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MESSAGE FROM THE GOVERNOR

Happy New Year to all of you interested in the advancement of the New NY Bridge project. Last year was a resounding success with major accomplishments, and we will continue that momentum into 2014 and beyond. It is inspiring to see the great state of New York make such great progress on a vital infrastructure project like the New NY Bridge to replace the Tappan Zee.

I personally inspected the construction site recently to see the ongoing construction firsthand, and I came away impressed by the size, scope and rapid advancement of the effort. I am also getting regular updates from top construction officials to help make sure the project remains on schedule and on budget, as it is now.

As a Westchester resident, it was particularly gratifying to meet some of the hard-working men and women who are undertaking this monumental effort out on the Hudson River. They are part of an economic resurgence spurred by the project, which has already created more than 600 jobs and benefited some 500 businesses. These numbers will only grow in the coming months as the construction ramps up, and the new twin-span structure starts to rise from the river between Rockland and Westchester counties.

The project is also fulfilling our mission to take advantage of the incredible diversity across New York. Our goal is to get $314 million in contracts to disadvantaged business enterprises, including those owned by minorities, women and veterans. The state is making great strides in creating opportunities for all New Yorkers and this year we are redoubling those efforts.

The New NY Bridge now serves as the national model for large-scale projects on multiple levels, from the bidding process through to the design, and most recently with the state closing on a record-setting $1.6 billion federal TIFIA loan in December – the largest in TIFIA program history. The TIFIA loan is part of an innovative financing plan for the project that has been developed by the New York State Thruway Authority, a plan that is already paying dividends. The inaugural bond sale for the bridge created excitement and high demand in the financial markets, which in turn resulted in more favorable rates than initially anticipated.

Those low rates will help keep any future toll increases as low as possible for businesses, commuters and local residents. At my request, the Thruway Authority is creating a Toll/Financing Task Force to explore alternate revenue sources, and to look into discounts for commuters and local residents who use the bridge regularly, to keep the span affordable.

An extensive community outreach effort is ongoing to keep people, businesses and other stakeholders informed, and to make this the most inclusive and transparent infrastructure project in state history.

If you’d like to see the construction site for yourself and monitor the progress being made, live construction cameras are available at: NewNYBridge.com.

Here’s to continued success, progress and prosperity for the bridge and all New Yorkers in 2014!

Andrew M. Cuomo
Governor of New York State

On the Cover
A view of permanent pile installation from the Westchester County shoreline in Dec. 2013.
The New NY Bridge project is moving forward in 2014, on time and on budget.

Tappan Zee Constructors, LLC (TZC), in partnership with the New York State Thruway Authority, is constructing the New NY Bridge under a design-build contract – where a single team synchronizes the design and construction of the structure. Through this expedited process, construction can begin before certain aspects of the design are finalized. To date, the design is about 80 percent complete thanks to a close partnership between TZC, the Thruway Authority and advanced, intensive geotechnical research.

This geotechnical research provided a refined evaluation of the project site, including the river bottom and bedrock. This was achieved through highly sophisticated surveys using barge-based, multi-beam sonar; advanced charting equipment; and global positioning satellite data. This innovative approach allowed us to determine the location and develop a unique design for each pier – which will serve as the foundation for the massive structure.

To investigate the potential impact of the project, crews installed remote monitoring equipment around the existing Tappan Zee Bridge and surrounding neighborhoods to continuously acquire noise, vibration and air quality data, which is posted online for the public to view, 24 hours a day, seven days a week, at NewNYBridge.com.

In addition, TZC completed numerous environmental studies to minimize impact on local flora and fauna. The breeding habits of oysters, sturgeon and peregrine falcons were taken into consideration while devising the construction schedule. Crews even counted and numbered every tree in the vicinity to preserve as many as possible during the construction process.

TZC has built several structures to prepare for construction operations, including: temporary work trestles that extend more than 1,000 feet from both county shorelines; temporary docks which provide access for maintenance crews; a new bulkhead area for the Rockland landing; temporary sound barriers in Westchester and Rockland counties to buffer noise; office facilities; work yards; and staging areas.

