Roger Bridges became intensely interested in the earth's fragile environment and finding ways to sustain it some thirty years ago, when he was working at a job that some might consider incongruous to environmental protection.

“I used to work for an oil company,” Bridges said. “Oil companies, at one time, were targeted by environmental groups and did not have very good global reputations. Generally, we were regarded as the bad boys.”

However, Bridges added, oil companies had both the money and the motivation to change their image, and pumped millions into saving the very environments they were accused of harming. Oil companies such as British Petroleum began investigating alternative forms of energy because even they understood that carbon-based fuel was in limited supply. Eventually, the earth's stores of oil, coal and natural gas will dwindle, and other sources of fuel and alternative power could render carbon-based products nearly extinct. Those alternative sources could, in the end, prove very profitable. Also, a focus on alternative forms of energy provided the added benefit of helping the oil companies improve their images.

“Oil companies or energy companies will look at any form of energy generation, as long as there is a market for it,” Bridges said.

Rising oil prices, an international shortage, and a beleaguered public fed up with seemingly endless lines at the pumps also fueled much of the push for alternative energy in the 1970s. Bridges, president of Knowles Consultancy Services, a Hill International company, remembers those turbulent times well.
Nuclear power is getting a serious second look as carbon-based power becomes more expensive. (www.faqs.org)

“I was just starting my employment at an energy company that was looking into alternative forms of energy, forms other than hydrocarbon (the element that facilitates combustion). There were various disruptions in the Middle East that caused what we now call the Energy Crisis,” Bridges recalled. “The price of crude oil went from $2.79 a barrel to $11 a barrel almost overnight.”

A mixture of politics, Arab-Israeli tension and an ailing world economy made oil prices continue to rise through the mid-1970s. Rising prices and high levels of pollution also fueled a marked interest in such technologies as solar energy, thermal energy, and wind power. The business of environmental remediation got its start. Many consumers ditched their mammoth, gas-guzzling, four-door sedans for smaller, more compact cars that burned fuel more cleanly and efficiently. Solar panels began popping up on homes and businesses. Sales of wood-burning stoves, kerosene heaters, ceiling fans and other alternatives for heating and cooling our homes saw dramatic surges.

“The height of oil prices in 1972 got people thinking about alternative energy. All kinds of weird and wonderful things were being proposed in those days. Some of them were wonderful,” Bridges said with a laugh, “and some were just weird.”

But, for a young professional in a fledgling industry, those were heady times.

By 1980, prices had leveled off, and continued to drop throughout the decade. “We had an oversupply and then a drop in price,” Bridges said. “For a number of reasons, OPEC lost its balance of power and other counties, such as Canada where I’m at, began exporting oil to the U.S., Western Europe and other parts of the world.” (Today, Canada produces an estimated 21 million gallons per day, transported to the U.S. via land-based pipelines, Bridges said.)

Before long, consumers fatigued by a decade of scrimping were ditching their suede fringe and compact cars for larger, luxury vehicles, and turning in their solar panels and wood-burning stoves for vaulted ceilings and natural gas fireplaces.

Today, a very similar mixture of world politics, a world-wide economic downturn and skyrocketing oil prices has created a renewed interest in alternative forms of energy. Oil companies and other big businesses are again pumping money into research and development, and consumers are clamoring for everything green, and urging local, state and federal officials to help break what has been called an international addiction to fossil fuels.

“Fossil fuels have traditionally been the primary sources of power throughout the western world. Power plants have largely been oil-fired, gas-fired or coal-fired,” Bridges said. Hydroelectric power — power generated by the force of falling or surging water is thought to be a cleaner energy producer, but has its drawbacks as well. “Hydroelectric is, in essence, very clean, but you have to dam a canyon or a lake, which can displace a lot of people.”

Nuclear power, stymied in the 1980s following the much-publicized accident at Three Mile Island in central Pennsylvania, and the devastating Chernobyl disaster in the former Soviet Union, is undergoing a second look of late. “Three Mile Island and Chernobyl made people aware nuclear power had a downside to it. Now, thanks to technological advances and re-branding, nuclear power could be a serious means of generating power as we go forward.”

Steven DiBartolo, a Hill vice president and head of its New Jersey project management group, agreed. “Nuclear power plant safety has come a long way in the past two decades,” DiBartolo said. “It’s a cleaner source of energy than oil, gas or coal, but still has not solved the problem of nuclear waste. Still, it is an alternative that has the potential for becoming a leading source of power in the United States and elsewhere.”

“Nuclear technology has moved forward,” Bridges concurred. “The first round of power plants were built in the 1950s and 1960s. Since then, everything — from technology, to the metals used to the welding techniques — has moved forward. And, our risk analyses and other studies are far more thorough, far more advanced than they were in the 1950s and 1960s.”

