

ENGINEER PROFILE

Name: Jimmy Dang, P.E.

Organization: Oro Loma Sanitary District

Engineering Discipline (Check one below):

- Civil
- Mechanical
- Electrical
- Environmental (including Process)
- Structural
- Information Technology
- SCADA
- Other

1. Please describe the work you do:

I work as a Senior Civil Engineer for the Sanitary District. I solve problems and enhance infrastructure through design and construction of projects. My work includes performing studies, preparing construction cost estimates, preparing engineering drawings and specifications, coordinating capital improvement program projects, and assigning work to other engineers and inspectors. Projects involve improving, replacing, and updating infrastructure such as sewer mains, lift stations, and the treatment plant.

2. What combination of education, experience, and skill was required in order for you to obtain your job?

Over the years, I have acquired my Bachelors of Science degree in Civil Engineering from Cal Poly San Luis Obispo. I am also a registered professional engineer of the State of California. I have worked for a General Contractor before joining a design firm where I was able to bring invaluable experience in the field prior to applying it to my design work. Afterwards, I joined a public agency where I can bring both my construction and engineering skills to the current agency. I also joined the Northern California Pipe Users Group, which is a non-profit organization that brings new technologies to professionals for educational purposes. Now I serve on the Board of Directors as the Chief Financial Officer. All of this experience and involvement helped qualify me for the current job as a Senior Civil Engineer.

3. What do you like best about your job?

As an engineer, I love resolving problems. When operators and maintenance personnel come to me with problems that need to be fixed, I engage them and try to figure out what the exact problem is, coming up with possible solutions, and implementing the best and most feasible solution. I like taking a puzzle, dissecting it and figuring out the problem so that I can find a solution to it. At the district, I am constantly trying to resolve issues, and it makes the day go by too fast sometimes.

4. Please tell us about the water or wastewater engineering project you enjoyed working on the most, and what made it rewarding.

First, watching a project go from planning, pre-design, design, construction, then final completion makes this job fantastic. Seeing a project go from its inception to creation gives me a sense of satisfaction and accomplishment. My first job was the design and installation of a 24" diameter recycled water pipeline through the City of Redwood City. I designed a portion of it, and worked with the owner's representative to bring a successful project to completion while providing recycled water to its residents. Another project I have thoroughly enjoyed was the construction of two new one-million gallon digesters at the current agency. By working with internal staff, inspectors, and the contractor, I was able to deliver that project on budget, and on time.

5. What qualities and capabilities are needed in order for an engineer to be successful in the water/wastewater industry?

I believe that you absolutely have to have two traits to be successful in the water/wastewater industry and also the engineering industry as well. One of them is attention to detail. You see this in classes you've taken in college, and when you reach the professional world, clients rely on you as an engineer to come up with solutions to their problems. In order to do so, you need to pay attention to the problems and figure out what they are, and design a solution that is detailed enough to resolve their issue. The other trait is communication, which they don't teach you in class too much. In order to be an effective engineer or construction manager, you need to be able to communicate effectively to others and convey complicated information to people in a manner they will understand. Most people may understand your engineering drawings and calculations, but some may not, and therefore, being able to communicate to them what you are designing is one key element to your success.

6. Do you have any advice for an individual who is considering pursuing a career as an engineer in the water/wastewater industry?

Enjoy your work! Develop relationships and network while pursuing your career. While in school, join clubs, get internships and work on learning the professional world. When out of school, working for a company, just remember that every company operates differently. They may all require you to use your engineering knowledge, but procedures and protocols are different. Learn to adapt and again, network, and communicate effectively, and once again, enjoy your work!