

The Road Ahead

By Jeff Fontaine, P.E., Director

Welcome to the "time capsule" edition of NDOT News. We're not saying this newsletter qualifies as literature for the ages, but it does take on an impressive span of time.



The department's origin in 1917 and the first cross-country military convoy two years later are contrasted with completion of a major freeway segment in Carson City. The difference between a convoy truck breaking through a rickety wooden bridge in Nevada (page four) and our current status of having the best bridges and roads could hardly be more dramatic.

Along the way we also look at a few more milestones that mark NDOT's accomplishments: "super projects," or major construction costing tens of millions of dollars, dramatic growth in the state, and our response to that growth are all part of the big picture of transportation.

We are pleased that Nevada's approach to maintaining roads and bridges has led to our high national ranking. If ever there were a testament to prevention beating a cure, maintenance trumping reconstruction seems to be it.

While some of this newsletter is devoted to "firsts," closer study reveals events coming full circle. The military convoy of 1919 was an experiment that showed our country's roads were in terrible shape and needed vast improvement.

A second convoy, crossing the United States this summer, is a tribute to that event and an interstate highway system bill.

But when the convoy terminates in Washington, D.C., there will also be a call to better maintain the 46,508 miles of roadway the interstate system has become.

As everyone who is involved with transportation can explain, however, maintaining the system in an era of flat revenues and rising costs will be difficult. It will be the next big challenge for departments of transportation around the country.

On The Cover: From dirt to gravel to the best combination of elements for asphalt or concrete, Nevada has made huge strides in road building. Cave Rock at Lake Tahoe is one area where the challenge has been great. NDOT received in February an award from the Tahoe Regional Planning Agency for Best Scenic Improvement from the way it has added a natural look to new barriers and guardrail.—Vintage photo from the Special Collections Department, University of Nevada, Reno Library

Highway System Marks Milestone

June 29, 2006, is the 50th anniversary of the federal legislation that started one of the biggest engineering projects ever undertaken: the U.S. Interstate Highway System. The wide, relatively straight roadways in the interstate system were designed to be faster and safer than the two-lane roads that preceded them. The new designs worked, and the system has brought amazing changes to our way of life:

- It has put Americans within a few days' drive of practically everyone else in our nation, altering our willingness to travel and the way we schedule our time.
- It has boosted our economy, forever changing the way we move people and freight; it has facilitated international trade; and turned trucks into rolling warehouses.
- It has improved the link between homes and jobs and has redefined the relationship between urban and rural America.

Good roads are now taken for granted. An increasing percentage of Americans cannot remember our nation without an interstate highway system.

Half a century into the quantum leap of mobility, it is time to reflect on what America has gained from it and ask what might need to change in future years to keep it working.

The Birth of the Interstate Highway System

As America entered the 20th Century, good roads—even paved roads—were not common. Roads might lead outward from cities, even to state lines, but there was no guarantee they'd meet other roads in adjacent states. Road systems weren't marked any better than they were built, so it was not uncommon for travelers to get lost as they attempted to drive early automobiles from town to town, and it was even more common for cars and bicycles to get stuck in mud on unpaved roads.

In 1914, officials of early state transportation departments formed the American Association of State Highway Officials to bring a more orderly

arrangement to the road system, establish standards for construction, and promote highway development across the country. Years later, the state officials worked with the federal government to set up a state/federal shared system for financing roads that continues to this day.

The National Highway Committee, appointed by President Franklin Roosevelt, developed plans for

This year marks the 50th anniversary of the federal law that brought America its unparalleled interstate highway system. This 46,508-mile web of superhighways has transformed our nation and our economy. It is a symbol of freedom and a tribute to human ingenuity—although some of the associated changes such as urban sprawl and increased reliance on fossil fuels have been controversial.

a national system of expressways in 1944. Congress designated the 40,000-mile National System of Interstate Highways that year, but funding would not be authorized until President Harry Truman signed the Federal-Aid Highway Act of 1952 offering a token down payment of \$25 million for the Interstates. It



FIRST MOTOR CONVOY—Nevada was part of history in 1919 when the first Army motor convoy crossed the state as part of its transcontinental journey. The convoy route generally followed US-50, then known as the Lincoln Memorial Highway. Lt. Col. Dwight Eisenhower was one of the officers in the convoy -- Nevada Historical Society



