

EMPLOYEE:

CLAIM #



## Job Analysis Form

ALTERNATE FORMAT AVAILABLE

**JOB TITLE** Design Engineer

**JOB CLASSIFICATION** Engineer II

**DOT TITLE** Environmental Analyst

**DOT NUMBER** 199.167-022

**DEPARTMENT** Transportation

**DIVISION** Roads

**# OF POSITIONS IN THE DEPARTMENT WITH THIS JOB TITLE** 6

**CONTACT'S NAME & TITLE** Jim Eagan, Manager

**CONTACT'S PHONE** 206-296-3742

### ADDRESS OF WORKSITE

201 South Jackson  
Seattle, WA 98104

**VRC NAME** Kyle Pletz

**DATE COMPLETED** 1/14/04

**VRC NAME** Jeff Casem

**DATE REVISED** 6/2/09

### WORK HOURS

Employee work a flex schedule based upon the core hours of 9:00am to 2:00pm. Ten hours per day and forty hours per week.

**OVERTIME** (Note: Overtime requirements may change at the employer's discretion)  
Optional, on a rare occasion, in accordance with business demand.

### JOB DESCRIPTION

Performs a broad scope of fully proficient engineering design, construction management inspection, and related responsibilities in support of a department's engineering functions. Work responsibilities are performed on an independent basis with minimal guidance and direction from higher-level positions. Approximately 85% of the work is performed in the office and 15% of the work is performed in the field.

### ESSENTIAL ABILITIES FOR ALL KING COUNTY JOB CLASSIFICATIONS

1. Ability to demonstrate predictable, reliable, and timely attendance.
2. Ability to follow written and verbal directions and to complete assigned tasks on schedule.
3. Ability to read, write & communicate in English and understand basic math.
4. Ability to learn from directions, observations, and mistakes, and apply procedures using good judgment.
5. Ability to work independently or part of a team; ability to interact appropriately with others.
6. Ability to work with supervision, receiving instructions/feedback, coaching/counseling and/or action/discipline.

## **JOB SPECIFIC REQUIREMENTS**

The employee must have knowledge of planning techniques and principles, policy analysis, project management techniques and principles, contract administration techniques and principles, budgeting techniques and principles as well as scheduling techniques. The employee also must have civil design skills and knowledge. The employee must possess planning skills, facilitation skills, decision-making skills and analytical skills. Must have skill in working with diverse individuals and customers and maintaining effective relationships, responding to frequently changing work responsibilities, and handling politically sensitive issues. The employee must possess a valid Washington State Driver's License or the ability to provide transportation to remote work locations with limited or no public transportation. Some positions may require a Washington State professional engineer's license or land surveyor's license.

## **ESSENTIAL FUNCTIONS**

1. Review and/or prepare engineering designs for assigned work unit.
2. Prepare plans, specifications, estimates or scope of work for public bidding/Request for Proposal process and/or internal use. Conduct bid or qualification process. Administer contracts.
3. Plan and conduct construction, maintenance and compliance inspections. Review contractor's compliance with construction procedures; check materials for proper approval, certification with contract specifications and other contractual requirements and enforce requirements of County road standards.
4. Assist higher-level staff in coordinating work assignments.
5. Assist or participate in the negotiation of contracts, change orders and recommendations for approval.
6. Plan and implement monitoring programs.
7. Prepare operations and maintenance documents and manuals.
8. Act as Project Manager for a specific task or assignment within a project such as the design of a pump.
9. Investigate and troubleshoot system failures and problems; recommend resolution.
10. Research, organize and assess technical information. Coordinate and oversee the review and preparation of technical environmental documents to assess impacts. Coordinate the integration of environmental specifications into plans.
11. Develop, implement or administer project scope of work, schedule, budget, contract requirements and the execution of plans for the design, procurement and construction phase of assigned projects.
12. Research and develop technical specifications for new or unique products.
13. Interpret and evaluate codes and regulations; research and provide testimony.
14. Provide technical quality assurance review of drawings and specifications.
15. Perform complex engineering calculations.

