

EMPLOYEE:

CLAIM #



Job Analysis Form

ALTERNATE FORMAT AVAILABLE

JOB TITLE Engineering Technician II (Survey) **JOB CLASSIFICATION** Engineering Technician II

DICTIONARY OF OCCUPATIONAL TITLES (DOT) NUMBER 018.167-034

DOT TITLE Surveyor Assistant, Instruments

DEPARTMENT Transportation

DIVISION Roads Services

OF POSITIONS IN THE DEPARTMENT WITH THIS JOB TITLE 2

CONTACT'S NAME & TITLE Trevor Cray, Supervisor

CONTACT'S PHONE 206-205-9910

ADDRESS OF WORKSITE

155 Monroe Avenue Northeast, Building C
Renton, WA 98056

VRC NAME Kyle Pletz

DATE COMPLETED 8/28/07

VRC NAME Jeff Casem

DATE REVIEWED 11/2/09

WORK HOURS

Multiple shifts; 8-9 hours per day, Monday through Friday, 40 hours per week.

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

JOB DESCRIPTION

The Engineering Technician II position is responsible for performing fundamental survey functions in an office and field environment for the Survey Unit on construction, topographic, boundary, GPS, geodetic and other surveys as assigned.

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

- Two (2) years survey work experience or an equivalent combination of survey work experience with survey technology coursework.

- Knowledge of survey techniques, principles and equipment.
- Knowledge of the fundamentals of CAD systems.
- Knowledge of computer systems using work related software including Microsoft Word, Excel and Access.
- Skill in operating survey instruments: GPS equipment, total stations, computer, level, rod, measuring tapes, tripods, tribrachs, prisms, handlevel, right-angle prism, compass and other survey equipment.
- Skill in setting up and leveling survey equipment.
- Skill in driving hubs, rebar, spikes, and nails with hammer, maul or bar; cutting brush with machete, brush cutter or chainsaw, using jackhammer, roto-hammer, and drill.
- Skill in verbal and written communication.
- Skill in mathematical calculations.
- Ability to read and interpret engineering plans, and survey mapping.
- Ability to check and adjust survey instruments.
- Ability to accurately layout horizontal and vertical control.
- Ability to work in team environment.
- Ability to have predictable and reliable attendance.
- Valid Washington State Driver's License or the ability to travel throughout the County in a timely manner.
- Employment is contingent on the success of a pre-employment physical examination.

ESSENTIAL FUNCTIONS

- Perform routine survey tasks within established guidelines and procedures with or without direct supervision.
- Set-up, operate and maintain survey equipment including total stations, automatic levels, and GPS receivers.
- Prepare preliminary and final drawings from field notes and sketches using appropriate drafting techniques and specialized drafting equipment, including Computer Aided Design (CAD).
- Perform labor tasks such as loading and unloading of equipment and supplies, digging holes, mixing concrete, operating compressed air jackhammer, setting monuments and cases, cutting brush and/or trees, pounding wooden hubs and rebar into the ground or pavement.
- Completion of required forms or reports and maintain proper field notes.
- Operate computers, calculators, plotters, copiers and other office machines as needed.
- Other duties as assigned.

PERSONAL PROTECTIVE EQUIPMENT USED

Electrical Hazards safety boots (steel toes), gloves (leather or insulated), ear protection, eye protection, hart hat, safety vest, knee pads and safety glasses.

OTHER TOOLS & EQUIPMENT USED

County vehicle, survey instruments, survey rods, hammers, shovels, machete, jackhammer, drill, computer, phone, fax, copier, and wheelbarrow.

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

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_____

Frequently on dirt, gravel, cement, concrete, wet, sloped, slick, frozen and uneven ground surfaces for up to 2 hours at a time for up to 3-4 hours total in a work shift. Most commonly occurs while performing instrument operation.

Walking

Health Care Provider initials if restricted_____

Continuously on dirt, gravel, cement, concrete, wet, sloped, slick, frozen and uneven ground surfaces for up to 2 hours at a time for up to 6-8 hours total in a work shift. Most commonly occurs while performing topography (collecting data points).