With construction already underway, Governor Cuomo’s plan for a new bridge in the lower Hudson Valley has become a reality on the largest highway and bridge project in North America. The combination of Governor Cuomo’s leadership and an innovative design-build approach is paying off with dredging complete and pile driving underway.

DID YOU KNOW? The New NY Bridge will:
- last 100 years without major structural maintenance
- cost over a billion less than originally estimated
- meet or exceed environmental standards during construction
- utilize quieter construction techniques wherever possible
New York State Thruway Authority Executive Director Thomas J. Madison continues to be an instrumental force in making the New NY Bridge project a success. From chairing the New NY Bridge Executive Steering Committee to supervising the development, financing, and construction of the project, he has proven to be an invaluable source of leadership to the project team and in his larger role overseeing the 570-mile Thruway and Canal Corporation. As a seasoned transportation professional with extensive government and private sector experience, Madison works diligently to better the lives of commuters as well as economic development in New York.

Q. What important insights have you gained during your career in transportation?
A. I’ve been involved in the construction industry from the time I could hold a hammer and the business is in my blood. I had summer jobs where I learned all aspects of construction and even worked on a heavy road construction crew at one point. Those experiences taught me that big projects get done by many individuals, and a project is most successful when everyone works together as a team. Leadership is important, and so is the focus and commitment of every single person involved. My early hands-on construction experience eventually merged with my interest in public policy and public service. As I progressed through various government positions, including appointments by two New York Governors and a U.S. President, it strengthened my view of the vital importance of investing in transportation infrastructure. I’m honored to have been chosen by Governor Cuomo to lead the Thruway Authority at such a pivotal moment and to work on such an important, historic project.

Q. What do you consider among the most notable project achievements to date?
A. I’m truly proud of all the “firsts” we’ve already achieved on the New NY Bridge project. The past two years have marked an extraordinary partnership between the Thruway Authority, the New York State Department of Transportation, and the Federal Highway Administration that has led to a remarkable chain of events. Our team of government and consultant forces worked with more than a dozen state and federal agencies to complete the environmental review for the project in just 11 months – a process that usually takes as long as seven years for a project like this. We also completed a complex design-build best value procurement process in about a year, resulting in a contract that is among the largest in New York State history and that will help ensure the project is delivered on time and on budget. Another “first” was securing the largest loan in the history of the USDOT’s Transportation Infrastructure Finance and Innovation Act (TIFIA) program – $1.6 billion.

Q. How will the New NY Bridge project transform the Thruway Authority?
A. Safety is the top priority in all that we do, and I’m pleased to report that 2012 and 2013 were the safest years in our nearly six-decade history. Major safety and reliability enhancements to the New NY Bridge will ensure an even safer system for the 138,000 plus vehicles that cross the structure every day and the hundreds of millions of motorists who travel the Thruway system each year. We’re also confident that the lessons we’re learning today about design-build delivery – and true public/private sector partnering – will help us improve risk profiles, accelerate schedules, and reduce costs on many more projects in the future.

Private Sector Leadership
Before he became executive director of the New York State Thruway Authority, Madison was vice president and director of transportation policy for STV, Inc., an internationally recognized engineering, design and construction management firm with more than 1,700 employees in 30 offices. He was also responsible for evaluating transportation policies at the local, state and federal levels.

A Focus on Innovation
As Federal Highway Administrator from 2008 to 2009, Madison was responsible for leading a major component of the U.S. Department of Transportation, with 2,800 employees, 52 division offices and an annual budget of $40 billion. He focused on promoting innovative financing and program delivery techniques, developing strategies to streamline and reform the nation’s surface transportation programs, and Highway Trust Fund solvency.