## **NON-ESSENTIAL FUNCTIONS**

1. Prepare environmental documents; secure environmental permits; perform field investigations for assigned projects to determine the need for permits and/or the extent of the environmental review.
2. Participate in various committees.
3. Write and process procedures.

### **PERSONAL PROTECTIVE EQUIPMENT USED**

Vest, helmet and protective boots (when at construction sites).

### **OTHER TOOLS & EQUIPMENT USED**

Computer, telephone, fax machine, copy machine, printer, surveyor's level, transit, blue prints, maps, walking wheel (rolotape), hook for drainage lids, manhole/drainage lids, sledgehammer, clipboard and level.

### **PHYSICAL DEMANDS AS JOB IS TYPICALLY PERFORMED**

Continuously = occurs 66-100% of the time

Frequently = occurs 33-66% of the time

Occasionally = occurs 1-33% of the time

Rarely = may occur less than 1% of the time

Never = does not ever occur (such demands are not listed)

Highly Repetitive = Repeating the same motion every few seconds with little or no variation for more than two hours total per day.

### **This job is classified as**

Medium to Heavy, based upon if the employee is working in the office or in the field.

Medium—exerting 20 to 50 pounds of force occasionally, and/or 25-50 pounds of force frequently, and/or 10-20 pounds of force constantly.

Heavy—exerting 50-100 pounds of force occasionally, and/or 25-50 pounds of force frequently, and/or 10-20 pounds of force constantly to move objects.

### **Standing**

Health Care Provider initials if restricted \_\_\_\_\_

Occasionally on flat carpeted or cement surfaces as well as uneven grass, dirt and gravel surfaces for up to 15 minutes at a time for up to 1 hour total in a work shift. Most commonly occurs while standing at the copy machine, reviewing plots and conversing with co-workers.

### **Walking**

Health Care Provider initials if restricted \_\_\_\_\_

Frequently on flat carpeted or cement surfaces as well as uneven grass, dirt and gravel surfaces for distances of up to 300 feet for up to 30 minutes at a time for up to 4 hours total in a work shift. Most commonly occurs while using the walking wheel, inspecting sites, performing field work and walking within the office. The amount of walking varies upon the amount of field work, which can be affected seasonally.

### **Sitting**

Health Care Provider initials if restricted \_\_\_\_\_

Continuously on an office chair or automobile seat for up to 1 hour at a time for up to 8 hours total in a work shift. Most commonly occurs while driving to and from sites and performing computer duties as well as reviewing plots and maps.

**Climbing stairs**

Health Care Provider initials if restricted\_\_\_\_\_

Rarely for up to 15 seconds at a time while climbing up to one flight for up to 30 seconds total in a work shift. Most commonly occurs while walking up a flight of stairs to talk to a home owner or citizen.

**Balancing**

Health Care Provider initials if restricted\_\_\_\_\_

Occasionally for up to 10 minutes at a time for up to 1 hour total in a work shift. Most commonly occurs while walking along a narrow shoulder and/or uneven ground.

**Bending neck down**

Health Care Provider initials if restricted\_\_\_\_\_

Frequently for up to 1 hour at a time for up to 4 hours total in a work shift. Most commonly occurs while reviewing plots and maps as well as inspecting rod features.

**Bending/Stooping**

Health Care Provider initials if restricted\_\_\_\_\_

Occasionally for up to 2 minutes at a time for up to 30 minutes total in a work shift. Most commonly occurs while adding paper to the copy machine, removing jams from the copy machine, opening and closing drawers, reviewing plots and manipulating maps as well as loading and unloading equipment from a vehicle trunk.

**Kneeling**

Health Care Provider initials if restricted\_\_\_\_\_

Occasionally for up to 5 minutes at a time for up to 15 minutes total in a work shift. Most commonly occurs while inspecting a manhole, road features or a plot. Kneeling can be reduced by alternating with bending/stooping or squatting.