TRUCK ROUTE?—King's Canyon above Carson City was the narrow route used by the 1919 Lincoln Highway Military Convoy on the way to San Francisco. Officers were worried about the narrowness of the road. One truck slipped off the road but it was winched back by the engineers.

would be up to President Dwight David Eisenhower to lead the campaign for funding sufficient to build the nation's Interstate System. Eisenhower witnessed the need for a national highway system in 1919, when as a lieutenant colonel in the Army he helped staff a coast-to-coast convoy of 81 military vehicles. The 1919 journey was a long and difficult trip—62 days of heat, breakdowns, mud, bridgeless river-crossings, and rough roads. Where bridges did exist, the heavy military vehicles often broke through bridge decks. With 3,251 miles to cover between Washington, D.C., and San Francisco, the convoy set a slow pace—58 miles a day at about 6 mph.

During the journey, Lt. Col. Eisenhower formed the opinion that the United States desperately needed a better highway system. That conviction was only

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Convoy Convinced Future President

reinforced during World War II, when Eisenhower used Germany's autobahn system to move U.S. troops with lightning speed, and put the German army on the run.

Although a system of special interstate highways had been discussed as early as the Roosevelt Administration in the 1940s, Eisenhower made it a keystone of his domestic agenda when he came into office in the 1950s. He named Gen. Lucius Clay to work with a federal interagency committee and the Bureau of Public Roads to assess needs, estimate costs and make recommendations on how to fund the system. Francis "Frank" C. Turner, who would later oversee much of the construction of the Interstate as head of the Bureau of Public Roads, served as executive secretary.

Although the Clay Committee's report, A Ten-Year National Highway Program, documented the funding needs, Congress failed to embrace it. The President's plan went down to defeat in July 1955.

Unwilling to give up, Eisenhower resumed his campaign. Creation of a new tax-based financing plan, with the federal government bearing the lion's share of construction costs, paved the way for passage of the program in the Federal-Aid Highway Act of 1956.

The bill that was to change the face of America was signed by Eisenhower without fanfare in a hospital room at Walter Reed Army Medical Center where he was recovering from surgery. --Article provided by the American Association of State Highway Transportation Officials.



CONVOY BREAKTHROUGH—Somewhere in Nevada, a frail wooden bridge couldn't take the strain of a military convoy in 1919. The convoy struggled with river crossings, weak bridges and rutted roads.

Caravan Will Celebrate Founding of Interstates

The 50th anniversary of the interstate highway system and its roots in the first transcontinental Army motor convoy is too big an event to go unnoticed. A cross-country journey

along I-80 will kick off in San Francisco on June 16. That afternoon the caravan, made up of transportation officials in more than a dozen vehicles, will pull into the National Auto Museum in Reno for a press conference. The caravan will overnight in Reno and leave for Salt Lake City the next day.



CHALLENGING TERRAIN—Imagine the Lincoln Highway in California when it was little more than a track of decomposed granite over the Sierra. For the military convoy, difficult roads plagued them throughout the journey. --Special Collections Department University of Nevada, Reno Library

followed the Lincoln Highway across the country, with Nevada stops in Ely, Eureka, Austin, Fallon and Carson City.

Consisting of 81 vehicles, a mobile machine shop, kitchen trucks, two ambulances 12 staff cars, several motorcycles, a searchlight and 280 officers and enlisted men, the convoy was a huge affair. One army officer was Lt. Col. Dwight David Eisenhower, a member of the Tank Corps from Fort Meade, MD.

This year's convoy will follow I-80, which is entirely appropriate as one of the longest interstates at 2,899 miles. The American Association of State Highway Transportation Officials, AASHTO, is organizing the caravan, made possible through corporate sponsorship. The caravan will conclude June 29 in Washington, D.C.

1900s Legislation Pushes Nevada To Enact Highway Department

The golden anniversary of the interstate highway system is a momentous event, but federal road building goes back 90 years to the Federal Aid Road Act, which allowed states to qualify for federal money for the construction of roads. That act spurred the creation of the Department of Highways in Nevada on March 23, 1917.

In less than one month a board of highway directors was appointed and Robert K. West was named the first state highway engineer.