Even a glut of new nuclear plants would still leave ample room for other technologies, Bridges said. Tidal energy — drawing power from the rhythmic surge and withdrawal of tides — is one of them, and is well suited to very specific areas of the world. “Tidal energy works best in an area that has a marked tidal rise and fall. Eventually, the earth’s stores of oil, coal and natural gas will dwindle, and other sources of fuel and alternative power could render carbon-based products nearly extinct.”
Also, you need to be close to both the source of the energy and a major center of population that requires the electricity. The longer the (transmission) line, the greater the loss,” he explained. Tidal energy is perfect for parts of eastern Canada. “We have one in the Bay of Fundy, which has the highest rise and fall of any tide in the world — 70 feet. Quite simply, you put a turbine in the channel and the incoming pressure of the water will turn the turbine blade. When the water goes back out, the blade turns in the other direction,” Bridges said. “It’s a very environmentally stable source of energy as long as you take provisions to protect fish, other sea life and their habitats and migrations.

“Another location is in the United Kingdom, at the Severn Barrage, which is near Cardiff and Bristol, and has a rise and fall of 54 feet. There is also a river in France, in Bordeaux, that has similar characteristics,” Bridges continued. “Such extreme rises and falls in tides provide golden opportunities to create power.”

While the technology may be space-aged, tidal power, like many forms of alternative energy, stretches back centuries.

Wind power is enjoying an unprecedented peak in popularity. “We have several turbines here in Canada, in Alberta, and we’re looking at putting up some more on the north shore of Lake Erie,” he said. Harnessing the wind to create power is an idea that is centuries old. “Windmills have been used in Holland for centuries, but for a different purpose.”

“Tidal energy is not new to anyone. There are plenty of old-fashioned mills that run off streams or tides, where the use of tidal power was used to grind corn or something. All we do today is attach a turbine to it to generate electricity. Likewise, windmills have been used in Holland for centuries, but for a different purpose,” Bridges said. “These ideas are not new; they are extremely old and being brought back. The difference is that, in the ‘old’ days, we didn’t have generators to create electricity. Now we can get not only mechanical power, but electrical power as well.”

Biomass is another, broad area that has been getting increased attention. “One application of biomass, for example, allows you to make good use of a landfill. You take the methane gas that is created (by decomposition) and use it for either power generation or mix it with traditional gas, for example, to power a gas turbine.”

Biomass also can include some very esoteric ideas for creating energy. “People are even looking in to creating fuel from the (decomposition of) pig manure and chicken droppings; those sorts of things,” Bridges said. “While those ideas have merit, I don’t expect them to become widely used.”

However, wastewater treatment plants in North American and Europe are being fitted with technology allows the produced methane to power the plant itself. “Again, this technology may not apply to a broad use, but certainly helps make the treatment plant self-sustaining.”

Geothermal energy — trapping and using the earth’s natural underground heat, also isn’t new. It’s an idea that is as old as the prehistoric geysers at Yellowstone National Park in California. The United States leads the world in this emerging and highly efficient technology. “The efficiency you get with thermal energy overcomes any power you use to capture it,” Bridges said.

An innovative project in Canada, along Lake Ontario, uses cool water pumped from the massive lake to cool many of Toronto’s buildings. “Lake Ontario is one of the biggest fresh water masses in the world, and Toronto is a lakeside town. To put it simply, a pipe goes out into the lake about a mile, to where the water is about four degrees centigrade. The pipe is used to pump water out of the lake, and the water is then distributed via a massive piping system to Ontario’s buildings. So, we’re using cold water, and not as much electricity, to cool our buildings. It’s been done here for a number of years.”

Bridges, like others watching the industry, is intrigued by a new form of solar power that many feel will soon eclipse the traditional way in which energy is created by the sun. Most traditional solar technology uses the heat of the sun to produce hot water, which then is used for heating of other purposes.

Photovoltaic power converts the sun’s power directly to electricity. It is reported to be the world’s fastest-growing form of alternative energy. Spain and Germany
Courts, the construction industry, federal and state governments, and insurers are grappling with the best ways to handle a deluge of claims from homeowners who say their homes and health have been ravaged by the effects of defective, “reactive” drywall. Over the past several months, the U.S. Consumer Product Safety Commission has received more than 2,000 complaints from residents in 32 states, alleging that drywall in their new or renovated homes is causing metals to corrode, and appliances to fail. Homeowners also allege that the drywall produces a foul, sulfuric order and is the cause of myriad respiratory problems, ranging from nasal congestion to asthma and other chronic illnesses.

