

**NOTICE OF PROPOSED CLASSIFICATION ACTIONS BY
THE HUMAN RESOURCES DIRECTOR**

The following actions are being posted in accordance with Civil Service Rule 109. In the absence of a protest addressed to the Human Resources Director, the proposed changes will become final seven (7) calendar days from the posting date.

Posting No: 64
Fiscal Year: 2015/2016
Posted Date: 01/29/2016
Reposted Date: N/A

AMEND THE FOLLOWING JOB SPECIFICATION(S):
(Job specification(s) attached.)

Item #	Job Code	Title
1	5201	Junior Engineer
2	5203	Assistant Engineer

Protests on an item should be addressed to the Human Resources Director and can be submitted by mail to the City and County of San Francisco, Department of Human Resources, 1 South Van Ness Ave, 4th Floor, San Francisco, CA 94103 or by email to DHR.ClassificationActionPostings@sfgov.org. All protests must be received in writing no later than close of business seven (7) calendar days from the posting date, and must include the posting and item number(s), the basis on which the protest is submitted and identify the affected parties.

For additional information regarding this proposed classification action, please contact Rich David, Senior Classification and Compensation Analyst, at (415) 557-4965 or by email at Rich.David@sfgov.org.

Copies of this notice may be obtained from the Department of Human Resources or from the website at: <http://sfdhr.org/index.aspx?page=109>. Copies of Civil Service Rule 109 may be obtained from the Department of Human Resources, the office of the Civil Service Commission at 25 Van Ness Ave, Suite 720, San Francisco, CA 94102 or from the website at: <http://www.sfgov3.org/index.aspx?page=328>.

cc: All Employee Organizations
All Departmental Personnel Officers
DHR – Class and Comp Unit
DHR – Client Services Unit
DHR – Employee Relations Unit
DHR – Recruitment and Assessment Unit
DHR – Client Services Support Services
Micki Callahan, DHR
Michael Brown, CSC
Sandra Eng, CSC
Devin Macaulay, Controller/ Budget Division
Theresa Kao, Controller/ Budget Division
Drew Murrell, Controller/ Budget Division
Alex Koskinen, Controller/ Budget Division
E-File

**CITY AND COUNTY OF SAN FRANCISCO
DEPARTMENT OF HUMAN RESOURCES**

**Title: Junior Engineer
Job Code: 5201**

INTRODUCTION

Under supervision, performs beginning-level engineering work in the field and the office following established engineering methods and procedures; assists professional engineers in tasks requiring advanced engineering skill and/or judgment; makes contacts with the public, contractors, and others on engineering matters; gathers, prepares, and maintains engineering data, records, and reports; applies engineering principles and practices to civil, mechanical, electrical, environmental, or transportation engineering problems; performs related duties as required.

DISTINGUISHING FEATURES

This is the entry-level classification in the professional engineering series. It is characterized by its focus on routine engineering issues and is distinguished from the Assistant Engineer classes by the latter classes' responsibility for performing more complex work under general supervision.

SUPERVISION EXERCISED

The Junior Engineer may direct the work of technical and/or clerical staff.

MAJOR, IMPORTANT, AND ESSENTIAL DUTIES

According to Civil Service Commission Rule 109, the duties specified below are representative of the range of duties assigned to this job code/class and are not intended to be an inclusive list.

1. Prepares or assists in preparing studies, calculations, designs, drawings, sketches, and plans using AutoCAD and other software tools.
2. Makes field inspections of existing structures and sites to determine necessity for future construction, repair, or maintenance; conducts preliminary field studies and surveys and collects data relative to the preparation of designs and drawings.
3. Makes regular field inspections of construction and repair projects in progress to ensure conformance with plans, specifications, and codes; checks and records work progress at various construction sites.
4. Prepares or assists in the preparation of reports, contract specifications, lists of materials, cost estimates, schedules, and progress payments.
5. Prepares or assists in the preparation of departmental reports and reports concerning field conditions, the progress of projects, the results of studies, and other matters.
6. Provides written and oral responses to a variety of inquiries from other agencies, contractors, and the general public.
7. May direct the activities of technical and/or clerical staff.
8. Prepares correspondence and minutes.
9. Performs specialized duties in the areas of civil, mechanical, electrical, transportation and/or environmental engineering.

IMPORTANT AND ESSENTIAL KNOWLEDGES, SKILLS, AND ABILITIES

Knowledge of: Principles, practices, and methods of engineering (civil, mechanical, electrical, environmental, and/or transportation); construction, maintenance, and repair methods and procedures; research techniques, report writing, and statistical analysis.

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Ability and Skill to: Prepare engineering designs, plans, details, and drawings manually or using AutoCAD; prepare cost estimates; perform mathematical calculations; gather data for analysis; use engineering computer software; maintain an effective working relationship with a variety of people; communicate effectively orally and in writing; understand, explain, and apply pertinent laws, regulations, codes, and ordinances.