**Squatting**

Health Care Provider initials if restricted\_\_\_\_\_

Occasionally for up to 5 minutes at a time for up to 15 minutes total in a work shift. Most commonly occurs while inspecting a manhole, road features or a plot. Squatting can be reduced by alternating with bending/stooping or kneeling.

**Operating Controls with Feet**

Health Care Provider initials if restricted\_\_\_\_\_

Occasionally for up to 45 minutes at a time for up to 1.5 hours total in a work shift while driving a County vehicle to various sites.

**Reaching above shoulder height**

Health Care Provider initials if restricted\_\_\_\_\_

Occasionally for up to 15 seconds at a time for up to 10 minutes total in a work shift while pulling plans or maps, removing and replacing files in upper file drawers and manipulating reference books.

**Reaching at waist to shoulder height**

Health Care Provider initials if restricted\_\_\_\_\_

Continuously for up to 2 hours at a time for up to 8 hours total in a work shift while performing computer duties, performing calculations and driving a County vehicle as well as manipulating documents, maps, plans and reference books.

**Reaching at knee to waist height**

Health Care Provider initials if restricted\_\_\_\_\_

Occasionally for up to 5 minutes at a time for up to 1 hour total in a work shift while opening and closing drawers as well as using the walking wheel.

**Reaching at floor to knee height**

Health Care Provider initials if restricted \_\_\_\_\_

Occasionally for up to 5 minutes at a time for up to 15 minutes total in a work shift. Most commonly occurs while inspecting manhole, road features or plots as well as opening and closing drawers.

**Lifting 1-10 pounds**

Health Care Provider initials if restricted \_\_\_\_\_

Occasionally for up to 30 seconds at a time for up to 15 minutes total in a work shift. Most commonly occurs with weights of 3-8 pounds while manipulating reference books, hammer, level, walking wheel, maps, plots, files and paper for the copy machine.

**Carrying 1-10- pounds**

Health Care Provider initials if restricted \_\_\_\_\_

Occasionally for distances of up to 300 feet for up to 5 minutes at a time for up to 1 hour total in a work shift. Most commonly occurs with weights of 3-8 pounds while transporting reference books, maps, plots, files and paper throughout the office as well as transporting a level, hook or hammer while out in the field.

**Lifting 11-20 pounds**

Health Care Provider initials if restricted \_\_\_\_\_

Rarely for up to 30 seconds at a time for up to 5 minutes total in a work shift. Most commonly occurs with weights of 10-15 pounds while manipulating a level, large file or a transit.

**Carrying 11-20 pounds**

Health Care Provider initials if restricted \_\_\_\_\_

Rarely for distances of up to 100 feet for up to 2.5 minutes at a time for up to 5 minutes total in a work shift. Most commonly occurs with weights of 10-15 pounds while transporting a level, large file or a transit.

**Lifting 21-50 pounds**

Health Care Provider initials if restricted \_\_\_\_\_

Occasionally for up to 5 seconds at a time for up to 20 seconds total in a work shift. Most commonly occurs with weights of up to 80 pounds while lifting up a solid, round catch basin lid.

**Pushing and Pulling**

Health Care Provider initials if restricted \_\_\_\_\_

Rarely for distances of up to 300 feet for up to 5 minutes at a time with a force of up to 5 pounds for up to 5 minutes total in a work shift while using a walking wheel as well as pulling maps, books and plots. On an extremely rare occasion the employee may need to pull a solid, round catch basin lid using up to 60 pounds of force for up to 5 seconds at a time for up to 10 seconds total in a shift.

**Handling**

Health Care Provider initials if restricted \_\_\_\_\_

Occasionally for up to 15 minutes at a time for up to 2 hours total in a work shift while manipulating books, walking wheel, telephone receiver, files, manuals and binders.

**Operating Controls with Hands**

Health Care Provider initials if restricted \_\_\_\_\_

Occasionally for up to 1 hour at a time for up to 2 hours total in a work shift while driving a County vehicle to various sites as well as when using the computer mouse. Mouse use is intense in this position due to prevalence of CAD drawings.

