

## NYS DOT BRIDGE INSPECTION, REGION 8



AI is performing Biennial Bridge Inspections for the NYS DOT in Region 8 (Lower Hudson Valley). AI is inspecting 1,450 bridges (3,207 spans) located over waterways, highways, and railroads. We are utilizing 100% hands-on inspection for fracture critical elements, non-redundant deck truss members and gusset plate connections, Category D and E welds, and any other elements requiring special attention.

## ConnDOT ENGINEERING ROTATION PROGRAM



AI successfully hosted two of ConnDOT's employees under the *Bridge Design to Bridge Safety Rotation Program (BD-BSRP)*, sponsored by ConnDOT. Under this program bridge design engineers from ConnDOT trained as Assistant Bridge Inspection Engineers (ABIEs) with AI Team Leaders for six months. The program gave them a better understanding of the importance of inspection procedures which can lead to better design and detailing of bridge components.

*"The cities that capture the mobile, college-educated 'young and restless' are the ones who are most likely to revitalize their downtowns and accelerate economic progress in their cities."*

- Lee Fisher, President of CEOs for Cities (a national not-for-profit organization that helps U.S. cities map out economic growth)

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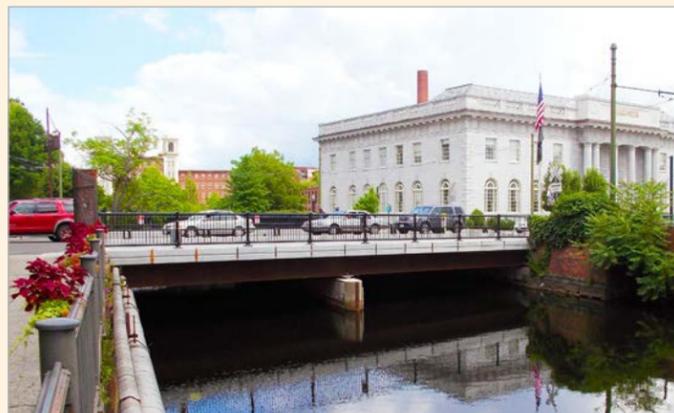
Albany, NY

Boston, MA

Cranston, RI

Richmond, VA

## KEARNEY SQUARE BRIDGE DESIGN



Originally built in 1847, the Kearney Square Bridge is privately owned and operated by Boott Hydropower, Inc. This bridge carries Merrimack Street over Eastern Canal in the City of Lowell, MA. The bridge and the canal are part of the Lowell National Historic Park. Kearney Square Bridge carries over 14,000 vehicles per day. Due to the poor condition of the superstructure and low load carrying capacity, this bridge needed to be replaced.

AI provided bridge design and survey services for the replacement of the superstructure including minor modifications to the historic stone masonry canal walls, abutments and center pier. The new bridge was constructed in 2012 in two phases in order to maintain the two traffic lanes. The new superstructure carries a sidewalk on the south side and consists of seven (7) steel rolled beams composite with a precast reinforced concrete deck. The trolley track which crossed the street adjacent to the east abutment was protected and kept in service during construction.

## SERVICES

- Bridge Engineering
  - Bridge Inspection & Evaluation
  - Bridge Design
  - Load Rating
- Construction Services
  - Construction Inspection / Contract Administration
  - Construction Management
- Civil Engineering
  - Site Design
  - Highway Design
  - Land Surveying
  - Airports
  - Utilities / Power
  - Transportation / Traffic
- Building Systems Engineering
  - Sustainable Design
  - M/E/P - Building Systems
  - Structural Engineering
- Design-Build Services

**AI** News

A Newsletter About **AI** Engineers, Inc.

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*Throughout our firm's history, we have been fortunate to perform engineering, design, construction and maintenance work in many U.S. cities. This issue is devoted to sharing and raising awareness amongst our readers, particularly the engineering professionals, about how the rise of cities in the post-industrial, knowledge based economy continues to help lift the economic fortunes of individuals, families and society at large. It discusses the impact our work, as professionals, has on the communities we live in along with some of the best practices being employed to exploit the economies of agglomeration. According to McKinsey & Co., by the year 2050, 70% of the world's population will live in urban centers. The revival and resurgence of urban life is a major contributing factor in this statistic.*

## OUR CITIES: FOSTERING SOCIAL & ECONOMIC DYNAMISM



*New York City Skyline*

Cities have played a critical role throughout the history of mankind as the centers of trade and commerce, arts and culture, and a wellspring of ideas in every sphere of human endeavor. They have long provided the necessary conditions for architecture, politics, law, governance, economy, science and technology to flourish. From Athens and Rome to modern day metropolis' like New York, London, Tokyo, Shanghai and Dubai, they continue to play a pivotal role in their national growth, societal progress and higher standard of living.

