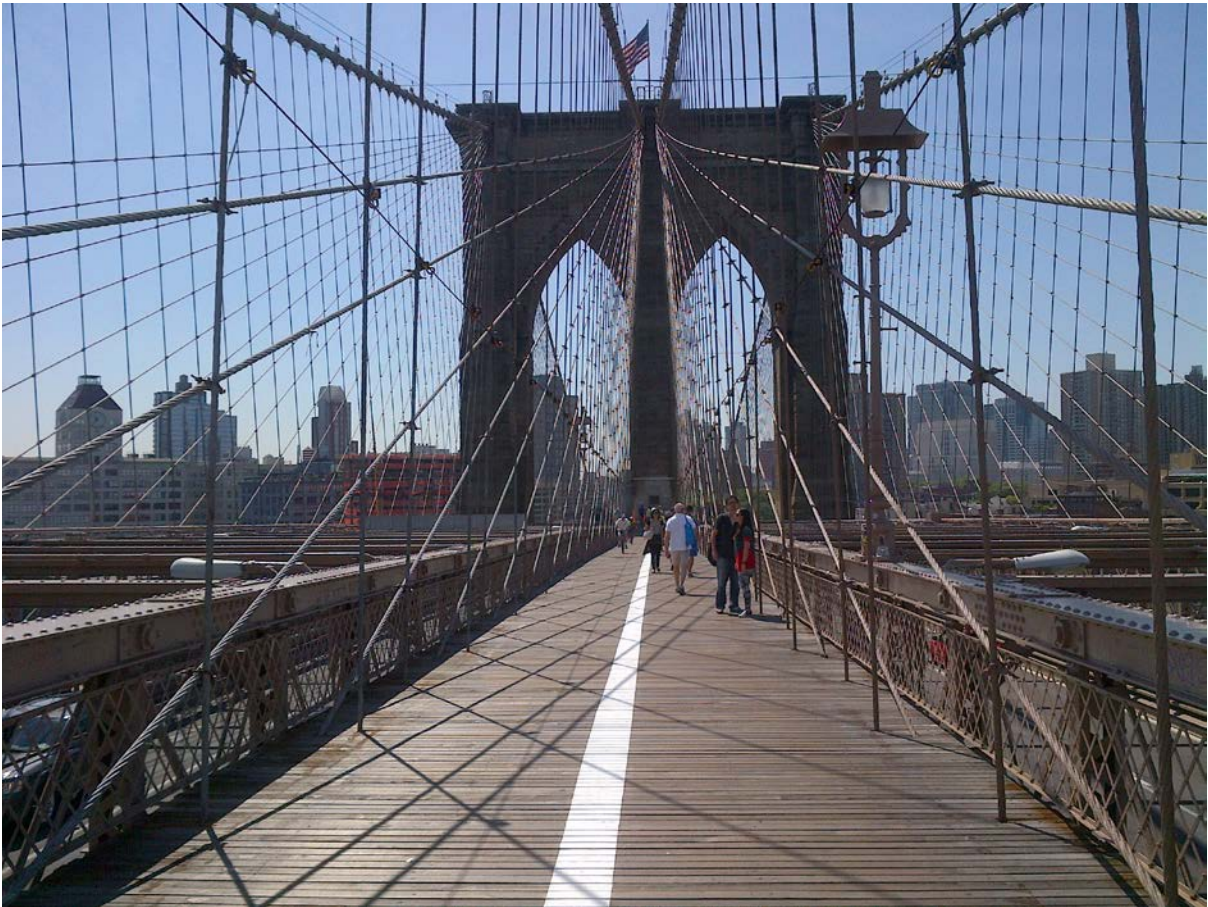


NEW YORK CITY DEPARTMENT OF TRANSPORTATION DIVISION OF BRIDGES 2014 BRIDGES AND TUNNELS ANNUAL CONDITION REPORT



Brooklyn Bridge Walkway and Bicycle Path in June 2014. (Credit: Earlene Powell)

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Ten projects made possible by the American Recovery and Reinvestment Act of 2009 and/or displaced funding made available due to the Act: Bruckner Expressway Bridge, Ward's Island Pedestrian Bridge (Credit: Nicole Garcia), Brooklyn Bridge, East 8th Street Access Ramp Bridge, East 14th Street Pedestrian Bridge, Staten Island Ferry Ramps, Greenpoint Avenue Bridge (Credit: Sergey Parayev), Midland Avenue Bridge, East 174th Street Pedestrian Bridge, and Claremont Parkway Bridge.