Extensive Public Sector Experience
Madison has many years of experience in state and local government. He served as deputy secretary to the Governor for transportation, and in 2005 was appointed commissioner of the New York State Department of Transportation. In that role, Madison oversaw the state’s vast transportation network including port and aviation facilities, freight and passenger rail services, local transit systems, bicycle and pedestrian programs, 10,000 employees, a multi-billion annual budget and a 5-year capital program of $17.9 billion. He was also New York’s principal advocate for the $2.9 billion Rebuild and Renew New York Transportation Bond Act, a statewide ballot initiative approved by voters in 2005.

HOMETOWN
Binghamton, N.Y.

EDUCATION
B.A., Political Science & International Relations, State University of New York College at Geneseo

HONORS & AWARDS
• Construction Industry Man-of-the-Year Award: American Heart Association, 2006
• Diamond Award: American Council of Engineering Companies of New York, for leadership and expertise in Transportation Administration and Education, 2006
To kick off the new year, Tappan Zee Constructors, LLC (TZC) launched its monthly business orientation series at the Westchester Marriott in Tarrytown, N.Y.

The forum gives local businesses the chance to learn about the New NY Bridge project, and how to work with TZC. More than 50 businesses were in attendance, including contractors, design engineers, suppliers and professional services firms - as well as representatives from the New York State Thruway Authority.

The series aims to help disadvantaged business enterprises (DBEs) understand the various requirements of the project. DBEs are small businesses that are owned by socially disadvantaged individuals, including women and minorities. There are significant opportunities for DBE construction firms to participate on the project, as TZC has a 10 percent DBE goal totaling $314 million.

DBE participation on the project continues to grow. There are currently 53 DBEs performing on the New NY Bridge project, with a total commitment to these firms of $44.6 million.

TZC has also begun to enhance its vendor database, which has grown to more than 9,900 vendors (including more than 6,100 DBE firms). The vendor database has been an effective resource in helping TZC connect with firms, particularly DBEs. Continued outreach ensures that all interested businesses are aware of the opportunities available to them.

To make this happen, TZC has built a small team of interns – engineering students from New York-area colleges, including Syracuse University, Westchester Community College, Manhattan College, as well as the University of Delaware – to research additional information on construction firms in the TZC vendor database. The information is then added to each firm's profile, which helps TZC match construction opportunities to the right businesses.

In the coming year, TZC will host business orientation meetings on the second Wednesday of every month, at TZC offices located at 555 White Plains Road in Tarrytown. Businesses interested in attending the next forum should register by contacting RSVP@TZC-LLC.com. TZC also encourages all firms interested in subcontracting with the project to register as a vendor. Registered vendors will be added to the TZC vendor database and informed of upcoming opportunities.

IS YOUR FIRM A TZC VENDOR?

Enhance your business profile by filling out our vendor questionnaire. Request one by emailing Procurement@TZC-LLC.com

NEW TEAM MEMBER

NATHANIEL T. JENNINGS

began his career in 1980 with the U.S. Coast Guard and later worked on vessels of the U.S. Navy’s Military Sealift Command. As an able-bodied seaman with rescue-swimmer training, Nate has worked on ships that circumnavigated the globe. This year, after 33 years at sea, he returns to New York to crew one of TZC’s tug boats and is thrilled to be involved in the New NY Bridge project.

“I grew up crossing this bridge. Years from now, I can proudly say to the next generation that I was a part of the team that built the New NY Bridge.”

Nathaniel T. Jennings
The New NY Bridge will incorporate a number of unique features to achieve an elegant design with efficient results.

An iconic main span serves as the signature aspect of the bridge, with 419-foot towers and geomeetrically aligned cables. The curved shape of the towers creates a unique look and eliminates the need for an upper transverse tower strut—a structural element typical between two towers—adding to the open air experience while crossing the bridge. This solution achieves a clean aesthetic, has vastly improved safety features and provides a high-quality, low-maintenance replacement for this critical crossing.

**Bridge Cross-Section**

- **Bridge length:** 3.1 miles, or 16,068 feet
- **Height of bridge towers:** 419 feet
- **Construction schedule:** 5 years, 2.5 months, to be completed in July 2018
- **Contract cost:** $3.14 billion
- **Additional New York State Thruway Authority cost:** Approx. $500 million
- **Total cost:** $3.9 billion

**How Do Cable-Stayed Bridges Work?**

Cable-stayed refers to a type of bridge where the deck is supported by straight cables attached to the top of towers. The towers are built first and then deck sections and stays are attached progressively. Cable-stayed bridges allow for long bridge spans.

