

COUNTY OF SONOMA - JOB DEMANDS ANALYSIS

**JOB CLASSIFICATION:** Engineering Tech IV (Construction)

**DATE COMPLETED:** 9/22/2022

**DEPARTMENT:** Transportation & Public Works

**DIVISION:** Roads – Engineering, Construction

**PHYSICAL DEMAND STRENGTH RATING:**

**INSTRUCTIONS TO MEDICAL PROVIDERS COMPLETING THIS FORM:**

*Please use the “Medical Provider Use Only” columns to the right of each section and the “Medical Provider’s Comments & Signature” Section on the signature page to provide work restrictions by indicating whether there is some portion of each function that the employee can perform; designating whether each restriction is temporary or permanent; and, if restriction is temporary, stipulating the expected duration of work restriction(s). To finalize the form, please provide the name of the employee evaluated and additional comments, as appropriate, then sign and date where indicated.*

**FREQUENCY RATING:**

Frequency	Percentage of time per shift	Repetition (# times per shift)	8 Hr Shift	9 Hr Shift	10 Hr Shift	12 Hr Shift
Never/Not Required (N)	n/a	n/a	n/a	n/a	n/a	n/a
Occasionally (O)	1 - 33%	1 – 100	0 - 2.5	0 - 3	0 - 3.5	0 – 4
Frequently (F)	34 - 66%	100 – 500	2.5 - 5.5	3 - 6	3.5 - 7	4 – 8
Continuously (C)	67 - 100%	500+	5.5 – 8	6 - 9	7 - 10	8 - 12

**PART 1 - JOB DUTIES/FUNCTIONS:**

A. Job Duty/Function	B. Job Duty #	C. Freq Rating	D. Equipment or tools used to perform (Describe)	E. Specialized Expertise, License, Certification Required? (Describe)	F. Essential or Non- Essential	Medical Provider Use Only: For each job duty/function, indicate in this column “Can Perform”, is “Temporarily Restricted” from performing, or is “Permanently Restricted” from performing.
Directly supervises assigned staff including: plans, organizes, and assigns work; orients and trains staff; monitors and facilitates staff continuing education; evaluates, reviews, and monitors activity of staff, both formally and informally, in writing and in person; takes appropriate disciplinary action in conjunction with Human Resources staff; participates in hiring interviews and decisions; actively utilizes and implements established safety practices; proposes and implements new safety practices as needed.						
Reviews and interprets construction plans and specifications.	1	C	Computer		E	

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Plans, assigns and supervises the work performed by subordinate inspectors and resident engineers to ensure compliance with plans and specifications of all work, correctness of change orders, and proper estimates of payments due the contractor on construction projects including: walks and climbs over uneven, steep, and slippery surfaces to monitor contractor performance and to inspect methods and materials used for compliance with specifications/ OSHA standards; provides direction or feedback as needed; reports the status of work in progress and any unforeseen problems or requirements to supervisors or managers.	2	C			E	
Tracks cost, inventory, and work completed; reviews pay estimates.	3	F	Computer		E	
Investigates complaints construction projects and makes recommendations on work requirements or corrective actions.	4	O	Computer, Telephone		E	
Documents and maintains records of construction projects.	5	F	Computer		E	
Performs various calculations of engineering functions.	6	F	Calculator			
Prepares written reports summarizing progress, status, findings, recommendations, and results.	7	F	Computer		E	
Drives county vehicle to and from job sites and other offsite locations, including rugged, remote, and off-road locations.	8	F	Vehicle	Driver's License	E	
Inspects vehicles, machines, equipment and tools and reports damage, wear, required repairs and maintenance, and need for replacement.	9	O	Pen/Pencil Paper		E	
Lifts, carries, sets up, adjusts and operates survey and other equipment weighing up to 50 pounds; holds survey rod steady while looking through equipment eyepiece for long periods of time and in all weather conditions; calibrates, cleans and services survey equipment.	10	O	Transit, 6 ft survey rod		NE	
Operates handheld device to monitor air during confined space work. Will not be entering.	11	O	Hand-held equipment		NE	
Performs various administrative tasks including, but not limited to: maintains electronic and paper files; makes copies; uses a computer to enter and retrieve data; uses fax machines and answers telephones.	12	C	Computer Office equipment		E	
Communicates with the public in person, by telephone, and in writing to provide information, on construction projects.	13	O			E	

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Participates in training to maintain and enhance knowledge and skills necessary to perform assigned duties.	14	O			E	

