

Job Task Analysis

Employer:	Stanislaus County
Occupation:	Road Supervisor
Company Contact:	Risk Management 1010 10 th Street Modesto, California 95354 (209) 525-5770
Date:	February 2010; Updated May 2019
Analysis Provided By:	Lyle Andersen, PT, CWCE Andersen Physical Therapy, Inc. 1917 Coffee Road Modesto, California 95355 (209) 549-4626

INTRODUCTION:

A complete job description is available through Stanislaus County Human Resources. The environmental factors, physical and functional demands for this Job Task Analysis were documented by Andersen Physical Therapy, Inc. The methodology for documentation consisted of on-site visits, using various measuring devices such as dynamometers and scales, as well as observation and interviews with employees and managers. A detailed record was made of the physical and functional demands of the job in terms of force pounds, weight, frequency, height, distance, anthropometric measurements, stamina, and degrees of range of motion. The determination of the frequencies of functional activities is based on standards provided by the National Institute for Occupational Safety and Health (NIOSH) and the Work Practice Guide for Manual Lifting (U.S. Department of Commerce, National Technical Information Service).

The Job Task Analysis is organized as follows: General work description; safety requirements; equipment; environmental factors; and physical/functional demands.

GENERAL WORK DESCRIPTION:

The frequency of the following activities may vary according to the physical requirements of the specific job tasks that the employee may be required to perform at random intervals.

Under the general supervision of the department manager, the Road Supervisor, plans, assigns and supervises the work of a crew that maintains roads, related structures and traffic control devices within road right-of-way as assigned.

SPECIFIC DUTIES: Available through the Human Resources Department at the County of Stanislaus.

<https://www.governmentjobs.com/careers/stanislaus/classspecs>

Safety Requirements: All employees are required to observe company safety procedures and standards to insure individual and collective safety, in addition to avoiding unnecessary risk to oneself, co-workers, customers, and property.

Equipment:

- | | |
|--------------------------|-----------------------|
| 1. 10-key adding machine | 6. Drafting equipment |
| 2. 2-way radio | 7. Hammer |
| 3. Barricade | 8. Traffic cone |
| 4. Cell phone | 9. Traffic sign |
| 5. Computer | |

*All employees within the **Road Supervisor** position are required to provide physical assistance for all weight and frequency requirement needs of all job tasks in order to maintain a safe work environment. Employees must be physically capable of working in any of the job tasks within the **Road Supervisor** position.*

ENVIRONMENTAL FACTORS



The following percentages are given in terms of an eight-hour workday:

Seldom =	1% - 2%	Frequent =	34% - 66%
Occasional =	3% - 33%	Constant =	67% - 100%

ENVIRONMENTAL FACTORS		MAXIMUM FREQUENCY
1.	Unprotected heights:	Not Applicable
2.	Being around moving machinery:..... Road traffic, earth moving equipment	Occasional
3.	Exposure to marked changes in temperature and humidity: outside temperatures may seasonally vary between 28-110 degrees.	Seldom
4.	Exposure to dust, fumes, smoke, gases, or other irritating substances (specify): Field or road dust. <i>Respiratory protection available.</i>	Seldom
5.	Driving: truck..... Heavy equipment. Seldom	Occasional
6.	Exposure to excessive noise:..... <i>Hearing protection is available</i>	Seldom
7.	Exposure to radiant or electrical energy:.....	Not Applicable
8.	Exposure to solvents or chemicals:..... <i>Refer to MSDS document.</i>	Not Applicable
9.	Exposure to slippery or uneven walking surfaces:..... Underdeveloped ground, hillside, water, ice	Occasional
10.	Working below ground:.....	Not Applicable
11.	Unusual fatigue factors:	Not Applicable
12.	Working with explosives:.....	Not Applicable
13.	Excessive vibration:	Not Applicable
14.	Working with hands in water or other substance:..... <i>Hand protection is available</i>	Not Applicable
15.	Working proximity:.....	Alone: Frequent Closely with others: Frequent
16.	Working inside:.....	Frequent
17.	Working outside:.....	Frequent

FUNCTIONAL ACTIVITIES



The frequency of the following activities may vary according to the physical requirements of the specific job tasks the employee may be required to perform at random intervals.

PHYSICAL AND FUNCTIONAL REQUIREMENTS

<u>FREQUENCY DEFINITIONS</u>	<u>SELDOM</u>	<u>OCCASIONAL</u>	<u>FREQUENT</u>	<u>CONSTANT</u>
Percent of the Day	1-2%	3-33%	34-66%	67-100%
Material Handling	1-4 Reps	5-32 Reps	33-250 Reps	251-2,000 Reps
Non Material Handling	1-4 Reps	5-32 Reps	33-250 Reps	251-2,000 Reps
Repetitive & Static Work	1-50 Reps	51-250 Reps	251-1,000 Reps	1,001-20,000 Reps

1.) **PUSH**: *Pushing activities may require use of the back in conjunction with leg and arm musculature.*

<u>MAXIMUM REQUIREMENT</u>	
0-10 pounds:	Occasional
11-25 pounds:	Seldom
26-100 pounds:	Not Required
Maximum Force: 25 Pounds	

Assistive Devices: 4-Wheeled Cart, Hand Truck. Additionally, one-person assistance is available with forces greater than 25 pounds.

