

Before You Know It.

How often do you think – “If only I had known that...” and wished someone had clued you into something you missed? That is what frequently happens to grant opportunities. They seem to be quietly announced and then slip away quickly.

There is a wealth of options for all types of projects that may be available to fully or partially fund what you are planning or need to implement. WAI is involved in a wide range of services for private and public clients that positions us to constantly research grants. We stay on top of grant deadlines and requirements and will be happy to keep you informed.

Here is an upcoming example that we are currently developing for some of our clients:

The Michigan Department of Environmental Quality (MDEQ) is accepting proposals for projects that enhance waterfronts, increase public access, and provide economic benefits for communities. The goal of the Request for Proposals (RFP) is to solicit projects that will create a vibrant, attractive waterfront within communities. The proposed project may either be a stand-alone project, or part of a larger overall development.

Proposals are being accepted until March 26, 2008

WAI is currently working with **The Village of Baroda** and **Village of Berrien Springs** to develop park and recreation plans that will include grant funding from several sources. Let us know if you would like to know more about what grant opportunities are available that may help your projects. ■



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WAI THE WIGHTMAN WAY

1st Quarter Report

Practical Solutions Based On Common Sense.



Structural Engineering

Streetscape Design

GPS Surveying

Moving Dirt Goes High Tech

GPS navigation systems seem to be available everywhere. They have commonly been used on boats and in cars and trucks for years. Now to stay competitive, contractors are turning to GPS on construction sites. Construction staking and moving dirt for grading and site preparation have always been a time and labor intensive segment of any project. Today, WAI design engineers are developing construction plans using GPS system software that greatly reduce the amount of construction staking required.

The significant factor with using GPS is the absolute positioning. An equipment operator now has a computer on board with a GPS receiver that is capable of using four or more GPS satellites to calculate its absolute position. No longer is the operator required to take notes from a hard copy plan, look for construction stakes or make repeated passes. The three dimensional plan and GPS equipment act as a navigational guide for construction equipment.

Operators know the exact location on the site both horizontally and vertically. This information along with the construction plan

information helps the operator to program the cutting edge of a dozer or grader blades to efficiently get to the final grade. This combination improves productivity and reduces rework and subsequent costs.

Perhaps only 10% of the former construction staking process is still needed which significantly reduces the costs involved in preparing a site. The time and cost for surveys are also reduced. Eliminating the second guessing by operators helps more work get done with fewer personnel and less equipment. Contractor costs are reduced by the lower personnel and fuel costs and equipment maintenance/ownership.

Dave Bell, Project Manger for Hoffman Brothers, Inc., used GPS plans to do the site work for the Four Winds Casino in New Buffalo. “Using GPS plans is a great time savings that translates into a cost savings for the contractor and the owner. We can be more competitive on our bid and it improves our work accuracy. There are fewer mistakes which means the job gets done faster. At the Casino, everyday was valuable. For that project I can safely say that we probably saved

a couple weeks worth of work by using GPS plans. When we bid with digital plans, we are more accurate because we can determine the volume of dirt to be moved and those numbers will be the same as the engineers.”

“You can't be competitive without GPS technology as a contractor,” stated J.W. Kalin, Kalin Construction Company. “Using GPS automated equipment saves the contractor and the owner money. It is a large investment for the contractor. It takes approximately \$60,000 to upgrade a grader or bulldozer.”

WAI recently completed plans for Lakeside Cabins Resort in Chikaming Township that included two ponds and about 90,000 cyd's of excavation. Completing the plans and providing information to contractors that enabled them to use GPS controlled equipment saved the developer over \$15,000 in construction staking, approximately \$120,000 or 35% in excavation, and several weeks of construction. The savings were based on a comparison of five bidders using GPS compatible equipment versus conventional methods. ■



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Sense of Community

A source of pride throughout WAI is our relationship with Harbor Habitat for Humanity. It started in 2005 with sponsoring and building one of the houses during the Jimmy Carter Blitz in Benton Harbor. Not resting on our laurels we have continued our relationship by providing surveying, design engineering and construction staking for the Harbor Habitat's latest project – Crystal Estates.



Crystal Estates is an 8 acre, 21 lot subdivision located on Crystal Avenue in Benton Charter Township. The main desire was to build a community of homes over a two-year period. Ground was broken in September 2007 and the preparation to select 21 families is under way. Pajay Inc. from New Buffalo will continue construction in April when the weather breaks. When the project is completed in 2009 it will include the Harbor Habitat's 100th home. At the same time it will be the 15th anniversary of Harbor Habitat...a double celebration.

"This was our first attempt at a full subdivision of Habitat homes and our smooth working relationship with Wightman helped us to get Crystal Estates off the ground more quickly than we could have expected. They are the cream-of-the-crop to work with. They helped us to find the best contractor and we know that we benefit from their ability to keep costs down. We can call anytime and get a fast, professional response. They truly are our partners sharing our pride and effort to build a better community," stated Mike Green, Executive Director, Harbor Habitat. ■



Wightman team celebrating completion of Habitat house in 2005.