While the complaints are coming from all parts of the U.S., the majority are fielded from Florida and Louisiana, due to the high levels of ambient humidity, and where successive hurricanes in 2004 and 2005, along with the boon for condominium development, led to record levels of construction — and an unprecedented need for construction materials, including drywall. China supplied a large portion of that drywall. During 2006 alone, the United States imported nearly 7 million sheets of drywall from China. Much of that drywall was used for new or renovated homes, and conservatively could account for work in more than 40,000 residential structures. The 2006 figures are still growing, and do not account for the period between 2003 and 2006, which also are suspected to have similar issues.

Local, state and federal agencies began receiving complaints in 2008, and they continued with increasing frequency for much of 2009. Homeowners told investigators the sulfide fumes thought to be emitted by the drywall were causing family-wide illnesses, and causing most of the metals in their homes, including plumbing, light fixtures, wiring and components of air conditioning units, dishwashers and other appliances, to turn black and corrode. Even though preliminary tests do not support the sulfide contentions, scientists are looking toward possible impacts of sulfur and strontium. Without answers, many homeowners left their homes, and are seeking relief from the government, their insurance companies, and the courts.

Thousands of claims and lawsuits have been filed across the U.S., and attorneys also are mounting large class-action lawsuits against a plethora of defendants, including builders and their subcontractors, insurance companies, importers and suppliers, drywall manufacturers and the banks that financed the manufacturers. The lawsuits have been an escalating cause of concern among U.S. defendants, but are not expected to have much impact on Chinese manufacturers, who are not held to judgments by U.S. courts. Any compensation from China would be largely voluntary. However, top officials at the U.S. Consumer Product Safety Commission have met with counterparts in China’s government on the issue, and have toured gypsum mines and manufacturing plants. Both the government and the manufacturers there are cooperating with investigators, the commission states.

An estimated 60,000 to 100,000 homes could be affected, and could need either extensive renovation or near-complete, down-to-the-studs reconstruction. A first step for many homeowners was to seek payment for replacement of the reactive drywall from their homeowners’ insurance carriers. Builders, suppliers and others seeking protection from lawsuits also often turn to their insurers for help. The effect on that industry, from both sides of the issue, could be staggering. According to The Wall Street Journal, insurance giant Towers Perrin has estimated that the reactive drywall could end up costing the industry $15 to $25 billion.

Timothy R. Chitester, P.E., a Hill senior vice president, agrees that the financial ramifications of the issue could be unprecedented. “Reactive drywall problems are beginning to cost owners, contractors and, potentially, insurers millions of dollars in property loss,” Chitester said. “The impact to both the construction industry and the insurance industry in the U.S. may be of the order of magnitude of a major CAT event with, potentially, billions of dollars of loss mounting against contractors and insurers.”

A multi-district litigation case pending in a U.S. District Court in New Orleans could set precedents for how reactive drywall cases are handled, and who pays for their remediation. The multi-district litigation, or MDL, bundles 10 federal lawsuits, mostly class-action suits against Chinese manufacturers. Litigation of the MDL, before U.S. District Court Judge Eldon Fallon III, is expected to begin in January 2010.

“We are closely following the proceedings, and expect that rulings will be forthcoming with regard to such issues as preservation of evidence and issues with regard to such issues as preservation of evidence.”
In late November, the Consumer Product Safety Commission completed its investigation of 41 affected homes, and concluded that their corrosion problems were caused by hydrogen sulfide. “We now can show a strong association between homes with the problem drywall and the levels of hydrogen sulfide in those homes and corrosion of metals in those homes,” the commission stated. It stopped short of identifying the hydrogen sulfide as the cause for homeowners’ health complaints, and stated that additional study is needed. The commission now will work with other public agencies to develop protocols for remediation. “Ongoing studies will examine health and safety effects, but we are now ready to get to work fixing this problem,” said commission chair Inez Tenenbaum.

With more than 30 years of experience in construction claims and helping clients manage risk, Hill is uniquely suited to help insurers and their construction-industry clients navigate what could be complicated and costly terrain.

“As an insurer’s or a contractor’s risk manager, Hill can implement programs that can identify the scope of their potential loss, in both depth and breadth, help the company or independent adjusters in property inspections according to approved protocols, and help create reserve boundaries and order-of-magnitude repair estimates,” Chitester explained. “We also can establish order-of-magnitude time frames for business interruption and loss of occupancy, and document both current conditions and requirements for the preservation of evidence.” Hill also can help an insurer’s or contractor’s legal counsel prepare for litigation, and provide expert witness testimony.

“And, if a decision is made to remediate the defective drywall, and the insurer or contractor has exposure under the policy, Hill can provide program oversight or remediation management,” Chitester added.

