



Title: Engineering Technician I

FLSA Status: (Non-Exempt)

BRIEF DESCRIPTION:

The purpose of this position is to provide entry-level technical engineering work associated with drafting, graphics, and related engineering duties. This is accomplished by answering technical questions and using specialized software applications to produce maps, construction plans, and other graphical exhibits for a variety of internal and external customers. Other duties may include completing related tasks as assigned.

ESSENTIAL FUNCTIONS:

Note: This information is intended to be descriptive of the key responsibilities of the position. The list of essential functions below does not identify all duties performed by any single incumbent in this position. Additionally, please be aware of the legend below when referring to the physical demands of each essential function.

(S) Sedentary	(L) Light	(M) Medium	(H) Heavy	(V) Very Heavy
Exerting up to 10 lbs. occasionally or negligible weights frequently; sitting most of the time.	Exerting up to 20 lbs. occasionally; 10 lbs. frequently; or negligible amounts constantly; OR requires walking or standing to a significant degree.	Exerting 20-50 lbs. occasionally; 10-25 lbs. frequently; or up to 10 lbs. constantly.	Exerting 50-100 lbs. occasionally; 10-25 lbs. frequently; or up to 10-20 lbs. constantly.	Exerting over 100 lbs. occasionally; 50-100 lbs. frequently; or up to 20-50 lbs. constantly.

#	Code	Essential Functions
1	S	Reviews as-built drawings to ensure compliance with City standards and catalogues approved drawings in the document management system database.
2	S	Assists project managers, engineers, and City staff with civil improvement plans utilizing computer-aided drafting software such as AutoCAD.
3	L	Assists project managers, engineers, and City staff with creation of visual illustrations utilizing applications such as Geographic Information Systems ArcMap. Prepares special project maps and exhibits. Prepare site exhibits utilizing GPS survey equipment. Prepare maps for Council Reports and/or public meetings.
4	S	Inputs data of final plats, minor land divisions, and various other documents into the document management system database. Scans, verifies quality, and uploads electronic files for internal use and recordation. Maintain and update engineering database of drawings, land and utility record maps utilizing CAD tools and other computer software. Geo-code the locations of As-Built drawings. Maintenance of facilities and records. Reviews project CAD and as-built plans to ensure conformance to Chapter 7 of the IDG. Upon approval, catalogs and geocodes into EMS utilizing an access database and GIS shapefiles. The CAD is saved to a shared folder for IT GIS to overlay the CAD into GIS. Administrator of civil plans including: MIDs, SLIDs, water, sewer, paving, grading, drainage, final plats, minor land divisions (any and all civil plans).



5	S	Records deeds, easements, and other legal documents.
6	L	Performs various administrative tasks; assists and provides back-up at the Engineering Counter as necessary. Responds to Public Information Requests.
7	S	Communicates with the general public, vendors, and others such as: Salt River Project (SRP), other utility companies, Arizona Department of Transportation (ADOT), Maricopa County Department of Transportation, etc., in order to coordinate utility conflicts for small capital improvement.
8	S	Communicates with the general public, other City employees, or others in order to identify work flow problems, express ideas, and establish the specific needs of work requests. Establishes and maintains effective working relationships with all those encountered during the course of work.
9	S	Researches drawing files for location of utilities and ensures accuracy of drawings. Provides existing utility locations to internal and external customers. Answers questions about legal descriptions, As-Built plans, etc.
10	S	Acts as web author of the infrastructure design guidelines, standard details, and engineering download documents. Edits, finalizes, and uploads information to the engineering webpage.



JOB REQUIREMENTS:

-Description of Minimum Job Requirements	
Experience	1-2 years experience. Moderate previous experience required in the same or similar previous positions. The job requires a good working knowledge of common and uncommon techniques, methods, practices, procedures, use of forms, routines, etc., of a moderate to complex nature.
Education	High school plus additional course work (equivalent to up to 1 year at a Community College or equivalent resulting in accumulation of similar knowledge and abilities).
Technical Skill	Skilled technical skills. Work requires predominately routine and some non-routine technical skills requiring practical knowledge of a technical field with use of judgment and decision making abilities appropriate to the work environment to the organization.
Physical Demands	Work requires moderate physical exertion. Forces exerted are equivalent to lifting between 10 and 25 pounds. Job requirements for manual dexterity or physical manipulation are also moderate. The need for physical stamina and endurance is of some significance. The degree of physical strain produced on the job is moderately taxing, and is fatiguing. Work could involve a considerable amount of walking, standing, a confining or tiring work position, or constant periods of sitting in one position where freedom does not exist to walk about.
Contacts	Contacts are an integral part of the job as work involves internal and external contacts for the purpose of problem-solving with respect to matters of considerable importance to the organization requiring tact, diplomacy and persuasiveness and/or where no guidelines exist. Improper handling could affect relationships between departments or functions. Contacts are frequently at the same or higher levels. Interactions may affect City business. Work involves regular contact with people who are upset, uncooperative or have difficulty communicating their requirements and/or a regular requirement to communicate information that people do not want to hear or may find upsetting.
Responsibility	May show another employee how to perform a task or may have some lead authority over one or more people for a short period of time through the year. May train replacement and/or co-worker in own job functions.
Accountability	Decision/action situations have a moderate impact on the organization. Errors are usually detected after the fact and may result in significant interruption and delay in work output and may impact on resources within a department. Errors may have an impact on other departments and external relationships.
Environment	Exposure to some undesirable or unpleasant environmental characteristics. Physical environment is generally safe and there is minimal health risk. No safety equipment or unusual precautions are required.
Safety	Work involves few, if any, duties that if incorrectly performed could present a safety risk to others.
Reading	Advanced - Ability to read literature, books, reviews, scientific or technical journals, abstracts, financial reports, and/or legal documents. Ordinarily, such education is obtained in at the college level or above. However, it may be obtained from experience and self-study.
Math	Intermediate - Ability to deal with a system of real numbers; and practical application of fractions, percentages, ratios/proportions and measurement. Ordinarily, such education is obtained in high school up to college. However, it may be obtained from experience and self-study.
Writing	Intermediate - Ability to write reports, prepare business letters, expositions, and summaries with proper format, punctuation, spelling, and grammar, using all parts of speech. Ordinarily, such education is obtained in high school up to college. However, it may be obtained from experience and self-study.
Certifications & Other Requirements	None



