

Job Analysis Form ALTERNATE FORMAT AVAILABLE

JOB TITLE Engineer II

GOE JOB CLASSIFICATION 05.03.06

DICTIONARY OF OCCUPATIONAL TITLES (DOT) NUMBER: 182.267-010

DOT TITLE: Construction Inspector

DEPARTMENT Development and Environmental Services DIVISION

OF POSITIONS IN THE DEPARTMENT WITH THIS JOB TITLE

CONTACT'S NAME & TITLE Molly A. Johnson

CONTACT'S PHONE: (206) 296-7178

ADDRESS OF WORKSITE Dept. Development & Environmental Services,

Black River Corp. Park 900 Oakesdale Ave. SW, Renton, WA 98057-5212

VRC NAME Thomas S. Sproger, MS, CRC, CEAS II DATE COMPLETED 6/2/10

OVERTIME (Note: Overtime requirements may change at the employer's discretion)

Required, between and hours per year

Optional X Does not occur

JOB DESCRIPTION

Positions in this classification perform skilled inspection and enforcement work in securing compliance of public utility and street construction with County codes and standard specifications. Work involves responsibility for inspecting a variety of development and construction projects (roadways, storm systems, parking lots, erosion controls) to determine whether plans, workmanship and materials conform with legally established requirements. Employees work independently on field inspections and make decisions exercising technical judgment; however, they consult with a technical supervisor on more difficult and unusual cases.

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

Performs review and approval of preliminary subdivisions and engineer design plans for residential land developments. Evaluates engineering plans for a wide variety of issues including drainage control, road design and environmental impacts. Performs site review to identify potential site constraints and land development design issues. Conducts on site public utility and street construction inspections of county and private development projects checking for conformity with county specifications and Codes. Follows construction to completion, performs final inspections, and signs off on work when complete and satisfactory.

ESSENTIAL FUNCTIONS

A, Inspect roads and streets

- 1. Obtains test results on materials used
- 2. Inspects and performs oversight on installation of curbs gutters, ADA ramps, sidewalks and asphalt
- 3. Inspects roadwork for compaction, moisture and appropriate preparation for paving
- 4. Follows loaded dump truck ("Proof roll") to ensure proper stability and compaction
- B. Inspect storm Drains
- 1. Visually inspects storm drains for flow and size
- 2. "Candles" system to ensure even uninterrupted flow, alignment and grades from structure to structure
- 3. Measures system components for size and capacity concerns
- 4. Perform confined space entries during inspections of storm systems
- C. Erosion control
- 1. Walks thru area to ensure "clearing limits" followed
- 2. May request and review soil and other tests
- 3. Ensures projects meet appropriate zoning ordinances and accepted specifications
- D. Perform final Inspection
- 1. Performs final inspection
- 2. Completes appropriate paperwork and reports
- 3. Ensures bond is on file
- 4. Signs off when complete
- 5. Coordinates with other King County agencies (DOT & WLRD) on final inspection (standard specifications, final corrected plans and codes).
- E. Educational function
- 1. Attends public hearings to provide testimony regarding land use regulation & design standards
- 2. Testifies as to surface water removal/storm drain design parameters and requirements
- 3. Prepares written reports and correspondence
- F. Review engineering plans
- 1. Review of new plans or plan change review of road, storm & erosion control plans, for approval
- 2. Calculate &/or review bond quantity worksheets as related to engineering plans, for approval
- Review of Surface Water Pollution Protection Plans (SWPPS) for new engineering plans

NON-ESSENTIAL FUNCTIONS

- 1. May confer with "public" &/or other King County Agencies regarding their concerns and complaints
- 2. May attend public meetings

PERSONAL PROTECTIVE EQUIPMENT USED

Boots, gloves, hard hat, eye protection, hearing protection Air quality equipment for confined space entries

OTHER TOOLS & EQUIPMENT USED

Cell phone & calculator

Personal Computer (laptop)

Surveyor's level & survey rod

Shovel & metal bar (to breakup compacted soils)

Soil probes

Equipment to unlock and lift storm basin lids (wrenches & hooks)

Measuring equipment (pocket tapes & rag tapes

Marking paint w applicator

Other confined space equipment (generator, ventilator w hose & sump pump)

Carpenter's level

Lanterns & mirrors with extension rods (for storm candling)

Engineering plans (large & small), technical engineering books & King County Standard books

Digital camera

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

Sedentary—exerting up to ten pounds of force occasionally and/or a negligible amount of force frequently. A sedentary job involves sitting most of the time.

