

ACEC Tennessee

American Council of Engineering Companies of Tennessee

CHATTANOOGA AIRPORT SUSTAINABILITY



By: John Naylor, Chattanooga Metro Airport Authority, Vice President of Planning & Development

Over the past 40 years, Chattanooga has transformed itself from one of the most polluted cities in the nation to one of the cleanest. As a cornerstone of the community, the Chattanooga Metropolitan Airport Authority (CMAA) shares the city's vision for sustainability. Several years ago, the airport pledged to reduce its environmental footprint and started small by initiating sustainable practices both on the airfield and within the commercial terminal. Over time, the airport has incorporated this green philosophy into larger projects including a solar farm and LEED certified facilities.

When the airport began developing the West Side General Aviation Campus, a hill had to be removed from the property before construction could begin. The dirt was moved from this location to a low lying area of the airfield that was unusable for any purpose. This one decision eliminated the pollution



created by trucking the dirt off airport property and it served as the foundation, literally, of the airport's solar farm. That low lying area that was once unusable is now the site of the first two phases of a planned three megawatt solar farm.

CMAA worked with Kimley Horn and Inman Solar to construct an efficient design for the solar farm that would make the best use of the airfield and follow FAA guidelines. The first phase, complete with a one megawatt fixed ground-mount solar PV array, has been in operation at the airport since December 2011. CMAA was awarded a VALE (Voluntary Airport Low Emission) grant by the Federal Aviation Administration (FAA) to ensure financial stability during the construction of the solar farm. CMAA was eligible for 95 percent funding because the airport is in an area designated by the Environmental Protection Agency's (EPA) National Ambient Air Quality Standards as non-attainment for particulate

matter with an aerodynamic diameter of less than 2.5 microns (PM 2.5).

Prior to construction of phase two of the solar farm, the FAA required a Glare Analysis to be completed on the existing array to ensure there was no interference of solar panels with planes preparing to land. CMAA worked with Leigh/Fisher to complete the study which was approved by the FAA and phase two of the airport's solar farm was installed in 2013.

The phase one installation of solar panels included 3,948 panels with 60 cells each, generating 255 watts per panel. Phase two added 3,542 panels with 72 cells each, generating 310 watts per panel. The solar park covers 7.5 acres of airport property and was the first of its kind at a commercial airport in Tennessee. It currently generates 61 percent of the airport's energy consumption and to date has generated over 10 million kilowatt hours.

CMAA continues to seek opportunities to fund phase three of the solar project, at which time Chattanooga Airport will be energy self-sufficient and carbon neutral.

In addition to the solar farm, CMAA has committed to building to LEED Certification for all new building projects and major facility renovations. In 2011, a general aviation terminal opened at the West Side General Aviation Campus. It was the first aviation facility in the world to achieve LEED Platinum Certification, which is the highest level a building can achieve. In addition, two hangars on that campus received LEED Gold Certification in recent years, and the commercial airport terminal was awarded LEED Silver Certification this summer.

CMAA has made substantial progress in improving the environment of the city and the region. Continuing efforts toward sustainability, green practices and education are encouraging the surrounding community to take the initiative to reduce their own carbon footprint and improve the overall quality of life for the entire region. Ultimately, by aligning CMAA's environmental goals with those of the community, visitors could one day fly into an entirely green airport, get into a green car and drive into a green community.

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JANUARY

8

EEA Notebooks and Panels Due

JANUARY

22

ACEC & TEF Scholarship Applications Due

JANUARY

27

Leadership PE Kickoff

FEBRUARY

4

EEA Judging

FEBRUARY

22 - 26

Engineers' Week

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EEA JUDGES

Although all the entries for the Engineering Excellence Awards are deserving, there can only be one Grand Iris winner awarded. The group charged with making that choice has now been named. A team of eight will convene at the Tennessee Engineering Center on February 4th to look over project information and ultimately determine the winners. Twenty-four projects are competing for top honors this year...In addition to the Grand Iris Award, a Grand Award will be handed out in each project category. The Engineering Excellence Award winners will be announced at a banquet at the Franklin Marriott Cool Springs in Franklin, Tennessee, on March 8, 2016.

Donny Davidson, PE
U.S. Army Corps of Engineers, Memphis District
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Robert Day
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WELCOME NEW MEMBERS!

Power Consulting Associates, LLC
2616 Grissom Drive
Nashville, TN 37204
Tel: 615-645-9354
Fax: 615-658-8084
Email: david.grooms@pca-llc.biz

PRINCIPALS: David Grooms, President & CEO

DISCIPLINES: Civil-General; Civil-Structural; Construction Management; Electrical; Environmental;

DESCRIPTION: Power Consulting Associates, LLC is an engineering company that provides design of substations, transmission and distribution lines, construction management/oversight, and environmental engineering.

