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Transporter
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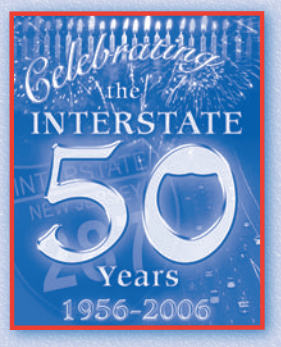

NJDOT has a celebration planned – and you're invited.

All 50 states are marking June 29, 1956, the date President Dwight D. Eisenhower signed the legislation for the building and funding of interstates, the start of a new roadway system designed to connect the entire country.

Commissioner Kris Kolluri, Esq. 2006

To mark the Golden Anniversary of the interstates, the American Association of State Highway and Transportation Officials (AASHTO) will coordinate a convoy from San Francisco to Washington D.C – the terminus of the original cross-country convoy in 1919.

You can take part in the proud history. Visit NJDOT Headquarters from June 5 through June 29. There will be exhibits, facts and artifacts, lectures and activities featuring the environmental concerns that became an integral part of highway construction with the interstates.

Commissioner Dwight R.G. Palmer 1956

"For NJDOT employees, this is a celebration of the engineering, environmental, community participation and construction expertise of the people of this Department," said Commissioner Kris Kolluri.

"It also marks the first of three national milestones," Kolluri said. In 2007 NJDOT will celebrate its 40th anniversary as the first state transportation agency in the nation. USDOT will celebrate its founding the same year.

Interstates make history

Although this 50th Anniversary issue touches mostly on milestones and events, it is the talent and dedication of decades of people at NJDOT who made New Jersey's interstates into the efficient, safe transportation network that they are today. Everyone at NJDOT past and present can be proud of our individual and combined accomplishments.

For Americans the warmer weather means they will head for the open roads. Many will use interstates, the federally-funded system of major highways between cities from coast to coast and border to border.

These roadways give drivers 42,794 miles on 62 highways, more than 54,000 bridges and 104 tunnels nationwide.

Built in the last 50 years, the interstates created an America of sprawling suburbs with full access to goods and services. Everyone in the country is within a few days by car to anywhere in the continental U.S.

Those roads weren't always there. In the 19th and 20th centuries, leaders who worked to create a viable highway system faced many challenges.

Our forefathers knew.

History provided the argument for better roads. At the turn of the 20th century the country's drivers were literally "in the mud" as most roads were unpaved. In 1892, the Office of Road Inquiry, forerunner of the Federal Highway Administration, was formed to advise states and counties on methods of improving roads.

General Roy Stone of New York, an advocate of safe, smooth roads, headed the agency.

Proposals for a nationwide superhighway system connecting states and major cities north to south and west to east had been suggested: for example, by Senator William Randolph Hearst in California in 1906.

In 1913 *The Road Maker* magazine ran an article titled "The Proposed Interstate Highway System" that described 16-foot wide roads, 18,000 miles long, connecting the 43 state capitols.

The Federal Road Act of 1916 mandated a highway agency in each state with engineering professionals to carry out federal-aid projects.

Unfortunately, World War I interceded. In 1918 the war ended, and at the American Association of State Highway Officials (AASHO) fourth annual meeting the discussion of a national highway plan resumed.

The movement for superhighways hit record speed when the 1938 Highway Act required a study for better roads by the Federal Bureau of Public Roads. The Federal Aid Highway Act of 1944 authorized the 65,000 km (40,300 miles) interstate system, with designations to be determined by individual states. However, none of these proposals authorized special funding.

Eisenhower knew.

