



DEPARTMENT: Development Management

NATURE OF WORK:

Performs highly varied engineering work in the planning, design, improvement, and inspection of public works and utility facilities. Work includes responsibility for coordinating the work and projects of a technically difficult engineering area. Work is performed under general supervision and is reviewed through conferences, reports, and analyses of results obtained.

ESSENTIAL FUNCTIONS OF THE JOB:

Coordinates, directs, and participates in technical and complex engineering areas such as erosion and sediment control, solid waste management, construction and development administration, water works maintenance, water source development, wastewater transmission, environmental protection, stormwater sanitation, hydrology, hydraulics and the like.

Reviews and revises complex construction plans, site and subdivision plans, water and sewer plans, and rezoning plans for compliance with standards, codes and ordinances and for adherence to acceptable engineering principles.

Manages complex construction projects including administration of substantial funds and numerous subcontractors, from design to bid award to completion.

Performs highly specialized inspections of complex structures and county and/or JCSA projects.

Plans, supervises, and reviews the engineering, inspection, and materials testing functions associated with assigned projects.

Coordinates the work of consulting engineers, county departments, and governmental agencies affected by or assigned to the designated project.

Responsible for administration of street sign and streetlight programs.

Prepares grant applications, budgets, records, and reports related to assigned projects.

Conducts field and office conferences with developers, contractors, engineers, homeowner's group, citizens, and County personnel regarding problems or deviations from approved plans and specifications and advises correct actions.

Responsible for setting surety amounts for land disturbing permits and new subdivision improvements and ensuring completion of improvements in accordance with appropriate plans, standards, and specifications prior to release of surety.

Responsible for the design and preparation of construction drawings and specifications for County engineering projects such as stormwater management structures, road and sidewalk projects, or for completion of subdivision improvements resulting from developer default on surety-guaranteed projects.

Practices continuous learning through individual study, classroom training, seminars, and conferences.

Performs work safely in accordance with department safety procedures and the County Safety Program. Operates equipment safely and reports any unsafe work condition or practice to Supervisor.

May be required to report to work to serve customers during emergency conditions. May be assigned to report at a different time and location and to perform different duties as necessary.

Performs related work as required.

JOB LOCATION AND EQUIPMENT OPERATED:

Duties are performed primarily in an office setting. Operates computer keyboard, surveying equipment, and telephone. Drives County vehicle to construction or other work sites. Requires occasional walking over rough terrain.

REQUIRED KNOWLEDGE, SKILLS, AND ABILITIES:

Thorough knowledge of the principles, practices, and methods of civil engineering as applied to planning, location, design, construction, and maintenance of the area or projects of assignment.

Thorough knowledge of the principles, practices, and techniques of engineering drafting.

Considerable knowledge of land and engineering survey systems, methods, and techniques.

Ability to coordinate the work of project personnel.

Ability to plan and design complex public works and utility facilities.

Ability to manage complex public engineering projects.

Ability to establish and maintain effective working relationships with county officials, employees, contractors, and the public.

Ability to communicate effectively, both orally and in writing.

Ability to prepare complex technical reports.

MINIMUM QUALIFICATIONS:

Bachelor's Degree in Civil Engineering or related field, and considerable professional engineering experience, including project management experience. Registration as a Professional Engineer is desirable but not required; or any equivalent combination of acceptable education and experience providing the knowledge, abilities, and skills cited above.

NECESSARY SPECIAL QUALIFICATIONS

Must possess a valid Virginia driver's license and have an acceptable driving record based on James City County's criteria.

Requires a post-offer drug test.

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IDENTIFICATION OF GENERAL APTITUDES AND PHYSICAL REQUIREMENTS

Position Title: Civil Engineer Position Number: 781
Department: Development Management Division: _____

The Americans with Disabilities Act requires that we identify the general aptitudes and physical requirements needed to perform the job listed above. Individuals who have the position must be able to perform all essential job functions unaided or with reasonable accommodation.

I. *Mental Abilities:* General learning ability. The ability to “catch on” or understand instructions and underlying principles.

- Ability to understand and follow oral instruction
- Ability to understand and follow written instruction
- Ability to guide and/or give instructions
- Ability to make decisions in accordance with established procedures and policies
- Not essential to job function

II. *Verbal Abilities:* Ability to understand meanings of words and ideas associated with them and to use them effectively. To comprehend language, to understand relationships between words, and to understand meanings of whole sentences and paragraphs. To present information or ideas clearly.

1. Speaking/Talking:

- Answer telephone, radio or switchboard
- Communicating with County officials
- Communicating with general public
- Communicating with vendors
- Communicating with supervisors and/or with other employees
- Communicating with other _____
- Not essential to job functions

2. Hearing/Listening:

- Ability to distinguish between different tones
- For communication with County officials, public, vendors, supervisors and/or other employees
- Not essential to job function.

