

**CITY OF GLENDALE**

<b>TITLE:</b>	<b>Senior Materials Technician</b>	<b>CLASS CODE:</b>	<b>743</b>
<b>REPORTS TO:</b>	<b>Construction Eng. Supervisor</b>	<b>GRADE:</b>	<b>25</b>
<b>DEPARTMENT:</b>	<b>Engineering</b>	<b>FLSA:</b>	<b>N</b>
<b>JOB SPECIFICATION DATE: October 5, 2006 kad</b>			

**JOB SUMMARY**

Plans, coordinates and supervises the activities and staff of the engineering materials testing laboratory, including testing, evaluating and documenting the quality, performance and acceptability of a variety of construction materials in the field and laboratory.

**ESSENTIAL FUNCTIONS**

1. Prioritizes, schedules, performs and documents field and laboratory testing to evaluate the acceptability of materials used on City construction projects within the City right of way.
2. Plans, coordinates, evaluates and supervises the activities and staff of the engineering materials testing laboratory.
3. Interprets engineering test methodologies in accordance with ASTM, AASHTO, MAG and ADOT as applicable.
4. Reviews and evaluates outside agency generated reports for specification compliance.
5. Monitors supplemental materials testing contracts.
6. Reviews and evaluates materials and prepares laboratory and field computations to obtain results. Maintains records of all testing performed in the field and laboratory.
7. Oversees and performs all AASTO, ASTM, MAG, and ADOT test methods as required by project specifications.
8. Performs in-place field density tests on soils, aggregates and asphaltic concrete using both sand cone and nuclear densometer; assists in establishing and monitoring asphaltic concrete rolling patterns to attain required in-place density.
9. Classifies soil and soil/aggregate combinations using ASTM and AASHTO guidelines.
10. Evaluates methods used in asphaltic concrete production and placement.
11. Resolves issues with contractors and consultants regarding specifications; delays construction until specifications are met.
12. Uses nuclear testing devices under Arizona Radiological Regulatory Agency guidelines.
13. Operates lab and field testing equipment.
14. Performs calibrations, maintenance, and minor repairs on lab and field testing equipment.
15. Performs research on differing types of materials and/or methods of performing tests.
16. Proposes specifications and/or changes to specifications.
17. Oversees maintenance of laboratory facility.
18. Attends meetings.
19. Develops materials testing budget and assists in presentation; monitors budget.
20. Trains other engineering personnel in materials testing.
21. Attends pre-construction meetings.
22. Acts as Radiation Safety Officer for Engineering department.

## **SECONDARY FUNCTIONS**

23. Performs other related duties as assigned.

## **KNOWLEDGE, SKILLS, ABILITIES**

### **Knowledge of:**

Civil engineering principles, terminology, and practices  
Acceptable materials used on construction projects  
Materials Inspection practices and procedures; modern testing methods and equipment  
ASTM, AASHTO, ADOT and MAG specifications and test procedures  
Properties, characteristics, strengths and weaknesses of materials, items or products used in construction  
Precautions for handling hazardous substances and wastes  
Acceptance tests on asphalt, bitumen, concrete, soils and manufactured aggregates

### **Ability to:**

Operate and maintain materials testing equipment  
Perform inspections and testing of methods and materials used in public works construction projects  
Communicate effectively verbally and in writing and by electronic methods  
Employ practical applications of mathematics  
Enter test results into an automated data base system, correct and recognize detrimental trends  
Establish and maintain effective working relationships with engineers, public officials, contractors, city staff and the public  
Lift heavy materials samples  
Operate asphalt coring equipment

## **WORKING CONDITIONS**

Works in field areas of heavy construction equipment, deep trenches, and traffic. Exposure to seasonal weather conditions, radioactivity, noise and hazardous substances. Lifting of heavy construction materials.

## **MINIMUM QUALIFICATIONS**

Associate's Degree in construction, engineering technology, materials testing or a related field and five years experience in engineering materials testing, including one year of supervisory experience.

Any equivalent combination of experience and training which provides the required knowledge, skills, and abilities is qualifying.

## **SPECIAL REQUIREMENTS**

Valid Arizona driver's license.  
Nuclear ARRA gauge certification.