

JOB DESCRIPTION
MARSHALL COUNTY, ALABAMA

STAFF ENGINEER - PE

JOB GRADE: 21

JOB CODE: 928

Department: Engineering
Reports To: County Engineer
Date: August 2015
FLSA: Exempt
DOT Ref: 005.061-014, 006.061-038

JOB DESCRIPTION

Assist in the county highway and bridge design, construction, and maintenance programs. Prepare highway and bridge plans, and drawings. Assist with or directs surveying projects. Draw and review drawings of plans. Prepare reports, specifications, plans, construction schedules, and designs for projects. Inspect construction sites to monitor progress and ensure conformance to engineering plans, specifications, and construction and safety standards. Assure that the county engineer is fully informed regarding the status of assigned projects.

ESSENTIAL JOB FUNCTIONS

- A. Perform technical and professional engineering work to facilitate the operation of the Engineering Department:
1. Leads work crews and employees to facilitate accomplishment of departmental objectives and goals.
 2. Assist in the coordination of road and bridge projects with county and state officials.
 3. Assist in preparing plans and specifications for proposed projects in accordance with state and federal guidelines.
 4. Coordinate line location with utility companies prior to plan preparation on roads and bridges.
 5. Close roads and bridges as necessary for safety or to make repairs, and assure that the public and other affected organizations are so informed.
 6. Advise county engineer on road matters and discuss road matters with citizens as requested.
- B. Act as project engineer for road and bridge projects:
1. Monitor projects to ensure that contractor constructs project according to specifications, to maintain diary of work completed, and to prepare cost estimates and submissions for payments.
 2. Conduct maintenance inspections of roads constructed with state and/or federal funds and inform county engineer of needed repairs.
 3. Perform material tests on construction projects when necessary, and coordinate tests with Alabama Department of Transportation personnel.
 4. Prepare records of finding at site visits and recommendations given to contractors or supervisors.
 5. Advise Commission on various road, bridge, drainage and safety issues including construction, design specifications, and cost estimates.

ESSENTIAL JOB FUNCTIONS (Continued)

6. Coordinate federal aid and state aid projects with ALDOT personnel and applicable reviewing agencies.
 7. Coordinate project activities with utility companies and emergency agencies.
 8. Direct district shops in fixing any road, bridge, drainage and safety issues.
 9. Inspect traffic control devices using the MUTCD.
 10. Communicate with county engineer on a regular basis concerning projects to ensure that he remains abreast of the status of all projects, particularly any problems that may need attention.
- C. Design, draw and review drawings of plans for bridges, culverts, and road projects:
1. Design plans for bridges, culverts, and road projects in accordance with specifications, guidelines, and other special considerations.
 2. Draw topographic maps and sketches as necessary.
 3. Drafting of roads and bridges using AutoCAD.
 4. Schedule drafting work to ensure that plans are completed in a timely manner.
 5. Review drawings to ensure that all plans meet state and federal guidelines and specifications.
 6. Prepare correspondence to accompany plans.
 7. Order drafting supplies as needed.
- D. Perform bridge inspections in accordance with regulations and completes necessary forms and reports:
1. Make site inspections to determine the need for maintenance.
 2. Perform annual maintenance inspection with Department of Transportation personnel.
 3. Check and grade bridges for replacement.
 4. Coordinate underwater and snooper inspection of bridges.
 5. Gather bridge cross section data.
 6. Update county bridge and culvert structures data in ALDOT PONTIS database.
 7. Prepare reports of findings, complete standard inspection reports, and enter data regarding county bridges and culverts in the state database (ABIMS).
 8. Inform county engineer regarding bridge and culvert structures, as needed.
- E. Direct and assist in survey projects:
1. Coordinate and perform surveys to ensure that work is completed on schedule and according to standards.
 2. Assist with stakeout of new projects.
 3. Make site visits to gather data, determine the need for further surveys, and answer questions and provide direction to survey crew.
 4. Direct and secure data on all phases of geodetic, topographic, route and hydrographic surveys.
 5. Perform construction surveys such as bridge and road location and layout work.
 6. Furnish contractors with horizontal and vertical line and grade during construction.
 7. Conduct field surveys and calculations.

KNOWLEDGE, SKILLS AND ABILITIES

- Knowledge of civil engineering methods and practices related to road and bridge construction and maintenance.
- Knowledge of materials, methods, and techniques used in road and bridge construction and maintenance projects.
- Knowledge of regulations regarding drainage, traffic control, and subdivision development.
- Knowledge of engineering design of bridges and roadways.
- Knowledge of the county, including major streets, highways, bridges and landmarks.
- Knowledge of occupational hazards and safety precautions needed in association with the work of the department.
- Knowledge of testing devices used in road and bridge construction.
- Knowledge of survey methods and principles.
- Knowledge of traffic engineering; traffic safety laws, manuals and traffic control systems.
- Knowledge of Microsoft Office.
- Knowledge of AutoCad 2015.
- Knowledge of how to use Estimator.
- Knowledge of AASHTOWare Bridge Management System.
- Ability to communicate effectively with the public, co-workers, state and federal agency employees both orally and in writing.
- Ability to independently assimilate facts and draw sound conclusions.
- Ability to direct and participate in surveys.
- Ability to read and interpret technical manuals, construction plans, reports, etc.
- Ability to perform engineering and survey calculations with or without a calculator or computer.

MINIMUM QUALIFICATIONS

- Bachelor's degree in Civil Engineering and some experience in civil engineering including surveying for roads and bridges and the construction and maintenance of roads and bridges or an equivalent combination of education and experience.
- Must possess a valid State of Alabama driver's license and a driving record suitable for insurability.
- Must be certified as Bridge Inspector (required or ability to obtain within six months).
- Must possess ACI and Asphalt Tech certificates (required or ability to obtain within six months).
- Must possess a Professional Engineer (PE) license.

This job description indicates in general the nature and levels of work, knowledge, skills, abilities and other essential functions (as covered under the ADA) expected of an incumbent. It is not designed to cover or contain a comprehensive listing of activities duties or responsibilities required of an incumbent. An incumbent may be asked to perform other duties as required. This job description reflects management's assignment of essential functions and position responsibilities. Nothing in this job description restricts management's rights to assign or reassign duties and responsibilities to this job at any time. Incumbent must be able to perform the essential functions of this position with or without reasonable accommodation.