

# **Information for Student Engineers/Architects**

**Bureau of Engineering**  
**City of Los Angeles**  
**1149 S. Broadway Street**  
**Los Angeles, CA 90015**



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## Vision

We will lead the transformation of Los Angeles into the world's most livable city.

## Values

**Integrity:** Our actions follow our words and we always take responsibility for the results.

**Respect:** We value and appreciate everyone's contribution, responding in a professional manner.

**Teamwork:** We work together to achieve goals.

**Quality:** We perform at a level that exceeds client expectation.

# Who Are the Key Players at Engineering?



**City Engineer, Gary Lee Moore, PE, ENV SP**, provides the overall leadership of the Department of Public Works, Bureau of Engineering (BOE), which is composed of over 820 engineers, architects, surveyors, technical support staff, and administrative professionals who deliver comprehensive, innovative engineering services by using best-in-class management practices and fostering multi-agency collaborations that are transparent and accountable. The BOE is responsible for the City's vast network of infrastructure within the public right-of-way, which includes the planning, design, and construction of public facilities, and the management and delivery of voter-approved public bond funds,

Federally-funded projects, and the delivery of cross-sector local government programs that serve millions of residents and businesses in diverse neighborhoods and industries.

There are 23 Divisions/Groups and 4 District Offices in the BOE, organized under the following Deputy City Engineers and Managers:

- Executive Division – Provides the overall management of the Bureau through the City Engineer and Deputy City Engineers. The Council and Board Liaison group represents the Bureau at meetings of the City Council, Council committees, and meetings of the Board of Public Works. The group coordinates the involvement of other Bureau offices as needed.
- Administration Division (ADM) – This Division prepares the budget, updates fees and charges; manages revenues and work orders; and oversees financial systems, purchases materials, equipment and services; processes Board Reports, tracks correspondence, provides recruitment, position control and operating personnel services; coordinates training programs; leads Bureau safety and emergency preparedness programs; provides timekeeping and payroll services; provides a variety of support services to the Bureau.



**Chief Deputy City Engineer, Deborah Weintraub** – Public Buildings & Open Spaces Program:

- Architectural Division (ARC) – Provides design and project management services for the construction of public projects. Prepares contract documents (plans, specifications, and estimates) for the construction of new municipal facilities as well as the alteration and retrofitting of existing facilities. It performs these services using staff or by managing consultant contracts. The

California Board of Architectural Examiners accredits the Division as an Intern Development Program agency recognized to train staff in preparation of their State architectural licensing examination. The Division also manages the Citywide Sustainable Design Implementation Program.

- Bond Programs Division (BPD) – Manages municipal facilities projects funded by General Obligation Bonds approved by the public through Proposition F bond measure of November 2000 for Animal Services Centers and Fire Facilities, and Proposition Q Public Safety bond measure approved in March 2002 for Police, Fire and Emergency Management projects. This Division works with client departments and coordinates with other bureaus within the Department of Public Works, Council offices, and citizen oversight committees.
- Bridge Improvement Division (BID) – Manages bridge improvement project funded by the City Seismic Bond, State and Federal Funds.
- Construction Management Division (CMD) – Provides construction management on Public Buildings & Open Spaces projects, and other programs on request. The Division prepares construction estimates and negotiates change orders on public works projects.
- Downtown Los Angeles Streetcar Division (SCD) – Oversees the Environmental Studies, Design and Construction of the Downtown Los Angeles Streetcar Project
- LARiverWorks (LAR) – Serves as the central coordination office for the implementation of the Los Angeles River Revitalization Master Plan (LARRMP), and for LARRMP-related project delivery, including the management and monitoring of consultant activities, support to and coordination of City departments and external partners in the development of River project scopes, designs, grant applications, budgets, and implementation; serves as the primary point of contact for the City in establishing River cooperation partnerships in coordination with the County of Los Angeles, the U.S. Army Corps of Engineers, and the State of California.



**Deputy City Engineer, Kenneth Redd** – Clean Water Infrastructure Program:

- Environmental Engineering Division (EED) – Responsible for delivering Wastewater Capital Improvement projects at the Hyperion Treatment Plant, Terminal Island Water Reclamation Plant, Donald C. Tillman Water Reclamation Plant and the Los Angeles/Glendale Water Reclamation Plant. EED also delivers collections systems pumping plant projects and odor control projects. EED core functions are to perform project management, design, and construction management services as well as completing research, engineering studies and technical reports.