MINIMUM QUALIFICATIONS

These minimum qualifications establish the education, training, experience, special skills and/or license(s) which are required for employment in the classification. Please note, additional qualifications (i.e., special conditions) may apply to a particular position and will be stated on the exam/job announcement.

1. Possession of a baccalaureate degree or graduate degree from an engineering program that is accredited by the Accreditation Board for Engineering and Technology (ABET) with a major in the field of study related to the specialty area defined for each position;

OR

2. Possession of ~~an engineering~~ baccalaureate degree or graduate degree from a non-ABET accredited engineering program with a major in the field of study related to the specialty area defined for each position; AND possession of a valid Engineer-in-Training Certificate (issued by the National Council of Engineering Educators Examiners for Engineering and Surveying (NCEES)).

Required Engineering Degrees per specialty:

Civil: Architectural Engineering, Civil Engineering, Environmental Engineering, Geotechnical Engineering, Sanitary Engineering, Structural Engineering, Traffic Engineering, Transportation Engineering, Water Resources Engineering, or Engineering Management

Electrical: Electrical Engineering

Mechanical: Aeronautical Engineering, Aerospace Engineering, Materials Engineering, Mechanical Engineering, or Mechatronics Engineering

Environmental: Bio-chemical Engineering, Chemical Engineering, Civil Engineering, Environmental Engineering, Industrial Engineering, Mechanical Engineering or Sanitary Engineering

Transportation: Civil Engineering, Transit Engineering, Transportation Engineering or Traffic Engineering

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OR

~~3. Possession of a valid Engineer-in-Training Certificate (National Council of Engineering Educators) AND two (2) years of verifiable technical engineering experience performing at least three of the following tasks:~~

- ~~a. — preparing engineering drawings and other material using computer drafting software in compliance with engineering drafting standards;~~
- ~~b. — conducting engineering investigations and collecting and calculating field/departmental data required in the preparation of designs and drawings;~~
- ~~c. — performing preliminary checks and reviews of engineering documents and drawings for accuracy, engineering sufficiency, and conformance to specifications and standards;~~
- ~~d. — assisting in the preparation of cost and quantity estimates for engineering projects, project specifications and written reports, and site investigations;~~
- ~~e. — applying mathematical and other engineering computations;~~

License and Certification:

3. Possession of a Professional Engineer (PE) license in the field required for each specialty from the California Board of Professional Engineers, Land Surveyors and Geologists.

Note: Most positions require a valid California driver license.

Substitution:

- ~~1. — One (1) year of professional engineering experience performing at least three of the tasks below may substitute for the two years of technical experience listed in #3 above:~~
 - ~~a. — Preparing or assisting in preparing studies, designs, drawings, sketches, and plans using AutoCAD and other software tools~~
 - ~~b. — Collecting data to assess project needs and define project scope through site visits, surveying, review of existing documents, reports, drawing and manuals, performing measurements, collecting samples, or/and interviews with the stakeholders.~~
 - ~~c. — Preparing or assisting in the preparation of contract specifications, lists of materials, cost estimates, schedules, and progress payments.~~
 - ~~d. — Preparing or assisting in the preparation of engineering reports and reports concerning field conditions, the progress of projects, the results of studies, and other matters.~~
 - ~~e. — Conducting data analyses and mathematical calculations, in order to determine type or size of material or equipment.~~
 - ~~f. — Conducting routine field inspections of construction and repair projects in progress to~~

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~~ensure conformance with plans, specifications and codes; checks and records work progress at various construction sites.~~

SUPPLEMENTAL INFORMATION

PROMOTIVE LINES

To: 5203 Assistant Engineer

ORIGINATION DATE: 5/7/1999

AMENDED DATE: 1/21/2000; 4/25/2008; 2/3/2015; XX/XX/2016

REASON FOR AMENDMENT *To accurately reflect the current tasks, knowledge, skills and abilities defined in the most recent job analysis conducted for this job code.*

BUSINESS UNIT(S): COMMN, SFMTA

**CITY AND COUNTY OF SAN FRANCISCO
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**Title: Assistant Engineer
Job Code: 5203**

INTRODUCTION

Under general supervision, performs engineering work of average difficulty in the field and office following established engineering methods and procedures; applies engineering principles and practices to civil, mechanical, electrical, environmental, or transportation engineering problems; performs related duties as required.

DISTINGUISHING FEATURES

This class is the second level class in the professional engineering series. It is characterized by its focus on routine engineering issues of average complexity and difficulty. It is distinguished from the Associate Engineer class in that the latter class requires a professional engineer license and has a greater degree of technical and supervisory responsibility.

SUPERVISION EXERCISED

MAJOR, IMPORTANT, AND ESSENTIAL DUTIES

According to Civil Service Commission Rule 109, the duties specified below are representative of the range of duties assigned to this job code/class and are not intended to be an inclusive list.

