

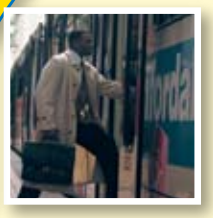

Transportation Vision and Strategy for the 21st Century Summit

Highways: Long-Distance Travel, Recreation, Tourism, and Rural Travel Panel
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A New Vision of America's Highways: Long-Distance Travel, Recreation, Tourism, and Rural Travel

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A New Vision of America's Highways: Long-Distance Travel, Recreation, Tourism, and Rural Travel

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"Our unity as a nation is sustained by free communication of thought and by easy transportation of people and goods. The ceaseless flow of information throughout the Republic is matched by individual and commercial movement over a vast system of interconnected highways crisscrossing the country and joining at our national borders with friendly neighbors to the north and south. Together, the united forces of our communication and transportation systems are dynamic elements in the very name we bear—the United States. Without them, we would be a mere alliance of many separate parts."

President Dwight D. Eisenhower
Letter to Congress
February 22, 1955

"On the road again
Goin' places that I've never been
Seein' things that I may never see again,
And I can't wait to get on the road again."

Willie Nelson

"Comme la vie, un beau voyage devrait être un œuvre d'art."

French aphorism

Americans on the Move: A New Vision

In 1956, Congress enacted, and President Eisenhower signed, the legislation that created the National System of Interstate and Defense Highways. Something that few people realized at the time and, indeed, that most people perhaps do not appreciate today, is that it turned out to be a transformational moment in the nation's history: it provided the infrastructure backbone of a *national network* that would sustain the economy and support America's international competitiveness for more than half a century. Beyond that, it also *connected America* and *Americans* in ways that provided unprecedented levels of mobility and access to employment, recreational, and cultural opportunities.

The vision behind the Interstate System was focused and succinct: "to connect principal metropolitan areas, cities, and industrial centers, serve national defense, and connect with Canada and Mexico." The vision was brilliant in its simplicity, and it paved the way for decades of investment in America's transportation network and not just the Interstate System, but non-Interstate highways, streets and roads, and inter-city and urban rail and bus systems.

The black-and-white clarity of the Interstate vision was perhaps appropriate for an America which, viewed in time's rear-view mirror, seems a simpler, less complicated place. Now, in response to the demands of a 21st Century world that is faster, smaller, and more interconnected, a new, more complex vision of America's transportation future is emerging. This new vision is a multi-colored tapestry, woven of threads both bright and subdued, that combine to yield a picture whose main features are clear but whose nuances and intricacies may take some time and effort to fully understand.

The ***underlying mission*** has not changed all that much: reduce congestion; improve safety; support economic growth and new patterns of development; connect farms, factories, and showrooms to national and global markets; and make it possible for all Americans to move about when and how they wish.

But what *has* changed is not only the complexity of the challenge but also the opportunities and tools to meet it. On the challenge side of the ledger:

- The ***aging infrastructure*** is increasingly costly to maintain, upgrade and replace, making it increasingly difficult to pay for needed new capacity while keeping the existing network in good repair. In many states, the cost of just maintaining the existing system exceeds available resources. Recent increases in the cost of petroleum and other raw materials just serve to make a bad matter worse.
- The ever-increasing importance of international trade combines with the advent of just-in-time manufacturing and the imperatives of global supply chain management to make ***system reliability*** critical to the national economy.
- ***Congestion*** in metropolitan areas and some inter-city corridors and international gateways continues to waste unacceptable amounts of time and money while worsening air pollution and consuming more energy.

- The burgeoning of ***non-work personal travel***—both within metropolitan areas and to the nation's parks, beaches, and historic and cultural places—is placing new demands on key corridors and gateways.
- The aging of the baby-boom generation, as well as new patterns of population growth and regional development result in ***changing demographics*** so that transportation planners and managers will need new mobility strategies.
- *Safety* continues to be a critical problem: death and injury rates, especially in rural areas, are simply too high, hovering around the 40,000 per year mark annually nationwide.
- The transport sector continues to be a major source of ***air pollution*** in urban areas and ***greenhouse gases*** everywhere.
- Increased ***planning and environmental requirements*** have made project and program delivery far more time consuming and costly.

Some of these problems were with us in 1956, although perhaps not to the same level of severity, while others are newcomers to the scene. The pace and shape of change—in technology, in the economy, in the population—combine with the sheer numbers of people and freight on the move to mean that there is no single "big idea" or "silver bullet" that is going to ensure that America will continue to enjoy the freedom of movement and economic vitality that are so critical to our way of life. There is no "new Interstate" that, 50 years from now will clearly standout as the key turning point in the story of transportation and mobility in America.