OVERALL PHYSICAL STRENGTH DEMANDS:

-Physical strength for this position is indicated below with “L”-				
Sedentary	Light	Medium	Heavy	Very Heavy
Exerting up to 10 lbs. occasionally or negligible weights frequently; sitting most of the time.	Exerting up to 20 lbs. occasionally, 10 lbs. frequently, or negligible amounts constantly OR requires walking or standing to a significant degree.	Exerting 20-50 lbs. occasionally, 10-25 lbs. frequently, or up to 10 lbs. constantly.	Exerting 50-100 lbs. occasionally, 10-25 lbs. frequently, or up to 10-20 lbs. constantly.	Exerting over 100 lbs. occasionally, 50-100 lbs. frequently, or up to 20-50 lbs. constantly.

PHYSICAL DEMANDS:

C Continuously 2/3 or more of the time.	F Frequently From 1/3 to 2/3 of the time.	O Occasionally Up to 1/3 of the time.	R Rarely Less than 1 hour per week.	N Never Never occurs.
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Note: This is intended as a description of the way the job is currently performed. It does not address the potential for accommodation.

-Physical Demand-	-Frequency-	-Brief Description-
Standing	O	In field
Fine Dexterity	C	Computer keyboard, telephone keypad, calculator
Walking	O	To other departments/offices, around work site
Lifting	F	Supplies, files
Carrying	R	Supplies, files
Sitting	F	Desk work, meetings
Reaching	O	For supplies, for files
Handling	F	Paperwork
Pushing/Pulling	O	File drawers, tables and chairs
Climbing	R	Stairs
Vision	C	Reading, computer screen
Foot Controls	N	Driving
Balancing	N	On step stools
Bending	O	Filing in lower drawers, retrieving items from lower shelves/ground
Crouching	O	Filing in lower drawers, retrieving items from lower shelves/ground
Hearing	C	Communicating via telephone/radio, to co-workers/public
Kneeling	O	Filing in lower drawers, retrieving items from lower shelves/ground
Crawling	N	Under equipment
Twisting	F	From computer to telephone
Talking	F	Communicating via telephone/radio, to co-workers/public
Other (specified if applicable)		



MACHINES, TOOLS, EQUIPMENT, SOFTWARE, AND HARDWARE:

Standard office equipment, scanner, HP Oversize Plotter, camera, Microsoft Office, Internet, ArcGIS, AutoCAD, PermitsPlus, Adobe, Google Earth, Google SketchUp.

ENVIRONMENTAL FACTORS:

C Continuously	F Frequently	O Occasionally	R Rarely	N Never		D Daily	W Several Times per Week	M Several Times per Month	S Seasonally	N Never
-Health and Safety Factors-						-Environmental Factors-				
Mechanical Hazards					N		Extreme temperature			N
Chemical Hazards					N		Wetness and/or humidity			N
Electrical Hazards					N		Respiratory hazards			N
Fire Hazards					N		Noise and vibration			N
Explosives					N		Physical hazards			N
Communicable Diseases					N					
Physical Danger or Abuse					N					

PROTECTIVE EQUIPMENT REQUIRED:

None

NON-PHYSICAL DEMANDS:

F Frequently From 1/3 to 2/3 of the time	O Occasionally Up to 1/3 of the time	R Rarely Less than 1 hour per week	N Never Never occurs
-Description of Non-Physical Demands-			-Frequency-
Time Pressure			F
Emergency Situation			R
Frequent Change of Tasks			O
Irregular Work Schedule/Overtime			R
Performing Multiple Tasks Simultaneously			F
Working Closely with Others as Part of a Team			O
Tedious or Exacting Work			F
Noisy/Distracting Environment			O

PRIMARY WORK LOCATION:

Office Environment	X	Vehicle	
Warehouse		Outdoors	
Shop		Other	
Recreation/Neighborhood Center			