator. Working from ladder or manlift. Driving. Other moving vehicles.
Expected Environmental Conditions	C	The Sign Shop is located in an office-type space that is temperature controlled. Worker will also visit other locations throughout the airport, which are generally temperature controlled. A worker may periodically be exposed to outside weather conditions while walking to or from a vehicle, or assisting with a sign installation located outside.

The above job analysis represents the requirements of a specific job based on personal observations, discussions with employer representatives, and/or workers. On occasion, practicality and feasibility prevent the direct observation and/or gathering of objective quantifiable data. For this reason, a "best estimate" may have been used when reporting physical demand frequencies.

Analysis was done on the job site? Yes No

Job Analysis Reviewed By: John R. Biddinger and Frank Irlanda

Completed by Vocational Provider Brice York, B.A., CDMS

Date September 22, 2011 Signature of Vocational Provider _____



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FOR PHYSICIAN'S/EVALUATOR'S USE ONLY

- The injured worker can perform the physical activities described in the job analysis and can return to work on _____
- The injured worker can perform the physical activities described in the job analysis on a part-time basis for _____ hours per day. The worker can be expected to progress to regular duties in _____ weeks/months.
- The injured worker can perform the described job, but only with the modifications/restrictions in the attached report and/or listed below. These modifications/restrictions are (check one):
 - Temporary for _____ weeks _____ months
 - Permanent
- The injured worker cannot perform the physical activities described in the job analysis based on the physical limitations in the attached report and/or listed below. These limitations are (check one):
 - Temporary for _____ weeks _____ months
 - Permanent

COMMENTS:

Date _____ Physician's/Evaluator's Signature _____

Physician's/Evaluator's Name Printed _____

PLEASE RETURN COMPLETED FORM VIA FACSIMILE TO:

Port of Seattle Employee Health & Safety Department at (206) 787-3406