

SENIOR TRAFFIC STUDIES ANALYST

JOB DESCRIPTION

Classification Responsibilities: A Senior Traffic Studies Analyst is responsible for conducting all types of traffic engineering studies and analysis, evaluating a broad variety of routine and difficult traffic engineering problems and making recommendations for traffic control solutions. Responds to complaints, questions, and explains policies from the general public regarding traffic-related concerns and traffic study processes and results. Prepares traffic control signing and pavement marking installation plans for the safe control and flow of traffic on public streets using AutoCAD, and reviews and corrects striping layouts. Specific duties will vary by assignment and may include reviewing transportation components of private development and road construction plans to ensure compliance with City standards, Transportation Plan, and established transportation engineering principles and practices; logging Traffic Engineering section's input on private development plan reviews and public road improvement projects. The position performs other related work as required.

Distinguishing Features: An employee of this class participates in the work of the Traffic Studies Unit under the supervision of the Senior Transportation Engineer or Transportation Engineer. Performs technical and paraprofessional traffic engineering work in the field and office under general supervision. Daily duties and assignments require the application of independent judgment, initiative, and decision-making regarding the design and review of traffic control signing and pavement markings. The Senior Traffic Studies Analyst class is distinguished from the Traffic Studies Analyst class by evaluating more non-routine and complex traffic problems, by the complexity of assignments, by the need to work more independently in a lead capacity to identify and resolve striping problems, and by the need to coordinate work activities with other City staff, contractors, and other agencies. Assignments are broad in scope requiring the use of independent judgment. Work involves frequent contact with the public regarding controversial and sensitive traffic issues. This class is FLSA exempt-administrative.

QUALIFICATIONS

Employee Values: All employees of the City of Mesa are expected to uphold and exhibit the City's shared employee values of Knowledge, Respect, and Integrity.

Minimum Qualifications Required. Graduation from high school or GED. Any combination of training, education, or experience equivalent to five years of technical, paraprofessional, or professional traffic or civil engineering work; **OR** graduation from an accredited college or university with a Bachelor's Degree in Traffic, Civil Engineering, or related field, and any combination of training, education, or experience equivalent to at least two years of technical, paraprofessional, or professional traffic or civil engineering work.

Special Requirements. Must possess a valid Arizona Driver's License by hire date.

Substance Abuse Testing. None.

Preferred/Desirable Qualifications. Experience in traffic engineering is highly desirable. Previous experience using AutoCAD is desirable. Experience in dealing with the public concerning controversial or unpleasant matters is preferred.

ESSENTIAL FUNCTIONS

Communication: Communicates with the general public and other City employees in order to respond to citizens' questions, objections, and concerns regarding such traffic engineering matters as traffic signal requests, left-turn arrow requests, speed limit reviews, crosswalks, general traffic safety, parking prohibitions, signing, striping, school zones, and neighborhood traffic and speed mitigation concerns. Notifies citizens of the results of traffic studies. Responds tactfully, pleasantly and accurately on the telephone, in person, or in writing, to internal and external customers in answering questions, explaining policies, traffic study processes, complex technical information, and the results of traffic studies at a level appropriate to the audience. Prepares written documents, memos, letters, and technical reports with clearly organized thoughts using proper sentence structure, punctuation, and grammar to handle citizen complaints; explains City policies; and makes recommendations for traffic control changes. Communicates with construction inspectors, contractors, outside agencies, and other City staff (example: Field Operations, Traffic Signals, Streetlights, and Traffic Engineers) to coordinate work for signal turn-on, opening newly constructed street segments, and to help ensure that traffic control devices provide for safe traffic operations by providing advice and assistance. Communicates with neighborhood groups, Homeowner Associations, and individuals regarding residential speed issues, and measures available for speed mitigation. Educates property owners/managers of their responsibility for maintaining landscaping to ensure adequate sight distance. Identifies deficiencies and recommends revisions and corrections to approved signing and striping plans, and communicates these to Engineering Design, engineering consultants, contractors and/or Traffic Operations, as appropriate. Acts as a liaison with City departments, engineering consultants, outside agencies, developers and other customers on traffic control devices planned for public streets development projects and road improvement projects during plan review and field reviews.

Manual/Physical: Conducts field studies for locations where accidents frequently occur in order to determine whether engineering improvements can be made to reduce the number of occurrences. Collects pedestrian, vehicular, and directional counts at intersections and in school areas; measures vehicle and pedestrian delay; makes field observations of traffic patterns, driver and pedestrian behaviors; measures safe horizontal and vertical curve speeds; and measures sight distance at intersections and of traffic control devices. Reviews the work product of others (inspects contractor's and studies analysts' striping field layouts and proposed signing locations; reviews approved signing and striping plans) to ensure compliance with procedures and state regulations regarding the Manual on Uniform Traffic Control Devices (MUTCD), American Association of State Highway and Transportation Officials [AASHTO] "A Policy on Geometric Design of Highways and Streets", and City of Mesa signing and striping standards, and City code. Creates reference marks in the field for pavement markings and sign installations. Operates a motor vehicle requiring a standard Arizona Driver's License to respond to traffic concerns and to field-check completed work. Uses steel tape measure, rolling tape measure, or in-vehicle distance measuring device to collect data for pavement striping designs and to determine and mark appropriate locations of signs and pavement striping reference points. Enters data on personal computer in order to log in work request information, customer complaints and investigations/actions, and prepare memos/reports. Prepares maps and graphs, to be used in written reports as part of fieldwork requests. Sets up or removes traffic cones to guide traffic during studies or emergencies and to evaluate existing sight distance. Recognizes deficiencies in barricade setups and communicates deficiencies to the Temporary Traffic Control Group, contractors, City crews, or construction inspectors. Maintains an awareness of surrounding conditions for safety of self, other employees, and the public. Uses common hand tools such as a hammer, meter wheel, measuring tape, and trimmer.

