



**Disability Services**  
**Safety and Claims Management**  
Department of Executive Services  
Human Resources Management Division  
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## JOB ANALYSIS

|                          |                       |                                |   |
|--------------------------|-----------------------|--------------------------------|---|
| Job Title:               | Marine Captain        | DOT Title:                     | Ferryboat Captain   |
| SVP:                     | 7                     | DOT #:                         | 197.163-010   |
| Location of Analysis:    | Pier 51               | Name of Employee:              |   |
| Analyst:                 | Kyle Pletz, VRC, CDMS | JA Source:                     | Laura Merritt   |
| Presenting VRC:          |                       | Employer Contact:              | Ron Panzero   |
| Date Analysis Completed: | 6/18/13               | Supervisor Contact Information | Phone: 206-263-5039<br>E-mail: ron.panzero@kingcounty.gov |

☒ On-Site    ☐ Interview    ☐ Representative

### JOB DUTIES:

#### Essential Functions according to the employer:

All King County jobs require ability/essential function to:

- Demonstrate predictable, reliable, and timely attendance.
- Follow written and verbal directions to complete assigned tasks on schedule.
- Read, write, and communicate in English & understand basic math.
- Learn from directions, observations, and mistakes and apply procedures using good judgment.
- Work independently or as part of a team and interact appropriately with others.



Incumbents command a passenger ferryboat by directing all crew and vessel activities pertaining to raising and lowering passenger loading ramp, loading and unloading passengers, fare verification, record keeping, and safe vessel navigation. Incumbents ensure passengers and crew observe all applicable regulations pertaining to the safe and efficient operation of the ferry service. This position represents the County's interests and must ensure a quality customer experience in the operation and delivery of ferry services.

1. Prepare vessel for service and for turnover or shutdown. Direct handling and navigation of vessel. Direct crew to close/open gates and raise/lower loading ramps; control vessel propulsion and associated systems. Determine course and speed of boat using specialized knowledge of weather, tides, and currents.
2. Maintain all ferryboat logs and associated records.
3. Ensure ferryboat is operated in strict compliance with U. S. Coast Guard and other applicable



King County Job Analysis Completed on: 6/18/13

Employee:

DOT #: 197.163-010

Job Title: Marine Captain

Claim #:

regulations.

4. Serve as Vessel Security Officer and perform security duties in accordance with regulations; maintain security equipment in good operating condition; conduct safety and security checks.
5. Conduct crew training and perform drills as required; conduct staff training in passenger safety orientation and other related subjects as required for safe operation.
6. Ensure the vessel and navigational aids are in good operational condition and well maintained.
7. Supervise fueling and replenishment of vessel and perform vessel and dock maintenance.
8. Perform other duties as assigned.

## **EXPERIENCE, QUALIFICATIONS, KNOWLEDGE, SKILLS:**

### **MINIMUM QUALIFICATIONS:**

- Knowledge of applicable U.S. Coast Guard laws and regulations.
- Knowledge of federal, state and local laws and regulations as they pertain to the operation of a passenger-only ferry service.
- Knowledge of navigation, seamanship, docking and passenger embarking and disembarking procedures.
- Knowledge of management and leadership techniques and principles.
- Knowledge of appropriate emergency and life-saving procedures.
- Knowledge of proper use of fire extinguishers and life-saving equipment.
- Skill in communications.
- Skill in handling multiple competing priorities.
- Skill in working with a variety of individuals from diverse backgrounds.
- Skill in establishing and maintaining effective working relationships.
- Skill in analytical thinking, problem solving and conflict-resolution.
- Skill in providing high level customer service.
- Ability to direct crew and respond safely, expeditiously and effectively during an emergency.

### **DESIRABLE QUALIFICATIONS:**

### **NECESSARY SPECIAL QUALIFICATIONS:**

- A valid U. S. Coast Guard license to operate an inspected passenger-carrying vessel of up to 100 gross tons and possession of a valid, Transportation Workers Identification Card (TWIC) issued by the Transportation Security Administration (TSA).
- Certification in Fire Safety Training and Life Saving Training.
- May be required to work a split shift.
- Additional licenses, certifications and other requirements determined necessary to meet the business needs of the employing unit may be required.