Sitting

Health Care Provider initials if restricted_____

Frequently on an automobile seat or office chair for up to 1-2 hours at a time for up to 3-4 hours total in a work shift. Most commonly occurs while performing office duties (approximately 1 hour per day) as well as when driving a county vehicle.

Climbing stairs

Health Care Provider initials if restricted_____

Rarely while climbing up to 2 flights at a time for up to 2 times total in a work shift. Most commonly occurs while taking elevation shots, topography shots and obtaining information on stair locations.

Balancing

Health Care Provider initials if restricted_____

Continuously on dirt, gravel, cement, concrete, wet, sloped, slick, frozen and uneven ground surfaces for up to 2 hours at a time for up to 6-8 hours total in a work shift. Most commonly occurs while performing topography (collecting data points).

Bending neck up

Health Care Provider initials if restricted_____

Occasionally for up to 2 minutes at a time for up to 1-2 hours total in a work shift. Most commonly occurs while looking at upper section of up to a 25' survey rod.

Bending neck down

Health Care Provider initials if restricted_____

Occasionally to Frequently for up to 2 minutes at a time for up to 2-3 hours total in a work shift. Most commonly occurs while looking at ground features.

Bending/Stooping

Health Care Provider initials if restricted _____

Occasionally for 2-3 minutes at a time for up to 1-2 hours total in a work shift. Most commonly occurs while locating points and pounding hubs.

Kneeling

Health Care Provider initials if restricted _____

Occasionally for 2-3 minutes at a time for up to 1-2 hours total in a work shift. Most commonly occurs while locating points and pounding stakes.

Squatting

Health Care Provider initials if restricted _____

Occasionally for 2-3 minutes at a time for up to 1-2 hours total in a work shift. Most commonly occurs while locating points and pounding stakes.

Crawling

Health Care Provider initials if restricted _____

Rarely dirt, gravel, cement, concrete, wet, sloped, slick, frozen and uneven ground surfaces for distances of up to 15 feet for up to 30 seconds at a time for up to 5 minutes total in a work shift. Most commonly occurs while traversing a steep slope or thick vegetation (crawl under log).

Operating Controls with Feet

Health Care Provider initials if restricted _____

Occasionally to Frequently for up to 1-2 hours at a time for up to 1-3 hours total in a work shift while driving a county vehicle.

Reaching above shoulder height

Health Care Provider initials if restricted _____

Occasionally for up to 2-3 minutes at a time for up to 2 hours total in a work shift while the holding survey rod, hammering in stakes and using a machete.

Reaching at waist to shoulder height

Health Care Provider initials if restricted _____

Frequently for up to 1-2 hours at a time for up to 3-4 hours total in a work shift while holding a survey rod, driving, writing and typing.

Reaching at knee to waist height

Health Care Provider initials if restricted _____

Occasionally for 2-3 minutes at a time for up to 1-2 hours total in a work shift. Most commonly occurs while locating points and pounding stakes.

Reaching at floor to knee height

Health Care Provider initials if restricted _____

Occasionally for 2-3 minutes at a time for up to 1-2 hours total in a work shift. Most commonly occurs while locating points, manipulating survey monuments and pounding stakes.

Lifting 1-10 pounds

Health Care Provider initials if restricted _____

Occasionally for up to 2-3 minutes at a time for up to 1-2 hours total in a work shift. Most commonly occurs with weights of 3-7 pounds while using a hammer, survey rod, hubs, survey stakes and field books.

Carrying 1-10 pounds

Health Care Provider initials if restricted _____

Occasionally to Frequently for up to 15-30 minutes at a time for up to 2-3 hours total in a work shift. Most commonly occurs with weights of 3-7 pounds while transporting machete, hand drill, hammer, survey rod, hubs, survey stakes and field books.

Lifting 11-20 pounds

Health Care Provider initials if restricted _____

Occasionally for up to 1-2 minutes at a time for up to 1-2 hours total in a work shift. Most commonly occurs with weights of 12-16 pounds while manipulating a stake bag, equipment bag, survey instrument (15 pounds), and survey legs.

Carrying 11-20 pounds

Health Care Provider initials if restricted _____

Occasionally for up to 5-15 minutes at a time for up to 1-2 hours total in a work shift. Most commonly occurs with weights of 12-16 pounds while transporting a stake bag, equipment bag, survey instrument (15 pounds), and survey legs.

