Compiled by Neda Simeonova

Peter Tunnicliffe

THE DESIGN-BUILD APPROACH

Addressing water and wastewater project challenges through design-build

WWD Editorial Director Neda Simeonova recently spoke with Peter Tunnicliffe, president of the Water Design-Build Council, about the benefits of design-build project delivery.

Neda Simeonova: For a municipality considering a design-build project, what are the key benefits of design-build project delivery?

Peter Tunnicliffe: Benefits of design-build delivery include schedule efficiency, cost efficiency and the ability of the owner to participate in scope advancement and to understand the cost implications of design decisions. Schedule efficiency is an important aspect of this form of project delivery, as it brings more jobs to the local economy more quickly than conventional design-bid-build project delivery.

Simeonova: What are some pitfalls associated with design-build project delivery, and how can a municipality avoid them?

Tunnicliffe: One of the primary pitfalls is when an owner spends too much time and effort advancing a preliminary design and issuing a fixed-price design-build procurement. Although this can seem like a conservative approach, the end results—as demonstrated by many water and wastewater design-build procurements—are as follows:

The schedule for the project ends up taking as long as a conventional project delivery, or longer when the procurement document development time is included; the actual approach selected by the owner is different than the preliminary design concept, resulting in inefficient re-engineering; and the owner has to work with a new team after they have spent considerable time and effort with the procurement development team.

An owner can avoid these pitfalls by taking advantage of the "progressive" form of design-build delivery, where the owner works with the selected design-builder from project inception and advances the design scope collaboratively with a full understanding of the cost and schedule implications of design options.

Simeonova: What type of utility would be a good candidate for a design-build project?

Tunnicliffe: Most municipal public works facilities are good candidates for design-build projects. Depending on the nature of the work, there may be multiple measurement and payment provisions, early release packages or permitting constraints that precede construction work but allow long lead-item procurements to take place. The skill of the design-builder is in delivering applied innovation to the owner's specific situation and generating added value.

Simeonova: What is the impact of funding on water/wastewater projects, and how can design-build address it?

Tunnicliffe: According to the U.S. EPA, Government Accountability Office and Water Infrastructure Network, the U.S. faces a $300- to $500-billion funding gap over 20 years between what is needed to upgrade and repair the nation's water and wastewater infrastructure and what is being spent, so there is a greater need for efficiency in project delivery.

Design-build project delivery promotes innovation and efficiencies in the project's schedule. In addition to quicker project implementation and completion, design-build also allows contracts to be awarded on overall best value and provides single-point accountability, resulting in fewer change orders, claims and disputes.

Simeonova: Can design-build projects accelerate the effectiveness of the economic stimulus package? Why or why not?

Tunnicliffe: As municipalities choose which projects to implement, their decisions will be based on which projects are most urgent and which projects can be started and completed with the most economic impact, both in terms of jobs created and value to local and state economies.

In general, design-build project delivery allows every project to be "shovel ready" within 120 days, provided land and permitting issues are cleared. Design-build project delivery also allows work beyond engineering to commence rapidly, stimulating manufacturing in a number of sectors. Water and wastewater facilities' design-build work can positively impact more industry sectors of our economy than almost any other type of work. WWD

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California Water District Activates Solar Panels

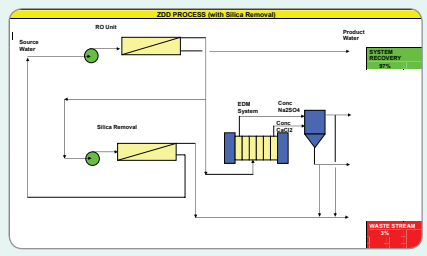
The Metropolitan Water District of Southern California recently activated a 10-acre field of solar panels at the Robert A. Skinner Water Treatment Plant.

The 1-mW solar installation will generate about 2.4 million kW-hours of renewable energy a year, nearly 25% of the power used by the plant and equal to the power used by about 250 homes annually. The energy will be used directly at the plant, helping to offset nearly 2 million lb of carbon emissions per year.

Thompson Pump Provides Bypass Pumps in Florida

Thompson Pump handled the bypass pumping of a critical storm water pump station located in Hollywood, Fla. To properly perform the bypass, Thompson Pump provided four Silent Knight bypass pumps, two wellpoint pumps, settling tanks, auxiliary fuel tanks, pneumatic pipe plugs, hoses and piping. All was provided as a turnkey system.

Veolia Acquires Rights to Desalination Technology



Veolia Water Solutions & Technologies has acquired worldwide rights to commercialize a new, patented zero-discharge desalination technology developed at the University of South Carolina by ZDD, Inc. It utilizes a combination of separation processes to remove divalent salts from water. Pilot testing shows that the technology can achieve 97% recovery on brackish water over an extended time period.

Mandatory Los Angeles Water Conservation Begins

As part of a mandatory water conservation program in response to a three-year drought, Los Angeles Department of Water and Power customers must reduce water consumption by 15% or pay a higher rate beginning June 1, myfoxla.com reported.

The new restrictions are set to be in place until more water supplies become available. Water supply is expected to drop about 20% this year because of the ongoing drought and a court decision that limited what water agencies can draw from the Sacramento-San Joaquin Delta.

Marquette Law School Launches Water Law Curriculum

Marquette University Law School will launch a new curriculum in water law for the 2009–2010 academic year.

This curriculum will include a course specializing in the legal principles involved in securing, allocating, transferring, managing and adjudicating water rights for public and private uses. It will also include courses on administrative law, patent and trade secret law, environmental policy and philosophy, land-use planning, natural resources law and agriculture law.

WateReuse Foundation and PUB Singapore Form Research Alliance

The WateReuse Foundation and PUB, Singapore's national water agency, have signed a research agreement to co-fund up to $5 million of research that will help water agencies worldwide provide a sustainable water supply while enhancing the environment and protecting public health.

Under the agreement, each organization will provide up to $500,000 annually over the next five years to fund research of mutual interest.

EPA Publishes Report from Preparedness Summit

The U.S. EPA has published the "Chicagoland Water and Wastewater Preparedness and Business Resiliency Summit: A Community Forum on Interdependencies (EPA 817-R-08-012)." The Summit explored interdependencies between the water sector and other critical infrastructure and started the dialogue to develop a framework for collaboration on issues affecting water sector vulnerability and resiliency.

For a copy of the report, visit: http://cfpub.epa.gov/safewater/watersecurity/features.cfm.

Water For People Selects CEO

Water For People has named Ned Breslin its chief executive officer. Breslin has been serving in the role of acting CEO for the past eight months. He joined Water For People in January 2006 as the director of international programs.

Lynn Osborn Honored with AWWA Life Member Award

Lynn Osborn was awarded the American Water Works Association (AWWA) Life Member Award at the 2009 Annual AWWA-MO/MWEA Joint Conference. Osborn is the senior applications manager for Insituform Technologies, Inc.

News compiled by Rebecca Wilhelm

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