### **Machines, Tools, Special Equipment, Personal Protective Equipment Used:**

65-77' catamaran-style passenger ferries, navigation systems, throttle controls, radio, joystick, anti-fatigue mat, pen, pencil, engine monitoring systems, log books, hoses, overboard equipment, breakers and binoculars,

Also operates a wired remote control which consists of a dial and two levers when docking the Spirit of Kingston vessel.



King County Job Analysis Completed on: 6/18/13

Employee:

DOT #: 197.163-010

Job Title: Marine Captain

Claim #:

## PHYSICAL REQUIREMENTS

| Frequency Scale   | Strength                                  | Work Pattern                                  |
|---|---|---|
| <b>N</b> = Never  | <input type="checkbox"/> Sedentary        | <input checked="" type="checkbox"/> Full-time |
| <b>S</b> = Seldom (1-10 %, up to 48 min)                | <input checked="" type="checkbox"/> Light | <input checked="" type="checkbox"/> Part-time |
| <b>O</b> = Occasional (11-33%, 48 min. – 2 hr 25 min)   | <input type="checkbox"/> Medium           | <input checked="" type="checkbox"/> Seasonal  |
| <b>F</b> = Frequent (34-66%, 2 hr 26 min – 5 hr 35 min) | <input type="checkbox"/> Heavy            | * Hours Per Day                               |
| <b>C</b> = Constant (67-100%, more than 5 hr 35 min)    | <input type="checkbox"/> Very Heavy       | * Days Per Week                               |

This is classified as a LIGHT job by the US Department of Labor.

\*There are multiple schedules for this position which can change per season (peak and winter), route (West Seattle vs. Vashon), and daily (based upon sailing schedule). Schedules can also vary based upon special events. Employees may have to work split schedules. Schedules are bid upon in order of seniority. There are full time, part time and term limited temporary positions. Exact schedules can be obtained in spreadsheet format.

| PHYSICAL DEMANDS |        | FREQUENCY |   |   |   |   | ACTIVITY DESCRIPTION  |
|------------------|--------|-----------|---|---|---|---|---|
|                  | % Time | N         | S | O | F | C |   |
| Sitting          |        |           | X |   |   |   | Can sit when performing log book duties up to 7 min./time.  |
| Standing         |        |           |   |   |   | X | Up to 10 min./time for up to 7 hrs. total while operating vessel (via main controls or remote control).   |
| Walking          |        |           |   | X |   |   | Up to 5 min./time for up to 2 hr. total in a shift while walking to/from vessel (300' via dock) as well as on the vessel (65-77'). Walks 20' approximately 88x per shift when exiting the wheelhouse to dock the vessel via remote control; walks for 5 min. when performing vessel inspection/preparation. |

| Lifting<br>floor – waist  | N | S    | O | F | C | lbs.       | Man overboard safety equipment bags (4 lbs., 7.5 lbs. , 4 lbs.) as well as log books/clipboard (2-3 lbs.) and supplies. Utilizes binoculars (3 lbs.) up to 5 min/time up to 2 hrs. total.  |
|---------------------------|---|------|---|---|---|------------|--|
|                           |   | 2-15 | 3 |   |   |            |  |
| Lifting<br>waist–shoulder | N | S    | O | F | C | lbs.       | Man overboard safety equipment bags (4 lbs., 7.5 lbs. , 4 lbs.) as well as log books/clipboard (2-3 lbs.) and supplies. Utilizes binoculars (3 lbs.) up to 5 min./time up to 2 hrs. total. |
|                           |   | 2-15 | 3 |   |   |            |  |
| Lifting<br>above shoulder | N | S    | O | F | C | lbs.       | Utilizes binoculars (3 lbs.) up to 5 min./time up to 2 hrs. total. Seldom garbage bags (10 lbs.).  |
|                           |   | 10   | 3 |   |   |            |  |
| Carry<br>(Dist.)          | N | S    | O | F | C | 10-15 lbs. | Seldom carries a garbage bag or supplies (toilet paper, paper towels) up to 300' to/from the vessel.   |
|                           |   | 300' |   |   |   |            |  |



