

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES

DIVISION: Southcoast Region Construction		PCN: 25-2414 (Position Description Attached)	
JOB CLASS/TITLE: Engineering Technician -Journey		WHEN POSITION IS NEEDED: ASAP	
FLEXIBLY STAFFED: <input type="checkbox"/> YES / <input checked="" type="checkbox"/> NO			
WAGE GRADE: 54 / \$22.16		DUTY STATION: Ketchikan	
<input type="checkbox"/>	Permanent Full-Time	<input checked="" type="checkbox"/>	Permanent Full-Time Seasonal
<input type="checkbox"/>	Permanent Part-Time	<input type="checkbox"/>	Permanent Part-Time Seasonal
<input type="checkbox"/>	Non-Perm Full-Time	<input type="checkbox"/>	Non-Perm Part-Time
TRAVEL REQUIRED: <input checked="" type="checkbox"/> YES / <input type="checkbox"/> NO			
<p>CANDIDATE MUST BRING TO INTERVIEW:</p> <input checked="" type="checkbox"/> Completed Workplace Alaska Application (if not already submitted to the hiring manager by Local 71) <input type="checkbox"/> Completed Certification of Employment as a Commercial Motor Vehicle Operator 10-year history form <input checked="" type="checkbox"/> Criminal Convictions: Must provide a copy of the judgement from the Court for <u>any</u> Felony Conviction (regardless of date) and any Misdemeanor Conviction within the last 5 years. For positions requiring APSIN* clearance, must provide judgement for <u>all</u> convictions regardless of date. <input checked="" type="checkbox"/> Copy of certifications and licenses <input type="checkbox"/> Other:			
<i>Note: Candidates who do not bring the required information to the interview may be rejected.</i>			

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2. Duties

2.1. In one or two sentences, state the main purpose of the position.

Under the direct supervision of a Construction Project Manager, and general direction of a Project Engineer, serves as a; construction inspector, office engineer, and/or materials testing technician, performing sub-professional engineering work in the field or in an office.

2.2. Starting from the most to the least important, list the functional areas assigned to the position. Within each functional area, describe the duty statement associated; estimate the percentage of time spent performing the duties; and define each area as essential (E) or marginal (M).

Functional Area Title: Construction Inspection by Engineering Technician, Journey		
E/M	% of Time	Duty Statement
E	35 %	Perform and complete materials test procedures and documentation to ensure contract compliance , i.e. compaction tests, concrete unit weight, slump and air content tests, gradations, asphalt content, etc. Collect materials samples in accordance with required test frequency and procedures. All sampling and testing of materials must be conducted in strict compliance with Western Alliance for Quality Transportation Construction (WAQTC) and Alaska Test Methods Manual (ATMM) procedures. Reject non-conforming materials.
E	25 %	Set up project records and filing systems at beginning of project. Compute quantities and complete reports such as the progress payment estimate, weekly reports, and cross sections. This also includes end areas, earthwork and grade calculations. Assist the project engineer in writing routine correspondence; directives, change orders, etc. Prepare preliminary or minor construction drawings and sketches. Compute, reduce and plot data from field notes. Assemble final estimates, record drawings, material summaries and reports in support of the project closeout process.
E	20 %	Inspect the placement of the widest range of materials, appurtenances, and features to be incorporated into the project, and maintain daily diaries and records to document the work. This includes daily force account records, pile driving records, daily inspector reports and/or diary, etc. Reject unacceptable work.
E	10 %	Mentor and train lower level technicians and interns. Monitor the work of lower level technicians and interns.
E	5 %	Inspect, document and report on the contractor's traffic control efforts and traffic control devices. Monitor compliance with the approved Traffic Control Plan. Maintain a Traffic Control Diary. Direct the Contractor to correct traffic control deficiencies.
E	2 %	Setup, maintain, and take down temporary field office and field laboratory.
M	3 %	Temporarily act as project engineer in his/her absence from the project.

Percentage Total: 100%

3. Other Work Details

3.1. List the computer software and hardware used to perform the duties described. Estimate how often each is used (e.g. daily, 2-3 times a week, 1-2 times a month, etc.).

Daily use of personal computer, laptop, and/or tablet with various software; Microsoft Office Suites (Excel, Word, Access, Outlook, PowerPoint, etc.) or its` equivalent, Adobe PDF, FileMaker Pro, and/or other specialized contract administration software (i.e. AASHTOWare) as required by the Project Engineer. Daily use of general hardware, such as; telephones, digital video/still cameras, voice recorders, and/or other hardware as required by the Project Engineer.