Light—exerting up to 20 pounds of force occasionally, and/or up to 10 pounds of force frequently and/or a negligible amount of force constantly. A job is light if involves less than or up to the indicated pounds of force and one or more of the following apply; walking and standing to a significant degree, sitting and pushing/pulling of arm or leg controls, or constant pushing and pulling to maintain a production rate even when weight is negligible.

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

Very Heavy—exerting in excess of 100 pounds of force occasionally, and/or in excess of 50 pounds of force frequently, and/or in excess of 20 pounds of force constantly to move objects.

Standing

Health Care Provider initials if restricted

Continuously Frequently Occasionally Rarely

on concrete, dirt and uneven surfaces for 15-30 minutes at a time for up to 2 hours total in a work shift. Most commonly occurs while observing work in process.

Walking

Health Care Provider initials if restricted

Continuously <u>Frequently</u> Occasionally Rarely

& highly repetitive

on both newly paved and uneven surfaces for distances of up to 2 miles for 1 hour at a time for up to 4 hours total in a work shift. Most commonly occurs while inspecting wooded areas, walking behind dump truck, and inspecting road pavement.

Sitting

Health Care Provider initials if restricted

Continuously **Frequently to Occasionally** Rarely

on task chair or truck seat for 30-45 minutes at a time for up to 3 hours total, 1/3rd of his work shift. This activity most commonly occurs while working at computer or driving from office to work site or attending meetings,

Climbing stairs

Not Present

Climbing ladders

Health Care Provider initials if restricted

Continuously Frequently Occasionally Rarely

& Highly Repetitive

on metal rung ladders to heights/depths of 12-15 feet for 5 minutes at one time for up to 2.5 hours total in a work shift. Most commonly occurs while checking storm drains and storm drain boxes

Balancing

Health Care Provider initials if restricted_

Continuously Frequently Occasionally Rarely

& Highly Repetitive

on ladders at heights of 6-12 feet for 5-10 minutes at a time for up to 5 minutes total in a work shift. Most commonly occurs while standing on ladder to inspect storm system components

Bending neck up

Health Care Provider initials if restricted

Continuously Frequently <u>Occasionally</u> Rarely

& Highly Repetitive

for 1-2 minutes at a time for up to 30 total in a work shift. Most commonly occurs while looking up from bottom of large storm drain basins or underground storm storage valts.

Bending neck down

Health Care Provider initials if restricted

Continuously Frequently **Occasionally** Rarely

& Highly Repetitive

For 30 minutes at a time for up to 4 hours total in a work shift. Most commonly occurs while inspecting road surfaces.

Bending/Stooping

Health Care Provider initials if restricted_

Continuously Frequently <u>Occasionally</u> Rarely

& Highly Repetitive

on road surfaces and in storm drain systems for up to 5 minutes at a time and up to 2-3 hours total in a work shift. Most commonly occurs while looking into basins. May kneel/squat/stoop instead.

Kneeling

Health Care Provider initials if restricted

Continuously Frequently *Occasionally* Rarely

& Highly Repetitive

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on paved, dirt, and gravel surfaces for 5 minutes at a time for up to 2-3 hours total in a work shift. Most commonly occurs while checking road surfaces, basins and storm systems. May sit or bend/stoop or squat instead of kneeling.

Squatting

Health Care Provider initials if restricted_

Continuously Frequently Occasionally Rarely

& Highly Repetitive

on paved, dirt, and gravel surfaces for 5 minutes at a time for up to 2-3 hours total in a work shift. Most commonly occurs while checking road surfaces, basins and storm systems. May sit or bend/stoop or kneel instead of squatting.

