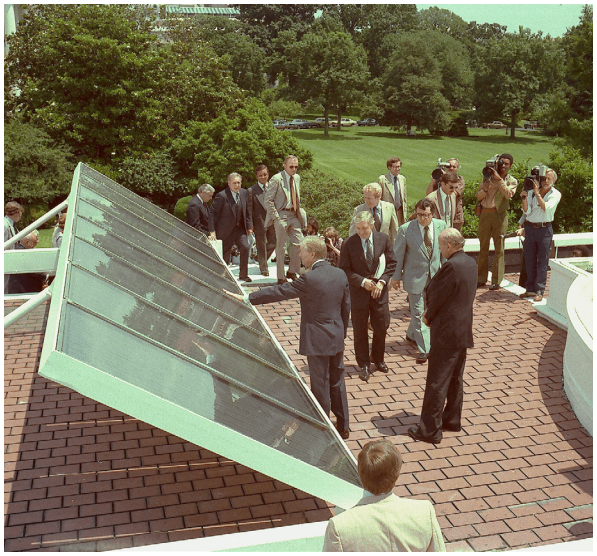
ON POINT

Todd Garing, PE, LEED AP
President

SUSTAINABLE DESIGN

SMART STRATEGIES AT WORK

Todd Garing, PE, LEED AP, president of Mueller Associates, has helped engineer several of the firm's high-profile sustainable projects. On Point explores Mueller's "green culture" with Todd, and the firm's commitment to sustainability.



Left, in the 1970s, Mueller's engineers designed photovoltaics installed on the roof of the White House.

Above, at Thomas Jefferson's Monticello, the new visitor center incorporates an innovative geothermal chiller/heater system.

Q: MUELLER HAS A DIVERSE PORTFOLIO IN SUSTAINABLE DESIGN. WHAT PROJECTS HAVE BEEN UNIQUE?

A: It's interesting—one of our earliest projects that focused on conserving energy was for the **White House** in the 1970s. We designed a solar energy system there. That was before my time, but I did have the opportunity to work on another historic property, at **Thomas Jefferson's Monticello**. The visitor center there is a LEED-Gold project, and it incorporates an innovative geothermal chiller/heater system. We like to think that Jefferson would have approved—it was cutting-edge but organic in that it made good use of the land.

Q: WHAT ARE SOME OF YOUR SIGNIFICANT SUSTAINABILITY PROJECTS?

A: Two of our higher education projects have achieved LEED Platinum: the **Angelos Law Center** at the University of Baltimore and the **Center for Natural Sciences, Mathematics, and Nursing** at Bowie State

Clockwise from Upper Left, the new Center for Natural Sciences, Mathematics and Nursing; the Angelos Law Center; the Performing Arts and Humanities Building; and the Engineering and Aviation Science Complex - all projects that utilize advanced, cutting-edge technology designed to promote energy efficiency and sustainability.

University. Both of these projects incorporated cutting-edge technology. The Angelos Law Center has radiant heating and cooling in the slab floor. The Center for Natural Sciences features chilled beam technology. At the LEED Gold University of Maryland Eastern Shore, the **Engineering & Aviation Science Complex**, we incorporated geothermal technology.

Q: HOW HAS THE FIRM APPROACHED THE CHALLENGES OF INCORPORATING SUSTAINABLE DESIGN MEASURES?

A: We've been working with institutional spaces for many years, so we've always had a focus on energy conservation—incorporating control strategies and more efficient equipment, or laying out the pipe and ductwork in a more effective configuration. The LEED process has essentially validated much of what we have been doing over the years. The focus has evolved so that it is not just an energy and cost-saving focus, but we are thinking more broadly in terms of environmental awareness. It challenges us to think in terms of each and every detail and what can be done more effectively to conserve resources.

For example, many people don't realize how much water is produced through A/C condensate. For the University of Maryland Baltimore County **Performing Arts and Humanities Building**, we were able to predict that as much as 40,000 gallons of water from condensate could be collected a month during the summer. That's a lot of water—it could be used for toilets, irrigation, or cooling tower make-up. For that project we utilized the A/C condensate as well as the rainwater collected from the roof to serve the irrigation system.

Q: HOW INTEGRAL ARE SUSTAINABLE STRATEGIES TO THE FIRM'S WORK? HOW MUCH OF MUELLER'S STAFF FOCUSES ON THIS ASPECT?

A: The sustainability framework guides all of our projects—it's inherent in our approach and our process. What is exciting to us is that the LEED process really taps into the "brain power" of the firm. We have a lot of smart people here—people who are good at coming up with ideas and new strategies. A large percentage of our professional staff is LEED accredited, so it has become integral to our practice and the way we approach our work.