3.2. List the equipment and materials used to perform the duties described, including machinery, tools, instruments, vehicles, etc. Estimate how often each is used (e.g. daily, 2-3 times a week, 1-2 times a month, etc.).

Depending upon assignment, daily use of; automobiles, all terrain vehicles (ATV) and/or skiffs. Depending upon assignment, 2-3 times a week use of transit, level, hand/smart level, calculator, Troxler nuclear densometer, materials testing equipment, nuclear asphalt content gauge, various drying ovens and furnaces with temperatures up to 1000 degrees Fahrenheit, electronic and mechanical scales, electro-mechanical sieve shakers, power and hand tools, and other equipment as listed in the State of Alaska Competency Specification.

3.3. List the guides and references regularly used to perform the duties described. Examples include federal and state laws and regulations, professional standards, building codes, trade practices, contracts, and policy and procedure manuals. Explain how and why these guides and references are used. Estimate how often each is used (e.g. daily, 2-3 times a week, 1-2 times a month, etc.).

The following guides and references are used by Department of Transportation & Public Facilities (DOT&PF) employees in the performance of the duties describe herein.

Daily: Standard Specifications for Highway (or Airport or Building) Construction, Standard Drawings, and project specific Contract Documents (Plans, Specifications, and Estimates).

Weekly: Alaska Construction Manual (ACM), Alaska Test Methods Manual (ATMM), American Association of State Highway and Transportation Officials (AASHTO) manuals, American Society for Testing and Materials (ASTM) Standards, Asphalt Institute and American Concrete Institute (ACI) manuals, Western Alliance for Quality Transportation Construction (WAQTC) Training and Test Procedures.

Monthly: Materials Safety Data Sheets (MSDS), Qualified Products List (QPL), Construction Surveying Requirements, Alaska Construction General Permit (CGP), Alaska Traffic Manual (ATM), Federal Highway and Aviation Standards.

Annually: Occupational Safety & Health Administration (OSHA) guidelines, Alaska DOT&PF Safety Manual, Alaska Radiation Protection Program Manual, Chief Engineer`s Directives, Alaska DOT&PF Policy and Procedures.

3.4. Describe the level of authority and independence the incumbent of the position exercises. List the actions the incumbent takes or the decisions the incumbent makes on a regular basis without obtaining prior approval from a higher level employee. For example, explain how the position has the authority to commit the organization, or any parts thereof, to a course of action.

Identify and document unacceptable work, performance or materials within Contract established parameters. Notify Contractor and Project Engineer of deficiencies through written or verbal communications. Reject unacceptable work or materials. Decide when and where to take material samples in addition to project specific minimum frequencies, such as informational material samples.

3.5. Describe the nature of the contacts the incumbent has with other people in order to perform the duties described. Include who is contacted, the reason for the contact, and how often the contact is made.

Regular communication with project engineers, other engineering technicians, contractors, subcontractors, members of the Public, and other DOT&PF employees as required for successful contract administration, or as directed by the incumbent`s supervisor.

3.6. Describe the consequence of an error made by a prudent employee in the performance of the essential functions assigned to the position. What is the consequence of that error to individuals, operations, and programs?

Errors made by the incumbent may result in a Breach of Contract, out-of-specification materials or work being incorporated into our projects, injury to self or others, reductions in service life of the constructed project, increased operational costs, and other serious financial consequences to the State of Alaska.

3.7. List critical requirements of the position not previously described (e.g., skills in keyboarding, writing, negotiating, communications, etc.).

Computer literacy skills, reading and analytical skills, mathematical skills, communication and people skills, mentorship and leadership skills, ability to read/interpret contract documents (plans, specifications, and estimates), and attention to detail are required of this position.

Must possess or obtain current certifications in all WAQTC modules.

Must possess or obtain current Authorized Nuke User Gauge (nuclear densometer) certification.

Must possess or obtain current American Traffic Safety Services Association (ATSSA) certifications as a traffic control technician, traffic control supervisor, and flagger.

Must possess or obtain current certification as Alaska Certified Erosion & Sediment Control Lead (AK-CESCL).

Must be willing to travel to remote locations by automobile, aircraft, or marine vessel for extended periods of time with little notice.

Writing skills are highly desired.

High School Diploma, or equivalent, highly desired.

Physical stamina to lift 100 pounds regularly.

3.8. List licenses, certifications, registrations, physical or other standards required by state or federal law or regulation to perform the duties described. Cite the specific authority (e.g. law or regulation, such as the OSHA Bloodborne Pathogens Act).

Must possess valid State of Alaska Driver`s License to operate motor vehicles (AS 28.15.011).

