



VILLAGE OF HOFFMAN ESTATES

JOB DESCRIPTION

CIVIL ENGINEER I

EFFECTIVE DATE: 1/1/2017

DEPARTMENT: Development Services / Engineering	WORK LOCATION: Village Hall		FLSA STATUS: Exempt
CLASS CODE: 7475	RANGE: 19	PENSION: IMRF	UNION: NU
REPORTS TO: Village Engineer	LEVEL OF SUPERVISION RECEIVED: General Direction		LICENSE/CERTIFICATES: Illinois Class D Driver's License

SUMMARY:

Performs engineering studies and assignments with responsibility for planning and conducting a complete project of limited scope or a portion of a larger and more diverse project. Works as part of a team as well as independently on smaller tasks. Assists in reviews and inspections of street rehabilitation operations and site development activities for the Transportation and Engineering Division. Under direction, conducts plan review and construction inspection, as well as analyzes a variety of data to determine requirements to meet engineering objectives and comply with all current codes, standards, best practices, and other criteria; uses survey equipment to collect needed data; calculates design data; prepares layouts, details, specifications, estimates; documents and verifies project quantities for construction work; assists with assembling project plans and bid packages; assists with some project accounting and pay estimates; may serve as manager on some smaller scale projects; and works with the public and Village Departments to resolve engineering concerns.

Responds to and interacts with residents, employees, contractors, and others within and outside the organization in a courteous, professional, and effective manner.

JOB NO.	ESSENTIAL JOB FUNCTIONS AND RESPONSIBILITIES	FREQUENCY
1.	Assists with Village road construction projects, overseeing assigned tasks to ensure contractor compliance with plans, specifications, schedule, and budget parameters. Conducts inspections, records data, takes measurements, and documents construction activities. Responds to public or contractor inquiries relative to engineering procedures on specific projects and requests for other information. May assist with street profile design using spreadsheet application and survey information; may assist with design of street alignment and intersections; checks for drainage problems. Assists with field surveys, data collection, preparing plans, specifications, and estimates for bid packages.	Daily 75%
2.	Assists with and / or conducts engineering inspections of the construction of public and private improvements, such as water main, storm sewer, sanitary sewer, streets and grading. Reviews plans and specifications submitted by developers and other agencies or private parties for projects within the Village. Conducts inspections of new developments and subdivision improvements to ensure construction according to the approved plans and specifications. Uses calculated design data, prepares drawings and details using AutoCAD software.	Daily 25%
3.	Drives a Village vehicle to the various project sites to accomplish survey, construction inspection, field studies, and project management of various projects.	Daily 50%
4.	Assists with / conducts engineering surveys, collects data to complement survey, and collection of topographic information required for the resolution of problems, plus the design and construction of Village projects.	Weekly 10%
5.	Assists with reconciling and coordinating the appropriate accounts, bills and pay estimates as received from contractors on Village projects. Prepares summaries of quantities and cost estimates for Village projects.	Monthly 5%
6.	Assist with the preparation or development of select engineering plans and specifications for Village projects. Uses AutoCAD and other software / hardware tools as needed. Coordinates required advertising for bids, reviews construction bids and assists with making recommendations based on bid results.	Annually 20%
7.	Inspection of public and private improvements for residential, non-residential and miscellaneous projects. Conducts plan reviews of smaller scale permit applications for residential and commercial work.	Daily 20%
8.	Maintains infrastructure records. Assures as-built records of projects and documents reflect approved field changes / adjustments in order to improve accuracy of data used for maintenance programs and future projects.	Monthly 10%
9.	Meets as needed with consulting engineers, construction project engineers, County, State and Federal agencies, professional and technical groups and the general public regarding Division activities and services. On certain projects, may assist on coordination with other agencies including IDOT, Cook County, Illinois Tollway, MWRD, IEPA, etc. Also work with other Village departments / personnel as needed including Planning Division, site plan review meetings, Public Works, Police, and Fire Departments.	5%
10.	Operates and properly maintains all tools and equipment needed to perform the essential job functions and responsibilities listed herein while adhering to all safety rules and practices.	Daily

JOB NO.	OTHER RELATED DUTIES
1.	Assists with site development reviews, permit reviews, and inspections as needed.
2.	May serve as a member of various employee committees.
3	Follows Village-wide and departmental safety rules and practices.
4.	Investigates and reports on complaints, concerns, problems, or inquiries from staff, residents, and elected officials.
5.	Performs other duties, tasks, and responsibilities as assigned by Village Engineer and Division Director.

