

**NEW YORK CITY DEPARTMENT OF TRANSPORTATION  
DIVISION OF BRIDGES  
2004 BRIDGES AND TUNNELS ANNUAL CONDITION REPORT**



View From the Bronx of the Third Avenue Temporary Bridge and New Swing Span in November 2004.  
(Credit: Michele N. Vulcan)

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# Contents

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<b>Acknowledgements</b>	<b>iii</b>
<b>Commissioner's Message</b>	<b>iv</b>
<b>Section 1 2004 Executive Summary</b>	<b>1</b>
<b>Section 2 2004 Division Overview</b>	<b>3</b>
<b>Section 3 2004 Chronology</b>	<b>10</b>
<b>Section 4 2004 Innovations and Accomplishments</b>	<b>49</b>
<b>Section 5 2004 Bridge Capital Program – Appendix A</b>	<b>131</b>
<b>Section 6 2004 Flag Conditions – Appendix B</b>	<b>147</b>
<b>Section 7 2004 Inventory – Appendix C</b>	<b>152</b>
<b>Section 8 2004 Glossary of Bridges</b>	<b>204</b>
<b>Section 9 Components of the Preventive Maintenance Program</b>	<b>217</b>
<b>Section 10 Maintenance Personnel Resources – 2004 vs 1900</b>	<b>225</b>
<b>Section 11 Bridge Inspection Equipment List</b>	<b>227</b>
<b>Section 12 2004 Motion Picture, Television, Video, and Still Photography Highlights</b>	<b>228</b>
<b>Section 13 Suggested Reading</b>	<b>232</b>
<b>Section 14 2004 In Memoriam</b>	<b>240</b>
<b>Section 15 2004 Inventory Location Maps</b>	<b>241</b>

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### **Cover Photograph**

New Third Avenue Bridge Swing Span Passing Under the Brooklyn Bridge On its Way up the East River on July 8, 2004.

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## A Message from the

Commissioner

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Dear Friends,

On behalf of the many dedicated professionals who staff the Division of Bridges, it is my pleasure to present the 2004 Edition of the New York City Department of Transportation's Annual Bridges and Tunnels Condition Report, as mandated under New York City's Charter. This report provides DOT with an opportunity to display the many achievements, innovations and improvements that were realized by the Division of Bridges during the 2004 calendar year.

Preventive maintenance is essential to preserve the City's multi-billion dollar investment in its bridges. These steel and concrete structures must be protected from the stresses of weather, traffic, deterioration and neglect. In the last year alone, 14,969 square feet of concrete were used to renew sidewalks, curbs, and road decks; some 10,008 cubic yards of debris were removed; 1,221 bridge drains were cleaned; and crews eliminated 5,530,319 square feet of graffiti. DOT crews also eliminated 368 safety flag conditions that presented clear vehicle or pedestrian traffic hazards. Also, in the Department's ongoing attempts to minimize construction disruptions, we consistently used incentive and disincentive clauses in contracts to reward contractors who finish work early and penalize contractors who finish work late.

The Division's proud tradition of design and engineering excellence was recognized with awards from various entities, including:

- The American Council of Engineering Companies of New York's (formerly the New York Association of Consulting Engineers) award for the restoration of St. Felix Street, as well as the reconstruction of the Guy Brewer Bridge over the Belt Parkway.
- The Metro New York/New Jersey Chapter of the Construction Management Association of America's "Project of the Year" award for the Reconstruction of the North Roadways of the Williamsburg Bridge.
- The New York Tri-State Metro Chapter of the Design Build Institute of America's 2004 Excellence in Leadership - Owner of the Year award.
- *New York Construction Magazine* selected the component rehabilitation of Riverside Drive over West 96<sup>th</sup> Street for an Award of Merit as one of the best bridge projects of 2004.
- The Association for Bridge Construction and Design recognized the commitment, dedication and outstanding work of DOT's Chief Bridge Officer Henry Perahia with the Bridge Man of the Year Award.

New York City has a rich tradition of bridge design, construction, maintenance and administration. The Department of Transportation appreciates the importance of its duties and responsibilities, and the Division of Bridges is proud to shoulder the task of maintaining and rehabilitating our city's vital bridge infrastructure.

Sincerely,



Iris Weinshall  
Commissioner

## EXECUTIVE SUMMARY

### Inventory

In calendar year 2004, the inventory of bridges under the jurisdiction of the Division increased from 753 to 790. This was not the only change to the inventory: the condition ratings of the bridges also changed. In fact, over the past 10 years, there has been a mostly steady decline in the number of bridges rated "Poor," and a somewhat steady increase in the number of bridges rated "Very Good," as shown below.

	1995	1996*	1997	1998	1999	2000	2001	2002	2003	2004
<b>Poor</b>	<b>60</b>	<b>48</b>	<b>40</b>	<b>24</b>	<b>16</b>	<b>13</b>	<b>9</b>	<b>8</b>	<b>4</b>	<b>6</b>
<b>Fair</b>	406	524	530	516	507	481	459	451	429	456
<b>Good</b>	342	148	145	154	160	180	196	202	209	212
<b>Vgood</b>	<b>51</b>	<b>59</b>	<b>55</b>	<b>75</b>	<b>81</b>	<b>85</b>	<b>88</b>	<b>94</b>	<b>111</b>	<b>116</b>
<b>Unrated</b>		68								
	<b>**859</b>	<b>**847</b>	<b>770</b>	<b>769</b>	<b>764</b>	<b>759</b>	<b>752</b>	<b>755</b>	<b>753</b>	<b>#790</b>

\* In 1996, NYCDOT adopted a new rating scale to be used to determine the verbal condition of bridges. The new scale matches the rating scale by New York State DOT. The new scale changed the dividing line between Fair and Good bridges from 4.500 to 4.999. The net effect of this change was that, in 1996, 157 bridges that would have been rated Good were classified as Fair. This accounts for the increase in Fair rated bridges and the decrease in Good rated bridges.

\*\* The total count of structures in 1995 and 1996 still included the culverts.

# 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) are rated "Fair," which accounts for the increase in Fair rated bridges. 1 of the Parks additions is 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 clauses are another contract provision used in some reconstruction projects that is 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).

2004 was a year in which the use of incentives/disincentives resulted in the early completion of several new bridge projects, such as:

In July 2004, the **Cross Bay Boulevard Bridge over Conduit Boulevard** was re-opened to traffic some two months ahead of schedule, thus earning the contractor a \$300,000 incentive.

The early completion in December 2004 of the reconstruction of the **Belt Parkway Bridge over Ocean Parkway** earned the contractor the maximum incentive of \$2 million.

### **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 fifteen spray trucks, ten plow trucks and several smaller plows. Six of the spray trucks are combination spray/plow trucks with an 1800 gallon tank capacity, and four are spray-spreader/plow trucks with a 900 gallon spray capacity, and an eleven cubic yard spreader capacity. There are twenty chemical storage tanks, with a total storage capacity of 113,750 gallons.

In the winter of 2003-2004, a total of 97,000 gallons of anti-icing chemicals 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. The construction work is expected to commence in summer 2006.

### **2004 Awards**

In 2004, the outstanding work of the Division was recognized by the receipt of several awards. In February 2004, in recognition of his commitment, dedication and outstanding work, Chief Bridge Officer Henry Perahia was presented the Bridge Man of the Year award from the Association for Bridge Construction and Design. In April 2004, the American Council of Engineering Companies of New York (formerly the New York Association of Consulting Engineers) selected the restoration of St. Felix Street, as well as the reconstruction of the Guy Brewer Bridge over Belt Parkway for Engineering Excellence Awards.

In June 2004, the Metro New York/New Jersey Chapter of the Construction Management Association of America selected the Reconstruction of the North Roadways of the Williamsburg Bridge (Contract #7) as a "Project of the Year." In September 2004, the Department was presented the 2004 Excellence in Leadership - Owner of the Year award from the New York Tri-State Metro Chapter of the Design Build Institute of America.

In November 2004, *Roads & Bridges Magazine* selected the current project on the Manhattan Bridge (Contract #11) as the second place finisher in its annual selection of the country's top 10 bridge projects. The magazine also selected the replacement of the Belt Parkway Bridge over Ocean Parkway as the eighth place finisher.

In December 2004, *New York Construction Magazine* selected the component rehabilitation of Riverside Drive over West 96th Street for an Award of Merit as one of the best bridge projects of 2004.

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.

## DIVISION OVERVIEW

The New York City Department of Transportation's Division of Bridges is comprised of six major bureaus. The **Chief Bridge Officer** is responsible for formulating policy and providing executive direction. He oversees all aspects of the design, construction, rehabilitation and reconstruction, maintenance, operation and administration of the 790 bridges (including 6 tunnels), and 67 culverts presently under the jurisdiction of the New York City Department of Transportation (NYCDOT). In addition to broad supervision, the Chief Bridge Officer also provides overall executive and administrative direction for the Division of Bridges, and ensures that all contractors are promptly paid.

Reporting to the Chief Bridge Officer, the **Community Affairs Unit** maintains liaison with elected officials, community boards, community groups, and civic/neighborhood associations. The Unit takes a pro-active approach in addressing roadway closures and detours by reaching out to communities prior to the onset of construction. This enables the Division to proceed with its rehabilitation program with community input, and allows the Agency and its contractors to co-exist in a more harmonious manner with the community surrounding the project. Issues and problems of concern to the communities are brought to the attention of the appropriate Division personnel and addressed.

The **Specialty Engineering and Construction Bureau** is responsible for all **Component Rehabilitation** activities, **Emergency Declarations/Specialty Engineering Services**, **Bridge Painting**, and the **When and Where Unit**.

**Component Rehabilitation** is the revamping or replacement of damaged, worn or defective bridge components. This type of work is performed primarily on those structures not classified as being "deficient," but which contain specific components that have low condition ratings. By rehabilitating these components, the Division can ensure that these bridges remain in "good" or "very good" condition; usually extending the bridge's useful life by up to 10 years. Section Heads or Engineers-in-Charge (E.I.C.'s) report to the Director of Component Rehabilitation. Each is assigned a specific bridge, or bridges, for which they are responsible for all component rehabilitation activities.

The **Emergency Declarations/Specialty Engineering Group** provides technical and procurement expertise related to the following areas: preparing Emergency Declarations for unsafe conditions that require immediate remediation; assisting the Chief Bridge Officer in the contractor selection process for declared emergency situations; providing technical expertise related to the development, procurement and administration of Design-Build contracts throughout the various areas of the Division; preparing and administering Design-Build agreements; and supervision of Design-Build project design, construction, and inspection services.

The **Bridge Painting** section's function is to maintain the protective coating of the City's bridges. The section is divided into two programs, the in-house (expense) program and the capital program. The capital program oversees total paint removal and repainting, performed by contractors; this is done at twelve-year intervals on bridges measuring more than 100,000 square feet of painted area, and bridges over railroads. In-house personnel provide the inspection services on East River Bridge preventive maintenance contracts for quality control purposes. The in-house program is responsible for full steel painting of bridges measuring less than 100,000 square feet, and bridges that are not over railroads. This includes local surface preparation of deteriorated areas and overcoating of the entire bridge. In addition, the in-house program is responsible for spot and salt splash/spot painting. Salt splash/spot painting is performed five years after full steel painting, and spot painting is performed four years after salt splash/spot. Three years after spot, we once again perform full steel painting. The interval between full steel applications is twelve years. Members of the in-house program respond to emergency flag repairs alongside the in-house repair forces, to perform surface preparation prior to, and painting upon completion of, the steel work. In-house painting personnel also perform environmental clean-up after the iron workers finish their repair work.

