CLASS TITLE: Engineering Technician V

CHARACTERISTICS OF THE CLASS: Under direction, performs professional and complex professional engineering work, and supervises subordinate engineering personnel on a variety of engineering projects; and performs related duties as required.

EXAMPLES OF DUTIES: Acts as district or resident engineer at a moderately complex construction project, or as assistant resident engineer on a major project; supervises the construction of highway resurfacing, street channelization, pedestrian subways, foundations, sewer system, earthwork, retaining walls, traffic installations, caissons, curbs, gutters and related structures; develops original and complex engineering designs and criteria; evaluates a variety of contractor's shop drawings; studies contract plans and specifications for errors or omissions; prepares difficult mathematical calculations of dimensions, stress and elevations; evaluates accuracy of engineering source data; studies and reviews major traffic control changes; recommends location for the installation of traffic control signals, and other traffic regulating devices; develops traffic signal timing and sequence of operation; processes and approves applications for curb, gutter and street restoration work; responsible for the control, layout and programming of restoration projects; responsible for quantity and cost estimates for a variety of engineering projects; supervises and trains subordinate personnel in good engineering practices and procedures; coordinates activities between general contractor, utilities, and other City departments; makes field decisions as to proper interpretation of engineering plans and specifications; writes engineering specifications and calculates contract pay items; prepares monthly work estimates; prepares as-built engineering drawings.

Transcribes from field engineer's field books, topography and utility information; draws sewer and drainage profiles for construction or for study; draws and details special sewer structures required for proposed project.

Plats records of field engineers in allalisces after final records are submitted showing Inventories, final quantities, etc.; indexes all work completed; checks sewer designs for alleys and streets submitted by Board of Local Improvements before letting of contracts; designs and compiles contract plans for City street improvements and new parking facilities through the supervision of draftsmen and technicians, estimating quantities and cost, writing specifications, making field inspections of the project site, and checking final plans.

Reviews sewer plans prepared by consultants; prepares or supervises the preparation of plans and estimates for removal, relocation or construction of new street lighting systems; prepares preliminary layouts; supervises the preparation of construction drawings by draftsmen.
Conducts field surveys to obtain information necessary for preparing construction plans for street lighting projects; prepares unit cost estimates and labor and material estimates for projects; coordinates the construction and installation of street lighting equipment with other City agencies, contractors or utilities.

DESIRED MINIMUM QUALIFICATIONS:

Training and Experience. Four years of progressively responsible engineering experience in the field or office; or an equivalent combination of training and experience.

Knowledge, Abilities and Skill. Considerable knowledge of the theory and practice of engineering design, construction and inspection procedures. Considerable knowledge of modern construction methods and of the strength and uses of construction materials. Thorough knowledge of the use of surveying and drafting instruments.

Ability to originate and check designs, details, estimates, plans and specifications. Ability to meet and consult with community groups, engineers and contractors. Ability to supervise and direct the work of others.

Skill in the application of engineering theory and practices to engineering problems, and in the use of surveying and drafting instruments.

December, 1987