Early in 1918 the department was ready to begin its first construction program by letting several contracts covering a large number of road improvements. However, the demands of World War I prevented construction.

Questions about the best paving material arose at the start. While asphalt and concrete are the choices today, gravel was used on the first projects. From the first report from the State Highway Commission 1917-1918:

"Of the cheaper types of construction, that of a gravel surface is generally the most suitable for conditions in this state. Where the material is at all available, that is the type of surface adopted. The gravel itself is generally suitable for this purpose, but it is almost always found without bonding material such as clay or shale, and when placed upon an inert soil will undoubtedly require Reno acconsiderable rolling for its thorough packing.

"Only one piece of the so-called permanent surfacing has been contemplated so far. The road south of Reno to Huffakers in Washoe County, a distance of 5 ½ miles, will be surfaced with concrete 6 ½" in depth or Topeka asphalt 1 ½" thick on a broken rock base 5" deep. Excellent rock has been found for either of these pavements, but a poor quality of sand. The decision as to the type of pavement depends to a large extent upon the price of cement and asphalt."

The first 14 highway projects funded in Nevada,

except the job mentioned above, were gravel. Projects were awarded throughout the state, from Esmeralda County in the south to Elko and White Pine County in the north and Washoe to the west. All were assisted by the federal road building funds.

By 1922 the first 300 miles of state highway had been constructed. Thirty-five miles were concrete, 160 miles were gravel, and 105 miles were graded. Twelve bridges



PRE-FREEWAY--A two-lane track was all that was needed for a motorist to go from Reno to Carson City. This approach to Carson City has been replaced with a four-lane highway and interchange that opened in February 2006.—Special Collections Department University of Nevada, Reno Library

were constructed.

The first big Clark County project was converting an abandoned railway to a roadway between Las Vegas and Beatty in 1919. The right of way and bridges were a huge bargain: \$3,889.44.

Before the gasoline tax, funds came from legislative appropriations, auto license fees, the state racing commission, property taxes and the proceeds of mine tax.

In 1923, Nevada joined several other states in passing a gasoline tax of two cents per gallon. At one point the gas tax was split between the State Highway Fund and

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Road Taxes Passed to Fund Building and Maintenance

counties, but in 1929 the entire gas tax was allocated to the state. County gas taxes have since been imposed.

Safety issues have always been important. In the 1920s standard road markers and warning signs were erected. In the 1930s, the new challenge was unemployment due to the Great Depression. To provide jobs, Congress appropriated \$80 million to loan to states interest free for road construction. In 1933, the National Recovery Act brought \$5 million to Nevada. That year there were 2,400 miles of surfaced roads in the state.

In 1944, the Federal Highway Act created three highway categories for primary, secondary and secondary extensions into urban areas.

In 1956, the Federal Highway Trust Fund was established.

Where large machines do most of the work now, highway building 90 years ago used the muscles of man and animal.

Documentation from that era shows horses pulling a scoop of gravel to the center of a trestle and a worker tipping the rock into a truck parked below.

The 1960s were significant for Nevada. Sections of Interstate 80 as a four-lane divided highway were completed across the state, freeways were developed in Las Vegas, and the Federal Highway Administration approved new highway standards.



FABULOUS LAS VEGAS—Instead of a blaze of neon, a concrete road and a gentle change from rural to urban mark the entrance to Las Vegas in the 1940s. Note the sign marking all the interstates.



MOUNTAIN VIEWS—High-rise casino-hotels and flashing signs are yet to predominate on the Las Vegas "Strip" of 1952. As the city constantly tops the list of fastest-growing, it is a constant challenge for local and state officials to keep up with transportation projects.

Diver Goes Beneath the Surface to Discover if Bridges are Sound

The big storm that hit northern Nevada at the end of December will soon fade in the public's memory, but for NDOT the frantic work of plowing to keep roads open, moving rockslides, and channeling water has given way to mundane tasks.



DISCUSSION—Diver and engineer Mark Bostick talks about the bridge inspection he's about to undertake with NDOT's Dave Severns, principal bridge engineer.

Weeks after the event, maintenance crews are still cleaning drop inlets and filling in washouts. What may be unknown to the publike is the storm resulted in the department calling in divers from Clearwater, Fla., to inspect bridge structures in northern Nevada. The inspection is needed to examine structures that might have been adversely affected by scour or impact from debris.