**Projects Specifications**

- **North Tower**
  - Height: 419 ft
  - Location: Tarrytown, NY

- **South Tower**
  - Height: 419 ft
  - Location: Nyack, NY

**Westbound Span Lane Configuration**

Each bridge will have four lanes dedicated to general traffic, a wide shoulder and an emergency access/express bus lane.

**Belvederes on the Hudson**

The six, 60-foot-long belvederes extend 12 feet out from the shared use path on the westbound bridge to provide a viewing area where pedestrians and bicyclists can pause and take in the views of the Hudson River Valley.
The New NY Bridge will have many legs to stand on, nearly 1,000 in fact. These steel pipes – called piles, or pilings – are crucial in supporting the cable-stayed bridge. Constructing this foundation is the most critical stage of the project and requires a strong, coordinated effort.

Foundation construction starts with an understanding of the project site. Experts use advanced sonar technology to determine the layout of the riverbed and underlying layers of rock. With the development of an accurate river terrain map, experts determine the size, length and number of piles for each support location. The right kind of pile depends on several factors, including geology, soil conditions, available equipment and maintenance requirements.

In order to verify the calculations, “test piles” are installed along the entire length of the new bridge. The piles are tested to withstand up to 7 million pounds of weight, the equivalent of 22 Statues of Liberty. Tappan Zee Constructors, LLC and New York State Thruway Authority engineers monitor every aspect of the process, verifying geotechnical conditions and load capacities.

Pile driving is carried out by powerful crane-borne hammers. A curtain of air bubbles absorbs the resulting sound waves, protecting aquatic life from the powerful underwater surge. Once in place, the piles are filled with steel-reinforced concrete.

In the world of infrastructure construction, piles are the most common type of support for large bridges. They enable structures to be supported by rock found hundreds of feet below the water’s surface or by friction between the piling walls and the soil. This creates a stable framework for the construction project.

Permanent pile driving began in October, with the aid of highly skilled, specially trained welders. A proud procession of steel piers is scheduled to be standing tall by September of this year.

Building a Strong Foundation

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Tappan Zee Constructors, LLC (TZC) is hard at work developing the New NY Bridge project site for the spring. Shallow regions of the Hudson River are being prepared for large-scale equipment such as the I Lift NY super crane.

TZC crew-members are implementing a process called “dredging” to accommodate large barges that hold construction machinery. Dredging deepens shallow water levels by removing sediment from the river bottom; this is followed by layering “armoring” materials over the exposed location.

TZC has taken special care to support Hudson wildlife while dredging. By adhering to a strict timeframe for sediment removal, TZC was able to avoid interrupting the spawning and migration patterns of endangered sturgeon. Their narrow window was three months, from Aug. 1 to Nov. 1.

Crews worked 24 hours a day, seven days a week, completing a majority of the removal required. Using large clamshell buckets – tools specially designed to minimize the release of silt during lifting – over 800,000 cubic yards of sediment were removed from the river.

During these operations, environmental engineers analyzed the water quality in the Hudson with sophisticated instruments. By measuring potential contaminants and water turbidity (cloudiness), these experts were able to verify that the quality of the water was not affected. After being tested, the dredged sediment was processed and appropriately disposed of at off-site locations.

At this time, TZC is executing the armoring process. The armor layers are 2 feet thick and composed of sand and stone. This coating protects the river bottom from being disturbed by passing vessels, and maintains water quality in the area.

Dredging will begin again in August 2014. The operation will pave the way for the New NY Bridge, while minimizing the effects of construction on life in the Hudson River.

**How and why was the dredging window established?**

The three-month window was based on the migration patterns for sturgeon and other fish that live in the river. Previous studies and consultation with National Marine Fisheries Service (NMFS) and the New York State Department of Environmental Conservation (NYSDEC) tell us that dredging between Aug. 1 and Nov. 1 avoids spawning periods and peak biological activities in the project area.