Cities have had their share of problems as critics cite crime, high cost of living and aging infrastructure as arguments against cities, relegating them to mere work centers and not necessarily places to live. Starting in the 1950s, cities began to fall out of favor with most Americans. The automobile revolution, which enabled the public to work and live in distant places coupled with other local incentives led to a flight to suburbia for an entire generation of people. While this mass exodus of the U.S. population from urban centers to suburbs helped create vibrant suburbs, it also initiated the decline of cities. The slow decline of urban centers caused a wide range of social and economic problems. With swaths of middle-class families moving away from cities, it not only eroded the city tax base but also forced the cities to cut spending on housing and infrastructure. Industries and commerce were also attracted to the suburbs due to lower taxes and easy availability of a skilled and educated labor pool. This generational shift left cities with not just crumbling infrastructure but also with deteriorating quality of educational centers, housing problems, increased crime rate and other social ills. It started a vicious cycle where one problem exacerbated the

other. A recent case study is the City of Detroit, which was unable to diversify its automobile centric economy into a viable alternate economy.

Major cities like New York and Boston have shown remarkable resilience to come back from the verge of failure to being vibrant and attractive destinations not just to work but also to reside in. New York City teetered on the brink of bankruptcy in 1975 when it was about to default on its debt obligation. It faced a high crime rate, rampant corruption and widespread poverty. Boston fell into decline in the mid 1900s when major industrial factories relocated to other parts of the country as well as overseas in search of cheaper labor. Through a combination of visionary leadership, public initiative, infrastructure investment and sound policies these cities have been able to reinvent themselves where today *(Cont. on pg. 2)*

## AI RANKED AMONGST ENR TOP 500 DESIGN FIRMS!

AI is proud to announce that we have been ranked on ENR's Top 500 Design Firms list for the first time. We are ranked 434<sup>th</sup> on this annual list of the largest 500 design firms in the U.S. based on revenues. This is a great moment in our company's history and we would like to thank all of our clients who have given us the opportunity to serve them over the years.

## CTfastrak WINS THE ACEC ENGINEERING EXCELLENCE AWARD!



Contract 1 of the CTfastrak, where AI provided construction engineering and inspection services as a Prime Consultant, recently won the ACEC/CT Engineering Excellence Award. CTfastrak,

which officially began operations in March, is Connecticut's first Bus Rapid Transit (BRT) system and consists of a 9.4 mile long roadway dedicated to bus transportation that runs between New Britain and Hartford, CT. It is part of an effort by the State to reduce congestion and make ridership more accessible along this busy commuter corridor.

# Message From the President



Cities are coming back. Many U.S. cities have survived the tumultuous end of the industrial era mainly due to their ability to reinvent, adapt and transform their economies by producing ideas. Cities are about proximity, density and closeness. A connected world brings huge returns to the idea producing entrepreneurs and innovators who scour the earth in search for profits.

Successful cities must be appealing places to live, work and play for people of all ages and incomes, especially the young and the well educated. An optimum inventory of affordable housing, an efficient system of transportation and transit, inviting greenspaces for public, as well as close/walkable proximity of retail and entertainment districts from city center are necessary ingredients for prosperity.

An attractive city will support an eco-system where art, history, culture, science and technology, and new research can flourish. It will enable a regional economy which becomes self sustainable through constantly adapting to the demands of national and global economies. The collaborative brilliance of a city is the essence of its prosperity and health.