**PART 2: PHYSICAL DEMANDS**

Activity	Examples of Duties/Functions Requiring Activity	FREQUENCY RATING Never, Occasional; Frequent, or Constant	MEDICAL Can Perform	PROVIDER Temporarily Restricted	USE ONLY: Permanently Restricted
1 Sitting	1-14	F			
2 Walking	1-2, 4, 8-12, 14	F			
3 Running		N			
4 Standing	1-14	F			
5 Bending-Neck	1-14	F			
6 Bending-Waist	1-2, 8-12	O			
7 Squatting	1-2, 9-10, 12	O			
8 Climbing	2, 10	O			
9 Kneeling	2, 9-10	O			
10 Crawling		N			
11 Twisting (neck)	1-14	F			
12 Twisting (waist)	1-14	O			
13 Repetitive Hand Use	1-14	F			
14 Simple Grasping-Right Hand	1-14	F			
15 Simple Grasping-Left Hand	1-14	F			
16 Power Grasping-Right Hand	10, 12	O			
17 Power Grasping-Left Hand	10, 12	O			
18 Fine Manipulation-Right Hand	1-14	O			
19 Fine Manipulation-Left Hand	1-14	O			
20 Pushing and Pulling (right hand)	2, 10, 12	O			
21 Pushing and Pulling (left hand)	2, 10, 12	O			
22 Reaching (above shoulder level)	2, 5, 9-10, 12	O			
23 Reaching (below shoulder level)	2-6, 8-12	O			
24 Lifting-up to 10 lbs.	1-14	F			
25 Lifting-11-25 lbs.	2, 5, 8-9, 10, 12	O			
26 Lifting-26-50 lbs.	10	O			
27 Lifting 51-75 lbs.		N			
28 Lifting 76-100 lbs.		N			
29 Lifting 100 + lbs.		N			
30 Carrying 0-10 lbs.	1-14	O			
31 Carrying 11-25 lbs.	2, 5, 8-9, 10, 12	O			
32 Carrying 26-50 lbs.	10	O			
33 Carrying 51-75 lbs.		N			
34 Carrying 76-100 lbs.		N			

**PART 3: SENSORY REQUIREMENTS**

Activity	Examples of Duties/Functions Requiring Activity	FREQUENCY RATING Never, Occasional; Frequent, or Constant	MEDICAL Can Perform	PROVIDER Temporarily Restricted	USE ONLY Permanently Restricted
1 Functional vision, normal or corrected		C			
2 Functional color vision, normal or corrected		N			
3 Functional night vision, normal or corrected		O			
4 Functional hearing, normal or corrected		C			
5 A sense of smell or taste		O			

**PART 4: COMPREHENSION LEVEL**

Activity	FREQUENCY RATING Never, Occasional; Frequent, or Constant	MEDICAL Can Perform	PROVIDER Temporarily Restricted	USE ONLY Permanently Restricted
1 Follow Oral Instructions	C			
2 Follow Written Instructions	C			
3 Required to sustain concentration	F			

**PART 5: NATURE OF TASKS**

Activity	FREQUENCY RATING Never, Occasional; Frequent, or Constant	MEDICAL Can Perform	PROVIDER Temporarily Restricted	USE ONLY Permanently Restricted
1 Follow set procedures	C			
2 Organize own work	C			
3 Able to ask questions or request assistance when needed	C			
4 Required to make decisions independently	C			
5 Required to train and/or lead other staff	F			
6 Required to direct other staff (e.g. planning, goal setting, performance)	F			

**PART 6: WORK PACE**

Activity	FREQUENCY RATING Never, Occasional; Frequent, or Constant	MEDICAL Can Perform	PROVIDER Temporarily Restricted	USE ONLY Permanently Restricted
1 Tightly scheduled and rapid pace of work activities at high volume	C			
2 Meet time sensitive deadlines	C			
3 Long and/or irregular hours	F			
4 Limited/unpredictable opportunity for breaks	O			
5 Required to perform on-call or emergency work	O			

**PART 7: COMPLEXITY/VARIABILITY**

Activity	FREQUENCY RATING Never, Occasional; Frequent, or Constant	MEDICAL Can Perform	PROVIDER Temporarily Restricted	USE ONLY Permanently Restricted
1 Variable and unpredictable workflow	F			
2 Attention divided by issues requiring multi-tasking	C			
3 Work requires precise attention to detail	F			
4 Use of judgment in routine matters	F			
5 Requires use of judgment in adapting procedures from one task to another	O			
6 Possible legal ramifications associated with work activities or work product	F			