## DIVISION OVERVIEW

The engineers and inspectors of the **When and Where Unit** supervise the contractors' repairs of structural and safety flags citywide under both marine and general repair contracts. The use of these contracts allows the unit greater flexibility in deploying the contractors' resources as necessary, and in obtaining a variety of construction equipment and materials that are not readily available to in-house forces. In addition, the unit responds to bridge emergencies, providing on-site inspection to verify field conditions, taking measurements for repairs and providing emergency lane closures.

The Deputy Chief Engineer for Specialty Engineering and Construction also acts as the **Deputy Chief Bridge Officer**, assuming the responsibilities of the Chief Bridge Officer in that person's absence.

The **East River and Movable Bridges Bureau** is responsible for all design and construction activities for all rehabilitation/reconstruction work that is planned, or currently taking place on the four East River Bridges, as well as all City-owned movable bridges and tunnels. This involves overseeing and supervising design consultants who prepare plans and specifications for bridge rehabilitation/reconstruction projects on the four East River Bridges and all Movable Bridges, as well as overseeing and supervising contractors, Resident Engineers and Inspection Consultants, and Construction Support Services Consultants during the construction phase.

This Bureau consists of two major areas: **East River Bridges**, and **Movable Bridges**. Each of these areas is headed by a Director to whom Section Heads or Engineers-in-Charge (E.I.C.'s) report. Each is assigned a specific bridge, or bridges, where they are responsible for all design and construction activities. The Directors, in turn, report to the Deputy Chief Engineer of the Bureau.

The **Bureau of Roadway Bridges** is responsible for both design and construction activities for all rehabilitation/reconstruction work that is planned, or currently taking place on all City-owned, non-movable bridges, with the exception of the four East River Bridges. This involves overseeing and supervising design consultants who prepare plans and specifications for bridge rehabilitation/reconstruction projects, as well as overseeing and supervising contractors, Resident Engineers and Inspection Consultants, and Construction Support Services Consultants during the construction phase.

This Bureau covers two major geographic areas; **Brooklyn and Manhattan Bridges**, and **Bronx, Queens and Staten Island Bridges**. In each geographic area, the workload is divided by Community Board. Engineers-In-Charge report to the Directors of each major area, who, in turn, report to the Deputy Chief Engineer of the Bureau.

The **Engineering Review and Support Bureau** is responsible for providing Division-wide engineering support services. The following areas make up this Bureau: **In-House Design, Engineering Support, Engineering Review, and Quality Assurance**.

**In-House Design** staff prepare plans and specifications for bridge rehabilitation/reconstruction projects that enable the Division to restore bridges considered "structurally deficient," to a "very good" condition rating. This unit also handles urgent Division projects, as well as special projects under construction by the **Bureau of Bridge Maintenance, Inspections and Operations**. The Electrical Group reviews and/or prepares contract documents for the electrical and street lighting work for all projects in the Division's capital program. They further review plans and specifications prepared by consultants.

The **Engineering Support Section** is comprised of three units: *Specifications, Surveying and Load Rating*, and *Records Management*.



## DIVISION OVERVIEW

The *Specifications Unit* prepares and reviews specifications for all City-let in-house and consultant-designed bridge construction projects, processes the contracts for bidding, prepares and transmits addenda, maintains and updates boiler plates, and maintains an inventory of all NYC and NYS special specifications used in City-let bridge projects.

The *Surveying and Load Rating Unit* performs the survey, inspection and load rating of bridges, monitoring of cracks and movements in bridge structures and settlement of foundations. This unit also performs corrosion potential testing in all bridge resurfacing projects.

The *Records Management Unit* establishes electronic media, drafting and microfilming standards, and reviews contract, as-built and shop drawings prepared by consulting firms, as well as digital CDs, microfilms and indexes. This unit maintains original plan files, upgrades the database and converts original drawings into electronic media formats. It also answers requests for information regarding City-owned bridges.

The **Engineering Review Section** consists of five units: *Engineering Review and Estimates*, *Utilities*, *Land Acquisition*, *Geotechnical Engineering*, and *Scope Development*.

The *Engineering Review and Estimates Unit* reviews all City-let bridge construction contract drawings; reviews drawings from other Agencies and entities, as well as State and private companies; and ensures that the work to be performed conforms to NYCDOT requirements. This unit establishes design standards, including seismic requirements, and oversees estimates prepared by consultants. This unit also reviews superload truck permit applications and performs load analyses for the City's bridges. In addition, the unit conducts other, non-bridge engineering projects, such as the annual balloon wind study for the Macy's Thanksgiving Day Parade.

The *Utilities Unit* coordinates all issues related to utility design as they affect City-owned bridge projects and related projects.

The *Land Acquisition Unit* reviews and maintains a database of easement issues, right-of-way, and Uniform Land Use Review Procedures (ULURP).

The *Geotechnical Engineering Unit* provides geotechnical-engineering services and oversees seismic design requirements for City-let contracts for bridge projects.

The *Scope Development Unit* reviews inspection reports and structural condition ratings to develop the scope of work for the rehabilitation of deficient bridges, and initiates the procurement of Design Consultant contracts.

The **Quality Assurance Section** ensures that materials installed for the Bridge Rehabilitation Program meet contractual requirements and are incorporated in strict compliance with plans and specifications. This section operates under its own formulated Quality Assurance Plan that is based on NYSDOT requirements and procedures. Quality Assurance has contractually retained the services of private inspection/testing firms. The provision of services required for various projects is better coordinated through this centralized method, which is also timely and cost effective.

Off-site Quality Assurance services relative to a wide variety of basic and manufactured construction materials including concrete, asphalt, soils, reinforcing steel, bridge bearings, structural steel and precast/prestressed structural components for all bridge projects, irrespective of the funding source, are handled by this section. Current major projects include the Macombs Dam Bridge, the Third Avenue Bridge, the rehabilitation of the Manhattan Bridge North Spans, the Washington Bridge, the Queensboro Bridge, the East 241<sup>st</sup> Street Bridge, and the 145<sup>th</sup> Street Bridge.

Through its *Environmental Engineering Unit*, Quality Assurance also oversees the implementation of the Final Environmental Impact Statement (FEIS) on bridge construction projects involving the removal and disposal of lead-based paint. The unit's active involvement in training the supervisors and overseeing the abrasive blasting operations has resulted in the successful completion of various paint removal projects. This unit also oversees the proper and safe

## DIVISION OVERVIEW

disposal of other hazardous waste and regulated waste encountered during construction activities.

In addition to enforcing the lead paint removal protocols, the unit handles other environmental concerns. Typically, the unit participates in the design stage to ensure that any environmental issues are addressed during the construction phase of the project. These issues include, but are not limited to, asbestos abatement, soil sampling, groundwater sampling, remediation of contaminated soils and groundwater, worker exposure to environmental contaminants, management of waste oil, storage of hazardous waste, site safety, and OSHA compliance. The role of this unit in ensuring public safety has been recognized and commended by the community.

The unit has been instrumental in preparing and obtaining waste water discharge permits for such projects as the Metropolitan Avenue Bridge, dredging for the Third Avenue Bridge, discharging of waste water for the 145<sup>th</sup> Street Bridge pier drilling and seismic drilling of the riverbed at the Brooklyn Bridge. Waste water testing and analysis (as well as application of SPDES permits) for several movable bridges such as the Eastern Boulevard Bridge, Greenpoint Avenue Bridge and Hamilton Avenue Bridge, have also been a part of the waste water management program. The unit has provided environmental oversight on major capital projects such as the Third Avenue Bridge, Washington Bridge, 145<sup>th</sup> Street Bridge, Queensboro Bridge, as well as Component Rehabilitation projects and Design/Build projects.

The **Bureau of Bridge Maintenance, Inspections and Operations** employs almost 500 engineering, professional, administrative, and skilled trades employees in the maintenance and smooth operation of New York City's elevated infrastructure; it is composed of five major sections:

The **Flag Engineering** section is an engineering group that reviews, routes, and tracks hazardous or potentially hazardous safety and structural conditions ("flags") in or on the city's 790 bridges (including 6 tunnels). The Flags staff is on call 24 hours a day to respond to bridge emergencies. The section can be alerted to flag conditions by city and state inspectors and other sources, such as the Communications Center. All conditions undergo an evaluation involving review of the flag report, photographs of condition, and, if necessary, a visit to the site. Subsequently, a "flag packet" describing the type of repair or response that is required is created and routed to an appropriate group, in-house or contractor, for elimination. Flags engineers supervise repair work performed by contractors. The section monitors the status of each flag, and reports on all activities on a monthly basis.

The in-house engineers and skilled trades personnel of the **Bridge Repair Section** perform repairs to address flagged conditions. Flag repairs include structural and safety work, such as the repair of steel members damaged by corrosion or accident impact, the replacement of box beams and bridge railings, the replacement of roadway gratings, repairs to traffic control devices, and the rebuilding of wooden walkways. Much of this work is performed in the off-hours, either to accommodate traffic or in response to emergencies.

This section also rehabilitates and replaces damaged, worn, or defective components whose failure can affect service. This type of work, known as *Corrective Repair*, primarily involves the electrical, mechanical and operational control systems for the twenty-five movable bridges, as well as the travelers (movable underdeck access platforms) on the four East River bridges. The Bridge Repair Section is also responsible for the lubrication of the movable bridges as well as the mechanical components and the main cables of the East River bridges. In addition, this section administers federally funded contracts for the preventive maintenance of the four East River Bridges.

The **Inspections, Research, and Development** section performs three essential functions: *Bridge Inspections*, *Bridge Management*, and *Research and Development*.

The *Inspections Unit* inspects the city's bridges in accordance with state and federal standards; monitors bridge conditions with a high hazard potential, such as temporary repairs, outstanding

## DIVISION OVERVIEW

flags, and fire hazards; responds to emergency inspection requests from NYCDOT and external sources; recommends repairs and remedial measures for hazardous conditions; generates flag and inspection reports for the Division; supervises inspections by consultants working for the Division; conducts inspections and inventories of expansion joints; conducts acoustic emission monitoring; and inspects non-structural cladding.

The *Bridge Management Unit* develops and maintains the database for the City's bridge inventory, condition ratings, and inspection information. The unit is also responsible for maintaining records of privately-owned bridges in the City. The database is the source of information used in a variety of reports, including the present Bridges and Tunnels Annual Condition Report. This unit uses the bridge and span condition database to determine current and future needs for bridge rehabilitation, bridge component rehabilitation, flag forecasting, inspections and monitorings.