President Dwight David Eisenhower was

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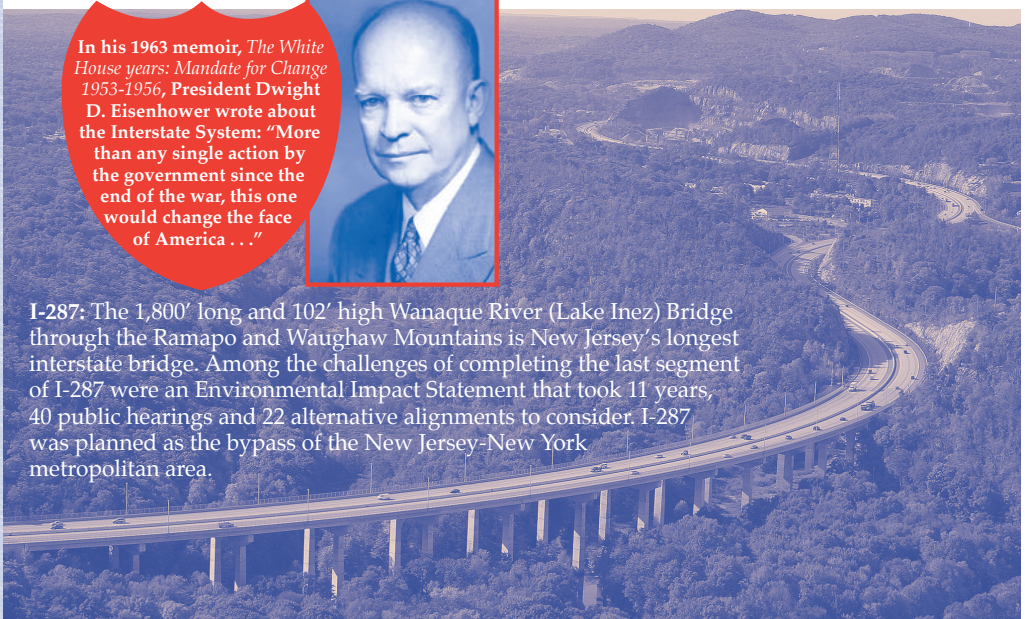
In his 1963 memoir, *The White House years: Mandate for Change 1953-1956*, President Dwight D. Eisenhower wrote about the Interstate System: "More than any single action by the government since the end of the war, this one would change the face of America . . ."



I-287: The 1,800' long and 102' high Wanaque River (Lake Inez) Bridge through the Ramapo and Waughaw Mountains is New Jersey's longest interstate bridge. Among the challenges of completing the last segment of I-287 were an Environmental Impact Statement that took 11 years, 40 public hearings and 22 alternative alignments to consider. I-287 was planned as the bypass of the New Jersey-New York metropolitan area.

I-78: "How much does an acre of forest weigh?" is the anecdotal question that comes up when memories of the planning for the "critter crossing" and the "cut and cover" or lowered roadway section (for noise abatement) in Union County were in the works. Community participation was also a major part of this project.

the major player in the growth of the interstate system. A General in the United States Army, he had participated in the Army's first transcontinental motor convoy from Washington D.C. to San Francisco in 1919. It took 62 days over muddy, sandy, icy roads and inadequate wooden bridges.

His later World War II experiences in Germany made him appreciate the *autobahn* (motorway) that made for easy convoy travel as opposed to the two-lane highways in the United States.

On January 5, 1956 in his State of the Union address, the President called for a modern interstate highway system. Later that year he signed the bill that provided for the interstates with federal funding. The Federal Aid Highway Act of 1956 empowered the states financially – $1.1 billion to the states for the first year of the interstate initiative – to construct a much needed, integrated roadway system throughout the nation.

The Act initially authorized 41,000 miles of roadways that would tie the nation together and effect efficient movement of goods, people and services. The length was later increased to 42,500 miles with a 1975 completion date.

New Jersey was ready.

New Jersey was a forerunner in the development of better roads. It was the first state to adopt a state aid plan for road improvements on the county level in 1891, and was anxious to join the national interstate movement.

One of three routes listed in the original interstate plan for east-west transcontinental routes was I-80 from San Francisco, CA to Teaneck, NJ and for the north-south route I-95 from Miami, FL to Houlton, ME (through New Jersey).

By the mid 1950s the New Jersey State Highway Department, with Dwight R.G. Palmer as Commissioner, had planned more than 415 miles of the nation's total 42,794 miles of interstate highways. The benefits were better national defense; reduced cost of transporting goods; and clean, wide safe, inexpensive highways for tourists.

While the NJ Turnpike, completed in 1951, was a toll road, the interstates were free. The federal government, which had primary responsibility for financing the roadway, provided 90 percent of construction costs.