3. Reading: (ability to read and understand text)

- Essential to job function
- Not essential to job function

III. Numerical: Ability to perform arithmetic operations quickly and accurately.

- Ability to mentally perform accurate two digit calculations
- Ability to perform accurate calculations aided
by a calculator, adding machine or measurement device

IV. Spatial Abilities: Ability to comprehend forms in space and understand relationships of plane and solid objects. May be used in such tasks as blue print reading and in solving geometry problems. Frequently described as the ability to “visualize” objects of two or three dimensions, or to think visually of geometric forms.

- Essential function
- Not essential function

V. Motor Coordination: Ability to coordinate eyes and hands or fingers rapidly and accurately in making precise movements with speed. Ability to make a movement response accurately and quickly.

1. Manual Dexterity: Ability to move the hands easily and skillfully. To work with the hands in placing and turning motions.

- | | |
|--------------------------------------------------------|----------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> Use telephone | <input checked="" type="checkbox"/> Manipulate computer keyboard and mouse |
| <input type="checkbox"/> Use switchboard | <input type="checkbox"/> Use postage machine |
| <input type="checkbox"/> Use radio/console | <input type="checkbox"/> Use hand tools |
| <input checked="" type="checkbox"/> Use a calculator | <input type="checkbox"/> Use power tools |
| <input checked="" type="checkbox"/> Use a copy machine | <input type="checkbox"/> Other: _____ |
| <input checked="" type="checkbox"/> Use a fax machine | <input type="checkbox"/> Not essential to job function |

2. Finger Dexterity: Ability to move the fingers and manipulate small objects with the fingers rapidly or accurately. For example: electrical wiring.

- Essential to job function
- Not essential to job function

Explain: Items in No. 1 are only dexterity items necessary.

VI. Physical Demands:

1. **Strength:** The quality, state or property of being strong. The power to withstand strain, force or stress.

Please check (✓) in appropriate boxes below.

	Ability to manipulate materials and/or equipment (lbs)						Frequency of Manipulation		
	5-	5-10	10-15	15-25	25-50	50+	Occasionally	Frequently	Continuously
Lift		✓					✓		
Push/Pull		✓					✓		
Hold/Carry		✓					✓		

Manipulation done from: ground to waist waist level waist to shoulder above shoulder
(Check all that apply)

Not essential to job function: Lift Push/Pull Hold/Carry (Check all that apply)

2. **Climbing:** To move up or mount by using the hands or feet.

- | <u>Ladders</u> | <u>Stairways</u> | <u>Steps</u> |
|-------------------------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------|
| <input type="checkbox"/> Step stool | <input checked="" type="checkbox"/> 1 flight | <input type="checkbox"/> 1-2 |
| <input type="checkbox"/> 8' to 10' step ladder | <input type="checkbox"/> 2 flights | <input type="checkbox"/> 2-3 |
| <input type="checkbox"/> Extension ladder | <input type="checkbox"/> 3 or more flights | <input checked="" type="checkbox"/> 3-4 |
| <input type="checkbox"/> Other _____ | <input type="checkbox"/> Other _____ | <input type="checkbox"/> Other _____ |
| <input checked="" type="checkbox"/> Not essential to job function | <input type="checkbox"/> Not essential to job function | <input type="checkbox"/> Not essential to job function |

3. **Ability to Stand, Sit, Walk, and Run:**

Please check (✓) in appropriate boxes below.

	Duration (hours/day)						Occasionally	Frequently	Continuously
	0-1	1-3	3-5	5-7	7-9	9+			
Stand		✓					✓		
Sit				✓				✓	
Walk			✓				✓		
Run									

If walking or running, over what type of terrain? flat rough both

Not essential to job function: Stand Sit Walk Run (Check all that apply)

4. Stooping, Kneeling, Crouching, and /or Crawling:

To bend forward or down from the middle of the waist or the middle of the back, to bend downwards, to lower oneself and/or to move freely on hands and knees.

Daily Amounts

- 0-5x 5-20x 20-50x 50+x
 Other _____ Not essential to job function

5. Reaching, Handling, Fingering, and/or Feeling:

To stretch out, extend, or put forth a bodily part. To touch or grasp something, by extending or stretching. To touch, lift, hold or operate with the hands.

Daily Amounts

- 0-5x 5-20x 20-50x 50+x
 Other _____ Not essential to job function

6. Seeing: To perceive or comprehend by the sense of sight.

- Essential to job function: These characteristics are necessary (Check all that apply)
 - Peripheral vision
 - Night vision
 - Focus (distinctness or clarity)
 - Color perception (discriminate between colors)
 - Depth perception (determine distance relationship between objects)

VII. Driving: The ability to transfer or convey in a vehicle.

<u>Transmission</u>	<u>Standard</u>	<u>Automatic</u>	<u>Multi-Gears</u>
Car	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Van	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Small Truck	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Medium Truck	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Large Truck	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Truck w/Equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Heavy Bus Equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not essential to job function	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Other (list) _____			