Comments: Pushing is utilized with activities such as retrieving, returning, storing, adjusting, moving, and/or transporting equipment, and supplies (e.g. closures). The employee exerts up to 25 pounds of force in a horizontal plane from waist to shoulder height of a distance up to 10 feet when performing job tasks (e.g. up to 25 pounds of force to open/close doors, gates, drawers, files, cabinets).

2.) **PULL**: *Pulling activities may require use of the back in conjunction with leg and arm musculature.*

<u>MAXIMUM REQUIREMENT</u>	
0-10 pounds:	Occasional
11-25 pounds:	Seldom
26-100 pounds:	Not Required
Maximum Force: 25 Pounds	

Assistive Devices: 4-Wheeled Cart, Hand Truck. Additionally, one-person assistance is available with forces greater than 25 pounds.

Comments: Pulling is utilized with activities such as retrieving, returning, storing, adjusting, moving, and/or transporting equipment, and supplies (e.g. closures). The employee exerts up to 25 pounds of force in a horizontal plane from waist to shoulder height of a distance up to 10 feet when performing job tasks (e.g. up to 25 pounds of force to open/close doors, gates, drawers, files, cabinets). *Pushing is the preferred method of moving carts.*

3.) **STAND-UP LIFT:** *Lifting weighted objects between floor and waist height.*

MAXIMUM REQUIREMENT

0-10 pounds:	Seldom		
11-25 pounds:	Seldom		
26-100 pounds:	Not Required	Maximum Force:	<u>25</u> Pounds

Assistive Devices: Forklift. Additionally, one or more person(s) assistance is available with weights greater than 25 pounds.

Comments: A stand-up lift is utilized with activities such as retrieving, returning, storing, adjusting, moving, and/or transporting equipment and supplies (e.g. road hazardous sign, tool). The employee lifts items weighing between <1 pound and 25 pounds off the floor when performing job tasks (e.g. up to 25-pound barricade in/out of truck; 5-pound cone; road debris). *Safe lifting is performed by utilizing a posture of partial squatting and a straight back.*

4.) **LEVEL LIFT:** *Lifting weighted objects from between waist and chest height level for a maximum horizontal distance of up to four feet.*

MAXIMUM REQUIREMENT

0-10 pounds:	Occasional		
11-25 pounds:	Seldom		
26-100 pounds:	Not Required	Maximum Force:	<u>25</u> Pounds

Assistive Devices: Forklift, 4-Wheeled cart, hand truck. Additionally, one-person assistance is available with weights greater than 25 pounds.

Comments: A level lift is utilized with activities such as retrieving, returning, storing, adjusting, moving, and/or transporting equipment and supplies (e.g. road hazardous sign, tool, documents). The employee lifts items weighing between <1 pound and 25 pounds when performing job tasks (e.g. up to 25-pound barricade in/out of truck; 5-pound cone; road debris; binders, books, lap top computer, paper, documents).

5.) **WEIGHT CARRY:** *Carrying weighted objects between waist and chest height beyond a distance of four feet.*

MAXIMUM REQUIREMENT

0-10 pounds:	Occasional		
11-25 pounds:	Seldom		
26-100 pounds:	Not Required	Maximum Force:	<u>25</u> Pounds

Assistive Devices: Forklift, 4-wheeled cart, hand truck, truck. Additionally, one-person assistance is available with weights greater than 25 pounds.

Comments: Weight carry is utilized with activities such as retrieving, returning, storing, adjusting, moving, and/or transporting equipment and supplies (e.g. road hazardous sign, tool, document). The employee carries items weighing between <1 pound and 25 pounds between 5 feet and 50+ feet when performing job tasks (e.g. up to 25-pound barricade; 5-pound cone; road debris; binders, books, lap top computer, paper, documents).

6.) **OVERHEAD LIFT/PULL DOWN:** *Lifting weighted object from/to chest and overhead height level.***MAXIMUM REQUIREMENT****0-100 pounds:** Not Required **Maximum Force:** 0 Pounds

Assistive Devices: A vertical ladder, step ladder or step stool is available to bring items to eye or shoulder level.