THREE INTERSTATE STORIES

New Jersey's super road system includes Interstates 78, 80, 95, 195, 280, 287 and 295. Three of those – I-78, I-287 and I-295 (the Trenton Complex) – are examples of NJDOT's dedication to completing a project while incorporating community participation, preserving wildlife, the environment and the cultural aspects of a project.

Protecting motorists and residents; preserving wildlife.

In 1957 when I-78 was proposed to link Allentown, PA with the NJ Turnpike and Newark Airport to the Holland Tunnel, residents of the area parallel to Route 22 opposed the roadway, particularly in the eastern sections. Local opposition to building in their towns held up construction.

There was other opposition as well. In 1965 when NJDOT planned to construct I-78 through the Watchung Reservation, a natural reserve, residents opposed construction.

Then, in 1970 the Federal Government passed a law mandating environmental studies before construction. The 5.5 mile strip of I-78 in Union County subsequently took 12 years of planning, compromise and research at a cost of $2 million.

This obstacle later became a win-win situation for motorists, environmentalists and residents giving the area more environmental safeguards than any other road construction project.

When this link of I-78 was built in 1985, environmentalists suggested wildlife overpasses between Scotch Plains and Springfield, Union County, connecting parkland. Using a concept that originated in Holland called "ecoducts," it allows wildlife to travel without crossing the highway.

This was a first for NJDOT – the first wildlife crossing over the interstate system in the United States and Canada, according to the Federal Highway Administration.

Other firsts on this project included extended bridges for equestrians and a lowered roadway "cut and cover" to obliterate highway sounds from spilling into the county reservation.

Decades pass.

Often called the missing link of roadways, I-287 took 64 years of planning and construction before Governor Jim Florio and Commissioner Thomas Downs opened the last link to traffic on a cold rainy day in November 1993.

Originally proposed as the New York-New Jersey Beltway in 1929 by the Regional Plan Association, the purpose for building a network of express highways in the Metropolitan New York area from the Outerbridge Crossing (NJ) to Rockland County (NY) was to serve the ever-increasing motor vehicle users as a

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New York-New Jersey metropolitan area bypass.

Studies continued in 1937 and 1947 until the Legislature passed a bill for construction of the Middlesex Freeway, from Route 22 in Somerville to Route 17 in Mahwah to the Outerbridge Crossing.

NJ Governor Robert Meyner and NY Governor Averill Harriman finalized plans to connect a route in New Jersey with a similar route in New York at the Outerbridge Crossing and again at Suffern in 1956.

In June construction on the 93 mile beltway was added to the National System of Interstate and Defense Highways; in September 1958, the road was named I-287.

Stops and starts in construction included an "interstate restructuring" in 1980 announced by Commissioner Louis Gambaccini, that left the last section of I-287, a 21 mile link, unfinished. Construction resumed from Route 23 to the Paterson Hamburg Turnpike in 1984.

The Environmental Impact Statement took 11 years to complete, as the alignment impacted 77 acres of wetlands and included 36 bridges.

The longest bridge was the Wanaque River Bridge at Lake Inez. NJDOT used the new AASHTO seismic design for the first time in the state on this and the Pequannock River bridges. The fog problem that plagued the bridge was solved by bi-directional light guidance tubes that would illuminate yellow to help the driver negotiate the bridge.

Baskets* help.

When NJDOT looked for a way to solve noise problems on I-287, in the Montville, Kinnelon and Pequannock areas, the Department used a 7,000-year-old method called Gabion basket to create noise walls along I-287 from 1985-1992.

Trenton Complex: I-295/I-195 and Route 29. The complex of roadways that access the State Capitol involved sophisticated planning on many levels. This project included one of the largest environmental projects undertaken by NJDOT. Community participation, wetlands replacement, archeology and history were serious considerations.

The walls are still intact, although special measures were needed in certain areas. In Montville, to ensure they were aesthetically appealing, the contractor filled the baskets with the crushed rock by hand.

The Trenton Complex: I-295 & 195 / Route 29

Seventy miles long, I-295 was originally planned to replace Route 30 in the 1940s. It starts at the Delaware Memorial Bridge, goes into Salem County, then follows a course west of the NJ Turnpike through the Philadelphia-Camden metropolitan area to the Trenton area and joins I-95 in Hopewell.

Also called the Camden Freeway, the first section opened in Gloucester County in 1948, with a second section following in 1954. NJDOT has scheduled a reconstruction of sections of this roadway in 2007.