**Fingering**

Health Care Provider initials if restricted

Frequently for up to 30 minutes at a time for up to 4 hours total in a work shift while manipulating documents, writing, using the mouse and typing.

**Talking**

Health Care Provider initials if restricted

Occasionally for up to 15 minutes at a time for up to 1.5 hours total in a work shift while conversing with co-workers, CAD Technicians and Project Managers as well as when talking on the telephone.

**Hearing**

Health Care Provider initials if restricted

Occasionally for up to 15 minutes at a time for up to 1.5 hours total in a work shift while conversing with co-workers, CAD Technicians and Project Managers as well as when talking on the telephone.

**Seeing**

Health Care Provider initials if restricted

Continuously for up to 2.5 hours at a time for 9 hours total in a work shift while reviewing maps, documents, plots and CAD drawings as well as inspecting sites and road features.

**Working with Heightened Awareness**

Health Care Provider initials if restricted

Rarely for up to 1 hour at a time for 1 hour total in a work shift while traversing through construction sites where moving machinery and other dangers could be present. The employee is also exposed to the general public and moving vehicles when they perform field duties.

**ENVIRONMENTAL FACTORS**

Work is performed in an office setting as well as in the field. When working in the field the employee is exposed to rough, uneven terrain that may be slippery or wet and/or sloped. Some work can be performed on narrow road shoulders with moving traffic. The employee can also be exposed to the general public, including potentially hostile persons, when performing field duties.

**The noise level is**

HCP Initials if Restricted

Approximately 40-130 decibels. The noise is caused by office noised as Well as construction equipment such as a jackhammer.

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**Work environment may include the following exposure(s):**

HCP Initials if Restricted

Outside weather: Occasionally  
Wet: Occasionally  
Odors: Rare  
Dusts: Occasionally  
Moving mechanical parts: Rare  
Vibration: Rare  
Working in high, exposed places: Rare


### **POTENTIAL MODIFICATIONS TO JOB**

Ergonomic workstation including appropriate desk height, monitor height and keyboard height.

Ergonomic keyboard.

Trackball (or touch pad depending on preference) and regular mouse (dual setup) to allow for alternating bodily motions and reduction of repetitive motions.

Alternate tasks to reduce static posture and break up repetitive motions.

Workpace software to ensure proper breaks and micro-pauses.

## SIGNATURES

Signatures on this page are obtained before the document becomes available for use and are not required each time the document is reused. Obtained signatures are kept on file at King County Safety & Claims. The Health Care Provider signature section is separate and appears on the following page.

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Printed name & title of VRC evaluator

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Signature of VRC evaluator

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Date

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Printed name & title of contact

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Signature of contact

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Date

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Printed name & title of employee

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Signature of employee

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Date



### HEALTH CARE PROVIDER SECTION

Check all that apply

- ☐ The employee is released to perform the described duties without restrictions on performance or work hours as of \_\_\_\_\_.
- ☐ The employee is released to perform the described duties on a reduced schedule as of \_\_\_\_\_. The recommended schedule is:  
\_\_\_\_\_  
☐ Temporary until \_\_\_\_\_ ☐ Permanent as of \_\_\_\_\_
- ☐ The employee is released to perform the described job with the following modifications:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
☐ Temporary until \_\_\_\_\_ ☐ Permanent as of \_\_\_\_\_
- ☐ The employee is not released to perform the described duties due to the following job functions:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
☐ Temporary until \_\_\_\_\_ ☐ Permanent effective \_\_\_\_\_
- ☐ The employee is unable to work in any capacity.  
A release to work is: ☐ anticipated by \_\_\_\_\_ ☐ Not expected

The limitations are due to the following objective medical findings:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Printed or typed name and phone number of Health Care Provider

\_\_\_\_\_  
Signature of Health Care Provider

\_\_\_\_\_  
Date