Renewable Energy Gets Closer Look; Green Industry Red Hot continued from page 1

Growing interest in renewable energy could reduce our reliance on fossil fuel, create new jobs and help protect our fragile environment. (www.engr.uaa.alaska.edu)

“Alternative and renewable energy is quickly becoming a culture. Trends come and go, but when something becomes part of a culture, of a national mindset, it’s here forever,” DiBartolo said. “If you think about it, kids today don’t remember what it was like without the internet. It’s the same with being green and sustainable. It’s all they know.”

Bridges feels that political forces are just as important to the health of this sprouting industry as public opinion. “I think the world has realized that something is going on with the climate. (Americans) have a new President who has made it clear that he supports cleaning up the environment and, in fact, sees the country’s economic recovery as dependant, at least in part, on producing alternative energy,” Bridges said. “And, the environmental lobbies are getting stronger and stronger. Politicians are realizing that, to get re-elected you have to think in terms of a greener society.”

For Bridges, a self-described “child of the 60s,” such changes could be a breath of fresh air. “Encouraging a greener society benefits everyone.”
Standing outside a restored late-19th-century rail terminal that overlooks Lady Liberty, Ellis Island and Manhattan beyond, Bill Vigrass can almost hear the insistent hisses and chugs of the passenger trains that once took immigrants to their new lives in their new country. The historic Central New Jersey Railroad terminal, located in Liberty State Park in Jersey City, New Jersey, “was often the second thing many immigrants saw, after Ellis Island,” Vigrass said. There, passengers boarded trains for points west, south or north. Vigrass, a retired Hill project manager, is leading a team dedicated to restoring rail service in the picturesque park. If the team’s plans are approved and funding is secured, Liberty State Park could be home to a unique trolley service that would help an ever-increasing number of visitors get around without spoiling the bucolic park’s fragile ecosystem or its stunning views.

The trolley line would be the latest in a series of public and privately funded improvements at the 1,212-acre park, located on the New Jersey side of the New York Harbor. Operated by the New Jersey Department of Environmental Protection, the park includes the refurbished rail terminal, which now functions as a museum, and a ferry dock for service to Ellis Island and the Statue of Liberty. With the addition of a 30-acre preserved salt marsh, a two-mile promenade, picnic areas and a marina, the park has been heralded as an undiscovered gem by outdoor enthusiasts. History buffs love the park’s Interpretive Center, lovingly restored railroad terminal, and ferry access to Lady Liberty and Ellis Island. Naturalists praise the park’s Science Center, carefully managed open space, and wealth of flora and fauna. Those seeking entertainment love the park for its world-class concert venues. Those seeking a thrill love the incomparable view the park provides of the Manhattan skyline and spectacular fireworks on July Fourth.

The wealth of offerings and winning location of the park has earned it a spot on many travel sites’ “must see” lists, and has contributed to a sharp increase in attendance over the past several years. Getting people there is relatively easy. However, the park has limited parking for cars, and the Hudson-Bergen Light Rail drops passengers off near the park’s main entrance, located more than a mile from many of the park’s most popular areas. From there, visitors must now get around the park on New Jersey Transit busses, which traverse an historic roadway constructed more than 100 years ago. “The ride can be a bit bumpy, as the bus bounces over Belgian block roads that were laid in 1889,” Vigrass said. “The roads can’t be removed or paved over because of their historic value. They’re very beautiful but, as I said, a bit bumpy.”

Trolley service could likewise shuttle visitors around the park, offering a greener alternative to buses and eliminating the need to build more parking lots.

The trolley service plan is the brainchild of a group of students at the Edward J. Bloustein School of Planning and Public Policy, a Rutgers University graduate school located on the university’s New Brunswick campus. Vigrass, himself a 2007 graduate of the Bloustein School, is one of three advisors who worked with the students to develop the plan. Vigrass began working with the students a little more than a year ago. “In early 2008, the Friends of the New Jersey Transportation Heritage Center contacted Liberty State Park and asked if they could arrange to have some of their historic railroad equipment displayed at the Park. To get the equipment into the park and to the CRRNJ terminal, rail lines would need to be constructed,” Vigrass explained.

The group also felt that the new rail lines would be perfect for some type of intra-park transportation, Vigrass added. “Park officials were encouraging, but said that they would need a consultant to do the necessary planning and research,” Vigrass explained. “A consultant’s report could cost $300,000, and the Friends didn’t have that kind of money.”

Friends’ director Bill McKelvey came up with a novel way to solve the dilemma, Vigrass said. “Mr. McKelvey suggested that a study be done on a ‘pro-bono’ basis by the Bloustein School, as one state agency helping another state agency.”