The *Research and Development Unit* is responsible for investigating new materials and methods to improve existing bridge conditions. It sponsors a series of lectures by experts on subjects relevant to design, construction, and maintenance, such as seismic retrofitting of bridges, salt substitutes, cathodic protection against corrosion, concrete patching materials, new paint strategies, non-destructive bridge testing, and deck resurfacing. The unit also participates in research programs with interested transportation and infrastructure entities. The unit contributed to the 1999 update of the Preventive Maintenance Manual for NYC bridges. In conjunction with the Port, Triborough Bridge and Tunnel, and NYS Bridge Authorities, it sponsored a report on suspension bridge cables that led to a federal project for the entire United States. A number of articles on bridge management are published by the unit in technical journals in the United States, Japan, France, and elsewhere. The Bridge Management and Research and Development Units created the system for generating bridge inspection reports with portable computers; a similar system is now being adopted by the NYSDOT.

**Preventive Maintenance** is a vital part of the overall bridge program. This section is responsible for functions including debris removal; mechanical sweeping; pointing of masonry brick and block; and emergency response, such as snow removal, oil/cargo spills, and overpass hits. The section also performs some corrective repair work such as asphalt and concrete deck repairs, sidewalk patching, fence repair, and brick and masonry repairs. Preventive Maintenance is responsible for conducting the Department's anti-icing operations on the four East River bridges.

**Bridge and Tunnel Operations** is responsible for operating the 25 City-owned movable bridges that span city waterways. This section operates under a variety of federal mandates that call for 24-hour coverage at many locations; its mission is to provide safe and expedient passage to all marine and vehicular traffic under and on movable bridges. In calendar year 2004, Bridge Operations effected a total of 7,774 openings, 6,595 of which allowed 11,115 vessels to pass beneath the bridges. The remaining 1,179 openings were for operational and maintenance testing. The section also operates the city's six mechanically-ventilated tunnels, performing electrical maintenance and arranging for roadway cleaning.

The overall mission of the Bureau of Bridge Maintenance, Inspections and Operations is to maintain the structural integrity of elevated structures and tunnels and to prolong their life by slowing the rate of deterioration. While our objective may be seen as "maintaining the status quo" of the infrastructure, we continue to take a new look at our methods, procedures, and general focus as we formulate our operational plans for the next several years.

As more bridges are rehabilitated, it becomes incumbent upon us to protect the government's investment in the infrastructure by developing and implementing a more **substantive preventive maintenance program** to keep these bridges in good condition.

The **Bureau of Management and Support Services** provides essential administrative and analytic services to each of the operational bureaus of the Division of Bridges. The Bureau is divided into six primary sections: **Office of the Executive Director, Administrative, Budget, Capital Procurement, Capital Coordination and Truck Sections**. Each highly-specialized

## DIVISION OVERVIEW

section is designed to address those issues and requirements that are critical to the operation of the respective Bureaus within the Division.

In addition to the Division-wide responsibility for conflict resolution, Equal Employment Opportunity (EEO) enforcement, confidential investigations, Bridges' Engineering Service Agreements, space allocation, mail delivery, and special projects, the **Executive Director** oversees, on an executive level, the following areas and functions:

The **Director of the Administrative Section** oversees and administers all administrative/personnel-related functions for the Division, acting as a liaison with the Central Personnel Coordinator in NYCDOT Personnel including, but not limited to, recruiting for vacancies (this includes reviewing for completeness and submitting the necessary paperwork, and reviewing and distributing candidates' resumes); maintaining all Managerial Position Descriptions; maintaining all Division organization charts; scheduling EEO training; confidential investigations; maintaining records of IFA-funded positions; initiating and assisting in resolving disciplinary/grievance actions; serving as Conflicts of Interest and Financial Disclosure Officer; collecting and reviewing managerial and non-managerial performance evaluations; absence control; providing interpretive advice to Division management regarding City and Agency policy and procedures; and overseeing telephone and facility-related issues for personnel located at Two Rector Street in Manhattan. The Director of Administration also serves as the Deputy Director of the Bureau of Management and Support Services, and assumes the responsibilities of the Executive Director in that person's absence.

The Director of the Administrative Section also oversees the following two units:

The *Analytic Unit* prepares comprehensive bi-weekly and monthly reports that address major issues confronting the Division; compiles statistical data detailing the Division's productivity; processes and monitors all FOIL requests; frames issues in which oversight assistance is required for use by the Division, NYCDOT Executive Management and the Mayor's Office; and prepares the City Charter-mandated **Bridges and Tunnels Annual Condition Report**.

The *Vehicle Coordination Unit* tracks the placement and condition of all vehicles under the jurisdiction of Bridges. It maintains a database and prepares reports containing this information; provides information and reports to appropriate inquiring Divisions and Agencies such as the Auditor General's Office, NYCDOT Legal Department and NYCDOT Litigation Support Services; coordinates the assignments of vehicles and their movement throughout various borough field locations and job sites; prepares reports on Vehicle Status and replacement; prepares reports for the purpose of tracking Overnight Vehicle Assignments for all Division vehicles; receives and routes vehicle Accident Reports, Police Reports and Security Incident Reports relating to vehicle accident, theft and/or vandalism; coordinates priorities for vehicle and equipment repair with Fleet Services; prepares reports and memoranda regarding vehicle safety issues and communication procedures for NYCDOT Communication Center; and collects required documentation from field personnel for checking Driver Certifications with the Department of Motor Vehicles (DMV).

The **Director of the Budget Section** oversees the Division's entire expense budget process including, but not limited to, base-line preparation, spending plans, overtime control, financial plan changes, and budget modifications. The unit further oversees all Division-wide fiscal activities, including the establishment and monitoring of all IFA-related project budgets, while simultaneously ensuring that the budget and plans represent the Division's priorities.

The **Capital Procurement Section** serves as a liaison between the Division of Bridges and the Office of the Agency Chief Contracting Officer (ACCO). The duties of this unit include: overseeing the Division's capital consultant contracts from inception to completion; acting as liaison between engineers and the consultant programs unit, handling all engineering questions and answers; preparing status reports; and coordinating Railroad Force Account Agreements for Division construction projects.

*Railroad Force Account Agreements* are a vital component in the rehabilitation/reconstruction program since train traffic affects 318 (40%) of City-owned bridges. Careful cooperation between the NYCDOT and the various railroad agencies that service the metropolitan area is required.

## DIVISION OVERVIEW

The Railroad Coordinator provides a single point of contact for all railroad issues. This coordination includes the use of railroad personnel for track safety, approval of reconstruction design drawings, track shutdowns and reductions in train service for bridge construction work. The coordinator informs managers of "typical" railroad problems and attempts to avoid them through proactive measures.

Our Legal Department and Division engineering staff work together to clarify force account language in an attempt to avoid ambiguity. New agreements are being designed to specify clearly when notices for outages or flagging protection are required, who will be responsible when outage/flagging is canceled, and specify those documents that can be audited to expedite reimbursement of bills. These additions will streamline payment processing. The use of a Master Agreement is not feasible since each railroad has its own rules and regulations governing its employees, its own scheduling procedures and different billing requirements/procedures.

NYCDOT bridge designers make every effort to prepare accurate and complete contract documents. Unfortunately, in many instances, the original design drawings for the deteriorating bridges no longer exist, and previous records of modifications and repairs are not available. When the contract documents for the bridge reconstruction projects do not accurately address conditions found in the field, Contract Change Requests (CCR) are needed. Change order work can not proceed until the CCR is registered. Due to the nature of bridge construction projects, change order work is often on the critical path. Any delay in the issuance of a change order affects the overall project, and adds substantial overruns to the final cost.

This approval process typically requires three to six months to complete. A tracking process for change orders has been implemented; it reduces the time for the approval process to one-and-a-half to three months.

The **Capital Coordination Section** is responsible for preparing, coordinating and updating the capital budget and capital program initiative within the Division of Bridges. Currently, the Division's Ten Year Capital Plan is worth approximately \$5 billion. This plan is designed to rehabilitate the City's bridges. Responsibilities include: administering and participating in the development and implementation of planning capital projects; acting as liaison with oversight agencies, DOT Administration and all responsibility centers within Bridges; developing and maintaining criteria by which the City's involvement in joint City/State projects is analyzed and evaluated; and determining applicability of projects for funding through the Federal Inter-modal Surface Transportation Efficiency Act (ISTEA).

The **Truck Section** issues Annual Overweight Load Permits, Annual Self-Propelled Crane Permits, and Daily Oversize/Overdimensional/Supersize Truck Permits, all in accordance with the New York City Department of Transportation Policy and Procedures and the New York City Traffic Rules and Regulations.

## JANUARY

### **191<sup>st</sup> Underground Street to Broadway (Manhattan)**

This underground street provides the main access to the 191<sup>st</sup> Street train station for the #1 and #9 trains in upper Manhattan. The structure underwent a facelift to repair 21 safety and structural conditions. The scope of work included waterproofing designated sections of the structure to limit groundwater intrusion; installing additional weep holes along the walls to convey any intruding groundwater to the drainage troughs that are on each side of the tunnel; repairing the drainage troughs and the installation of new gratings; repairing cracks and spalls in the concrete of the roof and walls; providing a new skid resistant walking surface; installing new high pressure sodium lighting fixtures to replace the old existing florescent fixtures, thus providing for a brighter structure; repairing the entrance stairway surface; and applying a new coat of graffiti resistant paint, thus giving it a new fresh, clean look. The structure was re-opened to pedestrian traffic on January 5, 2004.



Applying the 2<sup>nd</sup> Skid Resistant Coating to the Western Half of the Floor. – the Structure's Lighting Creates the Yellow Tint.  
(Credit: Thomas Leung)

### **Hamilton Avenue Asphalt Plant (Brooklyn)**

On January 10, 2004, Division ironworkers repaired the plant's blue smoke duct and rap bin.

### **Anti-Icing**

On January 11, 2004, Division personnel applied anti-icing chemicals 5 times to the East River bridges. In addition, the East River bridge pedestrian walkways and the priority overpasses were cleaned. Anti-icing crews were deployed again from January 14 through 16. According to *The New York Times*, for several hours after midnight on January 16, 2004, the official temperature of Manhattan dropped to 1 degree, which tied the record for the coldest January 16 in City history, a mark established in 1893.

### **Bruckner Expressway over Westchester Creek (Bronx) (a.k.a. Unionport Bridge)**

Due to extreme cold, the bridge was closed to marine traffic from 3 AM on January 16, 2004 to 12:10 AM the following night.

### **Anti-Icing**

From January 17 through 19, 2004, Division personnel applied anti-icing chemicals 17 times to the East River bridges. In addition, the East River bridge pedestrian walkways and the priority overpasses were cleaned. Iccle patrols monitored the FDR Drive, the Brooklyn-Queens Expressway, and the Cross Bronx Expressway.

### **Anti-Icing**

From January 25 through 28, 2004, Division personnel applied 16,000 gallons of anti-icing chemicals to the East River bridges. In addition, the East River bridge pedestrian walkways were

## CHRONOLOGY

plowed, and the priority overpasses were de-iced. Icicle patrols monitored the FDR Drive, the Brooklyn-Queens Expressway, and the Cross Bronx Expressway. The snowstorm left an accumulation of 10.3 inches of snow in Central Park.

### ***West 37<sup>th</sup> Street Bridge over Amtrak (Manhattan)***

The reconstruction of this bridge, which began on January 21, 2002, was substantially completed on January 27, 2004.



Deck Placement for the West 37<sup>th</sup> Street Bridge.