Crawling

Health Care Provider initials if restricted_

Continuously Frequently Occasionally <u>Rarely</u> & Highly Repetitive

on paved, dirt, concrete and gravel surfaces for distances of 1-5 feet for 1-2 minutes at a time for up to 30 minutes total in a work shift. Most commonly occurs while checking road surfaces, basins and storm systems.

Operating Controls with Feet

Health Care Provider initials if restricted_

Continuously Frequently <u>Occasionally</u> Rarely

& Highly Repetitive

of for 30-40 minutes at a time for up to 3 hours total in a work shift while operating company vehicle driving between work sites or from office to site and back..

Reaching above shoulder height

Health Care Provider initials if restricted_

Continuously Frequently **Occasionally** Rarely

& Highly Repetitive

for 1-5 minutes at a time for up to 2.5 hours total in a work shift while climbing ladders

Reaching at waist to shoulder height

Health Care Provider initials if restricted__

Continuously Frequently Occasionally Rarely

& Highly Repetitive

For 1-3 minutes at a time for up to 2 hours total in a work shift while taking measurements.

Reaching at knee to waist height

Health Care Provider initials if restricted

Continuously Frequently Occasionally *Rarely*

& Highly Repetitive

1-2 minutes at a time for up to ½ hour total in a work shift while opening manhole covers

Reaching at floor to knee height

Health Care Provider initials if restricted_

Continuously Frequently *Occasionally* Rarely

& Highly Repetitive

5-10 minutes at a time for up to 2 hours total in a work shift while inspecting storm drains

Lifting 1-10 pounds

Health Care Provider initials if restricted_

Continuously *Frequently* Occasionally Rarely

& Highly Repetitive

While lifting hook, plans, mirror, flashlight/lantern for 30 minutes at a time & for up to 3.5 hours total in a work shift. Most commonly occurs with weights of 1-5# at thigh to waist height while lifting equipment out of vehicle.

Carrying 1-10- pounds

Health Care Provider initials if restricted_

Continuously *Frequently* Occasionally Rarely

& Highly Repetitive

While carrying hook, plans, mirror, flashlight/lantern for 30 minutes at a time & for up to 3.5 hours total in a work shift. Most commonly occurs with weights of 1-5# while carrying equipment from office to vehicle and from vehicle to work site for distances of from 50 feet to 2 miles.

Lifting 11-20 pounds

Health Care Provider initials if restricted

Continuously Frequently Occasionally Rarely

& Highly Repetitive

of surveyor's level for 5 minutes at a time for up to 20 minutes total in a work shift. Most commonly occurs with weights of 20# at thigh to waist height while lifting surveyors' level off of shelf or out of vehicle.

Carrying 11-20 pounds

Health Care Provider initials if restricted

Continuously Frequently Occasionally Rarely

& Highly Repetitive

of 20# for distances of 50 feet to 100 yards at a time for up to 50 minutes total in a work shift. Most commonly occurs with weights of 20# at thigh to waist height while lifting surveyors' level off of shelf or out of vehicle.

Lifting 21-50 pounds

Health Care Provider initials if restricted

Continuously Frequently Occasionally Rarely

& Highly Repetitive

of manhole cover using "hook" for 1-2 minutes at a time for up to 20 minutes total in a work shift. Most commonly occurs with weights of 30-35# while inspecting storm drains.

Carrying 21-50 pounds

Health Care Provider initials if restricted_

Continuously Frequently Occasionally Rarely
of for distances of indicate range of distance her

Not Present

& Highly Repetitive

of for distances of indicate range of distance here for at a time for up to total in a work shift. Most commonly occurs with weights of while

Lifting 51-100 pounds

Health Care Provider initials if restricted_

Continuously Frequently Occasionally *Rarely* Not Present & Highly Repetitive of manhole cover using "hook" for 1-2 minutes at a time for up to 20 minutes total in a work shift. Most commonly occurs with weights of 30-35# while inspecting storm drains.