- Project Award & Control Division (PAC) – Performs a quality assurance review for all bid packages to advertise construction contracts, and prepares construction contract award reports to the Board of Public works. Serves as the Bureau’s expert in MBE/WBE/OBE/& BIP requirements and the Mandatory Subcontracting Minimums for construction contracts. Maintains the Bureau’s standard contracts for construction projects and personal services, and is the custodian of record for all Bureau technical audits. Maintains a public counter for distribution of bid documents, plan holder lists, lists of projects out to bid, and BOE plans. Serves as the Bureau’s utility coordination expert and is responsible for coordination of utility work for construction projects. Maintains the Uniform Project Reporting System (UPRS), which reports and updates the scope, budget and schedule for the design and construction of all BOE projects. Maintains the Personal Services Contracting System Contracting System (PSCS), which reports and updates the current status of all BOE consultant contracts.
- Prop O Clean Water Division (POB) – Proposition O authorized \$500 million of General Obligation bonds for projects to protect public health by cleaning up pollution, including bacteria and trash, in the City’s watercourses, beaches and the ocean, to meet Federal Clean Water Act requirements. Proposition O will also fund improvements to protect water quality, provide flood protection, and increase water conservation, habitat protection, and open space. The bonds allow the City to purchase property and/or improve municipal properties for projects that: Protect rivers, lakes, beaches, and the ocean; Conserve and protect drinking water and other waters sources; Reduce flooding and use neighborhood parks to decrease polluted runoff; Capture, clean up, and reuse stormwater. The Proposition O Implementation Program manages the design and construction of these projects and coordinates the funding of projects managed by other agencies and other City departments or bureaus.
- Survey Division (SUR) – Provides land surveying services for Public Works projects and other City Departments upon request. With staff located at each Engineering District office, Piper Technical Center and Figueroa Plaza the Division delivers preliminary, construction, boundary and control surveys utilizing state-of-the-art technology. The Division establishes and maintains the Citywide horizontal and vertical control network utilized by both the public and private sectors for all real property and construction surveys. Checks and approves final subdivision maps for boundary, title, lot closures and areas. Provides Right of Way engineering services for the Bureau and other Departments. Prepares and/or checks and approves legal descriptions used for street and utility dedications, property acquisitions and sale of surplus property for most City Departments.
- Wastewater Conveyance Construction Division (WCC) – Responsible for managing the new construction and rehabilitation of the City’s extensive sewage collection and conveyance systems for responding to sewer related emergencies. The construction projects include large sewer tunnels, pumping stations, Cement Sewer Replacement Program (CSR), Secondary Sewer Renewal Program (SSRP) and Emergency Sewer Repair Program (ESRP) that also includes Super Expedited Wastewater Emergency

Rehabilitation for Sewers (SEWERS). Typical operations include coordination with the contractors, inspectors, public and private agencies, community outreach, field engineering and project schedule and cost monitoring and control.

- Wastewater Conveyance Engineering Division (WCE) – Responsible for the design of new sewers, the rehabilitation and replacement of existing sewers, and odor control and other ancillary facilities; for the administration of the Collection Systems Settlement Agreement and the Accelerated Sewer Repair Program; for their party review; and for recommending the approval of materials for use in rehabilitation and replacement of sewers.



**Deputy City Engineer, Ted Allen** – Development Services & Permits Program:

- Central (CEN) and Valley (VAL) Districts – Maintains the permit public counter, performs plan check and issues permits for major and minor street construction, sewers, utilities and excavations for private development work. Prepares requirements for dedication and improvements under the hillside ordinance and building permits, and provides building permit clearances.
- Harbor (HAR) and West Los Angeles (WLA) Districts – These two district offices can design public improvements within their geographical boundaries. They design streets, sewers, and storm drains. They perform plan check and maintain a public counter to issue permits for major and minor street construction, sewers, utilities, and excavations for private development work.
- Land Development and GIS Division (LGD) – LGD consolidates the functions of the prior Land Development Group and GIS and Mapping Division into a single office responsible for all aspects of the subdivision of land and public right-of-way, including maintenance of these records.
- Systems Division (SYS) – Analyzes, designs, develops and implements systems to meet the needs of the Bureau. The Division manages Bureau systems for intra and interdepartmental integration and secures data and systems for which the Bureau has responsibility. They are responsible for specifying systems hardware and software.



**Deputy City Engineer, Alfred Mata** – Mobility and Engineering Services Program:

- Environmental Management Group (EMG) – Responsible for oversight and control of the Bureau's compliance with the California Environmental Quality Act (CEQA), the National Environmental Policy Act (NEPA), and related environmental permits. EMG provides timely, legally adequate, objective, public

disclosure of the environmental effects of proposed actions within the purview of the BOE. EMG also implements the City Engineer's Coastal Development Permit authority.