### ***Borden Avenue Bridge over Dutch Kills (Queens)***

Cleaning and painting of the bridge operator house began and was completed in January 2004.

### ***Greenpoint Avenue Bridge over Newton Creek (Brooklyn/Queens)***

Cleaning and painting of the bridge operator house, which began in December 2003, was completed in January 2004.

### ***Hamilton Avenue Bridge over Gowanus Canal (Brooklyn)***

Cleaning and painting of the bridge operator house, which began in December 2003, was completed in January 2004.

### ***Harlem River Drive Northbound Ramp over Harlem River (Manhattan)***

Cleaning and painting of the bridge, which began in December 2003, was completed in January 2004.

### ***Pulaski Bridge over Newtown Creek (Brooklyn/Manhattan)***

Cleaning and painting of the bridge operator house began and was completed in January 2004.

### ***Union Street Bridge over the Gowanus Canal (Brooklyn)***

Cleaning and painting of the bridge operator house began and was completed in January 2004.

### ***Willis Avenue Bridge over Harlem River (Bronx/Manhattan)***

Cleaning and painting of the bridge operator house began and was completed in January 2004.

### ***3<sup>rd</sup> Street Bridge over Gowanus Canal (Brooklyn)***

Cleaning and painting of the bridge operator house began and was completed in January 2004.

**FEBRUARY**

**Sergeant Keith Ferguson Tribute**

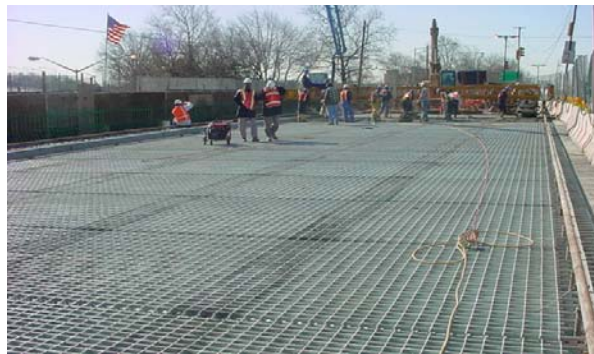
The American flag on the Brooklyn Bridge was lowered to half-mast by Division painters on February 2, 2004 in tribute to Emergency Service Unit Sergeant Keith Ferguson, who died on January 31, 2004. He collapsed while chasing an illegal vendor down a street in SoHo. The flag remained at half-mast until the end of the day on February 5, 2004. Sergeant Ferguson was a 17 year veteran of the NYPD.

**14<sup>th</sup> Avenue Bridge over LIRR Bay Ridge (Brooklyn)**

Stage II reconstruction of the bridge began on February 2, 2004.

**Cross Bay Boulevard Bridge over Conduit Boulevard (Queens)**

Stage IV reconstruction of the bridge began on February 5, 2004.



Concrete Placement for the Cross Bay Boulevard Grid Deck.

**Anti-Icing**

In response to winter storm warnings, Division personnel applied anti-icing chemicals 6 times to the East River bridges beginning in the early morning of February 6, 2004. The East River bridge pedestrian walkways and the priority overpasses were monitored and cleaned as necessary, and icicle patrols were active through the weekend.

**Brooklyn Bridge**

On February 7, 2004, an accelerometer test was performed by the U.S. Army Corps of Engineers R & D Center on the Brooklyn Bridge as part of the pedestrian vibration study.



Studying Pedestrian Vibrations. (Credit: Bojidar Yanev)

**Andrews Avenue Bridge over LIRR (Queens)**

Effective February 9, 2004, the bridge was closed to traffic for rehabilitation, as agreed to by Community Board #5.



**Steinway Street Bridges over Grand Central Parkway (Queens)**

Stage II reconstruction of the bridges began on February 9, 2004.

**Award**

On February 10, 2004, Chief Bridge Officer Henry Perahia was presented the Bridge Man of the Year award from the Association for Bridge Construction and Design in recognition of "outstanding career achievements", for "exhibiting leadership of the highest competence in maintaining and improving the historic bridges under his jurisdiction", and to recognize "his extraordinary leadership and his career long achievements". The award was presented to him by First Deputy Commissioner Judith Bergtraum on behalf of the Association's Directors.



Chief Bridge Officer Henry Perahia and Neal Bettigole, One of the Founders of the ABCD Northeast Region. First Deputy Commissioner Judith Bergtraum, Chief Bridge Officer Henry Perahia, and ABCD Vice President Dr. Khaled Mahmood.  
(Credit: Jagtar Khinda)

**Belt Parkway Bridge over Paerdegat Basin (Brooklyn)**

The emergency repair project on this bridge, which began on September 2, 2003, was substantially completed on February 17, 2004.



Director of Design-Build/Emergency Contracts Chris Sklavounakis and Beatriz Duran Observing the Demonstration Opening of the Movable Median Barrier.  
(Credit: Valeriya Remezova)

**Hamilton Avenue Asphalt Plant (Brooklyn)**

On February 21, 2004, Division ironworkers performed emergency repairs on the plant's drum, grizzly screen, and truck scale.

**Manhattan College Parkway Bridge, West 232<sup>nd</sup> Street Bridge, West 239<sup>th</sup> Street Bridge, and West 252<sup>nd</sup> Street Bridge over Henry Hudson Parkway (Bronx)**

A Notice to Proceed for the reconstruction of these bridges was issued to the contractor with a start date of February 23, 2004.

**Anti-Icing**

On February 24, 2004, Division personnel applied anti-icing chemicals 3 times to the East River bridges.

**Belt Parkway Bridge over Ocean Parkway (Brooklyn)**

The erection of the temporary bridge was completed at 12:15 AM on February 28, 2004, in less than 20 minutes. Eastbound Belt Parkway traffic was shifted to the temporary bridge the evening of March 23, 2004, and on the evening of March 25, 2004, westbound traffic was shifted to the former eastbound lanes.



Assembling the Temporary Bridge. Nose of the Temporary Bridge Nearly at the West Abutment.  
(Credit: Valeriya Remezova)



Temporary Belt Parkway Bridge.

**Belt Parkway Bridge over Mill Basin (Brooklyn)**

Cleaning and painting of the bridge operator house began and was completed in February 2004.

**MARCH**

**18<sup>th</sup> Avenue Bridge over NYCT (Brooklyn)**

Stage I reconstruction of the bridge began on March 12, 2004.

**Metropolitan Avenue Bridge over English Kills (Brooklyn)**

Stage I reconstruction of the bridge began on March 15, 2004.

# CHRONOLOGY



Looking East at the Demolition of the Bridge Operator House. Looking West at the Removal of the Northwest Grid Deck. Looking East at the Driving of a Test Pile.

## **Anti-Icing**

On March 16 and 17, 2004, Division personnel applied 10,000 gallons (37 applications) of anti-icing chemicals to the East River bridges. In addition, the East River bridge pedestrian walkways were plowed, and the priority overpasses were de-iced. Crews made another 5 applications beginning on the evening of March 18, 2004.

## **Third Avenue Bridge over Harlem River (Bronx-Manhattan)**

Division engineers visited the fabrication facility in Alabama from March 16 through 18, 2004 to monitor the assembly of the bridge's control house and the positioning of the track and rack castings. They also observed the erection of the swing span.



Touching up the Painting of the Intermediate Floorbeams. Track and Rack Assembly on Rotary Table Prior to Tooth Cutting. Northwest Truss Section for the New Third Avenue Bridge Swing Span (Credit: Rahul Shah)



Engineers Rahul Shah & Daniel Hom in Alabama.

**Brooklyn-Queens Expressway (EB) over Cadman Plaza (Brooklyn)**

On March 28, 2004, an emergency inspection resulted in the issuance of a PIA safety flag for separation of brick cladding at the abutment. Division personnel made the area safe and removed two panels of brick fascia totaling 7,500 square feet. They then installed steel angles with anchor bolts to support the coping stones. The project was completed on the night of March 30, 2004.



Bricklayers Ignazio Trapani & Savatore Romano on the Truck Platform Removing the Brick Façade. Cement Masons John Padovano & Thomas Valentino Removing Bricks.  
(Credit: Joseph Saverino)



Masonry Crew Removing the Bottom of the Brick Façade. Completed Safety Repair.  
(Credit: Joseph Saverino)

**Queensboro Bridge**

March 30, 2004 marked the 95<sup>th</sup> anniversary of the opening of the bridge.



Queensboro Bridge at Sunset. (Credit: Peter Basich)

## APRIL

### **Award**

In April 2004, the American Council of Engineering Companies of New York (formerly the New York Association of Consulting Engineers) selected the restoration of St. Felix Street for the Gold Award for the Metropolitan Region in its 2004 Engineering Excellence Awards. Founded in 1921, ACEC New York is the oldest continuing organization of professional consulting engineering firms in the United States. The Engineering Excellence Awards Program recognizes engineering achievements that demonstrate the highest degree of skill and ingenuity.

In January 1997, an eight inch water main burst beneath St. Felix Street between Hanson Place and Lafayette Street in Brooklyn. This break caused damage to a number of buildings, including partial wall collapses, building façade cracking, and stoop movement. Inspection revealed pervasive soil loss under the street bed over several blocks.

The B and D subway lines run below the street, along with numerous public and private utilities. The #2, #3, #4, and #5 subway lines and the Long Island Railroad run immediately adjacent to that area, as well. Any of these infrastructure elements could have caused or contributed to the existing soil loss.

Preliminary evidence pointed to an improper backfill created during the original subway construction in 1916. Soil borings and test pits suggested that timber was left in the ground causing huge voids below the street's surface. Over the years, the soil shifted into the voids causing water main damages.

Consequently, on February 19, 1997, in the interest of public safety, the Agency declared the situation to be an emergency, pursuant to Section 315 of the New York City Charter. Division engineers from the Design-Build section oversaw the restoration project.

Soil stabilization, drilling and grouting were completed in December 1997. Façade work began in March 1999. In the spring of 2000, the Landmarks Preservation Commission requested the full replacement of all windows for all of the houses.

These repairs were substantially completed on November 15, 2001. All remaining punchlist items were completed as of the end of April 2002. The street was stabilized and its houses restored to early 20th century landmark condition. The project provided homeowners with new facades, straight stoops, areaways and trees, lampposts, stamped colored concrete sidewalks, custom-made windows and cornices, and numerous other exterior and interior repairs.



Newly Restored St. Felix Street

### **Award**

In April 2004, the American Council of Engineering Companies of New York selected the reconstruction of the Guy Brewer Bridge over Belt Parkway for the Silver Award for the Metropolitan Region in its 2004 Engineering Excellence Awards.

The Guy Brewer Boulevard Bridge was built in 1937. Because a recent inspection revealed significant deterioration, DOT decided to replace the entire bridge. The old two span bridge

## CHRONOLOGY

consisted of reinforced concrete arch rigid frames with variable frame slabs. The new bridge consists of four spans with three new steel piers, a concrete grid deck, and concrete parapet walls with protective bridge fencing. The concrete abutments, approach slabs, adjacent curb, sidewalk, roadway and guiderails were replaced. New traffic signals, traffic regulatory signs, street lighting and thermoplastic stripping were installed. The utilities, including the water main, gas main, telephone cable and Fire Department cable were installed across the Belt Parkway under the bridge deck. Approximately 300 new trees will be planted in spring 2003 as part of the project's landscaping improvements. To improve safety, the safety barriers were rebuilt on the Belt Parkway adjacent to the bridge piers in the median areas. New directional overhead signs were installed across the Belt Parkway to guide motorists.