Mark Bostick, a professional diver and engineer with H. W. Lochner, has been inspecting Nevada bridges since 1992. One of the first bridges he inspected this year, the Virginia Street Bridge in Reno, had significant scour.

"There were 23 out of 90 feet in the arch foundation that had no support, it was completely scoured out," Bostick said. Reno city officials will have to bring in rock or cement to temporarily reinforce the foundation. The future of the bridge, now over a century old, is in doubt because its current height and profile catch debris and contribute to flooding during big storms.

Dave Severns, principal bridge engineer for NDOT, said it was important to have all the



COM BOX—Ken Ulrich, a certified bridge inspector with Lochner Inc., powers up the "com box" that will allow the diver to report back as he evaluates the Genoa Bridge.

bridges that might have been affected checked out. "The water is still high and swift in a lot of places, with a lot of turbidity. Divers provide a vital service. They provide data we're not able to get."



MEASURING UP—Mark Bostick makes one of several bridge measurements on the Genoa Bridge over the Carson River. Northern Nevada bridges were inspected after December storms to determine if they were damaged by flood or debris.

Nevada is Again at Top of List **For Best Roads and Bridges**

A good maintenance program, a benign climate and other advantages have again put Nevada at the top of the list for smoothest roads and best bridges, according to figures from the Federal Highway Administration.

Nevada has led the rankings for the past several years. One reason is an intelligent approach to maintenance and construction. Other reasons relate to

the fact that Nevada is the most arid state and has newer construction, which means that NDOT does not have to wrestle with ancient infrastructure.

Nevada and Arizona have the smallest percentage of bridges that are deficient at about five percent, but Nevada has only a quarter the number of bridges of Arizona: 1,723 compared to 6,901. Nationally, 25 percent of bridges are deficient.

"We have a relatively low number of bridges," Chief Bridge Engineer Bill Crawford said. "We can afford to fix them and expend money to maintain them.

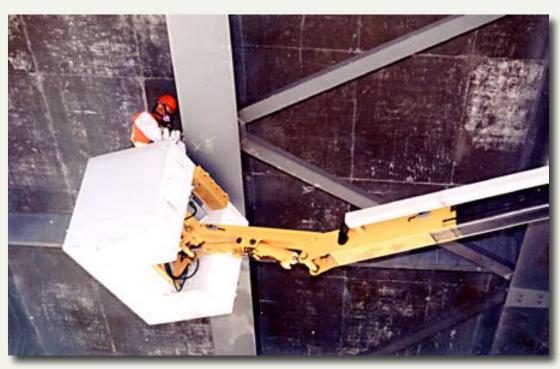
"Our success is based on a combination of things," Crawford said. "Most states have structures that are older and require more maintenance. Newer bridges, built to more modern standards, don't deteriorate as fast "

Nevada's climate is also a big factor. "On the East Coast they have to use a lot more salt during the winter. In the northeast they are putting out 10 to 20 times more salt per lane mile than we are. We minimize the amount of salt we use by using a salt and sand mixture or by using light coatings of brine which lowers the freezing temperature of the roadway," Crawford said.

The bridge chief explained that while the term "deficient bridge" is used to describe a bridge that is in need of a major rehabilitation or even replacement, it does not mean the bridge is in danger of collapse.

When salt is carried by water through cracks in concrete it rusts rebar and causes deterioration to the bridge structure.

FHWA categorizes deficient bridges as structurally or functionally obsolete. Structurally obsolete means the



BRIDGE INSPECTION--All of the state's public bridges, not just those owned by NDOT, undergo an inspection every two years. Every four years each bridge received an in-depth inspection where hundreds of measurements are taken. Larger structures, like the one shown, are inspected from a boom truck.

span has an inadequate load carrying capacity for current truck traffic. Functionally obsolete means the bridge restricts traffic flow or poses a hazard. Examples are bridges that are narrow by today's roadway standards or have an abrupt curve.

The department inspects 1,041 interstate and state bridges and 682 city and county bridges. Comparing surrounding states, Nevada has the fewest number of deficient bridges at 78 and the lowest percentage of deficient bridges at less than five percent. Arizona ranks just below the Silver State. Figures for the states surrounding Nevada:

Smooth Roads Ahead!