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A Message from the Commissioner



Dear Friends,

On behalf of the many dedicated men and women who staff the Division of Bridges, I am pleased to present the 2014 Edition of the New York City Department of Transportation's Annual Bridges and Tunnels Condition report as mandated under the New York City Charter. This report provides DOT with an opportunity to display the many achievements, innovations and improvements that were realized by the Division of Bridges in 2014.

DOT focuses on equitable service delivery through its maintenance of critical transportation infrastructure and its commitments to safety and mobility for all New Yorkers. DOT focuses on providing all its services, including bridge maintenance, in an equitable manner.

The Division of Bridges includes 832 hard working professionals who manage the City's Capital Bridge Program, conduct bridge inspections and monitoring, and keep the entire bridge network in a state of good repair. Our inventory includes the iconic East River Bridges, Harlem River Bridges, the Belt Parkway Bridges and pedestrian bridges and elevated roadways across the five boroughs.

To underscore the critical importance of infrastructure investment, City, State, and Federal governments contributed more than \$5 billion to bridge reconstruction over the past years. As a result, for the first time in DOT history, all of our 789 bridges are rated "Fair" or above.

The new design for the City Island Bridge, the only link between the Bronx mainland and New York City's historic seaport community, is a perfect example of a clean design with elements inspired by the current bridge, unobstructed views of Pelham Bay Park and Eastchester Bay, and a less expensive price tag – speaks volumes about the perseverance, creativity, and professionalism of the DOT team.

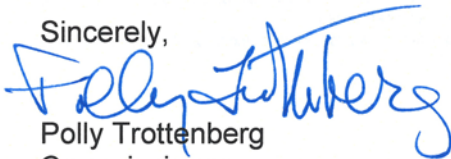
In November, we initiated the reconstruction of the Harlem River Drive Viaduct over 127th Street. This \$150 million project including \$85 million in Federal funds, will add at least 75 years of life to the structure through a full replacement, and the new viaduct and roadway will be designed to improve traffic safety and flow.

We will start construction in FY16 on the Belt Parkway Bridge over Mill Basin in Brooklyn and the Macombs Dam Bridge in the Bronx, and we will break ground this summer on the reconstruction of the Roosevelt Avenue Bridge over the Van Wyck Expressway in Queens.

Many other accomplishments are outlined in the pages ahead, but there is even more important work to be done. The Independent Budget Office recently reported that a significant number of bridges are now rated at the low end of “Fair”, meaning their need for rehabilitation is fast approaching. All of the East River Bridges are well over 100 years old, requiring continual care and attention. The remaining network of over 700 bridges serving neighborhoods across the city are subject to the continuing effects of heavy traffic and rough winters with long cycles of ice, snow, rain, sleet and de-icing activities. Aside from the East River and Movable Bridges, a replacement program of 16 bridges per year needs to be in place to maintain a 50 year life cycle. The current average life of our bridges exceeds 70 years. For New York City to create jobs and opportunities for our residents, and maintain its competitiveness with other leading global cities, we need to invest in our infrastructure.

DOT is committed to preserving all of the City’s bridges; they are crucial links in our transportation network and support millions of multi-modal trips each day. The Agency has a rich tradition of bridge design, construction, maintenance and administration, and will continue to use its resources and attract additional funds to provide safe spans that meet the needs of all 8.4 million New Yorkers.

Sincerely,



Polly Trottenberg
Commissioner

Inventory

In calendar year 2014, the inventory of bridges under the jurisdiction of the Division remained at 789. NYCDOT owns, operates, and/or maintains 760 non-movable bridges, 24 movable bridges, and five tunnels. Over the past 10 years, there has been a decline in the number of bridges rated "Poor," and an increase in the number of bridges rated "Very Good," as shown below.

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Poor	4	3	3	3	4	4	3	1	1	0
Fair	458	456	459	455	456	462	459	460	456	456
Good	210	210	215	213	209	207	215	212	217	221
Vgood	118	118	111	116	116	113	109	114	114	111
Closed			1	1	1	1	1	1	1	1
	790	787	789	788	786	787	787	788	789	789

In 2004, 32 Department of Parks and Recreation structures, 1 Department of Education structure, and 7 Division of Ferries structures were absorbed into the inventory. 30 of these additions (22 from Parks, 6 from Ferries, and the 1 from Education) were rated "Fair," which accounted for the increase in Fair rated bridges. 1 of the Parks additions, Flushing Meadow Park Pedestrian Bridge over Willow Lake and 76th Road, was rated "Poor." It has since been closed.