NJDOT built the majority of I-295 after it became eligible for interstate highway funding. Its design and construction reflects those standards: 12-foot wide lanes and shoulders, and a design capacity for 40,000 vehicles per day on the four lane roads; 75,000 for six lane roads; and 36 foot wide malls.

Older, pre-interstate sections of I-295 have 16 foot wide grass malls and Jersey barriers, a concrete median first used in New Jersey in 1955.

Near Trenton, I-295 intersects with I-195 and Route 29 at exit 60. Although it is a scenic state highway that follows the Delaware River in rural sections of Mercer County and Hunterdon County, in the Trenton area Route 29 becomes a freeway with a tunnel near the water marsh and swamp land.

To alleviate environmental problems and to satisfy the permit requirements of the Army Corps of Engineers and NJ Department of Environmental Protection for tunnel construction, NJDOT created an Open Water Mitigation Project on the banks of the Delaware near Duck Island. **Continued on page 4**

*Simply defined as cylindrical containers open at both ends, placed upright and filled with dirt or stone, Gabion baskets are also used as a fortification for problems such as soil erosion, water drainage, an eroding stream bed, or earth slippage. Gabion is a French word derived through Italian (gabbione) and Latin (gabbia) or cage. The baskets historically transcend many civilizations.

Egyptians first used the baskets along the River Nile for bank protection. During the American Civil War Gabion baskets were used as military fortifications, manufactured from willow in a cylindrical form. They were stood on end and filled with sand to protect soldiers from musket and cannon fire. As a defensive measure, the baskets were filled with wool and straw, lighted and rolled down slopes into advancing troops.

The first steel wire structure was built in 1893 in Caselecchio di Reno, northern Italy, to repair erosion damage along the Reno River. Because they are flexible, and can be shaped into the contours of any land form, creek or pond edge, they are used today throughout the world on highways, for bridge erosion control, in landslide areas and even on golf courses.

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Watson House

History lives.

Driving along on I-295 near the Arena Drive, Trenton exit, you'll also find historic sites. One of these is Watson House, home of the Colonial-era Overseer of Highways.

The year was 1703. Two major pieces of transportation legislation: the Public Roads Act of 1681 that provided a highway from Burlington to Salem and the Public Roads Act of 1684 that provided roads between the Delaware River towns had been enacted by the West Jersey Assembly.

Traveling along those roadways, however, was difficult as they were made of dirt, uneven with tree stumps and mud holes. The Assembly knew the problems had to be handled.

Enter Isaac Watson, a farmer and surveyor, who lived on 700 acres of land in Ye Falls of Ye Delaware, as Trenton was known, in Nottingham Township, along Watson's Creek that borders the Delaware River. The Assembly chose him as Overseer of Highways, for he had personal knowledge of the area, its roads and its waterways.

The *Watson House Book*, written by Mildred C. Mabie of the American Heritage Committee (Albert A., Colacello, Publisher) explains that when Watson was a child, his father William had purchased the land from West Jersey Proprietors, and with fellow members of the Society of Quakers, built a non-commercial scow ferry on the creek.

This mode of transportation was essential to carry produce from their farm to market in Philadelphia.

The younger Watson also knew how important the waterways and roads were to support construction in the area. In 1708, when he built his house with walls 15 inches thick, the stone was brought there on flat boats from Trenton.

Watson remained Overseer of Highways for another term, and his descendents lived in the house for more than 100 years. It was privately owned until 1964.

Today the original structure, recognized as the oldest house in Mercer County, still stands intact with the exception of the lead window sashes. They were removed during the Revolutionary War to manufacture bullets.

Located in the 200-acre John A. Roebling Memorial Park and Wildlife Safety Zone in a section aptly named Watson's Woods on the Hamilton Marsh Tidal Waterway, the Isaac Watson House is now the state headquarters of the Daughters of the American Revolution (D.A.R.).

For information or to visit, the Mercer County Park Commission offers information on John A. Roebling Park at http://www.mercercounty.org/parks/parks.htm, or you can contact the D.A.R. at http://www.njdar.org/watson.html or 609.896.0361 for the Watson House tour schedule.

– EDYTH HETMAN