Friends’ director Bill McKelvey came up with a novel way to solve the dilemma. Vigrass said. “Mr. McKelvey, suggested that a study be done on a ‘pro-bono’ basis by the Bloustein School, as one state agency helping another state agency.”

The proposal piqued the interest of Dr. Clinton Andrews, head of Bloustein’s Planning Department, but he didn’t have a free staff member to whom the project could be assigned. “At that point, Mr. McKelvey...
suggested that a recent graduate, named Bill Vigrass, could lead such a study,” Vigrass said with a laugh. Vigrass’ 50-plus years of experience in the transportation industry, on some of the nation’s most groundbreaking rail projects, made him perfect for the job. Vigrass was hired as a part-time lecturer for the newly conceived ‘design studio,’ under the oversight of Martin Robins, who is head of the Voorhees Transportation Institute at the Bloustein School.

Vigrass and the students began meeting last fall. The class’ 13 graduate students were charged with developing design that embodied the class’ topic, “Rail Access to Liberty State Park.” Most were second-year graduate students, with some already working for public transportation agencies or private firms with ties to the industry, Vigrass said, and they dug in quickly.

One of the students’ first assignments was to visit and study the park. “During the second week of classes, we arranged a tour of the park, using a chartered Rutgers bus that normally is used for the football team. “It was wrapped in red vinyl with ‘Scarlet Knights’ emblazoned on it. There was no question where we came from,” Vigrass recalled with a laugh.

By December, after countless hours of work, the design studio had come up with a proposed design. The students also produced a highly detailed report on their findings and recommendations, which included analyses of previous schemes, how other state and national parks handled their own transportation dilemmas, the feasibility of the project, suggestions for using public-private partnerships to save both money and time, and potential funding sources.

“The design calls for the re-use of three retired Newark subway trolley cars, owned by the Friends of the New Jersey Transportation Heritage Center. The trolley would function as an intra-park shuttle, taking visitors from the Hudson-Bergen Light Rail station to the CRRNJ terminal and its ferry landing, a distance of 1.09 miles,” Vigrass explained.

As part of its assignment, the class presented its findings at the Pratt Institute in New York in early 2009, at an annual face-off of five planning schools in the New York region of the American Planning Association. Two students went on to present the class’ findings at the New Jersey TransAction conference in Atlantic City, New Jersey, last May. The presentations completed the class’ requirements. “They did very well,” Vigrass said.

Two of the students, excited by the possibility of seeing their ideas become reality, elected to continue their work via independent study.

“Two of the students, excited by the possibility of seeing their ideas become reality, elected to continue their work via independent study. “The preliminary feasibility study that the design studio produced indicated, frankly, that more study was needed. That’s why we went on,” Vigrass said. “It’s like a keyhole in the door. When you look through the keyhole from a distance, you don’t see much. Up closer, you see quite a bit, and quite a distance beyond.

“As part of the independent study, alignments were refined, with final recommendations made for constructing the project in three phases,” Vigrass continued. “Phases one and two would provide rail access for the historic rail equipment, and a trolley shuttle between the Hudson-Bergen Light Rail station and the CRRNJ terminal. The third phase would provide a trolley loop entirely around the park that would connect venues within the park with one another and, hopefully, reduce or even eliminate the need for additional parking.” Intra-park transportation is already used in many state and national parks to reduce vehicular traffic and resultant greenhouse gasses.

Containing costs was a goal from the beginning. Vigrass and the class recommended that the project make good use of what already was available. “The Friends of New Jersey Transportation Center, at the very beginning of the study, offered to make available its extensive collection of historic railroad equipment and material. They have possession of four miles of rails, four miles of trolley wire, and thousands of track fittings, such as joint bars and tie plates, spikes, bolts, nuts and appurtenances. They also have more than thirty steel poles used to hold up trolley wire,” Vigrass explained. “Much of the material continued on page 8

Linking Liberty State Park’s many amenities could make the popular green space even hotter. (www.tripadvisor.com).
A group of students, train enthusiasts and historic preservationists are hoping working to use a rehabbed historic train shed to illuminate the history of rail travel in northern New Jersey. (http://geophoto.net)

was donated by New Jersey Transit when its Newark City subway line was modernized and replaced by light rail equipment, and the old trolley equipment was retired and disposed of."

The organization also is awaiting the donation of two electrical substations. "All of this material will have a dramatic impact on lowering the cost of implementing the two rail lines," Vigrass added.

"The heritage groups, including the Friends of the Transportation Heritage Center and the United Railroad Historical Society of New Jersey, own most of the equipment and material," he continued. "All we'll need is the labor to grade and install it. Because it will incorporate all former New Jersey Transit equipment, it will be historically accurate and, at the same time, will provide a very real transit service for visitors to the park."

