DA 281-2 (Special)
Rev. 1-97 (KDOT)

State of Kansas Department of Administration
DIVISION OF PERSONNEL SERVICES

Position Description

Read each heading carefully before proceeding. Make statements simple, brief, and complete. Be certain the form is signed. Send the original to KDOT Bureau of Personnel Services.

CHECK ONE: ☐ NEW POSITION x EXISTING POSITION

Agency #

Position

PART I - Position Information

1. Agency Name KS Dept. of Transportation	9. Position Number 00-09-20-802 / K0237990	10. Budget Program Number 70
2. Employee Name (leave blank if position vacant)	11. Present Civil Service Title / FLSA code (if existing position) Unclassified Engineering Associate / Non- Exempt	
3. Division Operations	12. Proposed Civil Service Title	
4. Section Bureau of Research	**For use by Personnel Office**	
5. Unit Research	13. (a) Allocation	(b) FLSA code
6. Location (address where employee works) City Topeka County Shawnee	14. Effective Date	
7. (Check appropriate items) Full time X RegularX 100% Part time Temp	15. By Approved 16. Audit Date: By: Date: By:	
8. Regular hours work: (check appropriate time) FROM: 7:30 AM TO: 4:30 PM	17. Position Review Date: By: Date: By:	

PART II -- Organizational Information

18. (a) Briefly describe why this position exists. (What is the purpose, goal or mission of this position?) (b) **If this is a request to reallocate a position,** briefly describe the reorganization, reassignment of work, new function added by law or other factors which change the duties and responsibilities of the position. **This position exists to assist the Research Operations Engineer on research development activities and projects. Assists in studies to test ideas, concepts, testing procedures, new products and new construction procedures. This position will back up other engineers in Research as needed to ensure proper oversite and completion of a variety of projects.**

19. Who is the supervisor of the position? (Who assigns work, conducts performance reviews, gives directions, answers questions and is directly in charge?)

Name	**Civil Service Title**	**KDOT/SHARP Position Number**
Daniel L. Wadley	Professional Civil Engineer I	00-09-10-801/K0228366

20. a) How much latitude is allowed the employee in completing the work? b) What kinds of instructions, methods and guidelines are given to the employee in this position to help do the work? c) State how and in what detail work assignments are made.

a The employee in this position will be given general instructions, written or verbal to complete a task or oversee a project. As experience is gained the individual will perform self-assumed tasks in the state's best interest, thus there is a very limited control exerted on this position. Work will be reviewed for results and conformance to policy and accepted practice.

b. Instructions, methods or guidelines are provided as deemed necessary for each task or project. As experience is gained oversite will be reduced.

c. Problems are assigned in general terms with some detailed steps being given.

(d) Check the statement which best describes the results of error in action or decision of the employee:

( ) Minimal property damage, minor injury and/or minor disruption of the flow of work.
(x) Moderate loss of time, injury, damage and/or adverse impact on health and welfare of others.
( ) Major program failure, major property loss and/or serious injury.
( ) Loss of life and/or disruption of operations of a major agency.

Give examples

The person in this position has responsible control of personnel to correctly utilize traffic control devices used in a test site to avoid accidents and loss of personnel or equipment.

The person will train and instruct the personnel in the proper use of some equipment and demonstrate correct procedures to prevent injuries and expedite completion of needed work programs.

This person must be able to identify potentially critical or unusual problems involved with any task, and determine a solution or know where to secure guidance for problems outside their expertise. Improper application of research could result in expensive premature failure.

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21. Describe the work of this position using this page or one additional page only. Use the following format for describing job duties:
What is the action being done (use an action verb)? To **whom** or **what** is the action directed (object of action)? **Why** is the action being done (describe the expected result or outcome)? ***How** is the action being done (describe the manner, methods, techniques or procedures by which the task is currently performed). For each task state: Who reviews it? How often? What is it reviewed for? Number each task, indicate percent of time and identify each function as essential or marginal by placing an E or M next to the % of time for each task. Essential Functions are the primary job duties for which the position was created (see 18a) and that an employee must be able to perform, with or without reasonable accommodation. A marginal function is a peripheral, incidental or minimal part of the position.

It is expected that the person in this position will provide effective leadership to their assigned work unit. This includes such things as leading by example, effective training, coaching, and providing employee development opportunities.