- Abul Islam

### Reference:

Triumph of the City: How Our Greatest Invention Makes Us Richer, Smarter, Greener, Healthier, and Happier - E. Glaeser

## OUR CITIES: FOSTERING SOCIAL & ECONOMIC DYNAMISM

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they stand as beacons of success and prosperity. Today, New York City is the world's financial capital and one of the most culturally diverse and vibrant places on earth. It is the global leader in media and advertising along with being one of the top tourist magnets in the world, with over 40 million tourists visiting the City annually. Boston saved itself from becoming a decrepit industrial relic by reinventing itself as a pioneer of post industrial urban revitalization. Boston is now considered as the educational and cultural mecca of the U.S., boasting some of the most prestigious colleges and universities in the world. The Greater Boston Area is home to Route 128 also known as America's Technology Highway. Revamped during the 1950s, this stretch of the corridor boasts some of the most highly regarded high-tech and biotech companies globally. In addition to Route 128, Kendall Square in Cambridge and the Seaport District in Boston are now considered to be the innovation hubs of the region competing against the likes of Silicon Valley.



Front Street District in Hartford

Places that have been able to evolve and adapt to the ever changing conditions have survived and set themselves on a path to growth. **Hartford** and **Bridgeport** are good examples of cities with great potential for a turnaround. Both cities have witnessed heydays followed by decline. But through renewed efforts to change their image and attract the millennials, these cities have begun the process of propelling themselves into a diversified economy. They are planning beyond traditional economies based on manufacturing, finance, insurance, and healthcare to attract and retain young talent in the areas of information technology, biotech, engineering and science to create a knowledge based economy for sustained growth. It is now a well established fact that innovation and entrepreneurship are fundamental to lifting a society's fortunes.

Hartford, once the wealthiest city in the country, saw its fortunes dwindle as it struggled to transition from being an industrial powerhouse to

a post industrial city. A steady loss of population to surrounding suburbs combined with a reduced tax revenue base left Hartford with a myriad of social and economic challenges. Even though Hartford has borne the mantle of being the insurance capital of the U.S., drawing a substantial number of employees to downtown every day, it wasn't able to adequately motivate them to live there, but this has changed in recent years. Major efforts have been undertaken to transform this commuter city perception of Hartford. Policy makers and community leaders have realized that to turn around the fortunes of the City it is imperative to make Hartford attractive to people of all ages especially the millennials to live, work and play. This generation of young professionals, not burdened by the City's past, wants to work, live and be entertained in a community setting. They want to experience the downtown life and live in an area where everything from business to transportation to retail and entertainment is easily accessible. To make this urbanization phenomenon a reality, requires a coordinated infrastructure investment effort on multiple fronts including the conversion of existing vacant office spaces into affordable housing units, effective public transit/transportation network, and attractive venues for art, architecture, recreation and landscape. Hartford has already embarked on an ambitious investment strategy that seeks to address all of these prerequisites.

Hartford is adding approximately 800 housing units in the next year to accommodate not just the millennials but also the empty nesters and students, who wish to live and work in walkable communities, are less interested in owning cars and want 24/7 access to daily amenities. The close proximity of where people live and work reduces carbon footprint due to decreased reliance on cars and public transportation, it reduces the strain on civic infrastructure and promotes a sense of community. Various transportation initiatives such as the recently inaugurated CTfastrak, to the upcoming New Haven-Hartford-Springfield (NHHS) High-Speed rail line and the I-84 viaduct redesign are underway to make Hartford more accessible, pedestrian friendly, and to effectively connect it with New York and Boston; two large metropolitan regions within a 100-mile radius experiencing phenomenal growth and infrastructure interest. CTfastrak furthers the vision of providing reliable commuter service between Hartford and (Cont. on pg. 3)

## OUR CITIES: FOSTERING SOCIAL & ECONOMIC DYNAMISM

(continued from pg. 2)

New Britain along with making Hartford more walkable and bikeable where people do not have to rely solely on cars. These transportation projects will complement the urbanization efforts being undertaken within the City such as the iQuilt program and the Intermodal Triangle Project. Both of these projects aim to make Hartford more pedestrian friendly and to better link the cultural and infrastructure assets of downtown such as museums, historic landmarks, recreation areas and transportation hubs to one another. It is no coincidence then, that Hartford is garnering renewed interest from not just businesses and real estate communities but also from educational institutions. University of Connecticut (UConn) is going to be the most notable addition to downtown in 2017 when it relocates its West Hartford campus to the present Hartford Times Building. It has the potential to change the dynamic and the demographics of the City in a major way according to the Director of Department of Development Services, **Thomas Deller, AICP**. By some estimates it will bring approximately 2,300 students as well as 250 faculty and staff to the downtown area, elevating commercial activity and vibrancy in the area. Envisioned as a neighborhood campus, UConn will leverage the use of City's already existing assets such as the Hartford Public Library, Connecticut Science Center, and Connecticut Convention Center by utilizing them for its programs.