The Division reconstructed this bridge in a single stage with full bridge closure. This reduced the expected construction time from 24 months to 12 months. However, pedestrian access across the Belt Parkway was maintained at all times during construction using a temporary pedestrian bridge.

Normal travel lanes on the Belt Parkway were restored on June 28, 2002, resulting in the completion of Phases II and III of this project 57 days ahead of schedule. On November 1, 2002, the bridge was re-opened to both vehicular and pedestrian traffic 104 days ahead of schedule. The contractor earned the maximum incentive for the completion of this milestone. Removal of the temporary pedestrian bridge at Guy Brewer Boulevard was completed on November 14, 2002.

The \$11.8 million reconstruction of this bridge, which began on July 9, 2001, was substantially completed on December 12, 2002.



Demolishing the Old Guy Brewer Boulevard Bridge in March 2002      The New Bridge

### ***2<sup>nd</sup> Avenue Bridge over LIRR Bay Ridge (Brooklyn)***

Stage II reconstruction of the bridge began on April 1, 2004.

### ***Congress Street Bridge over Brooklyn-Queens Expressway (Brooklyn)***

On April 6, 2004, a truck traveling westbound in the right lane hit the overpass, cracking the web and the bottom flange of a stringer. Division painters removed paint from the damaged areas on the night of April 7, and Division crews began emergency repairs of the web and bottom flange on the night of April 8. Repairs were completed on the night of April 9, 2004.

### ***Cross Island Parkway Bridge over Fort Totten Entrance (Queens)***

The emergency deck repairs to correct a through-hole in the southbound right lane, which began on the night of April 7, 2004, were completed by Division personnel on the night of April 13, 2004.

### ***East 3<sup>rd</sup> Street Bridge over LIRR (Brooklyn)***

Stage II reconstruction of the bridge began on April 22, 2004.

**Third Annual "Take Our Children to Work Day"**

On April 22, 2004, as part of the Agency's third annual "Take Our Children to Work Day," Division personnel hosted children at several trades' shops, the Brooklyn Bridge, and Division headquarters at 2 Rector Street. The children were treated to demonstrations by the ironworkers, oilers, electricians, and painters, a guided tour of the bridge, a video about the longest bridge in Japan, and a short lecture by Dr. Yanev on the Brooklyn Bridge.



Children at the Ironworker Shop. Chief Bridge Officer Henry Perahia Welcoming the Children. (Credit: Peter Basich)



Demonstration by Bridge Repairer & Riveter David Collins at the Ironworker Shop. (Credit: Peter Basich)



Future Ironworkers Samantha Quon and Corey Garcia at Work. (Credit: Peter Basich)

# CHRONOLOGY



Children With Electrician John Bayliss, & Oilers Samuel Garcia and Thomas McAuliffe. Oiler Samuel Garcia Demonstrating Equipment. (Credit: Peter Basich)



Painting Demonstration by Bridge Painter Drago Milin. Children on the Brooklyn Bridge With Engineer Jagtar Khinda (6<sup>th</sup> From Right). (Credit: Peter Basich)



Executive Director of Inspections and Bridge Management Dr. Bojidar Yanev Lecturing. Deputy Director of In-House Painting Earlene Powell (Center) With the Children. (Credit: Michele N. Vulcan)



Chief Bridge Officer Henry Perahia With the Children. (Credit: Michele N. Vulcan)



## ***Hamilton Avenue Asphalt Plant (Brooklyn)***

On April 25, 2004, Division ironworkers repaired sections of the plant's crusher and smokestack.

## ***Seeley Street Bridge over Prospect Avenue, Congress Street Bridge over Brooklyn-Queens Expressway, and Lincoln Road Bridge over BMT Subway (Brooklyn)***

A Notice to Proceed for the reconstruction of these bridges was issued to the contractor with a start date of April 26, 2004.



Congress Street Bridge in the 1990's.

## ***Carroll and Union Street Bridges over the Gowanus Canal (Brooklyn)***

On April 27, 2004, Bridge Operations personnel hosted kindergarten students from PS #321 on a class trip to the bridges. Students, teachers, and parents enjoyed their visit.

## ***FDR Drive Promenade at the Brearley School (Manhattan)***

Cleaning and painting of the promenade began and was completed in April 2004.

## ***Promenade over FDR Drive from East 79<sup>th</sup> to East 91<sup>st</sup> Streets (Manhattan)***

Cleaning and painting of the railings, which began in November 2003, was completed in April 2004.

## **MAY**

### ***Five Borough Bike Tour***

In preparation for the Five Borough Bike Tour on May 2, 2004, Division personnel performed mechanical sweeping along the route on the night before the event, including the Queensboro, Pulaski, Madison Avenue, and 145<sup>th</sup> Street Bridges, and performed asphalt repairs as necessary. In addition, they temporarily placed four variable message boards along the route on April 28, and removed them on May 3.

### ***Brooklyn-Queens Expressway (WB) over Furman Street & Brooklyn-Queens Expressway (EB) over Brooklyn-Queens Expressway (WB) a.k.a. BQE Triple Cantilever Joints (Brooklyn)***

A Notice to Proceed for the reconstruction of these joints was issued to the contractor with a start date of May 3, 2004.

### ***Carroll, Union, and 9<sup>th</sup> Street Bridges over the Gowanus Canal (Brooklyn)***

On May 4 and 5, 2004, and again on May 11 and 12, 2004, Bridge Operations personnel hosted kindergarten students from PS #321 on a class trip to the bridges. Students, teachers, and parents enjoyed their visit.



Students on the Bridge. Bridge Operator-in-Charge Leonard Thomas Answering Questions. Mr. Thomas has Been With DOT Since 1975. (Credit: Keith Burrowes)

**Broadway Bridge over Harlem River (Bronx/Manhattan)**

The component rehabilitation of this bridge was substantially completed on May 12, 2004.



Worn Out Finger Joints on the Bridge. New Finger Joints. (Credit: Nasir Khanzada)



Broadway Bridge. (Credit: Vadim Sokolovsky)

**7th Avenue Bridge over NYCT (Brooklyn)**

The reconstruction of this bridge, which began on April 22, 2002, was substantially completed on May 17, 2004.



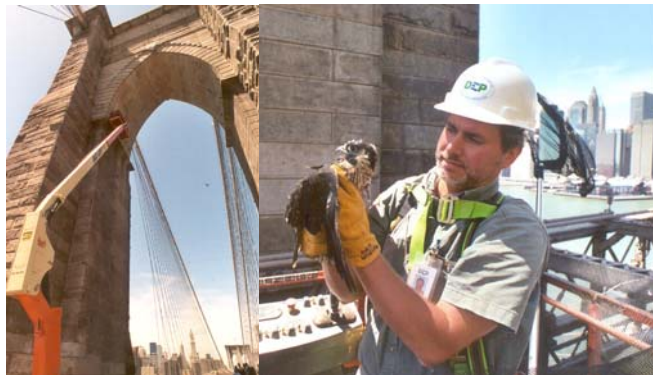
The New 7<sup>th</sup> Avenue Bridge. (Credit: Jiayi Shi)

**Cross Bay Boulevard Bridge over Conduit Boulevard (Queens)**

Stage V reconstruction of the bridge began on May 18, 2004.

**Brooklyn Bridge**

On May 20, 2004, Division personnel assisted DEP Director of Wildlife Studies Christopher Nadeski with access to the Brooklyn tower of the Brooklyn Bridge for the identification of 5-week-old falcon chicks. Southeastern New York State has 24 pairs of falcons, of which New York City hosts 12 on its bridges and buildings. Mr. Nadeski inspects and bands the City's new chicks every spring.



Lifting the Biologist to the Nest. Christopher A. Nadeski & Falcon Hatching. (Credit: Peter Basich)



Falcon Hatchling. (Credit: Hany Soliman) Parent Falcon Observing the Banding. (Credit: Peter Basich)

**14<sup>th</sup> Avenue Bridge over LIRR Bay Ridge (Brooklyn)**

The reconstruction of this bridge, which began on December 2, 2002, was substantially completed on May 21, 2004.



The New 14th Avenue Bridge. (Credit: Jiaji Shi)

### ***West 207<sup>th</sup> Street/West Fordham Road Bridge over Harlem River (Bronx/Manhattan) (a.k.a. University Heights Bridge)***

Due to heat expansion, the bridge was unable to close after opening for a barge carrying a crane bound for the Third Avenue Bridge project at 2:55 PM on May 25, 2004. It was returned to service at 7:10 PM that night.

### ***Williamsburg Bridge***

Bottom chord repairs on the bridge's Manhattan end spans, which began on October 22, 2003, were completed on May 27, 2004.

### ***Park Avenue Tunnel under 34<sup>th</sup> Street (Manhattan)***

Cleaning and painting of the tunnel began and was completed in May 2004.

## ***JUNE***

### ***Award***

In June 2004, the Metro New York/New Jersey Chapter of the Construction Management Association of America selected the Reconstruction of the North Roadways of the Williamsburg Bridge (Contract #7) as a "Project of the Year."

The reconstruction work on the north roadways of the Williamsburg Bridge was a mirror image of the completed reconstruction work on the south roadways. It included the complete replacement of the main bridge deck with a steel orthotropic deck system and the construction of new structures on both the Manhattan and Brooklyn approaches. This \$202.8 million contract included provisions for financial incentives to ensure that the project was completed within the scheduled roadway closure period, thereby minimizing the impact the closures had on the public.

Work on the north roadway substructure (pile foundations, piers and columns), began in early 2000. All four lanes that constitute the north roadways of the bridge were closed to traffic on January 29, 2001 for demolition and reconstruction.

The two lanes on the north outer roadway were completed and reopened to traffic on December 10, 2001, 50 days ahead of schedule. This allowed four travel lanes into Manhattan during the morning rush hour, and four lanes into Brooklyn during the afternoon rush hour. In addition, Manhattan-bound truck traffic was restored to the two outer roadway lanes, decreasing the demand at both the Manhattan Bridge and the Queens Midtown Tunnel. The contractor earned \$100,000 per day (for a maximum of 50 days) in incentive payments for early completion.

The north outer roadway reopening was complemented by the State Department of Transportation's early reopening of the Marcy Avenue connector ramp from the Brooklyn-Queens

## CHRONOLOGY

Expressway to the Williamsburg Bridge. This is the first time in the State's history that a segmented highway bridge was built using technology suited to situations requiring rapid construction with minimal traffic and community impacts.

The north inner roadway was re-opened to traffic on June 10, 2002, 50 days ahead of schedule, thus earning the contractor a \$5 million incentive. Mayor Bloomberg and Commissioner Weinshall presided over the opening ceremony.