Nevada has the smoothest interstates and national highway routes in the country, according to figures released by the Federal Highway Administration. The Silver State leads with 74 percent of its rural and urban interstate miles in "very smooth" condition. Figures were released by the FHWA for highways based on data collected in 2003. Data is collected in odd-numbered years.

The challenge for Nevada and other states will be to maintain their ranking as costs for paving and construction materials escalate.

"Two years ago an overlay cost \$400,000 per mile, today the cost is \$1 million," said Sohila Bemanian, assistant chief materials engineer for NDOT. "Reconstruction cost \$1 million per mile, and now it's up to \$2.5 million. The cost of plantmix overlay has risen from \$32 per ton to \$60, nearly double in two years."

Bemanian said Nevada's high ranking is more a product of having to resurface to avoid reconstruction rather than striving to attain a certain percentage of smooth roads.

"It's a question of pay me now or pay me much more later," Bemanian said. "We don't have the money to waste, so we need to keep our roads in top-notch shape. Our main objective is to be prudent with our resources and the side benefit is that we are number one."

Nevada keeps to a rigorous schedule of maintenance, overlaying highways with new asphalt even if the road does not show wear and tear, Bemanian said.

100 **National Highway System Data Summary** 74% 80 60 53% 51% 49% 45% 43% 43% 40 **NEW MEXICO** ENNESSEE FLORIDA MYOMING GEORGIA 20 Top States with percentage of highways in "Very Good" condition

Nevada and Surrounding States

| | # of Bridges | Deficient | Percent |
|------------|--------------|-----------|---------|
| Nevada | 1,723 | 78 | <5 |
| Arizona | 6,901 | 360 | 5 |
| California | 24,465 | 4,257 | 17 |
| Utah | 2,770 | 486 | 18 |
| Idaho | 3,521 | 665 | 19 |
| Oregon | 6,640 | 1,743 | 26 |



CHIP SEAL—NDOT workers sweep up loose chips after a chip sealing project in rural Nevada. By using asphalt overlays, slurry seals and chip seals, the department is able to delay expensive reconstruction.

"If you wait until problems arise it's probably too late. What would have been a simple overlay might become an

expensive reconstruction costing two-and-a-half times as much," the engineer said.

There is also a direct benefit to the public in direct costs with fewer potholes meaning fewer wheel alignments and punctured tires. Overlays take less time than construction and the duration of traffic delays is also reduced.

NDOT Director Jeff Fontaine said the ranking reflects well on the agency's employees and contractors, as well as the soundness of its maintenance program.

"Every state would be proud to earn this ranking on roads and bridges, and I feel it is more impressive to achieve the smoothest road status when we are taking on a number of construction and expansion projects."

NDOT is responsible for maintaining more than 5,449 highway miles, including 2,105 miles of interstates.

Modern Era Sees Freeway Interchanges; Bonding Allows More Projects to be Built

The modern era of highways was marked by completed interstates, beautification efforts, freeway interchanges and new methods of paving.

A six-year program to make US-40 four lanes over Donner Summit between Sacramento and Reno was completed in 1964, and the highway was renamed I-80 in 1975.



AIRPORT CONNECTOR--The first section of the Southern Beltway (I-215), from I-15 to McCarran Airport, along with a connecting tunnel beneath the east-west runways, was opened to traffic in 1994.

The Highway Beautification Act was passed in 1965, and several projects were begun in Nevada: three safety rest areas and two scenic viewpoints were constructed between the California state line to the Churchill-Pershing county line. A roadside rest was built north of Hawthorne and landscaping was planted along Sahara Avenue in Las Vegas.

Also by 1965, all but 23 miles of I-15 across the southern tip of the state were completed. Only those portions through Las Vegas and a portion east to the Arizona state line were still to be done. I-15 between McCarran International Airport and Sahara Avenue were under construction and by the late 1960s, I-15 through Las Vegas was built to three lanes in each direction. Lake Mead Boulevard in Henderson was reconstructed in 1965 and that was also a big year for NDOT as an agency: the new administration building in

Carson City was completed and occupied.