Lifting 21-50 pounds

Health Care Provider initials if restricted _____

Rarely for up to 1 minute at a time for up to 5-10 minutes total in a work shift. Most commonly occurs while manipulating survey monuments (40 pounds), survey monument cases and stake bag.

Carrying 21-50 pounds

Health Care Provider initials if restricted _____

Rarely for up to 1 minute at a time for up to 5-10 minutes total in a work shift. Most commonly occurs while transporting survey monuments (40 pounds), survey monument cases, bucket of water (40 pounds) and stake bag.

Lifting 51-100 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 while using a jackhammer (60-90 pounds), manipulating bags of asphalt or concrete (60 pounds) and using a wheelbarrow.

Carrying 51-100 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 while transporting a jackhammer (60-90 pounds), bags of asphalt or concrete (60 pounds) and a wheelbarrow between worksite and truck.

Pushing and Pulling

Health Care Provider initials if restricted _____

Occasionally for up to 5-15 minutes at a time with a force of 30-40 pounds for up to 15-30 minutes total in a work shift while using a wheelbarrow (30 pounds), pulling equipment out of truck, pulling stakes and manipulating monuments (40 pounds).

Handling

Health Care Provider initials if restricted _____

Frequently to Continuously & Highly Repetitive for up to 2 hours at a time for up to 4-6 hours total in a work shift while manipulating survey rod, driving, carrying equipment, manipulating monuments, using a hammer, using a drill, using a wheelbarrow and digging.

Operating Controls with Hands

Health Care Provider initials if restricted _____

Frequently to Continuously & Highly Repetitive for up to 2 hours at a time for up to 4-6 hours total in a work shift while using a survey instrument, driving, raising and lowering survey rod.

Fingering

Health Care Provider initials if restricted _____

Frequently to Continuously & Highly Repetitive for up to 2 hours at a time for up to 4-6 hours total in a work shift while using keypad on survey instrument and calculator as well as when typing and writing.

Feeling

Health Care Provider initials if restricted _____

Frequently to Continuously & Highly Repetitive for up to 30 seconds at a time for up to 4-6 hours total in a work shift while manipulating dials on the survey instrument.

Talking

Health Care Provider initials if restricted _____

Frequently to Continuously & Highly Repetitive for up to 5 minutes at a time for up to 4-6 hours total in a work shift while talking on radio communicating directions with coworkers.

Hearing

Health Care Provider initials if restricted _____

Continuously for up to 2.5 hours at a time for up to 6-8 hours total in a work shift while listening for radio communication as well as when identifying moving traffic and other hazards in the field.

Seeing

Health Care Provider initials if restricted _____

Continuously for up to 2.5 hours at a time for up to 6-8 hours total in a work shift while taking measurements, driving, using the survey instrument etc.

Working with Heightened Awareness

Health Care Provider initials if restricted _____

Continuously for up to 2.5 hours at a time for up to 6-8 hours total in a work shift while working around moving traffic and heavy equipment.

ENVIRONMENTAL FACTORS

Work performed in the field for extended periods of time may be performed under unfavorable weather conditions. Works outdoors, which may require walking on uneven, rocky or rough ground, or working in inclement weather.

The noise level is

Approximately 50-130 decibels. The noise is caused by jackhammer.

HCP Initials if Restricted

Work environment may include the following exposure(s):

- Outside weather: Continuous
- Wet: Occasionally
- Humidity/dampness: Rare
- Fumes: Rare
- Odors: Rare
- Dusts: Occasional
- Mists: Rare
- Gases: Rare

HCP Initials if Restricted

KING COUNTY JOB ANALYSIS COMPLETED ON: 8/28/07
JOB TITLE: Engineering Technician II (Survey)
EMPLOYEE:

DOT #: 018.167-034
CLAIM #

Moving mechanical parts: Frequent
Vibration: Occasional
Working in high, exposed places: Occasional
Toxic or caustic chemicals: Rare
Other:

POTENTIAL MODIFICATIONS TO JOB

None identified.

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.

Printed name & title of VRC evaluator

Signature of VRC evaluator

Date

Printed name & title of contact

Signature of contact

Date

Printed name & title of employee

Signature of employee

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 _____