SUPERVISORY RESPONSIBILITIES: *(Select one – required)*

☒ None required

☐ Supervisory responsibilities are required to be carried out in accordance with the organization's policies and applicable laws. ***(List specific responsibilities below)***

EDUCATION, EXPERIENCE AND COMPUTER SKILLS:

The designated education and experience levels best describe the minimum requirement needed to fulfill the essential job functions. However, any combination of equivalent education or experience may be considered.

Education Level (Select one - required)

- ☐ High school education with vocational training
☐ High school diploma or general education degree (GED)
☐ Two or more years of college coursework in related field
☐ Associate's degree (A.A.) from two-year college or technical school
☒ Bachelor's degree (B.S.) from four-year college or university
☐ Master's degree (M.A.)
☐ Doctoral degree (Ph.D.)

Degree or coursework should be in...

Civil Engineering

Experience Level (Select one - required)

- ☐ No prior experience or training required
☐ Six months to one year related experience
☒ Zero to two years related experience
☐ Two to four years related experience
☐ Four to ten years related experience

Additional Experience (Select as appropriate)

- ☐ Experience in supervisory capacity...
☐ Experience in management capacity...
☐ Must meet the requirements as set by the Fire & Police Commission

Enter number of years required here

Enter number of years required here

Computer Skills (Select as appropriate)

- ☒ Entry and processing of data
☒ Word Processing data
☒ Spreadsheet software
☒ Database software
☒ Specialized applications:

AutoCAD Software, GIS Software desired

COMMUNICATION SKILLS:**English Language/Communication Skills (Select one)**

- ☐ Basic skills Ability to read, comprehend, listen to and follow basic verbal or written instructions and provide appropriate feedback. Ability to read, comprehend and/or create routine correspondence and memos using proper spelling, grammar, punctuation and sentence structure. Ability to effectively convey information one-on-one or to small groups of employees or customers.
- ☐ Intermediate skills Ability to read, comprehend, listen to and follow complex verbal or written instructions from multiple sources. Ability to provide appropriate feedback by asking probing questions and/or suggesting alternative approaches. Ability to read, comprehend, create and explain to others complex correspondence, reports and/or manuals. Ability to convey procedures and policies one-on-one or in groups to employees or customers.
- ☐ Advanced skills Ability to read or interpret all types of documents including safety rules and regulations, and procedure manuals. Ability to create and edit reports and correspondence from varied source material using appropriate style and format. Clearly convey instructions to employees or team. Ability to speak clearly and effectively before groups of customers answering questions appropriately.
- ☐ Business skills Ability to read, research, and analyze general business periodicals, professional journals, technical reports, finance documents or government laws and regulations. Ability to write reports, business correspondence, manuals and draft policies and procedures. Ability to effectively make presentations and respond to questions from groups of managers, customers, citizens, or other agencies.
- ☒ Specialized skills Ability to read, analyze and interpret professional, scientific, or technical manuals, procedures, plans, schematics, maps, blueprints, licenses, and/or legal documents. Ability to respond to inquiries from managers, customers, business community or regulatory agencies. Ability to draft responses to complex or technical issues and/or effectively present technical concepts or information to managers, customers, or other agencies in concise understandable terms.

Foreign Language Skills (Complete if applicable)

☐ Foreign language skills Ability to speak and/or read, write and comprehend... **Enter language here**

REQUIRED COMPETENCIES:

To perform this job successfully, an individual must be able to perform each essential job function satisfactorily. The required competencies listed below are representative of the knowledge, skills, and/or abilities required for successful job performance.

PROFICIENCY IN:

Computer applications for word processor, spreadsheet, survey, and AutoCAD software.

Preparation of comprehensive engineering reports.

Operation of listed tools and equipment including the use of civil engineering instruments and equipment.

Using quantitative skills; performing qualitative analysis.

WORKING KNOWLEDGE OF:

Civil engineering principles, practices and methods as applicable to a municipal setting.

Applicable Village policies, laws, and regulations affecting division activities.

Construction techniques for land development and public works involvements.

ABILITY TO:

Pass or document that have passed the Fundamentals of Engineering exam (FE)

Pursue Professional Engineer license when eligible (desired)

Plan, design, lay out and execute the work to prepare related designs, estimates and specifications.

Work under difficult weather conditions and winter weather.

Analyze and perform difficult engineering computations.

Inspect public and private improvements in a construction environment.