Quantum Environmental & Engineering Services, LLC

126 Dante Road
Knoxville, TN 37204
Tel: 865-689-1395
Fax: 865-689-1395
Email: ghyfantis@qe2llc.com

PRINCIPALS: George J. Hyfantis, Jr., PE - President

DISCIPLINES: Chemical; Civil-General; Civil - Transportation; Construction Management; Environmental; Fire/Earthquake/Hazards/Safety; Hydrology; Land Development; Mining/Materials; Planning; and Water/Wastewater

DESCRIPTION: QE2 offers highly-skilled environmental professionals, advanced technologies, a fully equipped field capability, and an emergency response infrastructure to provide environmental service for all manner of need including compliance, policy, planning, investigation, and cleanup and spill response.

FROM THE PRESIDENT

THE MONTHLY UPDATE



By: John Kenny, PE
President of ACEC of Tennessee

As we turn the page to a new year I want to give you an update on what ACEC has accomplished in the last month and a look ahead.

As I write this, ACEC PAC is zeroing in on its \$1 million goal. ACEC of Tennessee has reached its state goal for the national PAC for twelve consecutive years. Tennessee Professional Engineers' PAC is also ramping up in anticipation

of the 2016 election cycle. We hope you will be a generous supporter of these efforts.

ACEC of Tennessee welcomed two new members in December:

- Quantum Environmental & Engineering Services, LLC
- Power Consulting Associates, LLC

We are making preparations for the 25th Annual Engineering Excellence Awards on March 8th. With 24 project entries it promises to be a great event!

Government Advocacy:

- Congress passed a new five-year, \$305 billion transportation bill. ACEC was responsible for two important efforts in the bill: we killed an amendment that would have repealed QBS, and were successful in getting important language encouraging states to contract out engineering services. Tennessee is slated to receive \$4.5 billion in highway funding from the new bill.
- The Tennessee General Assembly returns on January 12th. ACEC's Government Advocacy Committee is anticipating a full agenda this year, and welcomes your input.
- Engineers' Day on the Hill will be on Tuesday, March 8th. Please make plans to attend.

• ACEC of Tennessee is committed to taking a pro-active approach to advancing the business of engineering in our state. The Business Practices Committee is developing a mechanism to encourage members to assist us in identifying threats and opportunities to engineering and our firms.

• We hope that new transportation funding on the federal level will be a catalyst to ramp up the conversation about the significant need for comprehensive reform at the state level. While we are not optimistic that we will see a bill in 2016, it remains a priority for ACEC and our efforts continue.

• The Business Practices Committee met with members of the Architects and Engineers Licensing Board to discuss decoupling of the PE Exam and the years of experience. The discussion was productive in discussing pros and cons and steps that may be necessary for a resolution to the State's current regulations and consistency with other states.

Other News:

• ACEC of Tennessee's East TN Chapter had a luncheon meeting with Susan Mattson of the State of Tennessee's Comptroller's Office. She presented on "Tennessee Transportation Funding: Challenges and Options."

• The Environment and Energy Committee had another productive meeting with George Garden from TDEC and plan to collaborate on challenges facing various departments and corresponding consulting engineers.

• Leadership PE has received more than 20 applications for the 2016 Class with a broad spectrum of professionals from across the state and in various disciplines and industry sectors.

• ACEC of TN's East TN Chapter is having a luncheon on January 26th in conjunction with ASCE and TSPE entitled Financial Considerations for Project Engineers. Sam Mayes of Management Solutions is the presenter.

2016 EEA ENTRANTS (BY PROJECT TITLE)

46th Avenue and Murphy Road

Roundabout and Streetscape, Nashville, TN, RPM Transportation Consultants, LLC for Metro Nashville Public Works

Banks Avenue Regenerative Stream

Restoration, Knoxville, TN, S & ME, Inc. for The City of Knoxville

Bass Pro at the Pyramid

Memphis, TN, Kimley-Horn and Associates, Inc. for O.T. Marshall Architects

Chattanooga WPA Ditch Program Phase 1

Chattanooga, TN, Amec Foster Wheeler for City of Chattanooga

Community Hazard Assessment & Mitigation Planning System

Frankfort, KY, Stantec Consulting Services, Inc. for Kentucky Emergency Management (KYEM)

Comprehensive Long Term Environmental

Action Navy, Jacksonville, FL (NAS Cecil Field), EnSafe Inc. for U.S. Department of the Navy BRAC

Crossings Circle Transportation Study

Spring Hill, TN, Kimley-Horn and Associates, Inc. for City of Spring Hill

Fast Fix 8

Nashville, TN, TTL, Inc. for Tennessee Department of Transportation

Harriman Utility Board Water Loss Program

Harriman, TN, Cannon & Cannon, Inc. for Harriman Utility Board

Henderson County Stream Restoration

Lexington, TN, EnSafe Inc. for Tennessee Department of Transportation

HOI Pedestrian Bridge Mission Trip

San Esteban, Honduras, HDR | ICA Engineering for HOI, Inc.