Bridgeport, too, was victim of deindustrialization and suburbanization. As the largest city in the State, Bridgeport has great unrealized potential in spite of its challenges with security and economic growth. Its close proximity to New York City on the I-95 corridor, availability of mass transportation and

affordable rentals makes it an attractive place for millennials. The median age of the population of the City has dropped by three years in the last decade alone proving that demographic changes are underway in Bridgeport. Among the key infrastructure initiatives undertaken by Bridgeport, to attract businesses and professionals, has been the redevelopment of the Steelpointe Harbor. **David Kooris**, the Director of the Office of Planning and Economic Development, envisions a sustainable, dynamic and business friendly Bridgeport in the very near future. His department has been focusing its efforts on multiple strategies to achieve these goals whether it is through the revitalization of downtown to make it more pedestrian friendly and better connected to bus and rail stations; or championing an eco-industrial park to attract green businesses, or to create a health corridor that links public education with healthcare and medical manufacturing.

The urban revival is not unique to metropolitan cities like New York, Boston, San Francisco and Philadelphia but is also taking hold in small and mid-sized cities such as Hartford, Bridgeport, Richmond, Cleveland and the likes. These places have been able to reinvent themselves by investing in their future to attract a new breed of professionals and entrepreneurs who are eager to live, work, socialize and seek entertainment in an urban environment. Cities that have been willing to make investments in raising the quality of higher education institutions, advancing innovation and new technologies, developing an effective transportation network, affordable housing, arts and cultural venues, etc. are creating economic dynamism in their communities.

It is fairly evident that successful cities of the

## Employee Announcements

### Awards

Employee of the Year:

Peter Pardee, PE

Manager of the Year:

Shanila Aslam

Leadership Award:

Rohit Pradhan, PE, SECB

Office Manager of the Year:

Hudson Yost, PE

Twenty Years of Service:

Aslam Siddiqui, PE

Ten Years of Service:

Stephanie Lesick-Hernandez

Jan Pacanski, PE

Abdelmunim Elgabani

Project Recognition:

CTfastrak, Contract 1

future will be those that provide spatial proximity to facilitate human collaboration and sharing of ideas in an environment conducive to innovation and entrepreneurship. Such urban centers will have the potential to create regional economies capable of achieving sustained dynamism. Sustained dynamism will enable the regional economy to exploit the latest innovation and technology to continually introduce new products and services into the market. It will not be tied to a particular product or service but rather "reinvention" will serve as its economic base.

*Citation: (1) Sustainable Dynamism: A Regional Economic Development Strategy of Continuous Reinvention (Vol. 1) - D.W. Kennedy, PhD (2) The Metropolitan Revolution: How Cities & Metros are Fixing Our Broken Politics & Fragile Economy - B. Katz & J. Bradley (3) 2014 +10 Hartford's Future - Hartford Business Journal (4) Urban World: Mapping the Economic Power of Cities - McKinsey Global Institute*

## IN OTHER NEWS

- AI is pleased to announce that **James F. Byrnes, Jr., PE** has joined us as a **Senior Director, Business Development and Corporate Strategy**. Mr. Byrnes is a 36-year ConnDOT veteran where he served as Chief Engineer, Deputy Commissioner, and eventually as Commissioner. He managed a staff of over 3,400 and an operating budget of over one billion dollars while working closely with local, state, and federally elected officials in the delivery of complex public projects. Mr. Byrnes then served as the Vice President of a top ENR firm for over 9 years.
- The Associated General Contractors of Connecticut (AGCCT) recently conferred our President/CEO, **Abul Islam, PE, FASCE**, with the Private Owner of the Year award.
- Our Virginia office has expanded its operations with the success of the Salem District Bridge Inspection project, the Lynchburg District Bridge Inspection project, and the Statewide Load Rating project, along with the addition of our **Associate Vice President, Jason Krempl, PE**.
- Students from the Academy of Engineering & Green Technology (AoEGT) were given a tour of the CTfastrak site before its formal inauguration, where AI provided construction management and inspection services.



James F. Byrnes, Jr., PE