Comments: Overhead lift/pull down is not utilized to perform job tasks. *Variables to overhead reaching will be the employee's height and anthropometric reach.*

7.) **OVERHEAD REACH:****MAXIMUM
FREQUENCY:** Not Required

Comments: Overhead reach is not required to perform job tests. *A ladder (appropriate height) or step stool may be utilized to bring items to eye or shoulder level. Variables to overhead reaching will be the employee's height and anthropometric reach.*

8.) **FORWARD REACH:****MAXIMUM
FREQUENCY:** Frequent

Comments: Forward reach is performed to a distance of 28 inches when retrieving, returning, storing, adjusting, moving, and/or transporting equipment, and supplies (e.g. desktop work; operate equipment, vehicle, business machine; set up road hazardous warning signs and cones; worksite evaluation). *The degree of elbow extension required for reaching will vary according to the employee's anthropometric reach.*

9.) **STOOP:****MAXIMUM
FREQUENCY:** Seldom

Comments: Stooping is performed when retrieving, returning, storing, adjusting, moving, and/or transporting equipment and supplies (e.g. worksite evaluation; into/out of lower storage shelves and/or cabinets). *Variable to stooping will be the employee's height. Stooping of the head, trunk and knees can be minimized or avoided by substituting alternate positions of squatting, kneeling or bending when performing job tasks.*

10.) **SQUAT:** (Unloaded)

**MAXIMUM
FREQUENCY:** Not Required

Comments: Squatting is not required to perform job tasks. *Squatting may be minimized or avoided by substituting alternate positions of sitting, bending, half kneeling or kneeling. Partial squatting is a preferred lifting posture.*

11.) **FORWARD BEND:**

**MAXIMUM
FREQUENCY:** Seldom

Comments: Bending forward at the waist is performed when retrieving, returning, storing, adjusting, moving, and/or transporting equipment and supplies (e.g. worksite evaluation; into/out of lower storage shelves and/or cabinets). Maximum forward trunk flexion required is 60 degrees. *Employee may minimize or avoid excessive forward bending of the trunk up to 80 degrees by using alternate positions of bending at the hips, kneeling, half kneeling, stooping, sitting or squatting.*

12.) **TWIST:**

**MAXIMUM
FREQUENCY:** Occasional

Comments: Twisting at the waist is performed when retrieving, returning, storing, adjusting, moving, and/or transporting equipment and supplies (e.g. worksite evaluation; drive vehicle). *Twisting at the waist may be minimized by turning the whole body, including the feet and working from a swivel office chair.*

13.) **TURN:**

**MAXIMUM
FREQUENCY:** Occasional

Comments: Turning is performed when retrieving, returning, storing, adjusting, moving, and/or transporting equipment and supplies (e.g. worksite evaluation; reach into/out of tuck storage shelves and/or cabinets).

14.) **KNEEL:**

**MAXIMUM
FREQUENCY:** Not Required

Comments: Kneeling is not required to perform job tasks. *Kneeling may be minimized or avoided by substituting alternate positions of bending, squatting, or half kneeling.*

15.) **CRAWL:**

**MAXIMUM
FREQUENCY:** Not Required

Comments: Crawling is not required to perform job tasks.

16.) **STAIR CLIMB:**

**MAXIMUM
FREQUENCY:** Not Required

Comments: Stair climb is not required in order to perform job tasks. Maximum number of 21 steps is climbed.

17.) **LADDER CLIMB:**

**MAXIMUM
FREQUENCY:** Not Required

Comments: Ladder climbing is not required to perform job tasks. *Variables to overhead climbing will vary according to the employee's height and anthropometric reach.*

18.) **WALK:**

**MAXIMUM
FREQUENCY:** Occasional

Comments: Walking is performed when retrieving, returning, storing, adjusting, moving, and/or transporting equipment and supplies (e.g. worksite evaluation; work crew supervision; to/from office; to/from collaborating agency and/or colleague). Walking length varies between 3 feet and 600+ feet depending on job task.

19.) **SIT:**

**MAXIMUM
FREQUENCY:** Constant

Comments: Sitting is performed for a maximum of 120-minute intervals when performing job tasks (e.g. desk work; drive vehicle; operate equipment).

20.) **STAND:** *(Static)*

**MAXIMUM
FREQUENCY:** Occasional

Comments: Static standing is performed for a maximum of 60-minute intervals when performing job tasks (e.g. meetings or interviews with public, collaborating agency and/or colleague; evaluation of worksite; work crew supervision).

21.) **BALANCE:**

**MAXIMUM
FREQUENCY:** Frequent

Comments: Adequate balance is required for safe walking, standing, reaching and lifting.

22.) **HAND/FOOT CONTROL:**

<u>MAXIMUM REQUIREMENT</u>	
HAND:	
Right:	Occasional
Left:	Occasional
Both:	Occasional
Either:	Not Required
FOOT:	
Right:	Occasional
Left:	Seldom
Both:	Not Required
Either:	Not Required

Comments: Hand controls are utilized to operate equipment (e.g. vehicle) when adjusting controls (e.g. drive vehicle). Foot controls are utilized to operate equipment (e.g. vehicle; heavy equipment).