INRO White River Railroad Bridge

Replacement, Elora, IN, Amec Foster Wheeler for Indiana Railroad Company

John C Tune Airport Runway Safety Area

Nashville, TN, Atkins North America, Inc. for Metropolitan Nashville Airport Authority

Kingsport & Downtown Culvert Inspecting

and Assessment, Kingsport, TN, LDA Engineering for City of Kingsport

Oak Ridge SSO Program Management

Oak Ridge, TN, LDA Engineering for City of Oak Ridge

Pacific Industries Manufacturing Facility

Jackson, TN, A2H, Inc. for Pacific Manufacturing TN, Inc.

Pigeon Forge Wastewater Treatment Plant

Pigeon Forge, TN, Smith Seckman Reid, Inc. for City of Pigeon Forge

RJ Corman Railroad Bridge Rehabilitation

Clarksville, TN, HDR/ICA Engineering for Montgomery County Rail Service Authority

TDOT Fast Fix 8 Project

Nashville, TN, Gresham, Smith and Partners for Tennessee Department of Transportation

University of Tennessee Student Union

Phase 1, Knoxville, TN, Ross Bryan & Associates, Inc. for Bma-MHM Architects

Vanderbilt Powerhouse Conversion

Nashville, TN, I.C. Thomasson Associates, Inc. for Vanderbilt University

Water System Improvements

Mt. Pleasant, TN, Heathcoat & Davis, Inc. for City of Mt. Pleasant

West Riverfront Park & Ascend

Amphitheater Brownfield

Redevelopment, Nashville, TN, K.S. Ware & Associates, LLC for Hawkins Partners, Inc.

Widening of US Hwy 27 (SR 29)

Manufactures Rd. to SR 8

Chattanooga, TN, Volkert, Inc. for Tennessee Department of Transportation

ACEC Tennessee

American Council of Engineering Companies of Tennessee

The Voice of Tennessee Engineering Companies

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800 Fort Negley Boulevard
Nashville, TN 37203

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JANUARY
2016
INSIDE

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- Chattanooga Airport
- EEA Sponsors and Judges

FROM THE EXECUTIVE DIRECTOR

IGNORE POLITICS AT YOUR PERIL



By: Kasey Anderson
kanderson@tnec.org

A new year, a fresh start. Most of us begin the year with a to-do list of good intentions. Often they involve eating better, exercising, or losing weight - protection of our personal health, safety and welfare if you will. For most of us, by the time February rolls around that list is already collecting dust in a corner, waiting for the same cycle next year. With that in mind I'd like to present a different resolution for you for 2016: Get involved in ACEC's political efforts.

Many often assume that "someone else will take care of politics for our benefit." That statement is 70% true. I can assure you that someone else will take care of politics, but if you're not paying attention and part of the process, I can 100% guarantee that it will not be to your benefit. As the saying goes, "You can leave politics alone, but politics won't leave you alone" (rms).

The 109th Tennessee General Assembly convened its 2016 session on January 12th. Legislators will discuss hundreds of proposed bills, many of which could negatively affect the health, safety and welfare of the public. Many more could dramatically affect your

ability to successfully practice engineering. Others still will determine whether Tennessee has the necessary funding to continue to develop and maintain infrastructure, which is of great import to continued economic development in our state.

So here is my challenge: Take this opportunity to call an audible on your New Year's resolutions (let's be honest, they're likely forgotten already.) Instead, I challenge each and every one of you to engage in the political process with ACEC this year. Take a few minutes each week and pay attention to the politics that affect engineering. ACEC of Tennessee offers a plethora of opportunities to engage. Read the weekly legislative update. Attend local chapter meetings. Join a committee. Be a resource. I assure you it will make a difference.

One surefire way to make this new resolution stick? Join us for an important day of advocacy at Legislative Plaza.

ENGINEERS' DAY ON THE HILL TUESDAY, MARCH 8TH

Email me today and let me know you're coming
(kanderson@tnec.org)

In the meantime, stay informed, stay involved, and stay in touch. You **WILL** make a difference.



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