US-395 and I-80 were completed through Reno in the early 1970s and the Carlin tunnels near Elko were excavated. Also by 1972, I-80 was mostly in its final form except for sections near Lovelock, Elko and Wells east to Wendover.

1970 saw the establishment of the Federal-Aid

Urban System that provided federal funds for improvements to local streets and roads.

In 1979, the department's name was switched from highways to transportation, in keeping with the national movement to include the various modes of travel that move the country. Few people know, for instance, that NDOT inspects the general aviation airports in Nevada. The newly renamed agency was directed to develop and coordinate balanced transportation policy and planning. Added responsibilities include the social, environmental and economic goals of the state.

Between 1974 and 1995 the national maximum speed limit of 55 mph went into effect as a way to conserve fuel. 1974 was also the year of the first experiment with recycled asphalt in Nevada on I-15 at Sloan near Las Vegas.

In 1981, the Nevada Legislature allowed bonding to finance highway construction and \$25 million in bonds were sold for the I-80 Lovelock Bypass. Also in the early 1980s,

Nevada began its successful program of preserving the



LAKE TAHOE--In 1983, the Nevada State Legislature established the Scenic Byways program in Nevada, including the state routes along Lake Tahoe. Today there are 20 scenic byways in Nevada comprising a total of 420 miles.

surface on existing highways so that much more expensive reconstruction can be postponed or delayed indefinitely.

In 1983, major progress was made on the I-515 from Maryland Parkway to Las Vegas Boulevard and plans were made to build more of the expressway from Eastern Avenue to Maryland Parkway.

In 1991, the Intermodal Surface Transportation Efficiency Act was expanded to allow for federal funds to pay for resurfacing and maintenance of interstates.

Growth in the Las Vegas Valley required more than major arterials, and the concept for a beltway around the Las Vegas Valley began during the late 80's. In 1994, Clark County completed the first section of the Southern Beltway (I-215), from I-15 to McCarran Airport, along with a connecting tunnel beneath the east-west runways. The ring road was completed with the Henderson Beltway Interchange in 2005.

NDOT adopted a master plan for aesthetics and landscaping in 2002 to establish policies, procedures, standards, and guidelines for landscape and aesthetic treatments on the state's roads and highways. The plan calls for spending three percent of a project's costs on



EARLY LANDSCAPING—Sequoias on Reno's Plumb Lane make an impressive display. The trees were part of highway beautification in the 1960s.



MASSIVE CONSTRUCTION—At 66 tons per segment, and 675 pre-cast bridge sections, the construction of the Las Vegas Spaghetti Bowl in 1999 was a huge project with eight freeway to freeway flyovers. It was the first Nevada project to use large pre-cast bridge segments.

landscaping and aesthetic treatment. The policy means that all future NDOT construction programs will have beautification as part of the work.

The department also has a program to provide landscaping and aesthetic treatments on existing projects. In 2005 NDOT approved five projects requested by local communities in matching grants. A total of \$2 million will be made available each year toward community retrofit projects.



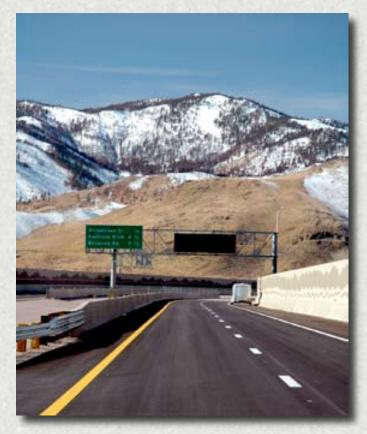
SNOW MOUNTAIN—One of NDOT's first partnering efforts for aesthetics on an interchange was this decoration at Snow Mountain on US-95 10 miles north of Las Vegas. Partners included the Las Vegas Paiute Tribe and the Bureau of Indian Affairs. The interchange opened in 1995.