No.	%	E/M	
1	20%	E	Serves as assistant to the Research Operations Engineer. Under direction leads field crews conducting surveys to gather data for projects and reports. Leads lab crews in performing a variety of testing on a variety of materials. The Research Development Engineer performs a wide variety of duties in various phases of research, development, and implementation. Employee will assist on federally and state funded development and implementation projects..
2	20%	E	Assists in the development and implementation research investigations which are designed to provide cost effective improvements in maintenance, materials, and construction methods and products. This requires the oversite of test programs and may include the conception, and oversite of the fabrication of new equipment or hardware not otherwise available to facilitate the investigation and potential implementation. This duty area will often be coordinated with other research sections.
3	20%	E	Investigate and analyze published research reports and related information and data to determine potential applications suitable for implementation at Kansas DOT to meet Construction, Maintenance and Materials needs. Provide technical assistance with specifications and field projecst during construction of transportation facilities. These assignments will be done after short notification and will be throughout Kansas.
4	15%	E	Directs technicians and/or other Kansas DOT personnel in the activities required to complete the objectives of the Bureau. This may involve assisting in (a) drawing, fabrication, and testing of new test equipment or hardware, (b) instructions towards demonstration of field implementable procedures, and/or (c) the conduct of laboratory test procedures not of a standard nature and requiring guidance for gathering data.
5.	15%	E	Write, edit and issue formal or informal reports, letters, memos, specifications and other documents to the appropriate Kansas DOT Bureaus. Presentations are made as needed..
6.	10%	M	Other duties and activities as assigned on an as needed basis.
		E	Must be able to perform the essential physical requirements as shown in Section 28.

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* The description of how the work is to be performed does not preclude the consideration of reasonable accommodations for qualified persons with disabilities.

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22. a) If work involves leadership, supervisory, or management responsibilities, check the statement which best describes the position.
(X) Lead worker assigns, trains, schedules, oversees, or reviews work of others.
( ) Plans, staffs, evaluates, and directs work of employees of a work unit.
( ) Delegates authority to carry out work of a unit to subordinate supervisors or managers.

b) List the titles and position numbers of all persons who are supervised directly by the employee on this position.

Civil Service Title **KDOT / SHARP Position Numbers**

23. For what purpose, with whom and how frequently are contacts made with the public, other employees or officials?

Frequent contacts are made with the public, University Faculty, Contractors, industry representatives, and other KDOT employees. These contacts may involve formal presentations on new or more efficient materials or procedures or informal discussions to evaluate and solve problems and administration of university research studies.

24. What hazards, risks or discomforts exist in the job or work environment?

( ) Frequent exposure to extreme cold/heat wet/humid conditions.
(x) Exposure to mechanical parts such as but not limited to, muffler, exhaust pipes, and other radiant energy equipment.
(x) Exposure to noise, vibrations, fumes, odors, gases, dust and/or poor ventilation.
(x) Works in traffic.
( ) Other:

All weather and environmental hazards. Exposure to all construction hazards at any time during construction. This will include evaluation of construction failures such as bridges collapses that involve additional risk.

Exposure to toxic organic and inorganic chemicals as industrial adhesives, solvents, etc., may be used for some research investigations or services. Compressors, core drills, generators and other equipment are used during many field investigations. Compression machines and electrical equipment are used for laboratory investigations.

Traffic is a constant hazard when working in the field.

25. List machines or equipment used regularly in the work of this position. Indicate the frequency with which they are used

Generators, compressors, epoxy injection pumps, heavy drills - trailer mounted, electric drills, core drills, saws, compactors,
Rapid Chloride Permeability, high temperature ovens, sub-zero freezers, trucks, autos and other equipment; time used and frequency as required for the individual study.
Computers and calculators will be used daily.

PART III -- Education, Experience and Physical Requirements

26. **REQUIRED CLASS SKILLS** (see class specifications)

Must possess the following:

- Engineer in Training Certificate
- Four year Engineering degree from ABET accredited college.

27. **SPECIAL REQUIREMENTS**

a) Indicate any license, registration, certification, etc. required for this position:

( ) Professional Civil Engineer License
(X) Engineer in Training Certificate
( ) Survey License
( ) CDL - Employee must attain a Commercial Drivers License with required endorsements or options within 60 days of hire, and maintain it, unless the time is extended by the District Engineer in accordance with SOM 2.1.9. **(This statement is for Equipment Operator positions.)**
( ) CDL - Employee must attain a Commercial Drivers License with required endorsements or options within 60 days of hire and maintain it unless the time is extended or the employee is exempted by the District Engineer, Bureau Chief, or Division Director in accordance with SOM 2.1.9. **(This statement is for CDL positions other than Equipment Operators.)**
(x) Other Kansas Drivers License

b) List preferred education or experience that may be used to screen applicants.

1. Knowledge of research and development methods and procedures.
2. Good Communication and skills in developing effective working relationship with others.
3. Knowledge of various sources of technical information.
4. Interest in research.

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28. **ESSENTIAL PHYSICAL FUNCTIONS/DUTIES** – duties that are fundamental to the position based on the function and the results to be achieved, rather than the manner in which they are being performed. Duties that are directly related to the reason the position exists and cannot be reassigned without changing the nature of the position. **All job duty physical demands are essential physical functions of this position and the employee must be able to perform them**.