**PART 8: INTERACTIONS WITH OTHERS**

Activity	FREQUENCY RATING Never, Occasional; Frequent, or Constant	MEDICAL Can Perform	PROVIDER Temporarily Restricted	USE ONLY Permanently Restricted
1 Works with others (e.g., co-workers, other departments/agencies, public)	C			
2 Interactions limited to giving/receiving information	O			
3 Interactions exceed giving/receiving information (e.g., advises, persuades, justifies)	C			
4 Interactions occur under circumstances of emotional stress	C			
5 Risk of confrontation with violent or assaultive clients or customers	O			

**PART 9: ENVIRONMENTAL FACTORS/WORKING CONDITIONS:**

Activity	FREQUENCY RATING Never, Occasional; Frequent, or Constant	MEDICAL Can Perform	PROVIDER Temporarily Restricted	USE ONLY Permanently Restricted
1 Work Inside	F			
2 Work Outside	F			
3 Extreme Heat (above 100 degrees)	O			
4 Extreme Cold (below 32 degrees)	O			
5 Excessive Noise (must raise voice to be heard)	O			
6 Vibration (e.g., jack hammer, hammer drill, chainsaw, etc.)	N			
7 Dust, Vapors, Fumes, Smoke	O			
8 Silica, asbestos, etc.	N			
9 Solvents (e.g., gas, turpentine, etc.)	N			
10 Grease, oils	O			
11 Acidic, Caustic Solutions	N			
12 Pesticides	N			
13 Explosives (e.g., dynamite, bomb, etc.)	N			
14 Cleaning supplies, abrasives	N			
15 Other Chemicals (e.g. drugs and other contraband)	N			
16 Human Blood, Body Tissues, or Fluids	N			
17 Human Wastes	N			
18 Animal Blood, Body Tissues, or Fluids	N			
19 Animal Wastes	N			
20 Biological Toxins (e.g., poison ivy, poison oak, anthrax, etc.)	O			
21 Insect Bites (e.g., ticks, mosquitos, spiders, etc.)	O			
22 Biomedical Waste	N			
23 Ionizing Radiation	N			
24 Non-Ionizing Radiation	N			
25 Electrical Energy	N			
26 Walking on uneven, slippery, or rough surfaces	F			
27 Proximity to moving mechanical parts (e.g., equipment, machinery)	F			
28 Proximity to moving vehicles or objects	F			
29 Heights (e.g., rooftop, ladders, scaffolding, etc.)	N			
30 Contact with water, other liquids, humid conditions - not weather related	N			
31 Work Below Ground: (e.g., excavation, trench, etc.)	N			
32 Potential exposure to airborne infectious diseases (e.g. clinics, labs, corrections)	N			
33 Operates non-commercial motor vehicles (cars, trucks)	F			
34 Operates commercial vehicles – CDL Class _____ Endorsements _____	N			
35 Operates passenger van to transport clients, inmates, etc.	N			
36 Pulls non-commercial trailers or equipment	N			
37 Operates heavy equipment	N			
38 Other:				

**PART 10: MEDICAL SCREENING, SURVEILLANCE AND VACCINATION REQUIREMENTS:**

Please check each of the medical screening, surveillance, and vaccination requirements that apply to the position, and indicate if the requirement applies pre-employment/pre-placement only, or whether there are additional requirements after hire.

Medical Screening, Surveillance or Vaccination	Pre-Hire	Post-Hire	Frequency (one time, annual, etc.)
1 Audiometric Testing			
2 DOT Commercial Driver Drug and Alcohol Screening			
3 DOT Commercial Driver Physical Exam			
4 Respirator Physical Exam			
5 Respirator Questionnaire – Short			
6 Respirator Questionnaire – Standard			
7 Blood lead level			
8 Hazardous Waste/Emergency Worker physical			
9 Heavy metal screen (mercury, lead, arsenic)			
10 HINT Hearing Noise Sensitivity Testing			
11 Tuberculosis skin test			
12 Vaccine: MMR			
13 Vaccine: Hepatitis B			
14 Vaccine: Influenza			
15 Vaccine: Meningococcal			
16 Vaccine: Pneumococcal			
17 Vaccine: Rabies			
18 Vaccine: Rabies Titer			
19 Vaccine: Tdap			
20 Vaccine: Chickenpox			

**PART 11: ADDITIONAL INFORMATION, PICTURES, ETC.**