Make comprehensive recommendations for the solution of engineering problems.

Review and interpret specifications, plans and reports.

Learn operation and then properly use Division equipment including surveying instruments, total station, GPS enabled measurements, etc.

Verify records, documents and survey.

Rate and determine applicable codes, regulations and requirements for all projects.

Work independently and complete assignments under general direction.

Work as part of a team.

Communicate effectively, verbally and in writing.

PHYSICAL DEMANDS:

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job with or without reasonable accommodations.

(mark all 17 activities)

----- Amount of Time -----

Physical Activity	None	Less than 1/3	1/3 to 2/3	More than 2/3
Stands	_____	_____	_____	<u> X </u>
Walks	_____	_____	_____	<u> X </u>
Sits	_____	_____	<u> X </u>	_____
Uses fingers in a repetitive motion	_____	<u> X </u>	_____	_____
Uses hands to grasp, finger, handle, or feel	_____	<u> X </u>	_____	_____
Reaches with hands and arms above shoulder	_____	<u> X </u>	_____	_____
Climbs or balances	_____	<u> X </u>	_____	_____
Twists or turns	_____	<u> X </u>	_____	_____
Stoops, kneels, crouches, bends, or crawls	_____	<u> X </u>	_____	_____
Pulls, pushes, or carries	_____	<u> X </u>	_____	_____
Talks or hears	_____	_____	_____	<u> X </u>
Tastes or smells	_____	<u> X </u>	_____	_____
Operates a motor vehicle or heavy equipment	_____	_____	<u> X </u>	_____
Lifts or move 0 to 10 pounds (sedentary)	_____	<u> X </u>	_____	_____
Lifts or move 10 to 20 pounds (light)	_____	<u> X </u>	_____	_____
Lifts or move 20 to 50 pounds (moderate)	<u> X </u>	_____	_____	_____
Lifts or move 50 to 100 pounds (heavy)	<u> X </u>	_____	_____	_____

VISION DEMANDS:

The vision demands described here including the ability to adjust focus, close vision, sharpness of vision, depth perception, peripheral vision, distance vision, hand-eye coordination or as otherwise specified by the Board of Fire and Police Commissioners, are representative of those that must be met by an employee to successfully operate the tools and equipment needed to perform the essential functions of this job.

Other Vision Demands (select if applicable)

_____ Absence of color blindness

 X Corrected vision of...

 20/20

_____ Uncorrected vision of...

 Enter specific vision requirement here

WORK ENVIRONMENT:

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job with or without reasonable accommodations.

(mark all 15 conditions) <u>Environmental Conditions</u>	----- Amount of Time -----			
	None	Less than 1/3	1/3 to 2/3	More than 2/3
Customary indoor conditions *	_____	<u> X </u>	_____	_____
Customary outdoor weather conditions including extreme cold, extreme heat, and wet or humid conditions *	_____	_____	<u> X </u>	_____
Non-weather conditions: extreme cold, extreme heat, and wet or humid conditions *	_____	<u> X </u>	_____	_____
Works near moving mechanical parts	<u> X </u>	_____	_____	_____
Works in high precarious places, underground, or confined spaces	_____	<u> X </u>	_____	_____
Flying debris or airborne particles	<u> X </u>	_____	_____	_____
Fire, smoke, fumes, gases, or noxious odors	<u> X </u>	_____	_____	_____
Toxic or caustic chemicals, aerosols, liquids, solvents or oils	<u> X </u>	_____	_____	_____
Risk of electrical shock	<u> X </u>	_____	_____	_____
Works with explosives or risk of radiation	<u> X </u>	_____	_____	_____
Vibration	_____	<u> X </u>	_____	_____
Extreme illumination	<u> X </u>	_____	_____	_____
Low noise level (Normal voice tones)	_____	_____	_____	<u> X </u>
Moderate noise level (Raised voice levels)	_____	_____	<u> X </u>	_____
High noise level (Shouting/ear protection may be needed)	_____	<u> X </u>	_____	_____

*** Time required in outdoor weather is determined by construction activities**

The information listed above reflects minimum standards and illustrations of the various types of work that may be performed. The omission of specific job functions, requirements or tasks does not exclude them from the job if the work is similar, related or a logical extension of the work assigned.

This job description does not constitute an employment agreement between the employer and employee.

Recommended Approval:



Department Director

Reviewed Approval:



Human Resources Management Director

Approved:



Village Manager

Effective Date: 1/1/2017

Revision Date: 1/1/2017