Rapid Growth Leads to "Super Projects"

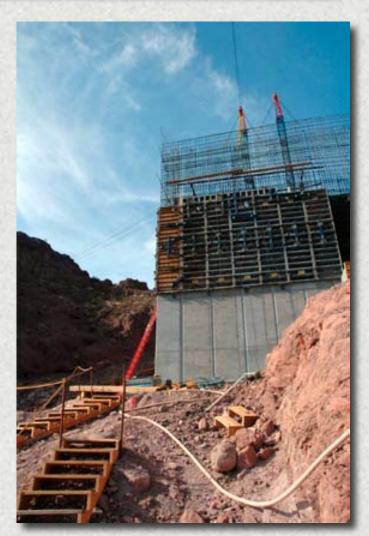
In the 1990s, the department recognized that the state's rapid growth meant highway projects had to be considered on a grander scale. A schedule of "super projects" was designed at an estimated cost of \$1.5 billion. While the numbers have changed somewhat over time, the six super projects will relieve the states most congested traffic corridors:

- I-15 widening Las Vegas to California state line
- US-95 widening in northwest Las Vegas
- I-580 Reno to Carson City freeway extension
- US-93 Hoover Dam Bypass
- Carson City Freeway
- I-515 Bruce Woodbury Beltway

All of these projects are now well under way with the exception of the Hoover Bridge connection to Boulder City, which is under design.



READY TO GO—Just before opening to vehicles in February, the Carson City Freeway has a Dynamic Message System sign in place, freeway signs and bright new striping. The Carson City Freeway is one of six Nevada "super projects" designated in the 1990s.



FOUNDATION WORK—With the approaches completed from Nevada and Arizona, the next step is to build the bridge structure over the Colorado River.

Another momentous year was 1991 when the Intermodal Surface Transportation Efficiency Act was passed allowing funding for bridge inspection, maintenance, rehabilitation and replacement of roadways, funding for intelligent transportation systems (ITS), toll roads and air quality enhancing transportation projects.

As the new millennium approached, Nevada's population neared two million and roadways in the state's major population centers, Las Vegas and Reno, became more congested.

Even before the new millennium there was a realization that highways could not be widened forever, and new transportation solutions had to be found. Answers include monitoring and responding to the flow of vehicles on interstates and arterials through Intelligent Transportation Systems (ITS). ITS can improve traffic flow by such things as ramp metering, using signs to alert drivers to problems, and coordinating traffic signals. More reliance on public transportation is also needed.

In 2002, Nevada's roadway maintenance program was recognized as providing the smoothest highways in the nation. The program started in the 1980s proved its worth.

Reviewing nearly a century of work by the Department of Highways and the Nevada Department of Transportation reveals varied challenges over the years. With history as a guide, the work at NDOT will never be easy, but the department, and its employees, will rise to the occasion.



COLORADO BRIDGE—Cables and pulleys support the first temporary towers in the construction of the bridge bypassing Hoover Dam. Completion is scheduled for 2008.

I-580—Bridge work continues on the I-580 extension between Reno and Washoe Valley. The temporary supports at the Browns Creek Bridge are being lowered and removed.



US-95—Years of work to widen US-95 through Las Vegas are coming to fruition, including this area at Jones and US-95 where a snorkel truck is being used to pump in cement to provide drainage structures.



Apparently, if you build it, they will come. Years of discussion, design, bridge building and highway construction culminated in the first phase of the Carson City Freeway opening to pedestrian traffic on Saturday, June 11. More than a thousand walkers, runners and cyclists showed up to experience the new freeway on a sunny, warm day.

The air was festive as people pushing baby strollers, rollerblading, or walking with dogs on leash experienced the long-anticipated freeway. The first section of freeway is three-and-a-half miles long and runs from US-50 to US-395 north of Carson City.

Festivities began at 9 a.m. with a five-kilometer and 10-kilometer race assisted by Fleet Feet of Carson City. Cyclists were allowed a few minutes later and the wide lanes easily accommodated those on foot and those on wheels. The first couple of hundred finishers received their choice of a commemorative hat or T-shirt provided by designers PBS&J Engineering and the contractor for the project, Ames Construction.

Several people said they were glad the freeway was opening to ease congestion on North Carson Street and to make travel easier from the Dayton and Mound House area to Reno.

One walker was excited enough to call someone on his cell phone. Overheard: "No, I don't have a bypass, I'm walking on a bypass."



While the entire project cost is \$330 million, the first phase, including the four bridges and rightof-way cost \$120 million.

A contract will be let this summer for the second phase

FIRST CAR-Gov. Kenny Guinn drives Carson City Mayor Marv Teixeira as they inaugurate the first phase of the Carson City Freeway on Feb. 16.



