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Engineering Tomorrow

Main channel dredging, solar technology, new terminal berths and dramatically enhanced road and rail access ...

When Tony Gioiello, Chief Harbor Engineer for the Port of Los Angeles, starts rattling off the number of projects his Engineering group oversees, the list seems endless.

Railroad systems, Alternative Maritime Power (AMP), energy efficient buildings, state-of-the-art security and fire protection systems ...

With 200 active projects and dozens of other projects continually being added to the pipeline, the list actually is endless.

HVAC systems, landscaping, marinas, community parks and open space ...

An engineer at the Port of LA since 1985 and head of the Port's Engineering Division since 2003, Gioiello oversees a staff of 90 professionals responsible for all aspects of the Port's robust Capital Improvement Program – a 10-year \$2 billion commitment for the planning and engineering of marine facilities, roadways, rail infrastructure, waterfront infrastructure, energy systems and more.

"The Port of LA's Capital Improvement Program is proof that we're committed to providing shippers with the most modern, efficient and hassle-free trade gateway in the nation for years to come," says Mike DiBernardo, Director of Business Development at the Port of Los Angeles. "Our Engineering Division is unmatched in terms of the breadth and depth of their work, and I never cease to be amazed at what they do and how well they do it."

If something at the Port of LA needs to be studied, budgeted, designed, permitted and built, the Engineering Division is the group that tackles a large portion of those tasks. As the largest trade gateway in the western hemisphere it takes plenty of expertise to keep everything moving and the Engineering Division has it: From world class Harbor, Civil and Electrical engineers, to industry-leading planners, architects, analysts, project managers and administrators.

"Our team is outstanding," says Gioiello. "And the thing that's very exciting to everyone is the fact that we're on the leading edge of so much when it comes to port technology and sustainable infrastructure, especially in the area of alternative energy solutions and future electrical distribution systems."

The reason for focusing on electrical distribution and alternative energies are obvious, ranging from controlling future fuel and utility costs, to reducing harmful air emissions. While complex, the need to control and reduce the use of fossil fuels is obvious and the Port of LA has emerged as a leader.

"More and more shippers need to do business with ports that not only save them money, but are in line with their environmental goals," says DiBernardo. "Through AMP, solar, and other technologies, shippers know that the Port of LA will always be part of the solution to meeting their fuel efficiency and environmental commitments."

During the past decade, the Engineering Division has installed more AMP technology than any port in the world and it is currently in the process of developing systems that would yield up to 10 megawatts of renewable energy.

And what does the future hold? From the perspective of Senior Electrical Engineer Vahik Haddadian -- with the Port since 1983 – a major key to the future is electrical distribution. "As the Port becomes more and more automated over the years, the need for high quality electrical distribution is vital," says Haddadian. "We're in the process of developing a power distribution master plan that will be revolutionary in the port industry."

While these new engineering challenges are exciting, the Engineering Division never loses sight of the basics. Currently, the group is deeply involved in designing and delivering major projects including the final phases of the Port's 10-year Main Channel Deepening Project, extensive berth and backland expansions at multiple terminals, a major on-dock rail expansion and roadway improvements to further speed to movement of goods to and from the port.

"The thing that sets the Port of LA apart from an engineering standpoint is that we've always supported innovation," says Haddadian. "Where others have shied away from progress, the Port has always pursued it. That's why the things we're doing today are on the cutting edge. It's always been exciting to be part of this team, but never more so than it is today."