Definition of Frequency:

Occasional = 1-33% (1 – 100 reps) **Frequent = 34-66% (101 – 500 reps)** **Continuous = 67 – 100% (500+ reps)**

Job Duty	Job Duty Physical Demands/Comments	Weight/ Force	Frequency
Test Concrete	Stand – To text mixture at standing work station.	N/A	Occasional
	Forward Bend Stand - To roll Rolla-meter on 37" table or on the ground for 1 minute per mixture.	N/A	Occasional
	Forward Bend/Crouch/ or Kneel – Up to 2 ½ minutes; to fill the slump.	N/A	Occasional
	Floor – Shoulder Lift – From floor to shoulder height; to shake Rolla-meter (20" 1x8" diameter) w/mixture.	38 lbs.	Occasional
	One-handed lift – From 12" to 39" height, to remove cylinder (**6**"x4") from water tank.	10 lbs.	Occasional
	Vertical Pull **100 lbs.** – 12" to knuckle height. To remove wheel barrow full of concrete outdoors on uneven terrain.**(Requires multiple loads, 50 lbs maximum per load or two person lift).**	**50** lbs.	Occasional
	12" – knuckle lift– 12" handle height – 5" height, to weigh **.25 cubic ft.** bucket of mixture on the scale, up to 3x/shift.	**45** lbs.	Occasional

Job Duty	Job Duty Physical Demands/Comments	Weight/ Force	Frequency
Test Aggregate and Soils	Stand – To test aggregate and soils at various testing areas.	N/A	Frequent
	Walk – To work various testing areas.	N/A	Occasional
	Sit - There are opportunities throughout the day to sit while waiting for tests to finish.	N/A	Occasional
	Floor – Knuckle Lift **100 lbs.** – From Floor to 32" height, to place bag of aggregate/soil from the ground to the tailgate. **(Requires multiple loads, 50 lbs. maximum per load or two person lift.).**	**50** lbs.	Occasional
	Other – Repetitive Upper Extremity use; Shaking sieve for sifting, , stirring soil for breakdown at 45" and 55" heights (work surfaces).	5 lbs	**Occasional**
	Carry - 15 feet, to transport pan of aggregate from fan area to the sieve/work station.	10 lbs.	Occasional

Job Duty	Job Duty Physical Demands/Comments	Weight/ Force	Frequency
Collect and Test Asphalt	Stand – To test asphalt.	N/A	Frequent
	Walk – To work various testing areas.	N/A	Occasional
	Sit – There are opportunities throughout the day to sit while waiting for tests to finish.	N/A	Occasional
	Knuckle to Shoulder Lift –Up to 48” height, to use various testing equipment such as breaking head, mixing bowl & materials, molds with samples, etc.	25 lbs.	Occasional
	12” to Knuckle lift – 8” to 31” height, to use the gyratory mold.	35 lbs.	Occasional
	One-handed lift – From 12” to 39” height, to remove cylinder (**6**”x 4”) from water tank.	10 lbs.	Occasional
	Horizontal lift – At 37” height, to use various testing equipment and materials such as gyratory mold w/ sample.	50 lbs.	Occasional
	12”to Waist Lift **80 lbs** – 12” to 33” high, to move cooler of asphalt from the ground onto the back of the pickup. **(Requires multiple loads, 40 lb maximum or two person lift).**	**40** lbs.	Occasional

Job Duty	Job Duty Physical Demands/Comments	Weight/ Force	Frequency
Collect Aggregate Samples	Sit – In pickup, to drive to various locations.	N/A	Frequent
	Stand – On uneven terrain, outdoors (including in extreme weather), to collect samples.	N/A	Frequent
	Forward Bend Stand - To collect samples from various levels.	N/A	Occasional
	Walk – On uneven terrain, outdoors (including in extreme weather), to access the samples.	N/A	Occasional
	Floor – Shoulder Lift - Floor- 54” height,, to collect crushed samples from conveyor into sample pan.	15 lbs.	Occasional
	Floor – Knuckle Lift - Floor- self-select height, to collect gradation and quality samples by running through the stream several times, (3-4 x/month). Then place in back of pickup at 33” height.	50 lbs.	Occasional
	Carry – Up to 50 feet, to bring bag of samples from conveyors to the vehicle.	50 lbs.	Occasional
	Floor – Knuckle Lift **80 lbs** - Floor- 33” height, to load bag**s** full of aggregate samples to/from the back of the pickup. **(Requires multiple loads, 50 lb maximum per bag).**	**50** lbs.	Occasional

Job Duty	Job Duty Physical Demands/Comments	Weight/ Force	Frequency
Test pavement density	Sit- In pickup, to drive to various locations.	N/A	Frequent
	Stand - Outdoors (including extreme weather), to test pavement density.	N/A	Frequent
	Walk - Outdoors (including extreme weather), to access various areas to be tested.	N/A	Occasional
	Floor – Knuckle Lift **80 lbs** - Floor to 33” height, to move the nuclear meter (and box) in/out of the back of the pickup. **(Requires a two person lift).**	**50** lbs.	Occasional
	Carry **80 lbs** – Up to 25 feet, to bring the nuclear meter (and box) to/from the pickup and test area. **(Requires a two person lift).**	**50** lbs.	Occasional

PART IV -- Signatures

Signature of Employee……Date…….

Signature of Personnel Official…… Date …….

Signature of Supervisor……Date

Signature of Appointing Authority…… Date