Carrying 51-100 pounds

Health Care Provider initials if restricted

Continuously Frequently Occasionally Rarely <u>Not Present</u> & Highly Repetitive of for distances of for at a time for up to total in a work shift. Most commonly occurs with weights of while

Lifting 100+ pounds Not Present

Carrying 100+ pounds Not Present

Pushing and Pulling

Health Care Provider initials if restricted

Continuously Frequently Occasionally *Rarely* & Highly Repetitive of estimated 30-100# for distances of 2-3' at a time with a force of 35# to 100# for 1-2 minutes at a time for up to 20 minutes total in a work shift while pulling manhole covers off of manholes.

Handling

Health Care Provider initials if restricted

Continuously to Frequently Occasionally Rarely

& Highly Repetitive

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for 45 minutes or more at a time for up to 6 hours total in a work shift while handling plans, pencil/pen and paper/clipboard while performing inspections &/or reviewing plans

Operating Controls with Hands Continuously Frequently Occasionally Rarely & Highly Repetitive of vehicle steering wheel/gear shift for 30-40 minutes at a time for up to 4.5 hours total in a work shift. Most frequently occurs while driving company vehicle
Fingering Continuously Frequently Occasionally Rarely Mealth Care Provider initials if restricted Whighly Repetitive For 5-10 minutes at a time for up to 2.5 hours total in a work shift while hand writing notes.
Feeling Continuously Frequently Occasionally Rarely of asphalt and concrete for 1-5 minutes at a time for up to 45 minutes total in a work shift while inspecting roads and storm drains.
Talking Continuously Frequently Occasionally Rarely & Highly Repetitive with citizens, other agencies, contractors, sub contractors for up to 30 minutes at a time at a time for up to 2.5 hours total in a work shift. Most typically occurs while discussing findings with contractors and attending meetings.
Health Care Provider initials if restricted Continuously Frequently Occasionally Rarely & Highly Repetitive 1 hour at a time for up to 5.5 hours total in a work shift while discussing issues with sub contractors and while listening for vehicles during road inspections.
Seeing Continuously Frequently Occasionally Rarely for 1-2 hours at a time for a total of 9 hours in a 9-hour work shift. The need to see occurs as part of virtually every task, including driving, computing (though modifications are possible), inspecting, meeting with contractors, etc.
Working with Heightened Awareness Continuously Frequently Occasionally Rarely for 30-60 minutes at a time & for 5-6 hours total in a work shift. Most typically occurs while driving company vehicle or inspecting roads, following behind construction vehicles.
The noise level is Approximately 80 - 110+ decibels. The noise is caused by trucks & heavy equipment.
Work environment may include the following exposure(s): Outside weather Non-weather related temperatures below 55 degrees

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Non-weather related temperatures above 75 degrees	
Wet	
Humidity/dampness	
Fumes	
Odors	
Dusts	
Mists	
Gases	
Moving mechanical parts	
Vibration	
Working in high, exposed places	
Radiation	
Working with explosives	
Toxic or caustic chemicals	
Confined spaces	
Other:	

CLAIM#

POTENTIAL MODIFICATIONS TO JOB

EMPLOYEE:

Use of video cameras to inspect storm drain-pipes (vs bending, crawling, kneeling)

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

Signature of employee

Thomas S. Sproger, MS, CRC, Vocational Rehabilitation Counselor

Puget Sound Vocational Services

Printed name & title of VRC evaluator

Date

Printed name & title of Supervisor

Signature of contact

Date

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 describe	ed job with the following modifications		
	☐ Temporary until	Permanent as of		
	The employee is not released to perform the desc functions:	cribed duties due to the following job		
	☐ Temporary until	Permanent effective		
	The employee is unable to work in any capacity. A release to work is: anticipated by	■ Not expected		
The I	limitations are due to the following objective medic	al findings:		
Printe	ed or typed name and phone number of Health Care Pi	rovider		
Signa	ature of Health Care Provider	Date		