King County Job Analysis Completed on: 6/18/13

Employee:

DOT #: 197.163-010

Job Title: Marine Captain

Claim #:

| Pushing/<br>Pulling   | N       | S               | O     | F | C | Minimal    | Slides bridge door open/close with 25-30 lbs. of force 50x per shift (*25x requires reaching over shoulder height to open/close door). Scrubs deck for up to 30 min total with 10-15 lbs. of force with brush and uses 30-40 lbs. of force when manipulating hose.                           |
|---|---------|-----------------|-------|---|---|------------|--|
|   |         | 25-30*<br>30-40 | 10-15 |   |   | lbs. force |  |
|   | N       | S               | O     | F | C |            |  |
| Climbing  |         |                 | X     |   |   |            | Up to 12 stairs at a time 20x per shift, 4 stairs 88x per shift, 6-7 rung vertical ladder for engine rooms or voids 1x per shift.  |
| Balancing   |         |                 |       |   | X |            | Work is performed on a floating dock as well as a moving passenger ferry that are swaying due to waves; some areas do not have railings so there are exposed heights on edges of docks and vessels with water below. Seldom enters engine rooms (ceiling height of 4'7" and confined space). |
| Stooping / Bending  |         | X               |       |   |   |            | Up to 3 min./time up to 10 min. total while reaching for breakers or traversing engine rooms (ceiling height of 4'7" and confined space).  |
| Twisting*   |         |                 | X     |   |   |            | Up to 5 min./time for up to 2.5 hrs. total while opening/closing bridge door 50x per shift, docking vessel using remote control, traversing engine rooms and performing lookout duties.  |
| Squatting / Kneeling  |         | X               |       |   |   |            | Up to 3 min./time up to 10 min. total while reaching for breakers or traversing engine rooms (ceiling height of 4'7" and confined space).  |
| Crawling  |         | X               |       |   |   |            | Up to 1 min/time up to 5 min. total while inspecting engine rooms.   |
| Foot Controls   | X       |                 |       |   |   |            |  |
| <b>Reaching</b><br>(Level)<br><br>Below Waist<br>Above Shoulder | Forward |                 |       |   | X |            | Up to 25 min./time for up to 7 hrs. total while utilizing throttle, joystick and remote controls when operating the vessel.  |
|   |         |                 |       | X |   |            | Up to 25 min./time for up to 5.5 hrs. total while utilizing throttle, joystick and remote controls when operating the vessel.  |
|   |         | X               |       | X |   |            | Up to 5 sec./time for up to 2 min total while reaching for remote control ( 4 lbs.) hanging on hook. Utilizes binoculars (3 lbs.) up to 5 min/time up to 2 hrs. total while performing lookout duties.   |
| Handle/Grasp  |         |                 | X     |   |   |            | Up to 2 min./time for up to 2.5 hrs. total while operating throttle, manipulating remote control, using clipboard and utilizing binoculars.  |



King County Job Analysis Completed on: 6/18/13

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DOT #: 197.163-010

Job Title: Marine Captain

Claim #:

|                          | N | S | O | F | C |   |
|--------------------------|---|---|---|---|---|---|
| Fine Finger Manipulation |   |   |   |   | X | Up to 30 min./time up to 7 hrs. total while using throttle, joystick and remote controls to operate vessel. Remote control requires constant use of both thumbs to control throttle as well as a dial for steering. *See picture. |
| Hand Controls            |   |   |   |   | X | Up to 30 min./time up to 7 hrs. total while using throttle, joystick and remote controls to operate vessel. Remote control requires constant use of both thumbs to control throttle as well as a dial for steering. *See picture. |
|                          | N | S | O | F | C |   |
| Repetitive Motion        | X |   |   |   |   | Body part: Cycles/hr.   |
| Vibratory Tasks          | X |   |   |   |   |   |
| Talking                  |   |   | X |   |   | Conversing with Deckhands, Coastguard, Other Vessels and Engineers via radio or in person.  |
| Hearing                  |   |   |   |   | X | Must be able to continuously listen for radio traffic, alarms and mechanical failures.  |