**Why is the reduced amount of dredging helpful in environmental mitigation?**

Less dredging means fewer acres of the river bottom being disturbed. Sturgeon feed on various invertebrates such as shell fish, worms and insects in the river bottom. They have mouths like a vacuum cleaner that dig into the river bottom. Reducing the amount of dredging reduced our impact on the ecological environment of the Hudson.

**What was done to monitor dredging?**

Our environmental compliance program monitored the dredging process in many different ways; including taking water samples twice a day to test for contaminants and turbidity or “cloudiness” of the water and having specially trained biologists closely monitor each step of the dredging process, to make sure no sturgeon were hurt in the process.

**How successful were the process and the procedure established in the Final Environmental Impact Statement (FEIS)?**

The plan established after consultation with the NMFS and NYSDEC during the EIS and permitting process has proven to be very successful as we saw no sturgeons were harmed through the entire 2013 dredging season.
Tappan Zee Constructors, LLC (TZC) is a strategic consortium of design-builders created to deliver the best project team to successfully design and build the New NY Bridge on time and on budget while achieving the highest environmental and safety standards.

TZC consists of Fluor Corporation, American Bridge Co., Granite Construction Northeast, Inc., and Traylor Bros. Inc. Fluor is the managing partner.

Founded in 1912 and based in Irving, Texas, Fluor Corporation designs, builds and maintains some of the most challenging and complex large capital projects around the world, from power plants and refineries to bridges and roads. Fluor is a Fortune 500 company with more than 40,000 employees and 60 international offices that deliver engineering, procurement, construction, maintenance, and project management to clients in the public and private sectors in a wide array of industries.

Fluor Chairman and CEO David Seaton visited the New NY Bridge project last November. Seaton was joined by additional Fluor leadership as the group was welcomed by TZC project leadership for an update and site tour.

“I was very impressed with the work of our Fluor team, and with the teamwork on this project,” Seaton said after spending a morning on the Hudson River and receiving an update from TZC President and Project Executive Darrell Waters (Fluor) and TZC Vice President and Project Manager Walter Reichert (Granite Construction Northeast) on the schedule, challenges and accomplishments of the enterprise.

“Even though the project has a number of different companies involved, they work together very effectively,” Seaton said.

Seaton planned this visit to the project as part of a trip to New York City, where he was honored by the American Institute of Chemical Engineers at an event with the theme: “Recognizing Excellence in Engineering Ethics.”

To wrap up his visit, Seaton met with Fluor employees working on the project. He took the opportunity to honor two long-term employees – Director of Materials Management, William Upham and Project Controls Manager William Glowasky – by presenting them with their 25-year service pins.

ire departments, law enforcement units, emergency medical service (EMS) teams and many other municipal agencies are working with the New NY Bridge project to keep workers and civilians safe and secure.

The New York State Thruway Authority and design-build contractor Tappan Zee Constructors, LLC (TZC) have instituted a culture of safety-driven teamwork.

The Thruway Authority and TZC have been in communication with municipal agencies from Westchester and Rockland counties to help them understand the unique environment created by the New NY Bridge effort and to identify safety and security issues that might arise during construction.

As one of the largest design-build infrastructure projects in the country, the New NY Bridge project involves many people and many moving parts. With safety as a top priority, the New NY Bridge team maintains strong relationships with marine- and shore-based emergency response teams. Even before construction began, the team assembled a unified coordination group (UCG), comprised of representatives from all local first responder agencies, Thruway Authority safety and security representatives, as well as NY State Police.

Project security and safety teams delivered incident command briefings to more than 40 chiefs, commanders and response specialists. Each briefing ensures that local officials stay informed, and stresses the importance of the role UCG plays.

In the event of an emergency requiring outside agency involvement, the UCG will coordinate communication and response efforts across all departments.