Results Are What Counts: The Heart of the Vision

At the end of the day, what matters is how well the system works. Can I get where I need to go, when I need to get there, in a comfortable, affordable, and predictable way? Can American agricultural and manufacturing products get to national and international markets at a cost and with a reliability that makes them competitive? Are the goods and services I need available when I need them and at a reasonable price? Is the experience of the journey such that I travel not just because I have to *but also because I want to*? It is the commitment to achieving these outcomes that drives the new transportation vision.

Meat on the Bones: Depicting the Vision

The devil, as they say, is in the details. How then to understand what this new transportation vision is really all about? To be sure, there are many interdependent aspects, many ways to cut the cake, and it can get pretty complicated pretty fast. But one thing is for sure; things will be different. If the vision is achieved, there will be big changes in:

- *What it is*: additions to the physical infrastructure of the network;
- *How the network is managed*: tools and technologies for maximizing network performance;

- *How it's maintained*: preserving the public's investment in the network; and,
- *Who will use it and how*: changing demographics and users.

Let's take a look at each.

Additions to the Network

There are roughly four million miles of roads in America. They come in all flavors:

- The 47,000-mile Interstate Highway System is only about one percent of that, but it's the backbone of the network: it carries 24 percent of all traffic and 41 percent of combination-vehicle truck traffic. However, as the capacity of the current Interstate System is used up, performance will begin to suffer and this, in turn, will harm U.S. economic productivity and our ability to compete in the global economy.
- Then there's the "National Highway System": the "NHS" includes all the Interstates, plus another 115,000 miles of principal roads in urban and rural areas, along with certain highways important for military mobilization and about 1,400 connectors to major freight facilities, such as ports and rail terminals. The non-Interstate parts of the NHS carry more traffic and freight per mile than any other roads in the country (with exception of the Interstates). These routes are key to an effectively functioning freight supply chain; they link people to airports, ports, and intercity rail and bus facilities; they connect mid-sized cities; and they provide connections to national recreational destinations.
- Other Federal Aid Eligible Arterials and Major Collectors. Another 600,000 to 700,000 miles of highways are arterials and major collector roads. These non-NHS roads are also an important part of the network of Federal-aid routes. They carry over 40 percent of traffic nationwide and provide an important link between the NHS and local streets and roads, helping to ensure good connectivity to the NHS system.
- Finally, there's everything else: something on the order of 3.2 million miles of local streets, county roads, and country lanes.

That's a lot of investment. Do we need more? In a word, yes. The numbers are irrefutable:

- Most of the Interstate System was built between the late 1950s and the 1980s and was designed in the pre-World War II period. In the late 1950s, there were 65 million vehicles creating 600 billion annual vehicle miles of travel. Vehicle ownership had just begun to take off and long-distance trucking was still in its infancy.
- Fifty years later, there are over 240 million vehicles creating 3 trillion vehicle miles of travel on a highway system that grew by only 15 percent in that period. Forecasts indicate that the U.S. population will grow from 300 million today to 435 million by 2055. Highway travel demand measured through Vehicle Miles

Traveled (VMT) may increase from 3 trillion today to as much as 7 trillion by 2055. Truck-borne freight is expected to double by 2035.

As the U.S. economy becomes both more integrated and globalized, there is an ever-increasing economic premium placed on rapid, reliable transportation for goods and passengers. Our ability to compete will require a well-connected, nationwide, high-capacity system capable of high speeds and reliability.

Investing for Performance

It does not take a weatherman to know which way the wind blows, and it does not take a transportation expert to know that congestion is bad and getting worse. And any business or labor leader knows how important efficient and reliable transportation is. What is to be done? One key idea is that of *focused investment* to increase system performance. By making relatively modest additions to the network—both adding lanes to existing routes and, in some cases, building entirely new highways—the network of the future can to continue to move traffic with acceptable speed and reliability.

Recent studies at the national level show that there is a need to add as many as 10,000 miles of new routes in new corridors, 20,000 miles of upgrades to National Highway System routes to Interstate standards, and 20,000 new lane miles on existing Interstate routes. That seems like a lot, and it is, but it is actually only a marginal increase in the overall system. The key is *investing for performance*, making targeted improvements to key corridors and facilities to ensure that the overall system works as well as it can.

