

COUNTY OF SONOMA - JOB DEMANDS ANALYSIS

JOB CLASSIFICATION: Bridge Worker
DEPARTMENT: Sonoma County Public Infrastructure
PHYSICAL DEMAND STRENGTH RATING: Heavy

DATE COMPLETED: March 2024
DIVISION: Roads

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.
While performing the following duties, employees frequently work outdoors in all types of terrain, vegetation, and weather conditions, performing duties in both daylight and dark/dim conditions, and work on public roadways close to moving traffic, equipment, and machinery.						
Requires working long and irregular hours, including nights, weekends, and holidays as needed to maintain public infrastructure, including response and recovery phases of emergency situations (e.g. storms, accidents, fires, earthquake, flood, etc.).	1	O			E	

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Constructs, repairs, and maintains bridges, bridge footings and abutments, concrete culverts, sidewalks, curbs, gutters, etc. including: constructs wood and metal forms; places and ties reinforcing bars; pours and finishes concrete; welds, grinds, and paints steel; drills bolt holes; performs scale removal, abrasive blasting, rivet busting, torch and saw cutting; works at heights up to 150 feet while suspended or on scaffolding.	2	O	Commercial trucks, trailers, and other heavy equipment, various hand tools, both power and manual; culverts, rebar, vibro plate, Personal Protective Equipment	CA Class A Driver's License w/Tanker Endorsement (Within first 6 months), Crane Operator's Certification (Desired after probation)/ confined space, trench awareness Welding Certification issued by the American Welding Society (Desired after probation)	E	
Constructs and maintains sack walls and rip rap including: lifts, carries over steep, slippery, uneven terrain, and sets rocks and sandbags weighing up to 35 - 80 pounds.	3	O	Commercial Truck, and other heavy equipment, sand bags, rocks (rip rap), shovel	CA Class A Driver's License w/Tanker Endorsement, Crane Operator's Certification	E	
Constructs and repairs guard rails including: lifts, carries over steep, slippery, uneven terrain, and sets guard rails and posts weighing up to 100 pounds.	4	O	Guard rails, posts, , Backhoe, Excavator, various hand tools, both power and manual		E	
Reads and follows blue prints for assigned projects.	5	O			E	
Performs traffic control/safety duties including; stands for long periods of time while remaining alert and holding flag at shoulder level; sets up and removes barricades and road signs weighing approximately 35 pounds.	6	F	Sign, Barricades, Truck	Flagger Certification	E	
Drives commercial and non-commercial vehicles to and from job sites and other offsite locations, including rugged, remote, and off road locations; drives pilot vehicle.	7	F	Pickup truck; commercial vehicles	CA Class A Driver's License w/Tanker Endorsement	E	
Operates heavy equipment including: sits for long periods of time; climbs up and down to enter and exit equipment; reaches forward, down, and across to operate controls; monitors and remains alert to verbal and visual signs from workers, and to equipment instrument and gauges to detect malfunctions and problems.	8	C	Heavy equipment	Crane Operator Certification	E	
Loads heavy equipment onto trailer, secures, transports and unloads heavy equipment.	9	O	Commercial vehicles, trailers, and other heavy equipment	CA Class A Driver's License w/Tanker Endorsement	E	
Inspects vehicles, machines, equipment and tools and reports	10	O	iPad	CA Class A Driver's License	E	