Mental: Prioritizes own work and provides training, guidance and assistance to Traffic Studies Analysts. Conducts research and analyzes data to perform traffic studies (example: traffic count, traffic speed data, traffic accident data, striping and signing) to make recommendations to resolve traffic concerns. Evaluates effects of implemented solutions. Occasionally represents transportation at various day and evening public meetings such as the Transportation Advisory Board (TAB), school meetings, neighborhood meetings, interdepartmental, freeway, and arterial roadway meetings regarding new construction and improvements. Interprets as-builts and construction drawings to input, update, and maintain digital design data. Understands procedures, terminology, and the use of system menus and operational system panels in the Transland application. Proactively works to comprehend roadway-signing needs to resolve potential traffic problems, and inform sign shop of missing or damaged traffic control devices. Collects and analyzes data on the physical and traffic characteristics of intersections in order to determine the need for signals. Analyzes and tallies by location, traffic accident reports received through local law enforcement agencies. Resolves operational work-related problems by conducting traffic studies to determine need for traffic control changes. Summarizes and analyzes pedestrian, vehicular, and directional counts. Recommends whether a school crosswalk should be established. Evaluates technical information and statistics. Performs mathematical calculations and statistical computations to determine sight distance calculations, pavement marking tapers, safe curve speeds, traffic speed characteristics, and determination of appropriate warning sign locations. Comprehends and makes inferences from written material or verbal communications from concerned citizens in order to respond to the concern being raised. Comprehends and uses reference material (MUTCD, AASHTO “A Policy of Geometric Design of Highways and Streets”, City policies, City Traffic Barricade Manual, and other manuals) to appropriately apply the traffic engineering standards for signing and striping designs for traffic control changes. Applies good judgment using the principles and practices of traffic engineering to make field changes that are needed and were not identified in previously approved signing and striping plans. Identifies non-standard roadway geometry that may affect the installation of traffic control measures or devices at desired standards. Recognizes incorrect and potentially unsafe traffic control/operations and communicates deficiencies to appropriate personnel or takes measures that follow sound traffic engineering principles and practices to correct them. Understands and interprets as-built construction plans, supplemented by in-field measurements, and blueprints to prepare signing and striping diagrams. Learns job-related material through on-the-job training and self-study regarding City policies and standards, Transportation Division policies and practices, the MUTCD, the City Traffic Barricade Manual, and other references. Reviews site development and road improvement plans for such factors as the ability for roadways to be striped and signed for a particular design speed and to ensure adequate visibility for drivers at intersections and driveways. Reviews site development and road improvement plans for transportation engineering features for compliance with Mesa Standard Details, Mesa Transportation Plan, as well as other technical design references. Provides written plan review comments that are clear, concise, and technically sound.

Knowledge/Skills/Abilities:

Knowledge of:

Transportation Plan and COM Standard Details, policies and procedures; COM land database, engineering drawings and shape files; principles and practices of traffic engineering, MUTCD, AASHTO, and the City Traffic Barricade Manual; complex statistical concepts and calculations;

safety procedures, practices, and policies for working in heavy traffic; traffic laws and regulations pertaining to traffic control and traffic operations; traffic surveying techniques and practices; the operation, application, and limitations of traffic control signals (detector loops, video detection cameras, controllers, turn arrows, accessible pedestrian signals, pedestrian heads, etc.; terminology, methods, practices, and techniques used in technical traffic engineering report preparation; symbols and terminology used in construction drawings; and principles and practices of employee training.

Skill in:

effective written and verbal communication; determining traffic control measures to implement; and operation of a computerized data system.

Ability to:

participate in the selection of staff, provide or coordinate staff training, conduct traffic studies and prepare concise reports of activities and studies, including parking studies, accident analyses, signal studies, left-turn signal studies, high accident location studies, and studies concerning traffic conditions in neighborhoods and around schools; determine traffic control measures to implement in response to complaints or emergency situations; evaluate complex technical information and statistics; present recommendations effectively both orally and in writing; determine adherence to traffic engineering specifications; analyze and make statistical calculations related to traffic engineering to determine Citywide and local area, intersection, and road segment crash rates; identify high crash rate locations; work outdoors in temperature extremes while making field measurements, marking sign locations, and inspecting roadway projects prior to completion; establish and maintain effective working relationships with management, coworkers, peers, and the general public; prepare for, participate in, and conduct public meetings; use Word, Excel, Access, Adobe, AutoCAD, ArcView, Transland, and traffic analysis software such as Crash Magic, PC Warrants, PetraPro, Autodesk Vehicle Tracking, etc.; and communicate with and respond pleasantly to a demanding and diverse public in answering questions, explaining City policies, and handling complaints.

The duties listed above are intended only as general illustrations of the various types of work that may be performed. Specific statements of duties not included does not exclude them from the position if the work is similar, related, or a logical assignment to the position. Job descriptions are subject to change by the City as the needs of the City and requirements of the job change.

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EEO-Prof

JOB FCTN-TEC

INCREMENTS 62-200

PAY GRADE: 49

IND-9410

SWORN-No