Utility Rate Follow-up

In our Fall Wightman Way newsletter we compiled a comparison of Utility rates for our local area. At the same time the news was filled with stories about the decaying of our country's water infrastructure. Locally many municipalities have or are looking into raising their rates...never a popular prospect.

In the January/February *Engineering Inc.* article "Trouble Below" there were two key challenges that summed up the battle that we are all facing –

- Lack of awareness and/or understanding by the public
- Lagging or cut back of funding.

Here is a small portion of the article:

"...the majority of the water treatment and delivery systems in the United States were built so long ago that an entire generation hasn't had to face building new systems or dealing with expensive upgrades and repairs. It's simply not within their realm of consciousness. As a result, funding has lagged. The federal government has cut back significantly on its investments in local water infrastructure. What was once a flood of federal dollars has, in recent years, turned into a trickle. Funding for the State Revolving Fund (SRF) program, for example, which is the principal federal funding vehicle for wastewater projects, decline from \$21.26 billion in F.Y. 2004 to \$842.5 billions in F.Y. 2007 (the most recently enacted level). Thirty-five years after the passage of the Clean Water Act, funding for water projects now amounts to an annual battle on Capitol Hill."

Utility rates are not subsidized. The days of 75% to 90% grant money for funding improvements or new systems are gone while the demands on the systems are increasing. Our environmental standards are also an increasing demand with more stringent regulations and oversite requirements. So what can be done?

One more common solution is municipal utilities are merging into larger systems. This allows fixed costs to be paid by more users and help to reduce rates to users. WAI has experience in working with communities to help develop inter-municipal systems. The mergers often face the first challenge mentioned above, lack of public understanding. WAI will frequently attend public meetings to provide factual information in layman terms.

To address the second challenge, lack of funding, our goal is to find the most cost effective solutions that are at the same time the most efficient for the long term. This involves looking at what a community needs and getting low interest loans and/or grants that will meet the costs and help minimize rate increases.

The expectation is that everyone should have clean water and effective sewage treatment. The reality is that providing this expectation involves pro-active system management and the need to inform the general public that the price tag for this expectation will never stop increasing. ■



Great Things Are Happening...People

NEWS FLASH



Cesar Arizmendi Becomes LEED Accredited Professional

Cesar Arizmendi has earned Leadership in Energy & Environmental Design (LEED) AP accreditation from Green Building Certification Institute, established with the support of the U.S. Green Building Council. Since joining the firm in 2005, Arizmendi has served as a Project Designer and has been passionate about learning green practices, working mainly with residential and commercial projects. Cesar has a Bachelor's degree in Architecture from the Technological Institute in Mexico.

NEW Hires



David Conn is an engineer in training and will provide road design, sanitary sewer systems, treatment plant design, storm sewer design, right-of-way plans, site design, water system design, and construction inspection. He has a B.S. in Civil Engineering from Michigan Tech, Houghton, MI. David was in the Thompson Scholars program and was an active member of the Pavement Design and Construction Materials Enterprise.



David Carrigan is the Business Development Consultant. His responsibilities include client contact and new client development for the firm. David has over 25 years experience in new business and product development in many engineering fields including mechanical and civil engineering. His past contacts and employers have included Fortune 500 companies in the U.S. and Canada.

Off to New Adventures



Mike Kiewel ended a 29 year engineering career at WAI. Mike's experience includes being a flight-test engineer assigned as system specialist for the propellant utilization system on the Atlas Intercontinental Ballistic Missile and Space Launch Vehicle programs; quality assurance engineer assigned to the high-lift system of the F-111 airplane; and as a municipal engineer responsible for water and sanitary sewer systems, storm sewers, roads and other projects at WAI.

Great Things Are Happening...Projects

AEP

AEP has selected WAI to do right-of-way work in Indiana.

The City of Wyoming

renewed its right-of-way contract with WAI continuing a 6 year relationship.

Berrien County Drain Commission

Roger Zielke, Commissioner, selected WAI to complete three drain projects in Baroda Township

City of South Haven

WAI is developing an update to the City of South Haven's sanitary sewer study to include two subdivisions outside the city and performing an as-recorded information update for this area to be added to the city's infrastructure grid.

Apple Grove

is a new subdivision in the works for developer Terry Nicholson. This 14 lot subdivision will be located on Huckleberry Road in Berrien Township.

Berrien County Road Commission

hired WAI to complete all underwater bridge inspections.

City of Portage

asked WAI to help complete their application for MDOT funding to replace the Kilgore Road bridge over Portage Creek.

Konover Restaurant Group

headquartered in Connecticut, selected WAI to do the preliminary design for a Holiday Inn Express indoor pool facility in Fremont, IN.

King Venture

in Livonia, MI, asked WAI to do ADA Evaluations for three of its Burger King Restaurants.

Village of Eau Claire

asked WAI to do engineering for lift station and lagoon rehab work.

Kalamazoo County Road Commission

WAI will begin work on VW Avenue near Schoolcraft continuing a 15 year partnership to improve Kalamazoo County roadways. ■

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