23.) **UPPER AND LOWER EXTREMITY COORDINATION:**

<u>MAXIMUM REQUIREMENT</u>	
Simple Grasp:	Frequent
Firm Grasp:	Seldom
Fine Manipulation:	Occasional
Eye/Hand Coordination:	Frequent
Hand/Foot Coordination:	Occasional

Comments: Grasping and coordination activities are performed when retrieving, returning, storing, adjusting, moving, and/or transporting equipment and supplies (e.g. desktop work; drive vehicle).

Simple grasping is utilized to perform job tasks (e.g. lift and manipulate objects weighing less than 5 pounds).

Firm grasping is utilized to perform job tasks (e.g. lift and handle objects weighing 5 pounds or greater).

Fine manipulation is utilized to perform job tasks (e.g. keyboard, mouse, 10-key, telephone, 2-way radio; handwrite, draw, page turn, sort, file).

Eye/hand coordination is utilized to perform job tasks (e.g. keyboard, mouse, 10-key, telephone, 2-way radio; handwrite, draw, page turn, sort, file; drive vehicle, operate heavy equipment).

Hand/foot coordination is utilized to perform job tasks (e.g. drive vehicle; operate heavy equipment).

Depending on individual hand dominance, one hand may be used more frequently than the other when performing job tasks.

24.) **CERVICAL (NECK) MOVEMENT:**

	<u>MAXIMUM REQUIREMENT</u>
Static Neutral Position:	Frequent
Flexing:	Frequent
Rotating:	Frequent
Extending:	Seldom

Comments: Neck movement is required when performing job tasks (e.g. desk work; worksite evaluation; drive vehicle; operate heavy equipment). *Participation in the observation of the work environment allows for safe working conditions. Full cervical range of motion is required to safely perform the job tasks.*

{End of Report}



Stanislaus County

JOB TASK ANALYSIS SUMMARY

<u>FREQUENCY DEFINITIONS</u>	<u>SELDOM</u>	<u>OCCASIONAL</u>	<u>FREQUENT</u>	<u>CONSTANT</u>
Percent of the Day	1-2%	3-33%	34-66%	67-100%
Material Handling	1-4 Reps	5-32 Reps	33-250 Reps	251-2,000 Reps
Non Material Handling	1-4 Reps	5-32 Reps	33-250 Reps	251-2,000 Reps
Repetitive & Static Work	1-50 Reps	51-250 Reps	251-1,000 Reps	1,001-20,000 Reps

The following is a summary of the physical demands of the Job Task Analysis that were obtained for the position of:

ROAD SUPERVISOR

Functional Activities	Maximum Requirements	Functional Activities	Maximum Requirements
<i>Push (Force)</i> ¹	25 pounds	<i>Stair Climb</i>	Not Required
<i>Pull (Force)</i> ¹	25 pounds	<i>Ladder Climb</i>	Not Required
<i>Stand Up Lift</i> ¹	25 pounds	<i>Walk</i> ¹	Occasional
<i>Level Lift</i> ¹	25 pounds	<i>Sit</i> ¹	Constant
<i>Weight Carry</i> ¹	25 pounds	<i>Stand (Static)</i> ¹	Occasional
<i>Overhead Lift/Pull Down</i>	0 pounds	<i>Balance</i> ¹	Frequent
<i>Overhead Reach</i>	Not Required	<i>Hand Control</i> ¹	Occasional
<i>Forward Reach</i> ¹	Frequent	<i>Foot Control</i> ¹	Occasional
<i>Stoop</i> ¹	Seldom	<i>Simple Grasp</i> ¹	Frequent
<i>Squat (Unloaded)</i>	Not Required	<i>Firm Grasp</i> ¹	Seldom
<i>Forward Bend</i> ¹	Seldom	<i>Fine Manipulation</i> ¹	Occasional
<i>Twist</i> ¹	Occasional	<i>Eye/Hand Coordination</i> ¹	Frequent
<i>Turn</i> ¹	Occasional	<i>Hand/Foot Coordination</i> ¹	Occasional
<i>Kneel</i>	Not Required	<i>Cervical (neck) Movement</i> ¹	Frequent
<i>Crawl</i>	Not Required		

¹ The critical demands of the job.


Lyle Andersen, PT

 Lyle Andersen, PT, CWCE
 Preparer Signature

Date: _____

 Contact Person
 Title

Date: _____

 _____
 Contact Person
 Title

Date: 10/3/19

Road Superintendent
 Contact Person
 Title

Date: 10/3/19

LA/gm