4. Work Demands

The following identifies some of the physical and mental demands and potential hazards typically encountered by this position. These are job demands which can be ***reasonably anticipated and are an expectation of the job***.

Keeping in mind the essential functional areas and duty statements described in section 2, select the rating that best matches the requirement of this position according to the following descriptions:

Rating **Description**

Not Required (N): Not required of this position.

Present (P): Requirement **is** present, but **is not** essential to the position. (For example, a receptionist may encounter aggressive or angry people, but this is not an essential assignment.)

Occasional (O): Required 33 percent of the time or less **and** essential to the position. (For example, a lifeguard swims only occasionally, but it is essential that a lifeguard be able to swim; a correctional officer must control aggressive/angry people who are life threatening.)

Frequent (F): Required over 33 percent of the time **and** essential to the position.

Items checked below must be consistent with the duty statements listed in section 2.

4.1 Physical Requirements

Title	Rating			
	N	P	O	F
Sitting				F
Walking				F
Standing				F
Running			O	
Jumping	N			
Bending or twisting				F
Squatting or kneeling				F
Crawling	N			
Reaching above shoulder level			O	
Reaching below shoulder level				F
Ascending or descending using a ladder or other conveyance			O	
Climbing stairs			O	
Driving cars, light duty trucks				F
Driving heavy duty vehicles	N			
Using floor mounted foot controls to operate equipment (e.g., not driving a car)	N			
Repetitive motion of hands/fingers (e.g., keyboarding, turning pages)				F
Fine manipulation with fingers				F
Pinching with fingers			O	
Grasping with hand, gripping				F
Load, unload, aim, and fire handguns, shotguns or other firearms	N			

Lifting/carrying up to 25 pounds				F
Lifting/carrying 26-50 pounds				F
Lifting/carrying more than 50 pounds				F
Pushing/pulling up to 25 pounds				F
Pushing/pulling 26-50 pounds				F
Pushing/pulling more than 50 pounds				F
Balancing on moving surfaces			O	
Balancing on narrow surfaces			O	
Balancing on slippery surfaces			O	
Balancing on uneven surfaces			O	
Restraining/grappling with people in a public protection environment	N			
Seeing objects at a distance			O	
Seeing objects peripherally			O	
Using depth perception			O	
Seeing close work (e.g., typed print)				F
Distinguishing colors			O	
Hearing conversations or sounds				F
Hearing via radio or telephone				F
Communicating through speech				F
Communicating by writing/reading				F
Distinguishing odors by smell	N			
Distinguishing tastes	N			

4.2 Work Environment

Title	Rating			
	N	P	O	F
Work in/exposure to inclement weather				F
Work in/exposure to cold water			O	
Work/live in remote field sites				F
Work in confined areas (under desks, in heating vents, etc.)	N			
Exposure to dust, chemicals, or fumes			O	
Exposure to hazardous equipment (e.g., guns, chainsaws, explosives)	N			
Exposure to electrical current (not outlets)		P		
Swimming/scuba diving	N			
Work at heights up to 25 feet (e.g., towers, poles)			O	
Work at heights over 25 feet (e.g., towers, poles)			O	
Work in urban or highway traffic (other than driving)				F
Work around moving machinery or mobile equipment				F
Work around moving mechanical parts				F
Work on and off moving equipment			O	
Work on slippery or uneven surfaces			O	
Work/travel in boat/small aircraft/helicopters			O	

Exposure to high noise levels			O	
Exposure to infection, germs, or contagious diseases (e.g., hospital, lab, clinic, etc.)	N			
Exposure to blood, body fluid, or materials potentially contaminated by blood or body fluids (e.g., hospital, lab, clinic, public protection environment)	N			
Exposure to needles or sharp implements (e.g., hospital, kitchens)	N			
Use of hot equipment (e.g., kitchen ovens, lab equipment)			O	
Exposure to wild/dangerous animals	N			
Exposure to insect bites or stings			O	
Exposure to aggressive/angry people in a public protection environment (e.g.: State Troopers, Correctional Officers, Probation Officer)	N			
Exposure to aggressive/angry people in the work environment		P		

4.3 Other Work Demands

Title	Rating			
	N	P	O	F
Work in office and lodging without running water or standard sanitary facilities			O	
Working with or around radioactive testing equipment			O	

4.4. Explain any special physical, mental, or behavioral requirements of the position that have not already been addressed.

Moderately hazardous environment in the field. Wear hard hats, hearing protecting, eye protection, safety vests, gloves and similar protective clothing or devices when appropriate. Physically setting up and taking down field offices and laboratories (and their equipment) at remote locations.