Moving Freight: Critical Commerce Corridors

The ability to move freight efficiently and securely and to respond rapidly to national emergencies is largely dependent on the adequacy of the nation's surface transportation infrastructure network. It is imperative to recognize that these are true national challenges that require Federal leadership and funding. To be truly effective, however, the solutions to these challenges cannot come about through top-down direction from the Federal government. The responsibility for planning and decision making must continue to reside at the state and metropolitan level, with multi-state coordination, where necessary assisted by the federal government, and with inclusion of the communities affected, and substantial consultation with the private sector including trucking, railroads, ports, and shippers. In both freight movement and emergency preparedness, a *systemic approach* must be taken. While freight movement and emergency preparedness represent their own distinct challenges, developing an infrastructure network that allows the reliable movement of freight would provide the transportation capacity and redundancy necessary for effective responses to national emergencies.

To address this need, a network of "Critical Commerce Corridors (3C)" can be identified which would be a new 25-year Federal initiative focused exclusively on developing the surface transportation capacity necessary to facilitate the secure and efficient movement of freight. The types of segments that would be potentially eligible for inclusion in the 3C network could include: designated trade corridors;

international gateways; access routes to major ports and airports; roadways that carry, or are projected to carry, over-the-road truck traffic significantly in excess of their design capacity; portions of the Interstate Highway System; intermodal connectors; and highway truck bottlenecks. The 3C System should not be limited to existing facilities. It should also identify where new capacity is warranted. The 3C System would be funded through freight-related user fees from outside the Highway Trust Fund. Development of this type of system should in no way reduce the Federal support for the existing network of Federal-aid roadways.

A part of this strategy should be the construction of dedicated truck lanes in selected corridors. This would greatly improve public safety while at the same time enhancing national and regional economies and lowering road maintenance costs. Moreover, placing trucks on pavement specifically designed for their heavier load conditions just makes good sense.

In some areas though, the social, economic, and environmental costs of adding new highway capacity may be prohibitively high. That's why we should also take a serious look at creating new freight distribution centers that are accessible by rail, connect to major freight arteries, and provide better access to our waterborne port facilities. These centers could create a hub and spoke model where goods could be moved by rail for long hauls between centers and off-loaded to trucks for delivery within a particular region. To be sure, more analysis is needed to determine whether and under what conditions such centers could provide a feasible and cost-effective alternative to new highway capacity, but the concept would appear to warrant consideration.

This combination of rail and trucks holds enormous potential to address many of the challenges facing transportation today. It would reduce highway congestion, it would improve highway safety, it would increase efficiency by centralizing truck-loading points, and it would improve service.

Supporting New Growth

America has changed a lot since the original Interstate System was laid out. One huge change is the development of new regions, particularly in the West and South, that need new roads, or upgrades to existing roads, to adequately interconnect with other regions, rural areas, and parks and recreational opportunities. Over the next 30 years, 88 percent of the nation's population growth will occur in the South and West. Florida, California, and Texas are each expected to grow by 15 million people. Arizona is projected to add 5.6 million and North Carolina 4.2 million. The top five fastest-growing states are expected to be Nevada (114 percent), Arizona (109 percent), Florida (80 percent), Texas (60 percent), and Utah (56 percent). Even though not expected to grow as fast, the population of the Northeast and the Midwest are still expected to increase the Northeast by 4.1 million and the Midwest by 6.1 million.

To accommodate this growth, extensions and improvements in rural areas would extend the system of roads built to Interstate standards. One aspect of this strategy would be to upgrade to Interstate standards links from the existing Interstate network to unconnected urbanized areas with a current or expected population greater than 50,000. This would add 12,400 lane-miles to the existing, mostly rural parts of the

National Highway System. In addition, 40,000 lane-miles would be added to the existing 135,000 lane miles of rural Interstate highways. Finally, another 6,000 lane-miles would be added to existing NHS routes that already exceed capacity or are expected to in the future.

Travel, Tourism, and Recreation

One of the least understood and appreciated industries in the United States is travel, tourism, and recreation. Together they rank as the most important industry in three states, and they rank 2nd, 3rd, or 4th in all the rest. Travel and tourism are expected to generate over $700 billion in revenues in 2007, over $100 billion of that from international visitors. Leisure trips represent 80 percent of domestic travel. Over 200 million Americans visit our U.S. Forest campgrounds each year. The use of forest service roads has increased 15-fold over the past 20 years. The number of visitors to our National Parks is approaching 300 million.

The plain fact is that this industry is directly dependent on a safe and efficient transportation system. But there's more to it than that. *Travel should also be enjoyable*. Since, the first national survey of public recreational activities was conducted in the early 1960s, driving for pleasure has ranked at or near the top of the list of preferred pursuits.

