

## TRAFFIC STUDIES ANALYST

### JOB DESCRIPTION

**Classification Responsibilities:** A Traffic Studies Analyst is responsible for: data collection, analysis, problem-solving, report writing, ensuring that signing and striping installations comply with City of Mesa signing and striping standards and traffic engineering principles and practices, field inspections of proposed new signing and striping layouts, and public contact work to produce traffic studies.

A Traffic Studies Analyst may be assigned primarily to perform duties that include preparing annual fatal, serious injury, pedestrian, bicycle crash reports, and overall City crash statistical reports; analyzing and tallying by location, traffic crash reports received through local law enforcement agencies and Arizona Crash Information System (ACIS) data to make recommendations on traffic crash reduction measures; maintaining and updating the traffic crash databases; and generating and interpreting traffic crash reports and trends. This position performs other related work as required.

**Distinguishing Features:** An employee of this class performs paraprofessional traffic engineering work in the Traffic Studies Unit under the supervision of the Senior Transportation Engineer or Transportation Engineer. Examples of paraprofessional traffic engineering work include designing, signing, and striping plans in compliance with the Manual on Uniform Traffic Control Devices (MUTCD) and City standards and policies. 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 two years' experience in technical, paraprofessional, or higher-level traffic or civil engineering work; or two years' experience as a City of Mesa Traffic Operations Worker II or higher classification; or a Bachelor's degree from an accredited college or university with a major in Traffic, Civil Engineering, or related field can be substituted for two years of required work experience.

**Special Requirement.** Must possess a valid Class D Arizona Driver's License by hire date.

**Substance Abuse Testing.** None.

**Preferred/Desirable Qualifications.** Experience in dealing with the public concerning controversial or unpleasant matters is preferred. Experience in traffic studies and data analysis is desired.

### ESSENTIAL FUNCTIONS

**Communication:** Responds to citizens' questions, objections, and concerns regarding such traffic engineering matters as traffic signal requests, left-turn arrow requests, speed limit reviews, crosswalks, traffic safety, speeding, speed humps, all-way stops, visibility, no parking zones, signing, striping, school

zones, and neighborhood traffic by investigating the problem. Notifies citizens of the results of traffic studies, detailing the study process and reasoning. Prepares written documents, memos, letters, and technical reports with clearly organized thoughts using proper sentence construction, punctuation, and grammar to handle citizen complaints, explain City policies, and make recommendations for traffic control changes. Presents technical information clearly, both verbally and in writing, at a level appropriate to the audience. Communicates with construction inspectors, contractors, other jurisdictions, and other City staff (example: Field Operations, Traffic Signals, Streetlights, and Traffic Engineers) to coordinate a variety of work, including work for signal turn-on, opening newly constructed street segments, and signing and striping changes on existing streets. 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. Reviews approved signing and striping plans, identifies deficiencies, and recommends revisions and corrections, and communicates these to Engineering Design, engineering consultants, contractors, and/or Traffic Operations as appropriate.

**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. Reviews the work product of others (contractors, field crews, etc.) to ensure compliance with procedures and state regulations regarding the MUTCD, American Association of State Highway and Transportation Officials (AASHTO) "A Policy on Geometric Design of Highways and Streets", City of Mesa signing and striping standards, and City code. Collects pedestrian, vehicular, and directional counts at intersections and in school areas; measures vehicle 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. Works proactively to locate, study, and resolve visibility concerns throughout the City. Contacts and/or drafts letters, diagrams, and maps to responsible parties as needed to request landscape trimming and maintenance. Operates a motor vehicle requiring a standard Class D Arizona Driver's License to respond to traffic concerns and to field check completed work. Conducts research on as-builts and construction drawings, and obtains field measurements of road geometrics and existing striping and signing to create work requests. Uses tape measure, rolling tape measure, and electronic 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. Uses standard procedures and customized menus and symbols in an AutoCAD environment to prepare detailed striping and signing plans. Enters data on a personal computer (PC) in order to issue and track work request information, customer complaints, investigations and actions taken, 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 and/or temporary traffic control devices and signs weighing up to 30 pounds to guide traffic during studies or emergencies and to evaluate existing sight distance. Moves barricades to facilitate striping. Detects traffic sounds when working near moving traffic during fieldwork. Uses common hand tools such as hammer and trimmer. Meets scheduling and attendance requirements.

**Mental:** 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 and to measure the effectiveness of traffic control changes. Occasionally represents transportation at various day and evening public meetings such as the Transportation Advisory Board, school meetings, neighborhood meetings, interdepartmental, and roadway construction meetings. Recognizes and resolves conflicting signing and striping information in the field and on plans.

Interprets as-builts and construction drawings, and conducts research in the office and in the field to input accurate and precise road geometry, pavement markings, and traffic signs into AutoCAD. Comprehends and makes inferences from written or verbal communications from concerned citizens in order to provide solutions/resolutions. Performs research to identify responsible party Homeowners Associations (HOAs), property managers, developers, property owners, and governmental agencies for maintaining landscaping to ensure adequate sight distance. Comprehends reference material (MUTCD, AASHTO "A Policy of Geometric Design of Highways and Streets", City policies, and other manuals) to appropriately apply the traffic engineering standards for signing and striping designs for traffic control changes. Applies judgment using the principles and practices of traffic engineering to make field changes to approved signing and striping plans prepared by others in order to account for conditions of the roadway. Identifies non-standard roadway geometry that prevents installation of traffic control devices at desired standards. Understands and interprets as-built construction plans supplemented by in-field measurements, and monitors new construction or construction changes to determine the effect of the dynamics on existing signing or traffic controls. Determines how the new construction changes alter the needs of the location regarding signing/striping and prepares signing and striping diagrams to initiate changes. Learns job-related material through on-the-job training regarding City policies, Transportation Department policies and standards, and the MUTCD. Attends various training workshops. Prepares reports and recommendations for countermeasures at specific locations. Prepares annual fatal, pedestrian, and bicycle crash reports, and overall City crash statistical reports. Analyzes and tallies, by location, traffic crash reports received through local law enforcement agencies and Accident Location Identification Surveillance System (ALISS) data to make recommendations on traffic crash reduction measures.

### **Knowledge and Abilities:**

Knowledge of:

statistical concepts and calculations;  
principles and practices of traffic engineering;  
MUTCD, AASHTO, safety procedures, practices, and policies for working in heavy traffic;  
the operation, application, and limitations of traffic control signals (detector loops, video detection cameras, controllers, turn arrows, accessible pedestrian signals, pedestrian heads, etc.); and  
traffic laws and regulations pertaining to traffic control.

Ability to:

prepare traffic studies, including parking studies, accident analysis, 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;  
analyze and collect data on traffic patterns and recommend possible traffic engineering improvements;  
learn and use Word, Excel, Adobe Acrobat, PC warrants, ArcGIS, AutoCAD, SPF Tool, printers, plotters, fax machines;  
prepare neat and precise striping and signing designs in AutoCAD from sketches, verbal descriptions, and field measurements;  
analyze and make statistical calculations related to traffic engineering to determine Citywide and local area, intersection, and road segment crash rates;

maintain and update traffic crash report databases;  
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;  
effectively communicate, both orally and in writing; 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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JOB FCTN-TEC

INCREMENTS 62-200

PAY GRADE: 48

IND-5506

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