THEY'RE OFF!—The 10 kilometer fun run begins in earnest as racers are the first to take on the Carson City Freeway on Feb. 11.

of the project from Highway 50 to Fairview Drive. The freeway will move from an above-ground project to below ground to save on the expense of bringing in fill.

Four structures will be built to allow traffic to pass above on Fifth Street, Koontz Lane, Clearview Drive and Snyder Avenue.

The third and final phase of the project will be completion of the roadway and a full interchange with Highway 50 at the base of Spooner Summit, allowing vehicles to pass completely through Carson City via freeway.



FIRST TRAFFIC—More than a thousand walkers, bikers, roller bladders, moms with strollers, and dog owners all found time to explore the freeway on the one and only day it would be pedestrian friendly.

Traffic Center Brings Agencies Together

Although the official grand opening is set for April 3, a new hightech facility in Las Vegas is already monitoring and responding to the flow of vehicles on interstates and arterials. The Traffic Management Center contains FAST, the Freeway and Arterial System of Transportation. The new center has brought together the Department of Public Safety's Highway Patrol, the Intelligent Transportation System for Southern Nevada, and, about a year from now, a maintenance facility for NDOT.



AERIAL VIEW—Traffic management in Las Vegas took a big step forward by bringing together video monitoring and enforcement.

FREEWAY AND ARTERIAL

Currently, there are 266 county signals on the FAST system, but 301 signals can be integrated in the future. Traffic is monitored 18 hours a day, seven days a week.

COMPUTING POWER—Part of the computer operation at the traffic center is shown for the combined Las Vegas facility with 20 workstations and a bank of large monitors connected to more than 100 live feed cameras.

COMBINED EFFORT—The new center in Las Vegas includes the Department of Public Safety's Highway Patrol, the Intelligent Transportation System for Southern Nevada, and, next year, a new maintenance facility for NDOT.

The \$15 million complex is situated on 20 acres near the corner of Decatur Boulevard and the I-215 Beltway. FAST is operated by the Regional Transportation Commission of Southern Nevada.

FAST coordinates local traffic signals in Clark County, Las Vegas, North Las Vegas and Henderson.



Highway Patrol

affic Managemen Center

Attorney General George Chanos Joins Transportation Board

George J. Chanos has joined the State Transportation Board by virtue of his appointment as Nevada attorney general. He succeeds Brian Sandoval, who was appointed to a federal judgeship.

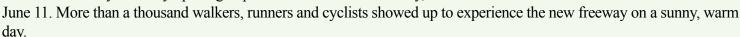
Chanos graduated from University of Nevada, Las Vegas in 1981 as president of the Consolidated Students. He served as an intern in the Washington, D.C., office of Sen. Paul Laxalt until entering the University of San Diego School of Law, where he received his law degree in 1985.

He began his law practice as a business litigator for the San Diego offices of a 700-plus attorney law firm and gained extensive experience in resolving complex multi-party litigation in both state and federal courts.

Since 1986, the new attorney general focused his practice in the areas of business litigation and commercial transactions with primary emphasis in the areas of negotiation and dispute resolution.

He received advanced training in negotiation Fun Run, Dedication Open Carson City Freeway

Apparently, if you build it, they will come. Years of discussion, design, bridge building and highway construction culminated in the first phase of the Carson City Freeway opening to pedestrian traffic on Saturday,



The air was festive as people pushing baby strollers, rollerblading, or walking with dogs on leash experienced the long-anticipated freeway. The first section of freeway is three-and-a-half miles long and runs from US-50 to US-395 north of Carson City.

Festivities began at 9 a.m. with a five-kilometer and 10-kilometer race assisted by Fleet Feet of Carson City. Cyclists were allowed a few minutes later and the wide lanes easily accommodated those on foot and those on wheels. The first





Vol. 47 No. 1
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NDOT News is published and distributed from the Public

NDOT News is published and distributed from the Public Information Office, NEVADA DOT Headquarters, 1263 South Stewart Street, Carson City, Nevada 89712. (775) 888-7000 or

www.nevadadot.com

Nevada Department of Transportation 1263 S. Stewart Street Carson City, NV 89712

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