¹In 2009, the newly "Poor" rated Hill Drive Bridge in Prospect Park was closed to vehicular traffic. In 2009, 93 of the Parks bridges accounted for 20.4% of the "Fair" rated structures. In 2013, 100 of the Parks bridges accounted for 21.9% of the "Fair" rated structures.

²In 2014, 104 of the Parks bridges accounted for 22.8% of the "Fair" rated structures.

NYCDOT has no bridges rated "poor."

Contract Acceleration

Acceleration measures are a contract provision used in some reconstruction projects that is implemented through a contract pay item. This contract provision provides a mechanism to implement measures to accelerate the contractor's work to maintain critical path milestones. This provision does not apply to measures undertaken by the contractor to make up for time it lost in the progress schedule. Only the NYCDOT representative invokes this provision when the contract schedule is compromised due to unforeseen conditions during construction that are out of the contractor's control, and when it is deemed in the City's interests to accelerate.

Incentive and disincentive (I/D) clauses are another contract provision used in some reconstruction projects that are implemented through a contract pay item. Under this provision, the contractor is compensated a certain amount of money for each day if the identified work in a critical milestone is completed ahead of schedule and is assessed a deduction for each day the contract overruns the allocated time. The amounts for the I/D clauses are based upon such items as traffic safety, maintenance and road user delay costs, Resident Engineering & Inspection (REI) expenses and cost of traffic enforcement agents. These amounts are implemented in accordance with guidelines established by Federal Highway Administration (FHWA).

East River Bridges Anti-Icing Program

The Division's Anti-Icing Program uses the liquid chemical potassium acetate and aggregate chemical sodium acetate. The anti-icing fleet consists of twenty-two application trucks, five plow trucks and several smaller plows. Ten of the spray trucks are combination spray/plow trucks with a 1,000 gallon tank capacity, and five are spray-spreader/plow trucks with a 360 gallon spray capacity, and a nine cubic yard spreader capacity. There are twenty chemical storage tanks, with a total storage capacity of 114,250 gallons.

In the winter of 2013-2014, a total of 107,200 gallons of potassium acetate and 182 tons of sodium acetate were applied on the roadways of all four East River Bridges.

Marine Borer Remediation

In October 1999, the Department began a study to assess the present damage caused by marine borers as well as the potential for future damage at several waterfront DOT structures, including the supporting structures of the relieving platforms along the FDR and Harlem River Drives, and the timber piles and structures of the Carroll Street and Ocean Avenue bridges in Brooklyn. The underwater inspection of timber piles supporting the FDR Drive began on May 8, 2000. Inspection of the Brooklyn sites was conducted during the week of October 23, 2000. The inspections were completed in October 2000, and the Marine Borer Evaluation Report was published in June 2001. Using the results of the underwater inspections, preliminary plans were developed for the implementation of repairs and remediation measures to protect the structures from attack. These preliminary plans were completed in December 2001. An updated underwater inspection was performed within the limits of the proposed contract in 2009. The construction work commenced in April 2012, and is expected to be complete in August 2016.

2014 Awards

In 2014, the outstanding work of the Division was recognized by the receipt of several awards.

In March 2014, the American Council of Engineering Companies of New York selected the St. George Ferry Terminal Ramps Rehabilitation for a Gold Award in the structural systems category in its 2014 Engineering Excellence Awards. The Belt Parkway Bridge over Fresh Creek Basin reconstruction and the St. George Ferry Terminal Ramps Rehabilitation projects were selected for Platinum Awards in the transportation category, and the Bruckner Expressway Bridges over Amtrak project received a Gold Award in this category.

In June 2014, in recognition of his outstanding contributions to the status of the civil engineering profession, Deputy Commissioner Robert O. Collyer was presented the Herbert Howard Government Civil Engineer of the Year award by the Metropolitan Section of the American Society of Civil Engineers.

The 2014 Prize Bridge Awards Competition is conducted by the National Steel Bridge Alliance. The program honors outstanding and innovative steel bridges constructed in the U.S. The Willis Avenue Bridge won the 2014 Prize Bridge Award in the Movable Span category, and also won a commendation for accelerated bridge construction in the Movable Span category. The awards were described in the June 2014 issue of Modern Steel Construction.

The dedication and hard work of all members of the Division ensures that the Department is stronger than ever and more capable than ever to meet the challenges of maintaining a diverse and impressive bridge infrastructure.