During construction, the Department maintained pedestrian/bike access across the bridge. The south footpath/bikeway remained open at all times. During Contract #7, DOT constructed a new Manhattan approach ramp and north footpath/bikeway. The new footpath/bikeway has one common access point for pedestrians and cyclists in Manhattan at Clinton Street, which leads to a crossover before the main span of the bridge to enable people to access either the north or south paths. The north path is open to both pedestrians and bicyclists and leads to an access point at Washington Park in Brooklyn. The south path is dedicated to pedestrians and leads to an access point at Bedford Avenue. Completion of the new north walkway also means that, for the first time ever, the bridge is accessible to wheelchair users and meets the requirements of the Americans with Disabilities Act.

Contract #7 was substantially completed on December 12, 2002. The newly completed pedestrian walkway opened to traffic at 3:00 PM on this day.



Williamsburg Bridge

### ***President Ronald Reagan Tribute***

The American flags on the Brooklyn Bridge and at the Ironworker Shop at 59 Adams Street in Brooklyn were lowered to half-mast on June 7, 2004 in tribute to former President Ronald Reagan, who died at age 93 on June 5, 2004. Mr. Reagan served as the 40th president of the United States from 1981 to 1989. The flags remained at half-mast until July 2, 2004.



President Ronald Reagan. Brooklyn Bridge Flag at Half-Mast at Dusk. (Flag Credit: Michele N. Vulcan)

### ***Belt Parkway Bridge over Mill Basin (Brooklyn)***

Due to heat expansion, the bridge was closed to marine traffic beginning at 2:12 PM on June 9, 2004. It was returned to service at 6:50 AM on June 10, 2004.

### ***Hamilton Avenue Bridge over Gowanus Canal (Brooklyn)***

Due to heat expansion, the bridge was closed to marine traffic beginning at 2:15 PM on June 9, 2004. It was returned to service at 2:15 AM on June 10, 2004.

### ***Williamsburg Bridge***

Bottom chord repairs on the bridge's Brooklyn end spans, which began on January 26, 2004, were completed on June 14, 2004.

### ***West 207<sup>th</sup> Street/West Fordham Road Bridge over Harlem River (Bronx/Manhattan) (a.k.a. University Heights Bridge)***

Due to heat expansion, the bridge was closed to marine traffic beginning at 10:57 A.M. on June 16, 2004. It was returned to service at 12:15 AM the following night.

### ***Third Avenue Bridge over Harlem River (Bronx-Manhattan)***

On June 18, 2004, the new swing span was transferred from land onto an ocean barge at the Port of Chickasaw in Mobile, Alabama.



Transfer of New Third Avenue Swing Span From Land to Ocean Barge.

### ***Olympic Torch Relay***

As part of the Olympic flame's 46,800-mile journey before the start of the 2004 Summer Games, Derek Roberts, DOT's Director of Mail Room and Store Room Services, carried the torch on the Brooklyn Bridge on June 19, 2004. At 19, Mr. Roberts was selected for the United States Olympic Track Team in 1980. Unfortunately, he was unable to compete due to the United States boycott of the Moscow Olympics that year. Almost a quarter of a century later, as one of the 140 New York City torchbearers, he finally had the chance to be a part of the Olympic Games. Mr. Roberts has worked for the city for two decades and is currently a pastor at the Soul Tabernacle Church in the South Bronx.



Derek Roberts Carrying the Olympic Torch.  
(Credit: Cornelius Savage)

***BQE Eastbound over Cadman Plaza (Brooklyn)***

The concrete pothole and deck repair project, which began in early June 2004, was completed on the night of June 23, 2004, approximately two weeks ahead of schedule.

***Third Avenue Bridge over Harlem River (Bronx-Manhattan)***

On June 27, 2004, the ocean barge carrying the new swing span departed the Port of Chickasaw in Mobile, Alabama.



New Swing Span Leaving Mobile, Alabama

***Battery Place over FDR Drive (Manhattan)***

Cleaning and painting of the railings began and was completed in June 2004.

***Belt Parkway Bridge over Bay Parkway (Brooklyn)***

Cleaning and painting of the bridge, which began in April 2004, was completed in June 2004.

***81<sup>st</sup> Street Pedestrian Bridge over the Belt Parkway (Brooklyn)***

Cleaning and painting of the bridge began and was completed in June 2004.

**JULY**

***Manhattan Bridge***

The new north bikeway was opened to the public at 12:30 PM on July 1, 2004.



Testing the Lights Prior to the Opening of the New North Bikeway.

**Third Avenue Bridge over Harlem River (Bronx-Manhattan)**

The Manhattan half of the old swing span was removed on June 30, 2004, and the Bronx half was removed on July 1, 2004. The removal operation involved a 907 ton supercrane, six tugboats, and 13 barges.



Old Third Avenue Swing Span on Left, New Temporary Bridge on Right. Removing the Manhattan Half of the Old Swing Span. (Credit: Daniel Hom)

**Roosevelt Avenue Bridge over Van Wyck Expressway (Queens)**

The concrete deck repair project, which began in June 2004, was completed by Division crews on July 8, 2004.



Division Crew Starting Concrete Deck Repairs. (Credit: Anthony Napolitano)



Division Crew Continuing Concrete Deck Repairs. (Credit: Anthony Napolitano)





Division Crew Completing Concrete Deck Repairs. (Credit: Anthony Napolitano)

***Third Avenue Bridge over Harlem River (Bronx-Manhattan)***

On July 8, 2004, the ocean barge carrying the new swing span arrived in New York City.



Swing Span Arrival in NYC. Barge Arrival at the Bridge Site. (Site Credit: Bojidar Yanev)

***Cross Bay Boulevard Bridge over Conduit Boulevard (Queens)***

The bridge was re-opened to traffic on July 14, 2004, some two months ahead of schedule.

***145<sup>TH</sup> Street Bridge over Harlem River (Bronx/Manhattan)***

A Notice to Proceed for the reconstruction of this bridge was issued to the contractor with a start date of July 15, 2004.

***Glenmore Avenue Bridge over the LIRR (Brooklyn)***

The reconstruction of this bridge, which began on January 14, 2003, was substantially completed on July 16, 2004.



New Glenmore Avenue Bridge

**Third Avenue Bridge over Harlem River (Bronx-Manhattan)**

On July 17 and 18, 2004, the new swing span was transferred from the 400-foot ocean barge to two smaller working barges moored along the Manhattan wharf.



Transfer of the New Span From the Ocean to the Working Barges. (Credit: Daniel Hom)

**Belt Parkway Bridge over Ocean Parkway (Brooklyn)**

The temporary bridge was removed during the early morning hours of July 20, 2004.

**Pitkin Avenue Bridge over LIRR (Brooklyn)**

Stage I reconstruction of the bridge began on July 23, 2004.

**Steinway Street Bridges over Grand Central Parkway WB & EB (Brooklyn-Queens Expressway) (Queens)**

On July 23, 2004, during the demolition process to remove the first one-third of the existing bridge in preparation for installing the new bridge components, a portion of the existing north bridge collapsed onto the westbound roadway of the Grand Central Parkway. An ongoing forensic investigation is in progress to study and determine the cause of the sudden collapse of the north bridge.

**East 241<sup>st</sup> Street Bridge over the Bronx River Parkway and Metro North (Bronx)**

Cleaning and painting of the bridge was completed on July 27, 2004, nine months ahead of schedule.



Detail of Freshly Painted East 241<sup>st</sup> Street Bridge.

**236<sup>th</sup> Street Pedestrian Bridge over Henry Hudson Parkway (Bronx)**

Cleaning and painting of the bridge, which began in June 2004, was completed in July 2004.

**AUGUST**

***Roosevelt Island Bridge over East River/East Channel (Manhattan/Queens)***

Due to heat expansion, the bridge was closed to marine traffic beginning at 1 PM on August 4, 2004. It was returned to service at 7:07 PM that night.

***Hamilton Avenue Bridge over Gowanus Canal (Brooklyn)***

Due to heat expansion, the bridge was closed to marine traffic beginning at 5:45 PM on August 10, 2004. It was returned to service at 8 PM that night.

***52<sup>nd</sup> Street Bridge over LIRR Bay Ridge (Brooklyn)***

Stage II reconstruction of the bridge began on August 13, 2004.



Installing Stay-in-Place Forms on the New Bridge.

***Hamilton Avenue Asphalt Plant (Brooklyn)***

On August 14, 2004 Division ironworkers patched holes on the plant's bin and chute, installed plates on the crusher, and repaired broken welds on the flapper.

***Atlantic Avenue Bridges (EB & WB) over East New York Avenue (Brooklyn)***

The reconstruction of these bridges, which began on September 9, 2002, was substantially completed on August 20, 2004.



Southbound East New York Avenue.

***West 232<sup>nd</sup> Street Bridge over Henry Hudson Parkway (Bronx)***

The bridge re-opened to traffic on August 20, 2004, some three months ahead of schedule.

***Hamilton Avenue Asphalt Plant (Brooklyn)***

On August 28, 2004, Division ironworkers performed repairs to the plant's drum, tension bars, and silo.

**Shore Road Bridge over Hutchinson River (Bronx) (a.k.a. Pelham Bay Bridge)**

On August 31, 2004, Division ironworkers replaced the bridge's northwest semaphore gate, which had been struck by a vehicle on August 29, 2004.

**SEPTEMBER**

**Brooklyn-Queens Expressway near Gold and Nassau Streets (Brooklyn)**

In August 2004, at the request of the Department of Parks & Recreation, Division personnel began to install metal shielding below the expansion joints to prevent debris from falling into the Golconda Playground. This project was completed on September 3, 2004.

**Hamilton Avenue Asphalt Plant (Brooklyn)**

On September 4, 2004, Division ironworkers performed repairs to the plates inside the plant's mixing drum.

**Hamilton Avenue Bridge over Gowanus Canal (Brooklyn)**

Due to heat expansion, the bridge was closed to marine traffic beginning at 4:45 PM on September 7, 2004. It was returned to service at 8 PM that night.

**Fresh Meadow Lane Pedestrian Bridge over Long Island Expressway (Queens) (NYS)**

On September 10, 2004, Division personnel completed the installation of pedestrian bridge landing fences at the State-owned Fresh Meadow Lane Bridge over the Long Island Expressway. The slalom fencing at the bottom of the exit ramps, which forces pedestrians, cyclists, skateboarders, and people using wheelchairs to travel in a zigzag pattern, is part of a citywide safety pedestrian initiative by Mayor Bloomberg and Commissioner Weinshall to make crossing pedestrian bridges safer citywide. Similar fences were installed at seven other pedestrian bridges over the Long Island Expressway, and at two pedestrian bridges over the Grand Central Parkway.



Bridge Ramp Before and After Installing the Fencing. (Credit: Hany Soliman)

**Hamilton Avenue Asphalt Plant (Brooklyn)**

On Patriot Day, September 11, 2004, Division ironworkers performed repairs to the plant's plates and mixing drum.

**Patriot Day Tribute**

The Brooklyn Bridge flags flew at half-mast on September 11, 2004 to commemorate Patriot Day.

**Cortelyou Road Bridge over NYCT (Brooklyn)**

Stage II reconstruction of the bridge began on September 13, 2004.

**Knapp Street Bridge over Belt Parkway (Brooklyn)**

At about 8 AM on September 20, 2004, the NYPD reported damage to the bridge due to a vehicular accident. The responding engineer arrived to find that one of the vehicles involved had hit and displaced the railing atop the wing wall, and several masonry blocks had fallen onto the embankment. Division crews and painters cut and removed the damaged rail and fence, installed temporary barriers, and made the area safe. All work was completed by 8:30 PM.