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damage, wear, required repairs and maintenance, and need for replacement; completes and submits inspection reports; takes photos; enters data into electronic database.						
Communicates by phone, email, or in person with other departmental staff and members of the public to coordinate activities, answer questions, respond to complaints, and provide information; maintains a calm and professional manner while dealing with hostile or verbally abusive members of the public.	11	O	Computer, phone	CA Driver' License	E	
Participates in continuous training to maintain required licenses and certifications and to maintain and enhance knowledge and skills necessary to perform assigned duties.	12	O	Computer		E	
Cleans, unclogs, and maintains manholes, catch basins, storm drains, culverts, and ditches including: digs trenches; lifts, carries and places culverts and other materials weighing up to 100 pounds; works below ground and in tight/confined spaces; lifts and removes manhole/drain covers weighing up to 100 pounds.	13	O	Potato Fork, Shovel, Rake, Grate Inlet, Pry Bar, Chainsaw, Manhole/Drain cover		E	
Prunes and trims trees and shrubs; clears brush; works suspended above ground at heights up to 20 feet.	14	F	Chainsaw, Pole Saw Pruning Shears, Rake, Manlift	Crane Certification for man basket	E	
Installs erosion/sediment control devices including; loads, unloads, lifts, carries over steep, slippery, uneven terrain, and sets straw barriers and sand bags weighing up to 35 pounds.	15	O	Straw Bales and Wattles, Sand Bags		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	5,7,8,11,12	O			
2 Walking	1-4, 6,9,11,13,14,15	F			
3 Running	N/A	N			
4 Standing	1-4, 6,9,11,13,14,15	F			
5 Bending-Neck	2-15	F			
6 Bending-Waist	2-15	O			
7 Squatting	2-4,10,13,15	O			
8 Climbing (ladders, pile driving leads, on steel girders)	2-4,7,8, 13-15	O			
9 Kneeling	2-4,13,15	O			
10 Crawling (welding under a viaduct and in tight spaces)	2,13,15	O			
11 Twisting (neck)	2-15	F			
12 Twisting (waist) (during carpentry work, demolition of old viaducts)	2-15	O			
13 Repetitive Hand Use (using computer)	8,10	F			
14 Simple Grasping-Right Hand (while driving)	5,7,10	F			
15 Simple Grasping-Left Hand (while driving)	5,7,10	F			
16 Power Grasping-Right Hand (tightening steel bolts, using power tools)	2-4,6,8,9,15	F			
17 Power Grasping-Left Hand (tightening steel bolts, using power tools)	2-4,6,8,9,15	F			
18 Fine Manipulation-Right Hand (nailing or screwing materials together, computer work)	2,10	O			
19 Fine Manipulation-Left Hand (nailing or screwing materials together, computer work)	2,10	O			
20 Pushing and Pulling (right hand) (Using power tools, guiding steel members into place)	2-4,8	F			
21 Pushing and Pulling (left hand) (Using power tools, guiding steel members into place)	2-4,8	F			
22 Reaching (above shoulder level) (Setting steel carpentry, work on pile walls and viaducts)	2,13,14	O			
23 Reaching (below shoulder level)	2-4,6-8	F			
24 Lifting-up to 10 lbs.	2,3,5,6,9	C			
25 Lifting-11-25 lbs.	2,3,6,9,15	C			
26 Lifting-26-50 lbs.	2,3,4,6,9,15	C			
27 Lifting 51-75 lbs. (e.g. wooden/steel posts)	2,3,4,13	C			
28 Lifting 76-100 lbs. (e.g. guard rails, jack hammer, bags of sand or cement)	2,3,4,13	O			
29 Lifting 100 + lbs. (Team lift required)	N/A	N			
30 Carrying 0-10 lbs.	2-15	F			
31 Carrying 11-25 lbs.	2,3,6,15	F			
32 Carrying 26-50 lbs.	2,3,6,15	O			
33 Carrying 51-75 lbs. (e.g. wooden/steel posts)	2,4	O			
34 Carrying 76-100 lbs. (e.g. guard rails, jack hammer, bags of sand or cement)	2,4	O			

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	2-15	C			
2 Functional color vision, normal or corrected	N/A				
3 Functional night vision, normal or corrected	2-4,6,8	O			
4 Functional hearing, normal or corrected	2-15	C			
5 A sense of smell or taste	N/A				

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	F			
2 Follow Written Instructions	F			
3 Required to sustain concentration	C			

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	F			
2 Organize own work	O			
3 Able to ask questions or request assistance when needed	C			
4 Required to make decisions independently	O			
5 Required to train and/or lead other staff	O			
6 Required to direct other staff (e.g. planning, goal setting, performance)	N			

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	O			
2 Meet time sensitive deadlines	O			
3 Long and/or irregular hours	O			
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	F			
3 Work requires precise attention to detail	F			
4 Use of judgment in routine matters	O			
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	F			
3 Interactions exceed giving/receiving information (e.g., advises, persuades, justifies)	O			
4 Interactions occur under circumstances of emotional stress	O			
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	O			
2 Work Outside	C			
3 Extreme Heat (above 100 degrees)	O			
4 Extreme Cold (below 32 degrees)	O			
5 Excessive Noise (must raise voice to be heard)	F			
6 Vibration (e.g., jack hammer, hammer drill, chainsaw, etc.)	F			
7 Dust, Vapors, Fumes, Smoke	F			
8 Silica, asbestos, etc.	O			
9 Solvents (e.g., gas, turpentine, etc.)	N			
10 Grease, oils	F			
11 Acidic, Caustic Solutions	O			
12 Pesticides	O			
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.)	F			
21 Insect Bites (e.g., ticks, mosquitos, spiders, etc.)	F			
22 Biomedical Waste	N			
23 Ionizing Radiation	N			
24 Non-Ionizing Radiation	N			
25 Electrical Energy	O			
26 Walking on uneven, slippery, or rough surfaces	C			
27 Proximity to moving mechanical parts (e.g., equipment, machinery)	F			
28 Proximity to moving vehicles or objects	C			
29 Heights (e.g., rooftop, ladders, scaffolding, etc.)	F			
30 Contact with water, other liquids, humid conditions - not weather related	O			
31 Work Below Ground: (e.g., excavation, trench, etc.)	O			
32 Potential exposure to airborne infectious diseases (e.g. clinics, labs, corrections)	N			
33 Operates non-commercial motor vehicles (cars, trucks)	O			
34 Operates commercial vehicles – CDL Class A Tanker Endorsements	F			
35 Operates passenger van to transport clients, inmates, etc.	N			
36 Pulls non-commercial trailers or equipment	N			
37 Operates heavy equipment	O			
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	X	X	Annual
2 DOT Commercial Driver Drug and Alcohol Screening	X	X	Random
3 DOT Commercial Driver Physical Exam		X	Bi-Annual
4 Respirator Physical Exam	X	X	Annual
5 Respirator Questionnaire – Short			
6 Respirator Questionnaire – Standard	X	X	Annual
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.



Metal Posts- typical = 54 lbs.



Guard Rails- typical = 91 lbs.



Wood Posts- typical = 70 lbs.



Reinforcing Steel (REB)



Flat Rack