Frequency of the intra-park rail service would depend largely on the season and inherent number of visitors, Vigrass said. "In summers, the park can get more than 20,000 visitors. And, at special events or on the Fourth of July, they get tens of thousands."

The students also analyzed existing and planned developments surrounding the park, all of which would add to its allure and push the number of visitors even higher. Planned developments for Jersey City's "gold coast" include residential, hotel and entertainment projects, as well as two convention centers and a golf course, among others. "All of this planned development indicated a growing need for transportation within the park," Vigrass said.

Still, the students felt more was needed. "These very committed students began working last summer to develop funding sources for a (necessary) consultants' study, as well as for the capital costs to construct what is proposed," Vigrass said.

Doug McQueen, of Asbury Park, is one of the two students who have devoted themselves to finding funding for the consultant's study and rail line itself. In addition to pursuing a Master of City and Regional Planning degree at the Bloustein School, McQueen is simultaneously pursuing a law degree as part of a dual degree program offered at Rutgers. When he's not working at his full-time-plus job as an airline pilot, attending classes or studying, he clerks at the office of a prominent New Jersey judge. In his spare time, McQueen is investigating how public grants and private funding could help pay for further study of the rail plan.

"To move forward and apply for the federal capital funding, we need to do a more professional study. That professional study would then help make us eligible to apply for federal funding," he said. An application for funding of further study is expected to be submitted to the New Jersey Department of Environmental Protection in December.

Over the past several months, McQueen has learned a lot about grant writing and the rigors of obtaining public funds, and has pitched the project to potential stakeholders on several occasions.

"The wealth of offerings and winning location of the park has earned it a spot on many travel sites' ‘must see’ lists."
occasions. His passion for the project, and firm belief in its benefits shines through.

“My motivation comes from my desire to really get my hands on something, to be able to take what I’ve learned and put all of the pieces together,” he said. “This project touches a lot of different areas — the historic aspect, the transit aspect, the environmental aspect, and provides a viable, alternative form of transportation in a really beautiful setting, in a really beautiful state park,” he said. “I like seeing all of these pieces come together.”

It was this synthesis of ideas, and the joy of putting those ideas to work, that first drew McQueen to Vigrass’ class. He found Vigrass’ extensive rail experience, and his recent stint as a student, equally valuable. “Bill has a lifetime of experience and a vast amount of technical knowledge. But, knowing that he was only just recently a Bloustein student reinforced, for me, that he knew what was like to also be a student. He has the experience but has been in our shoes as well.”

But, it was McQueen’s life-long love of the park itself that really hooked him. “I have a very personal interest in Liberty State Park. I used to live in Jersey City and I spent a lot of time at the park. Even long before I lived there, when I was young, I watched the development of the park,” McQueen said. “I like the fact that this project could provide better access to the park, solve parking problems, and provide for better circulation within the park. This project is kind of a capstone that will finish a lot of the unfinished aspects of the park,” such as more restoration at the CRRNJ terminal and adjacent train shed, and other improvements. “The plan has ancillary benefits as well, in addition to its historic preservation and transportation aspects. Our plan uses environmentally friendly electric rail trolley cars, as opposed to cars powered by fossil fuels,” McQueen said. Also, the trolley cars are quiet, and the (park’s) natural areas act as a buffer to further reduce noise. In addition, the trolleys would help eliminate the need for more parking lots and resultant vehicular traffic at the park. Less parking means fewer cars. Less cars means less greenhouses gasses and more of what makes the park so popular: green space.

“There’s also the educational aspect, created by the interpretive experience of being able to ride in an actual, historic streetcar,” McQueen added. “And, the project will serve as a catalyst for the remaining historic preservation work that needs to be done on the historic Train Shed and ferry slips, as well as a catalyst for economic development in the surrounding area. This investment will spur other investments.”

Most people with whom he’s met favor the project, McQueen said. “Reaction has been almost completely positive,” he said. “People react very well to the idea of the project. We’ve listened to them as they’ve expressed any concerns, such as questions of noise, blocking traffic, grade crossings and those sorts of things, and we’ve made updates to address those concerns, where possible.”

If funds are approved by the DEP, the plan could undergo formal scrutiny by a paid consultant next year. The results of that formal study then will be used to solicit public funds to help make the students’ dream a reality. “If all goes well, a request for capital funding could be made in 2011 or 2012,” Vigrass said. If funding is approved, construction could begin soon after.

McQueen is cautiously optimistic. “This isn’t the first time that a circulator has been proposed for Liberty State Park,” he said. “What makes this one different is that it’s gone farther than other plans, and it meets various, multiple needs of the park, not just one need. (This plan) addresses the historic preservation needs at the park, the environmental needs, the educational needs, and does more than any other of the previous plans.