Division Personnel Inspecting the Damage. (Credit: Bala Nair)

**2<sup>nd</sup> Avenue Bridge over LIRR Bay Ridge (Brooklyn)**

The bridge's deck concrete was placed on September 21, 2004.



Placing the Deck Concrete.

**Cross Bay Boulevard Bridge over Conduit Boulevard (Queens)**

The reconstruction of this bridge, which began on July 15, 2002, was substantially completed on September 22, 2004.



Looking South at the New Cross Bay Boulevard Bridge.

**Award**

On September 30, 2004, the Department was presented the 2004 Excellence in Leadership - Owner of the Year award from the New York Tri-State Metro Chapter of the Design Build Institute of America. The Institute advocates and advances single source project delivery within the design and construction community. Members include practitioners from all project phases, plus public- and private-sector project owners. The organization was founded in 1993.



Deputy Chief Engineer Albert Novak, Director of Design-Build/Emergency Contracts Chris Sklavounakis, Chief Bridge Officer Henry Perahia, and Engineer-in-Charge Valeriya Remezova.

**17<sup>th</sup> Avenue Pedestrian Bridge over Belt Parkway (Brooklyn)**

Cleaning and painting of the bridge, which began in June 2004, was completed in September 2004.

**OCTOBER**

**Hamilton Avenue Asphalt Plant (Brooklyn)**

On October 9, 2004, Division ironworkers welded cracks and installed plates in the plant's mixing drum.

**Brooklyn Bridge**

The project to mill and resurface the Brooklyn Bridge entrance ramps, a joint effort of the Division of Bridges and the Division of Roadway Repair and Maintenance, which began on September 25, 2004, was completed on the weekend of October 9 and 10, 2004.

## ***Williamsburg Bridge***

Top chord repairs of the bridge's north truss, which began on December 23, 2003, were completed on October 15, 2004.



Looking East at the North Truss Top Chord.

## ***Hamilton Avenue Asphalt Plant (Brooklyn)***

On October 15, 16, and 17, 2004, Division ironworkers performed extensive repairs to the plant's mixing drum, paddles, and shielding.

## ***Sutter Avenue Bridge over the LIRR (Brooklyn)***

The reconstruction of this bridge, which began on January 14, 2003, was substantially completed on October 19, 2004.



New Sutter Avenue Bridge.

## ***East 3<sup>rd</sup> Street Bridge over LIRR (Brooklyn)***

The reconstruction of this bridge, which began on May 5, 2003, was substantially completed on October 25, 2004.

## ***Pulaski Bridge over Newtown Creek (Brooklyn/Manhattan)***

On October 27, 2004, the Division participated in a 50<sup>th</sup> year anniversary celebration for the bridge. The event was organized by the Polish American Congress. The speakers at the event were Brooklyn Borough President Marty Markowitz, Assemblymember Joseph Lentol, and Chief Bridge Officer Henry Perahia.



Vice-Consul of the Republic of Poland in New York Marek Skulimowski; Polish & Slavic Center President Bozena Kaminski; Chief Bridge Officer Henry Perahia; Assemblymember Joseph Lentol; Polish American Congress President Frank Milewski; Brooklyn Borough President Marty Markowitz; Brooklyn Borough Commissioner Lori Ardito; Polish American Congress Chairperson Chet Szarejko; and Polish American Congress Secretary Richard Brzozowski. (Credit: Kathryn Kirk) Pulaski Bridge Viewed From the East Side in 1992.

***Third Avenue Bridge over Harlem River (Bronx-Manhattan)***

On October 29, 2004, the new swing span was floated into place. It is estimated that this span weighed approximately 4.8 million pounds. Six tugboats pushed the span, which was supported on two barges, to within 2 inches of the center pier and bearings. Personnel worked with the rising tide and hydraulic jacks to position and then set the span. After positioning, and working with the now falling tide, 480,000 gallons of water were pumped into ballast tanks to sink the barges and lower the new span truss onto its bearings.



Chief Bridge Officer Henry Perahia Observing the Float-In. (Credit: Daniel Hom). Engineer-in-Charge Daniel Hom, Executive Assistant Yanina Goldfeld, Svetlana Melnichenko, and Engineer Wen-Yang Tsay at the Float-in.





Engineer-in-Charge Daniel Hom and Deputy Chief Engineer Russell Holcomb at the Float-in. New Swing Span After the Float-in. (Span Credit: Keith Burrowes)

### ***Manhattan College Parkway Bridge over Henry Hudson Parkway (Bronx)***

The bridge re-opened to traffic on October 29, 2004, some six weeks ahead of schedule.

### ***Grand Avenue Bridge over Long Island Expressway (Queens)***

Cleaning and painting of the bridge, which began in September 2003, was completed in October 2004.

### ***Hamilton Place Bridge over Long Island Expressway (Queens)***

Cleaning and painting of the bridge, which began in August 2003, was completed in October 2004.

### ***69<sup>th</sup> Street Bridge over Long Island Expressway (Queens)***

Cleaning and painting of the bridge, which began in September 2003, was completed in October 2004.

## **NOVEMBER**

### ***Award***

In November 2004, *Roads & Bridges Magazine* selected the current project on the Manhattan Bridge as the second place finisher in its annual selection of the country's top 10 bridge projects. Scheduled to begin in January 2005 and to be completed in 2008, Contract#11 will include the following improvements: reconstruction of the lower roadway, rehabilitation of the anchorages, rehabilitation of the travelers, installation of new lighting on the north upper roadway and lower roadway, and upgrading of the lower roadway lane control signals. The work on the lower roadway, which will include the installation of 200,000 square feet of new bridge decking, is scheduled to begin in August 2006 and be completed in July 2007.

### ***Award***

In addition to the award for the Manhattan Bridge project, in November 2004, *Roads & Bridges Magazine* selected the replacement of the Belt Parkway Bridge over Ocean Parkway as the eighth place finisher in its annual selection of the country's top 10 bridge projects. This project also involved the reconfiguration of the interchange, roadway work on approximately a mile of the Belt Parkway, and roadway and associated landscaping work on Ocean Parkway from approximately Avenue Z to West End Avenue. The new bridge utilized many precast elements, including deck units, t-wall abutments, cap beams, parapets, and approach slabs.

## ***Carroll and Union Street Bridges over the Gowanus Canal (Brooklyn)***

On November 5, 2004, Bridge Operations personnel hosted two second grade classes from PS #321 on a class trip to the bridges. Students, teachers, and parents enjoyed their visit.



Deputy Director of Bridge & Tunnel Operations Keith Burrowes (Kneeling) & Students on the Carroll Street Bridge.

## ***New York City Marathon***

In preparation for the Marathon on November 7, 2004, Division personnel inspected and cleaned the Pulaski, Madison Avenue, and Willis Avenue Bridges, and painters searched for and removed all graffiti along the race route. On the night before the race, all bridges along the route were swept. Division crews installed temporary barriers and barrels on the Queensboro Bridge approaches. Standard traffic configurations were restored before the next morning rush hour.



Great Britain's Paula Radcliffe (Wearing #F111), Winner of the 2004 NYC Marathon, Crossing the Willis Avenue Bridge. Ms. Radcliffe Won in 2 Hours, 23 Minutes, and 10 Seconds, and Was the First British Woman to Win Since Liz McColgan in 1991. Leaders in the Wheelchair Race on the Willis Avenue Bridge. (Credit: Russell Holcomb)

## ***Brooklyn Bridge***

On November 11, 2004, Mayor Michael Bloomberg and Governor George Pataki held a ceremony on the Brooklyn Bridge walkway to publicize the City's bid to host the 2012 Olympics. Supporters waved white "NYC 2012" pennants, schoolchildren held flags from 60 countries, and former Olympians and Paralympians wore their medals. The mistress of ceremonies was the 1960 and 1964 Olympic swimming gold medalist and NYC2012 Senior Advisor for Sports Donna de Varona. The attending athletes included the 2004 Olympic 100-meter gold medalist Justin Gatlin, a Brooklyn native, as well as Jason Read, a 2004 Olympic rowing gold medalist and volunteer firefighter from New Jersey. Mr. Read is a recipient of an Arête Honorary Lifetime Achievement Award for Sport for his response at Ground Zero following the World Trade Center attacks on September 11, 2001. Division personnel provided electrical assistance and temporarily removed several benches.



NYC Olympic Bid Supporters Waving Pennants. Governor George Pataki, 2004 Gold Medalist Jason Read (Holding Medal), 1960 & 1964 Gold Medalist Donna de Varona (in Red Coat), and 2004 Gold Medalist Justin Gatlin (Speaking). (Credit: Eric Thompson)



Donna de Varona, Justin Gatlin, and Mayor Michael Bloomberg. Schoolchildren Holding Banner and Pennants. (Credit: Eric Thompson)

***Liberty Avenue Bridge over the LIRR (Brooklyn)***

Effective November 11, 2004, the bridge was closed to traffic for rehabilitation, as agreed to by the community.

***Congress Street Bridge over Brooklyn-Queens Expressway (Brooklyn)***

The contractor removed the structural steel of the old bridge on the night of November 12, 2004.



Structural Steel Removal on the Congress Street Bridge. (Credit: Carlos Ramirez)

***Belt Parkway Bridge over Mill Basin (Brooklyn)***

On November 16, 2004, Division ironworkers replaced the bridge's northeast warning gate and housing, which had been struck by a vehicle on November 12, 2004.

**Williamsburg Bridge**

Top chord repairs of the bridge's south truss, which began on December 15, 2003, were completed on November 19, 2004.

**Carroll and Union Street Bridges over the Gowanus Canal (Brooklyn)**

On November 22, 2004, Bridge Operations personnel hosted first grade children from PS #321 on a class trip to the bridges. Students, teachers, and parents enjoyed their visit.



Students on the Carroll Street Bridge Watching the Union Street Bridge Open. (Credit: Keith Burrowes)

**Madison Avenue Bridge over Harlem River (Bronx/Manhattan)**

Cleaning and painting of the bridge was substantially completed on November 23, 2004.



Freshly Painted Madison Avenue Bridge.

**Andrews Avenue Bridge over LIRR (Queens)**

The bridge was re-opened to traffic on November 24, 2004.

**Washington Bridge over Harlem River (Bronx/Manhattan)**

Cleaning and painting of the bridge was substantially completed on November 24, 2004.



Installing Safety Netting During the Painting of the Washington Bridge.  
(Credit: Vadim Sokolovsky)

**78<sup>th</sup> Annual Macy's Thanksgiving Day Parade**

Division engineers reviewed and approved the design specifications of three new large balloons to be introduced in the parade, as follows: Sponge Bob, M&M, and Chicken Little. A balloon is classified as large if it is larger than 5,000 cubic feet. However, the balloons in the parade cannot be taller than 70 feet, wider than 40 feet, or longer than 78 feet.