- Geotechnical Engineering Group (GEO) – Provides geotechnical, geologic, and subsurface contamination investigations as well as construction support for Bureau projects and for various City departments; Provides emergency response for landslides, sinkholes, as well as program management, design, and construction management for geotechnical and contamination projects.
- Metro Transit Division (MTD) – Performs expedited review and approval of design and construction in City streets associated with major transit projects by the LA County Metropolitan Transportation Authority (Metro).
- Real Estate Division (RED) – Provides all necessary real property acquisition services for all Public Works infrastructure projects. The Division has a Caltrans Level-3 pre-qualification making it the only real property group in the City that can certify federally funded right-of-way projects. Services provided include pre-design consultation, right-of-way project management, appraisal, negotiation, acquisition, relocation assistance, property management, title examination, consultant oversight, escrow and right-of-way instruction; processes dedications, vacations, quitclaims, and irrevocable offers to dedicate property to the City.
- Sixth Street Viaduct Division (SIX) – Responsible for managing all activities related to the Sixth Street Viaduct Replacement Project.
- Street Improvement/Stormwater Division (SSD) – Prepares plans and specifications and provides construction management for the construction of street Capital Improvement Program projects and provides design and construction management services for flood control projects and stormwater structural Best Management Practices in order to minimize pollutants in stormwater and urban runoff (e.g., dry-weather storm drain flow diversions to the sewerage). Provides technical coordination and constructibility review for the Light-Rail/Metro-Rail transit. Provides technical coordination with Caltrans. Also oversees the planning for the City's flood control program and coordinates the City's activities required by the National Flood Insurance Program.
- Structural Engineering Division (SED) – Provides design and construction support services for the various programs in the Bureau. Prepares structural plans and specifications for wastewater conveyance and treatment facilities, municipal buildings, railroad and vehicular grade separations, pumping plants, pedestrian and vehicular bridges, tunnels, retaining structures, and various subterranean structures. This Division is involved in reviewing Overload Permits and Private Development B-Permit plans for structures adjacent to and in the Public Right-of-Way. SED is also the first responder during emergencies that affect our City bridges.



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# What is the Student Engineer/Architect Program?

The Student Engineer/Architect Program is implemented as a part of the BOE's outreach recruitment effort. Normally students are sought from local colleges and universities. Emphasis is placed on selecting those students who are majoring in the engineering field, in particular Civil Engineering, or in the architectural field.

The Program introduces selected students to the scope of work of the BOE. It provides students with opportunities to explore future careers and obtain hands-on experience in the fields of engineering or architecture within the City.

The Student Engineer/Architect Program emphasizes the mastery of engineering and architectural skills and critical thinking within a diversified work environment. Specialized work tasks are developed to accomplish these objectives with each student. The Program provides students a work experience that creates a successful transition to a professional career upon graduation.

This program limits employment to those students enrolled in a four year college or university. Students must also be a United States Citizen or permanent resident of the United States. Criteria for entry level qualification to the Program are 30 semester units or 45 quarter units with a major in engineering or matriculation and completion of one year of college architectural training in a recognized four-year college or university.

Selection is made through the screening process by assigning each applicant a final rating. This rating is based on considerations, such as the applicant's education, initiative, general interest, and abilities.

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## **What are the duties of Student Engineer/Architect?**

Student Engineers, depending on their major or interests, may serve in any of several engineering fields including civil, electrical, mechanical, structural, hydraulic, sanitary, transportation, surveying and material testing while enrolled in a school of engineering. Although a Student Engineer will perform productive engineering work, the primary purpose of this class is to attract and evaluate college engineering students who are interested in a professional engineering career with the BOE.

A Student Architect is assigned to work in the Architectural Division that is responsible for the design of new City building and the renovation and rehabilitation of existing City buildings. A Student Architect may prepare presentation drawings and make architectural models, prepare design drawings for schematics and design development phases using AutoCAD, Civil3D, Map3D, Revit, InfraWorks, Navisworks, etc., depending on the division where they are assigned.

Student Engineers and Student Architects receive assignments in the form of written and oral instructions. Work is reviewed for accuracy, judgement exercised, and skill demonstrated, based on the student's academic level and previous work experience. Students may work in the field or office and normally work under the supervision of a professional engineer or architect.

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## What is the description of each class pay grade level?

Student Engineer positions fall into the four paygrade levels listed below and the descriptions are used as a basis for determining the pay level of each individual.

**Student Engineer I.** A Student Engineer who has completed one academic year of training in a school of engineering.

**Student Engineer II.** A Student Engineer who has completed two academic years of training in a school of engineering.

**Student Engineer III.** A Student Engineer who has completed three academic years of training in a school of engineering.

**Student Engineer IV.** A Student Engineer who is in his/her senior year of training in a school of engineering, who is currently enrolled and completing the last semester of course work.

Student Architect positions fall into the three paygrade levels listed below and the descriptions are used as a basis for determining the pay level of each individual.

**Student Architect I.** A Student Architect who has completed one academic year of training in a school of architecture.

**Student Architect II.** A Student Architect who has completed two academic years of training in a school of architecture.

**Student Architect III.** A Student Architect who has completed three academic years of training in a school of architecture.