“If we get some of the initial funding and continue to put together the right group of stakeholders, I think we’ll have a better chance, than not, of succeeding,” McQueen added.

For Vigrass, the class’ plan becoming a reality would be a singular achievement in a remarkable career that has spanned more than five decades, and began when he took a job as a clerk for the Erie Railroad Company in Cleveland in 1952.

“I’m having a ball, really and it’s been a delight to work with the class,” he said. “The fact that we might actually accomplish something tangible, that we might actually have a hand in getting this project built, is incredibly exciting.”

For additional information on this innovative project, contact Bill Vigrass at 856-810-6239 or billvigrass@hillintl.com; the United Railroad Historical Society of New Jersey at www.urhs.org; or the Friends of Liberty State Park at www.folsop.org.

— Bill Vigrass

The historic CRRNJ rail terminal, restored to its 19th-century opulence is the centerpiece of planned improvements at Liberty State Park. (Jim Russell/www.wikipedia.org)
Hill Hires, Promotes Key Executives

Hill International announced the following recent promotions and new hires throughout the globe:

Thomas J. Spearing III has been promoted to President of Hill’s Project Management Group (Americas). Spearing previously was Hill’s Senior Vice President and Chief Strategy Officer. In his new role, Spearing will be responsible for managing all of the company’s project management operations throughout the United States. He will continue to be based out of Hill’s headquarters office in Marlton, New Jersey. Spearing has 25 years of operational and business development experience in architecture, engineering and construction management. Spearing earned his B.B.A. in computer and information science from Temple University, his B.S. in construction management and his B.S. in civil engineering from Spring Garden College, and his M.S. in management from Rosemont College. He is a member of the American Public Transportation Association, the Women’s Transportation Seminar, the New Jersey Business & Industry Association, the Southern New Jersey Development Council, and the New Jersey Alliance for Action, among others.

“Tom’s breadth of experience — in operations, business development and strategic planning — is a unique skill set that few in our industry possess,” said David L. Richter, Hill’s President and Chief Operating Officer. “That multi-faceted skill set has fully prepared him for this challenging role, and will be key to Hill’s continued growth in both existing and future markets.”

David Carrick has been promoted to Senior Vice President, Scotland and U.K. North. Carrick has more than 35 years of experience in claims analysis and resolution, as an arbitrator, adjudicator, mediator, conciliator, expert witness and claims assessor. He will continue to be based out of the company’s U.K. region.

Vincent J. D’Ambrosio has been promoted to Senior Vice President in charge of business development for Hill’s Project Management Group (Americas). Previously, D’Ambrosio was a Vice President with the company. He will continue to be based out of Hill’s headquarters office in Marlton, New Jersey. He has 12 years of operational and business development experience in construction management.

Tobias I. Hunt has been promoted to Senior Vice President of Business Development and Administration. Hunt has nearly 15 years of experience in business development, operations and management. He will continue to be based out of the company’s U.K. region.

David A. Kyte has been promoted to Senior Vice President-Quantum, Expert Services Group. Kyte has more than 14 years of experience in construction claims analysis and resolution, and has served as an expert witness on dozens of construction disputes. He will continue to be based out of the company’s U.K. region.

Franco Mastrandrea has been promoted to Senior Vice President and Head of Expert Services for the Europe, Middle East and Africa Region. He has 35 years of construction experience, and has acted as an expert on many substantial construction disputes involving cost, scheduling and project management issues.

Derek Nelson has been promoted to Senior Vice President-Continental Europe. Nelson has nearly 25 years of experience in the construction and engineering industries, and specializes in the preparation, negotiation and settlement of construction claims, as well as dispute mitigation and avoidance.

Bruce A. Schlaitzer, R.A. has joined the firm as Senior Vice President and Managing Director of the European Region for Hill’s Project Management Group. Schlaitzer has more than 35 years of experience in the construction industry, with an emphasis on executive management responsibility for large, high-profile real estate development projects.

Bruce A. Schlaitzer, R.A. has joined the firm as Senior Vice President and Managing Director of the European Region for Hill’s Project Management Group. Schlaitzer has more than 35 years of experience in the construction industry, with an emphasis on executive management responsibility for large, high-profile real estate development projects.

Eric C. Butterworth has been promoted to Vice President and Managing Director of Hill’s project management operations in the United Kingdom. Butterworth has nearly 40 years of experience in project management for public and private-sector building, civil engineering, pipeline, mechanical engineering, and petrochemical projects throughout the United Kingdom and overseas.

Michael DeBernard, AIA, has joined the firm as a Vice President with Hill’s Project Management Group. DeBernard is an architect with more than 35 years experience in the management of large design practices, nation-wide programs, and major construction projects.