1. Prepares, reviews, and checks routine studies, calculations, designs, drawings, sketches, and plans for a variety of engineering projects using AutoCAD and other software tools.
2. Conducts field inspections of existing structures to determine the necessity for future construction, repair, or maintenance; conducts preliminary field studies and surveys and collects data relative to the preparation of designs and drawings; reviews and analyzes field data and results of office research to determine necessary corrective measures.
3. Conducts routine field inspections of construction and repair projects in progress to ensure conformance with plans, specifications and codes; checks and records work progress at various construction sites.
4. Gathers, prepares and maintains engineering data, records and reports.
5. Prepares reports, contract specifications, lists of materials, cost estimates, schedules, and progress payments.
6. Prepares departmental reports and reports concerning field conditions, the progress of projects, the results of studies, plans for future developments and improvements, and other matters.
7. Provides written and oral responses to a variety of inquiries from other agencies, contractors, and the general public.
8. May exercise limited supervision over junior engineers, student engineering trainees, and related personnel.
9. Prepares correspondence, minutes, and reports for a variety of inquiries and problems regarding engineering policies, procedures, standards, environmental impact issues, appeals, and other related project activities; may prepare and process legislation for engineering related issues.
10. Meets and consults with professional engineering personnel, contractors, and the public regarding engineering matters.

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11. Performs related duties and responsibilities as required.

IMPORTANT AND ESSENTIAL KNOWLEDGES, SKILLS, AND ABILITIES

Knowledge of: the principles, practices, and methods of engineering (civil, mechanical, electrical, environmental [water purification], and/or transportation); construction, maintenance, and repair methods and procedures; research techniques, report writing, and statistical analysis.

Ability and Skill to: prepare routine engineering designs, plans, details, and drawings manually or using AutoCAD; prepare cost estimates; perform mathematical calculations; gather data for analysis; use engineering computer software; maintain an effective working relationship with a variety of people; understand, explain, and apply pertinent laws, regulations, codes, and ordinances; communicate orally in a clear, understandable and persuasive manner; and compose clear and understandable written reports, correspondence and memos.

MINIMUM QUALIFICATIONS

These minimum qualifications establish the education, training, experience, special skills and/or license(s) which are required for employment in the classification. Please note, additional qualifications (i.e., special conditions) may apply to a particular position and will be stated on the exam/job announcement.

Education:

1.

a. Possession of a baccalaureate degree or graduate degree from an engineering program with a major in the field of study related to the specialty area defined for each position.

Required Engineering Degrees per specialty:

Civil: Architectural Engineering, Civil Engineering, Environmental Engineering, Geotechnical Engineering, Sanitary Engineering, Structural Engineering, Traffic Engineering, Transportation Engineering, Water Resources Engineering, or Engineering Management

Electrical: Electrical Engineering

Mechanical: Aeronautical Engineering, Aerospace Engineering, Materials Engineering, Mechanical Engineering, or Mechatronics Engineering

Environmental: Bio-chemical Engineering, Chemical Engineering, Civil Engineering, Environmental Engineering, Industrial Engineering, Mechanical Engineering or Sanitary Engineering

Transportation: Civil Engineering, Transit Engineering, Transportation Engineering or Traffic Engineering

AND

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Experience:

b. One (1) year of verifiable professional engineering experience performing at least three of the following tasks:

- a. Preparing or assisting in preparing studies, designs, drawings, sketches, and plans using AutoCAD and other software tools
- b. Collecting data to assess project needs and define project scope through site visits, surveying, review of existing documents, reports, drawing and manuals, performing measurements, collecting samples, or/and interviews with the stakeholders.
- c. Preparing or assisting in the preparation of contract specifications, lists of materials, cost estimates, schedules, and progress payments.
- d. Preparing or assisting in the preparation of engineering reports and reports concerning field conditions, the progress of projects, the results of studies, and other matters.
- e. Conducting data analyses and mathematical calculations, in order to determine type or size of material or equipment.
- f. Conducting routine field inspections of construction and repair projects in progress to ensure conformance with plans, specifications and codes; checks and records work progress at various construction sites.

Note: Internships, drafting experience and student design work do not qualify as professional engineering experience.

AND

License and Certification:

c. Possession of a valid Engineer-in-Training (EIT) certificate (issued by the (National Council of **Examiners for Engineering and Surveying (NCEES)** Engineering Educators).

OR

2. Possession of a Professional Engineer (PE) license in the field required for each specialty from the California Board of Professional Engineers, Land Surveyors and Geologists.

Note: Most positions require a valid California driver license.

Substitution:

Possession of a professional engineering license may substitute for the EIT certificate.

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Title: Assistant Engineer
Job Code: 5203

-SUPPLEMENTAL INFORMATION

PROMOTIVE LINES

To: 5207 Associate Engineer
From: 5201 Junior Engineer

ORIGINATION DATE: 10/2/2000

AMENDED DATE: 4/25/2008; 2/3/2015; **XX/XX/2016**

REASON FOR AMENDMENT *To accurately reflect the current tasks, knowledge, skills and abilities defined in the most recent job analysis conducted for this job code.*

BUSINESS UNIT(S): COMMN, SFMTA