But at present, traffic bottlenecks at major vacation destinations are becoming more prevalent, all too often making the weekend outing with the family anything but enjoyable. Many of the nation's most popular tourist destinations—including seashores, lake regions, and national parks—experience significant traffic delays on roads that serve as primary access routes for visitors. In fact, traffic on many of these roads is actually increasing faster than on major urban roads. Similar to what is envisioned for key freight corridors, focused investments are needed to eliminate these bottlenecks.

Most important to improving travel to these destinations is strong investment in the Federal-aid system below the Interstate and NHS. Much of the access mileage to national parks and similar destinations is on two lane Federal-aid highways, highways that also need improvement for safety reasons and also often to facilitate delivery of agricultural and other resource products. Also helpful would be continued and increased investment in parkways and park roads, forest highways, and scenic byways.

Key to making recreational travel what it should be is improvements to the national system of Scenic Byways as well as roads on Federal lands maintained by the National Park Service and the Forest Service. The total number of designated National Scenic Byways and All-American Roads is now 126, together stretching some 37,000 miles of roads that are often destinations in themselves. In addition, there is the immense system of routes maintained by Federal agencies including the National Park Service and the Forest Service that are vital to accessing America's public lands. The Forest Service alone has more than 400,000 miles of roads and 125,000 miles of trails. Unlike State and local road systems, there is no earmarked source of funding for operations and maintenance of these routes. Compounding the problem is that the process once used to fund construction and maintenance of these forest routes, timber sales, have decreased by 75 percent and are very unlikely to again offer substantial resources. Adequately maintaining and operating these byways and roads is essential to ensuring

that Americans and visitors from other countries can continue to enjoy our treasured natural resources. In addition, it can reasonably be expected that many recreational drivers would voluntarily opt to travel Scenic Byways in lieu of Interstates if they offered good connectivity and were signed appropriately.

Intercity Rail

The United States can neither afford for congestion to get as bad as forecasted, nor for traffic to increase as much as is estimated. In part, what is needed is a reduction in demands placed on the highway system. With respect to the movement of goods, America's freight rail system carries 14 percent of the nation's freight by tonnage, 29 percent of ton-miles, and 5 percent of value. Freight rail provides shippers with cost-effective transportation, especially for heavy and bulky commodities. Freight rail, in partnership with the trucking industry, provides intermodal transportation connecting U.S. seaports with inland producers and consumers. Truck lines use rail to carry trailers long distances, as one solution to the shortage of truck drivers. Rail is a preferred mode for hazardous materials shipments. It is also vital to military mobilization.

The freight rail industry is operating under the same economic principals as any successful U.S. business—to maximize return on investment and grow shareholder equity. These principals unfortunately sometimes come into conflict with the public's interest and expectation that the railroads will continue to carry their market share of freight and mitigate roadway congestion by reducing the number of trucks on the Interstates and going into our cities. Further, over the past two or three decades tens of thousands of rural rail branch lines have been abandoned. Over that time Class I railroads have shed over 100,000 routes miles. While some of those former Class I miles are still operated by smaller railroads, the reduced reach of the rail network means that many areas, particularly rural areas, must rely more heavily on trucks and the road network for important commerce needs. In the future, railroads must add to the capacity needed to at least continue to carry their current market share of freight so it does not shift to trucking thereby increasing highway demand.

With respect to the movement of people, expanding the capacity of intercity passenger rail can help shift some long-distance trips off the Interstate system and could, as it is doing in Europe, also reduce the need to expand some airports by accommodating some mid-distance trips.

Maximizing Network Performance

Whether it's the network of today or tomorrow, advanced technologies and better system management techniques need to be utilized to reduce congestion, improve throughput, and increase system reliability for both passenger vehicles and trucks. In addition, trucking productivity can be increased by sensibly revising truck weight and size restrictions.

Incident Management, Traveler Information, and Vehicle Technologies

Capacity addition will reduce but not totally eliminate congestion or reliability problems. Traffic disruptions—crashes, breakdowns, construction work, weather, and special events—cause about 50 percent of total delay. These disruptions can be addressed through aggressive system operations applications such as incident clearance, snow and ice control, and construction work zone management. Advanced technologies can be used to collect real-time information on road and travel conditions, to improve travelers' information, and to improve traffic flow through the use of ramp metering and lane management.

Work zone delays are estimated to cause 24 percent of non-recurring congestion. As the infrastructure ages and more rehabilitation is needed, we are going to have find better techniques to get the job done. Examples of these techniques include using components prefabricated off-site, longer-lasting materials, working at night, short-term shutdowns to allow intensive work, and incentives to get contractors to finish work faster.