Michael C. Kenyon has been promoted to Vice President and Executive Director-Quantum, Expert Services Group. Kenyon has more than 20 years of experience in the construction industry.

Michael S. Luciani, P.E., has joined the firm as a Vice President with Hill’s Project Management Group. Luciani has more than 20 years of experience in engineering, construction and consulting. He will be based out of the company’s Philadelphia, Pennsylvania office.

Jordy L. Murray has joined Hill as a Vice President with the company’s Construction Claims Group. Murray has more than 20 years of engineering, construction and consulting experience on a wide variety of projects.

L. Adam Winegard has joined the firm as a Vice President with the company’s Construction Claims Group. Winegard has more than 20 years of experience providing technical qualitative and quantitative risk assessment and analysis, management, marketing, business development and contract administration within the construction and insurance industries. He will be based out of Hill’s Irvine, California office.

Jacek P. Zurawski has been promoted to Vice President and Managing Director of Hill’s project management operations in Poland. Zurawski has more than 27 years of experience in construction including on commercial, hotel, industrial, infrastructure, housing and transportation projects.
As interest in, and funding for, sustainable projects continues to rise, so has Hill International’s slate of green projects. A sampling of Hill’s most high-profile green projects includes:

**Sky Tower at Shams Abu Dhabi**

Hill in managing construction of the iconic Sky Tower at Shams Abu Dhabi. At 74 stories and 300 meters high, it will be the tallest in Abu Dhabi and the fifth tallest in the United Arab Emirates. The Sky Tower will accommodate 598 residential and commercial units, offices, a shopping mall, restaurants and coffee shops, as well as extensive recreational facilities, including swimming pools, tennis courts, and sports and fitness centers.

The creative and unique building design will include energy-saving and environmentally friendly features, efficiently and aesthetically combining the beauty of the surrounding environment and the needs of its residential and commercial tenants. The tower also aspires to be the first building in the U.A.E. to achieve certification under the U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED) ratings system. The LEED ratings system awards points for sustainable design and construction, including environmentally sensitive site development, water savings, energy efficiency, materials selection, and indoor environmental quality. Projects in planning stages first are registered, then designed and constructed to meet LEED requirements, and finally are reviewed for potential certification.

**Mission Madagascar!**

Hill managed the highly visible reconstruction of the historic Lion House at the Bronx Zoo for use as the new home of Mission Madagascar!, an interactive exhibit designed to showcase the plants and animals that are endemic to Madagascar, the world’s fourth largest island, located off of the coast of southeastern Africa.

As the largest building on the zoo’s renowned Astor Court, the Lion House was originally designed as an exhibit area for big cats. All of Astor Court, an impressive assemblage of six beaux-arts buildings at the center of the Zoo, was designated as a landmark by the New York City Landmarks Commission in 2000.

Its renovation was extensive and a complex undertaking, and included both structural and aesthetic improvements, as well as the incorporation of several green elements. The Lion House project achieved LEED gold certification from the U.S. Green Building Council, and includes geothermal wells, a fuel cell, inflatable Teflon™ skylight technology, and waste recovery that was greater than 90 percent of the demolition. The Lion House is the first New York City-owned building to receive such a distinction from the USGBC.

**Comcast Center**

The 58-story Comcast Center in Philadelphia is the City of Brotherly Love’s tallest building, and the 15th tallest in the U.S. Green building concepts were incorporated into nearly every element of the skyscraper’s design and construction. It stands as the tallest LEED-certified building in the country, and includes such innovations as underground parking that reduces hear-producing above-ground hardscapes, and encouraging mass transit usage by providing parking for...

Projects funded by the stimulus package, however, could make commuters and countless others very happy.

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Hill recently managed the construction of the Comcast Center in Philadelphia. The 58-story building is the tallest LEED-certified building in the United States.

Hill’s Roster of Green Projects Growing

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only 1.5 percent of the building’s occupants. Conveniently located charging stations are provided in the parking garage for those who drive low-emission vehicles.

In addition, the building employs extensive water-saving measures to reduce use of potable water, including low-flow fixtures and waterless urinals. Comcast Center’s glass curtain walls block 60 percent of the sun’s heat, while capturing 70 percent of its light, providing ample daylight while reducing reliance on air conditioning and unnecessary lighting. Finally, waste management and recycling are mainstays of the center’s day-to-day operations. This commitment began even before construction began at the busy urban site. More than 75 percent of the waste from demolishing the site’s previous building was sorted and recycled, diverting tons of waste from needlessly entering a landfill.

For more information on Hill’s sustainable projects, call us at 856-810-6210, or contact us via e-mail at info@hillintl.com.