Visual:

Continuously utilizes vision when operating the vessel, performing lookout duties, completing logs as well as utilizing navigations systems, alarms, gauges and dials. Must be able to safely operate the vessel in all weather conditions including rain, fog, sun glare etc.

| ENVIRONMENTAL CONDITIONS             | FREQUENCY |   |   |   |   | ENVIRONMENTAL CONDITIONS              | FREQUENCY |   |   |   |   |
|--------------------------------------|-----------|---|---|---|---|---------------------------------------|-----------|---|---|---|---|
|                                      | N         | S | O | F | C |                                       | N         | S | O | F | C |
| Exposure to Weather                  |           |   |   | X |   | Noise Intensity                       |           |   | X |   |   |
| Extreme Cold                         | X         |   |   |   |   | Atmospheric Conditions                |           | X |   |   |   |
| Extreme Hot                          |           |   | X |   |   | Exposed Heights                       |           | X |   |   |   |
| Wet and / or Humidity                |           | X |   |   |   | Exposure to Electricity               |           | X |   |   |   |
| Proximity to Moving Mechanical Parts |           |   | X |   |   | Exposure to Toxic / Caustic Chemicals | X         |   |   |   |   |
| Exposure to Explosives               | X         |   |   |   |   | Exposure to Radiation                 | X         |   |   |   |   |
| Other:                               |           |   |   |   |   |                                       |           |   |   |   |   |



King County Job Analysis Completed on: 6/18/13

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DOT #: 197.163-010

Job Title: Marine Captain

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#### Analyst's Comments:

The employee inspects engine rooms (ceiling height of 4'7" and confined space) while crawling around potentially hot engines. Arrow indicates travel path to front of engine where the generators are located. Ceiling height of 4'7".

Work is performed on a floating dock as well as a moving passenger ferry that are swaying due to waves; some areas do not have railings so there are exposed heights on edges of docks and vessels with water below; constant balancing is essential for safety.



Captain utilizes both thumbs (one for each throttle) as well as center dial when operating the vessel via remote control when docking

#### Possible Employer Modifications:





King County Job Analysis Completed on: 6/18/13

Employee:

DOT #: 197.163-010

Job Title: Marine Captain

Claim #:

**Note:** The information for this job analysis was gathered by either on-site observation, interview and / or is representative of the labor market as indicated on page one. Additional data may have been obtained from standardized industry resources such as the DOT, GOE, COJ, OOH, WOIS and O-NET. 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.

**Analyst:**

Kyle Pletz

6/18/13

\_\_\_\_\_  
Vocational Consultant

\_\_\_\_\_  
Date

**Presenting VRC signature:**

\_\_\_\_\_  
Vocational Consultant

\_\_\_\_\_  
Date

**Employer Verification:**

\_\_\_\_\_  
Name

\_\_\_\_\_  
Date

**Employee Verification: (optional)**

\_\_\_\_\_  
Name

\_\_\_\_\_  
Date



King County Job Analysis Completed on: 6/18/13

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DOT #: 197.163-010

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**MEDICAL PROVIDER:**

- ☐ I agree that the employee can perform the physical activities described in this job analysis and can return to work.

State date employee is released to return to work if different from today's date \_\_\_\_\_

- ☐ I agree the employee can perform the described job but only with modifications (describe in comments section). Modifications are needed on a permanent ☐ or temporary ☐ basis.

- ☐ The employee **temporarily** cannot perform this job based on the following physical limitations:

**Anticipated release date:** \_\_\_\_\_

**Treatment plan:** \_\_\_\_\_

- ☐ The employee is **permanently** restricted from performing the physical activities described in this job analysis based on the following physical limitations (state objective medical findings):

**Comments:**

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Print Name

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Attending Physician | <input type="checkbox"/> Consulting Physician | <input type="checkbox"/> Pain Program Physician |
| <input type="checkbox"/> IME Physican        | <input type="checkbox"/> PCE Therapist        | <input type="checkbox"/> OT / PT Therapist      |
| <input type="checkbox"/> PEP Physician       |   |   |