On November 25, Chief Bridge Officer Henry Perahia, Deputy Chief Engineer Kamal Kishore, Director of Engineering Review Abul Hossain and Mahabal Shah, as well as three consultants, were positioned at various locations along the parade route to ensure that the balloons were flown within the prescribed requirements for the wind conditions at that site. An estimated 2.5 million spectators watched the parade in 64 degree weather. Wind speeds remained between 7 and 17 miles per hour.



New Sponge Bob. (Credit: Mahabal Shah) New M&M. (Credit: Kamal Kishore)  
New Chicken Little. (Credit: Mahabal Shah)



Lady Liberty Float & Charlie Brown. (Credit: Kamal Kishore)  
Kermit. (Credit: Mahabal Shah)



Assistant Commissioner for Special Events Evan Korn, DOT Commissioner Iris Weinsall; First Deputy Commissioner Judith Bergtraum; Agency General Counsel Philip Damashek; Chief Bridge Officer Henry Perahia; Deputy Chief Engineer Kamal Kishore (obscured); and Mahabal Shah. Director of Engineering Review Abul Hossain and George Jarvis.  
(Credit: Kamal Kishore)

***Officer William Rivera Tribute***

The American flag on the Brooklyn Bridge was lowered to half-mast by Division painters on November 26, 2004 in tribute to Police Officer William Rivera, 35, who died on November 24, 2004. Officer Rivera, a 12 year veteran of the NYPD, was seriously injured on October 2, 2004, when he fell off a rooftop while chasing a robbery suspect. The flag remained at half-mast until November 29, 2004.

***Greenpoint Avenue Bridge over Newton Creek (Brooklyn/Queens)***

Cleaning and painting of the bridge, which began on August 1, 2003, was completed in November 2004.



Bridge Painter Julio Perez at the Greenpoint Avenue Bridge. (Credit: Earlene Powell)

***5<sup>th</sup> Avenue Bridge over Prospect Expressway (Brooklyn)***

Cleaning and painting of the bridge, which began in October 2004, was completed in November 2004.

**DECEMBER**

**Award**

In December 2004, *New York Construction Magazine* selected the component rehabilitation of Riverside Drive over West 96<sup>th</sup> Street for an Award of Merit as one of the best bridge projects of 2004. The award recognizes the contribution of key team members and the innovative solutions to a project's challenges. This \$4.7 million project rehabilitated the corroded structural steel hidden within the granite stone masonry of the 1,110 square foot three span steel structure. Other improvements included the installation of new sidewalks, curbs, and bridge railings, as well as concrete sidewalk barriers to protect the public from vehicular traffic. This project, which began in April 2001, was substantially completed on June 26, 2003.



View of the Bridge Under Construction Showing the Marked Granite Stones to be Reinstalled. Newly Installed Structural Steel Members Along the East Sidewalk. View of the New Structural Steel Fascia Girder Being Installed.



Newly Installed Structural Steel Floor Beams Along the East Sidewalk. Completed Pedestrian Concrete Barrier. Looking East from West 96<sup>th</sup> Street at the Newly Rehabilitated Bridge.

***Gun Hill Road Bridge over Metro North RR (Bronx)***

A Notice to Proceed for the reconstruction of this bridge was issued to the contractor with a start date of December 1, 2004.

***Firefighter Christian Philip Engeldrum Tribute***

The American flag on the Brooklyn Bridge was lowered to half-mast by Division painters on December 2, 2004 in tribute to Firefighter Christian Philip Engeldrum of Ladder Company 61 in the Bronx, who was killed in action while serving in Iraq. Mr. Engeldrum was the first New York City employee to die on active military duty in the war. Army National Guard Sergeant Engeldrum was a 5 ½ year veteran of the New York City Fire Department.

Mr. Engeldrum, 39, began his career in with the City of New York as a New York City Police Officer assigned to the 47<sup>th</sup> Precinct. After successfully completing the New York City Fire Academy in 1999, he was assigned to Engine Company 89 in the Bronx. Firefighter Engeldrum also served in Engine Company 58 in Manhattan and was most recently assigned to Ladder Company 61 in the Bronx. Engeldrum received one FDNY unit citation on July 15, 2000, as a result of his company's successful rescue of two civilians at a fire. The flag remained at half-mast until November 29, 2004. The flag remained at half-mast until December 13, 2004.

***Belt Parkway Bridge over Ocean Parkway (Brooklyn)***

The reconstruction of this bridge, which began on September 12, 2002, was substantially completed on December 3, 2004.



New Belt Parkway Bridge.

***Carroll and Union Street Bridges over the Gowanus Canal (Brooklyn)***

On December 3, 2004, Bridge Operations personnel hosted first grade children from PS #321 on a class trip to the bridges. Students, teachers, and parents enjoyed their visit.



Bridge Operator Mary Harrigan at the Union Street Bridge. (Credit: Adal Maldonado)

***Westchester Avenue Bridge over Hutchinson River Parkway (Bronx)***

The construction and installation of the vehicle height sensor system on the bridge was substantially completed on December 3, 2004.



Overheight Sensor on the Northbound Hutchinson River Parkway. Gantry With an Exit Variable Message Sign on the Northbound Hutchinson River Parkway. (Credit: Roly Parroco)



## ***Third Avenue Bridge over Harlem River (Bronx-Manhattan)***

The new swing span was opened to two lanes of traffic in the morning hours on December 6, 2004.

## ***Seeley Street Bridge over Prospect Avenue (Brooklyn)***

The deteriorated stairs of this bridge had become a possible hazard to pedestrians. Repairs were designed that involved the building of wooden steps and their installation by Division carpenters over the existing concrete ones. Division ironworkers fabricated steel tread plates, and applied a spray-on non-skid surface. Division engineers supervised the job to ensure compliance with the design standards and made field changes as required. The project to repair the stairs, which began on October 26, 2004, was completed by Division personnel on December 9, 2004.



Seeley Street Bridge Stairs. (Credit: Hany Soliman)

## ***Cortelyou Road Bridge over NYCT (Brooklyn)***

Stage III reconstruction of the bridge began on December 9, 2004.



Excavating and Demolishing the Bridge Approach.

## ***15<sup>th</sup> Avenue Bridge over NYCT (Brooklyn)***

The bridge was re-opened to traffic on December 9, 2004.

## ***Hamilton Avenue Asphalt Plant (Brooklyn)***

On December 11, 2004, Division ironworkers performed repairs to the plant's silos, mixing drum, and rap bin.

## ***2<sup>nd</sup> Avenue Bridge over LIRR Bay Ridge (Brooklyn)***

The reconstruction of this bridge, which began on November 4, 2002, was substantially completed on December 17, 2004, some two months ahead of schedule.



New 2<sup>nd</sup> Avenue Bridge.

### ***Anti-Icing***

In the first storm of the 2004-2005 winter season, ½ inch of snow was recorded in Central Park, and up to 2 inches in parts of Queens. Anti-icing crews were mobilized from 4:00 PM on December 19, 2004 to 9:00 AM the following day. 8,100 gallons of potassium acetate were applied to the East River bridges.

### ***Belt Parkway Bridge over Ocean Parkway (Brooklyn)***

On December 21, 2004, a substantial completion celebration was held in the project field office, during which City Councilmember Domenic Recchia presented award plaques for a “job well done”. The event was attended by Commissioner Weinshall.



Councilmember Recchia. Solademi Olajide; Beatriz Duran; Brooklyn Borough Commissioner Lori Ardito; Director of Design-Build/Emergency Contracts Chris Sklavounakis; Engineer-in-Charge Valeriya Remezova; DOT Commissioner Iris Weinshall; Leonid Gitis; Chief Bridge Officer Henry Perahia; Andre Celestin; and Tamara Berlyavsky. (Credit: Katherine Sarlin)

### ***Third Avenue Bridge over Harlem River (Bronx-Manhattan)***

Removal of the temporary bridge span on the Manhattan side took place on December 17, 2004, and the Bronx span was removed on December 21, 2004.

### ***Southbound Van Wyck Expressway (SB) at Union Turnpike (Queens)***

On December 21, 2004, Division ironworkers completed the repairs to the box beams and Jersey barriers that had been struck by a truck on December 7, 2004.

## ***FDR Drive (Manhattan)***

On the morning of December 26, 2004, acting upon complaints received by the Communications Center, our contractor mobilized a crew to remove icicles hanging from structures above the FDR Drive, which were judged to be in danger of falling onto traffic. Icicles were removed at Gracie Mansion, Houston Street, and at the Battery Park Underpass.

## ***Anti-Icing***

In the second storm of the 2004-2005 winter season, 1.8 inches of snow were recorded in Central Park. Anti-icing crews were mobilized from the evening of December 26, 2004 through the following morning. 5,050 gallons of potassium acetate were applied to the East River bridges. In addition, Division personnel cleared overpasses and monitored icicle conditions at the underpasses and on the FDR Drive and Cross Bronx and Brooklyn-Queens Expressways.

## ***Belt Parkway Bridge over Paerdegat Basin (Brooklyn)***

On December 27, 2004, Division ironworkers performed emergency repairs on a loose expansion joint on the bridge to avert an immediate threat to vehicles.



Division Ironworkers at the Belt Parkway Bridge over Paerdegat Basin. (Credit: Gholamali Mozaffari)

## ***New Year's Eve***

On the night of December 27, 2004, at the request of the Mayor's Office of Special Events and the NYPD, Division ironworkers temporarily welded shut all manholes in the Times Square area in preparation for New Year's Eve. Celebrating the arrival of the New Year in Times Square started in 1904 by Adolph Ochs, owner of the *New York Times*. The ball dropping tradition began three years later.

## ***Belt Parkway Bridge over Bay Ridge Avenue (Brooklyn)***

Cleaning and painting of the bridge, which began in April 2004, was completed in December 2004.

## ***Brooklyn-Queens Expressway over Atlantic Avenue (Brooklyn)***

Cleaning and painting of the bridge, which began in September 2004, was completed in December 2004.

## ***Cross Bay Boulevard Bridge over Belt Parkway (Queens)***

Cleaning and painting of the bridge, which began in November 2004, was completed in December 2004.

## ***Farmers Boulevard Bridge over Southern Parkway (Queens)***

Cleaning and painting of the bridge began and was completed in December 2004.

## ***Henry Hudson Parkway Viaduct over West 72nd to West 79th Street (Manhattan)***

Cleaning and painting of the bridge, which began in June 2003, was completed in December 2004.

## CHRONOLOGY

### **Linden Boulevard Bridge over Cross Island Parkway (Queens)**

Cleaning and painting of the bridge began and was completed in December 2004.

### **Seeley Street Bridge over Prospect Avenue (Brooklyn)**

Cleaning and painting of the bridge began and was completed in December 2004.

### **Superior Road Bridge over Cross Island Parkway (Queens)**

Cleaning and painting of the bridge began and was completed in December 2004.

### **11<sup>th</sup> Avenue Viaduct over LIRR West Side Yard (Manhattan)**

Cleaning and painting of the bridge, which began in July 2003, was completed in December 2004.



Bridge Painters Goncalo Lima & Milan Radovic at the 11<sup>th</sup> Avenue Viaduct. (Credit: Eralene Powell)

### **Manhattan Bridge**

December 31, 2004 marked the 95<sup>th</sup> anniversary of the opening of the bridge.



Manhattan Bridge at Twilight. (Credit: Michele N. Vulcan)