Preparedness is essential to maintaining a safe and secure environment and is only possible through effective partnerships. Early in the construction process, local fire, police and EMS teams accompanied TZC on a guided tour of the site’s floating platforms. This allowed chiefs and crews to become familiar with the work site in advance of a potential incident. Last fall, the team put that knowledge into action when it assisted in the recovery of a boat that had come lose from its mooring and drifted dangerously close to the existing Tappan Zee Bridge.

As work on the New NY Bridge project site progresses, the already heavily traveled Hudson gains even more activity. This ever-changing dynamic calls for heightened sensitivity to safety and security on the water.

Safety and security success go hand-in-hand. The New NY Bridge team would like to thank all emergency service organizations that have collaborated to secure the work site for the New NY Bridge.
Engaging the public in one of the largest transportation infrastructure projects in North America.

From the very start of the New NY Bridge project, public involvement has been a top priority for Governor Andrew M. Cuomo, the New York State Thruway Authority and Tappan Zee Constructors, LLC (TZC).

Over the past year, the outreach team, headed by Special Advisor to the Governor Brian Conybeare, has held nearly 200 community update meetings in Rockland and Westchester counties. The team has met with local residents, civic and social organizations, schools, industry partners, and other groups. By sharing project updates and information related to the design-build process, the outreach team ensures the community stays informed as the project grows.

At the meetings, the team also solicits input from those who live in communities that will neighbor the new bridge. “Public engagement is a critical component of the project,” says Conybeare. “When our team presents information about the construction program to a classroom of science students or to a forum of local business and community leaders, the give-and-take is vital to our mission of transparency and inclusion. Often, we receive valuable suggestions or comments that we can take back to the New NY Bridge team and to the Governor.”

Community Outreach Centers located in Rockland and Westchester are important in the public involvement effort. At the centers, visitors can find fact sheets, displays and other materials concerning the New NY Bridge project. The Outreach Centers are also venues for project team members to meet with the public and hear comments and concerns.

Community members can learn about upcoming events by following us on Twitter @NewNYBridge and on the project website NewNYBridge.com.

**OUR COMMUNITY TIMELINE**

**West Nyack Senior Center:** The New NY Bridge outreach team presented a project update to a full house at the West Nyack Senior Citizen Center.

**Cottage Lane Elementary:** Special Advisor to the Governor Brian Conybeare responded to questions from 5th grade students during an educational outreach presentation.

**Mass Transit Task Force:** The Mass Transit Task Force held a meeting at the White Plains Public Library to discuss project funding strategies and transit solutions.

**Rockland Outreach Center:** Bridge workers brought a section of the pipe piles designed to support the new bridge to the project’s Rockland Community Outreach Center.

**Construction Webcam:** The first of four web cameras going live on the New NY Bridge website. The real-time images of the construction site are updated every 15 minutes, and accessible from personal computers and smartphones.

**Halloween Festivities:** Children gathered around a special candy version of the New NY Bridge built by the project team for Halloween outreach events in Rockland and Westchester counties.

**DBE Outreach:** Brian Conybeare and Thruway Authority/TZC officials presented upcoming project contracting opportunities for M/W/DBEs at the 23rd Annual Brotherhood Breakfast in Tarrytown, N.Y.

**In the News:** On Journal News “Phil Reisman Show” Brian Conybeare gave an update on the project. The show was streamed online, and viewers were able to submit their questions live via email and Twitter.

**Community Food Drive:** Using donated nonperishable food items, ultimately going to local families in need, members of the Jewish Community Center on the Hudson were joined by New NY Bridge staff to build a food replica of the New NY Bridge.
Stay connected to the project and receive real-time updates by following us on Twitter via your social media accounts and/or mobile devices.

Prefer to receive project information in your email inbox? Visit NewNYBridge.com to subscribe for periodic email updates.

The project website provides detailed information about the design and construction of the New NY Bridge. Check back often to see the latest project progress.

Our phone hotline is open 24 hours a day, 7 days a week, ready for your questions and comments. You can reach us at 1-855-TZBridge (1-855-892-7434).