On long-haul trips, travelers are not surprised by delays in metropolitan areas. These are anticipated and often routes and schedules are adjusted to compensate. What is not typically anticipated are incident-induced delays on rural sections of the Interstate system. The incident management systems that have proven to be effective in urban areas need to be applied in rural areas as well—even something as simple as quickly removing an accident that would otherwise result in needless backups extending for miles.

Automobile manufacturers, technology suppliers, and government are collaborating on vehicle-to-vehicle and vehicle-to-system management communications technologies that will save lives and improve performance. Cars can already park themselves, pay for tolls, and map out directions, but automakers and transportation officials are testing communication systems to enable roads to talk to cars, cars to talk to other cars and officials to glean tons of traffic information from the electronic chit-chat. An important part of the effort to improve system performance will be to embed new, cost-effective technologies into both new and existing roads.

In the future, technological innovations can increase reliability and greatly enhance the experience of the long-distance traveler. The vision is a nationwide wireless communication infrastructure that would allow communication between vehicles and between the vehicle and the roadside. Cars would be equipped with a communications device and a GPS unit so that data could be exchanged with a nationwide, instrumented roadway system. Realization of this vision could mean a significant reduction in highway fatalities, while at the same time offering dramatic improvements in transportation mobility.

Perhaps a bit over the horizon is the notion of self-driving vehicles. There is a growing body of evidence that self-driving vehicles will some day become a technical reality to make trips safer and more pleasant. The promise is for greater safety and greater capacity since vehicles could possibly move closer together at higher speeds.

Improving Trucking Productivity

With respect to freight movement, it should be noted that the United States has the most restrictive truck size and weight regulations of any developed country. The lowest axle weight limits, most limiting bridge formulae, and the lowest gross weight limit. At the same time, America's freight transportation demands are greater than any other nation, and we have the world's most well-developed highway system. The potential productivity benefits of changes to size and weight regulations are very significant. Perhaps more important, however, are the possible safety benefits of size and weight reform. Research demonstrates that more productive trucks can be as safe as or safer than existing configurations. Furthermore, because fewer truck trips will be needed to haul a set amount of freight, accident exposure and therefore, the number of accidents will be reduced. More productive trucks will reduce congestion and would decrease the amount of fuel needed to carry the same amount of freight, thus reducing emissions.

If a national network of truck-only highways were created, it would allow for longer and heavier trucks for longer distance inter-city trips, although the loads (for example triples) would in many, if not most, circumstances need to be broken down into smaller units to traverse the regular network in metropolitan areas. States in collaboration with the freight transportation industry and the Federal government should investigate the feasibility of regional adjustments in truck size and weight restrictions, particularly in corridors that demonstrate important economic benefits and meet safety, pavement/bridge impact, and financing criteria.

Preserving the Public's Investment in the Network

You would not buy a new car, drive 100,000 miles, and never change the oil. Common sense dictates that it is essential to adequately maintain the existing network while we are making additions to it. Usage of the U.S. roadway system, as measured by vehicle miles traveled, has doubled in the last 25 years to 3 trillion miles; while new miles constructed has only increased a mere 1.5 percent over the same period. Since many of the Interstate highways and other major thoroughfares were constructed in the 60s and 70s, continuing with the car analogy, we are now driving a vehicle that is decades old, twice as fast, and still ignoring the service warning lights.

Just looking at the Interstate System, it currently has approximately 210,000 lane-miles of pavement. As these pavement structures reach 40 to 50 years of life, the traditional approach of rehabilitation and resurfacing will no longer be sufficient; major portions of the Interstate System will need to have their pavements and foundations completely reconstructed. The Interstate System also has more than 55,000 bridges and tens of thousands of other significant structural elements, many of which are reaching 40 to 50 years of age. Bridges and other structures of this age usually require substantial rehabilitation, and, as we look out another 20 to 30 years, they will require complete replacement.

Most transportation infrastructure studies indicate that roadways and bridges are becoming more obsolete and structurally deficient; highways more crowded and unsightly; and dwindling bridge and roadway maintenance budgets are being diverted to patching

problems rather than preventing them. Because the costs of preserving the aging system are so extensive, the Nation, at all levels of government, is at present not investing enough to maintain conditions and performance of the existing highway system. Furthermore, as the system continues to age, the cost of maintaining it is expected to escalate.

However, the burden of carrying out this massive, priority task can to some degree be ameliorated by innovative concepts in the area of operations and maintenance which provide for immediate and proven results for maintenance cost savings while consistently maintaining the transportation asset at or above existing levels of service. States are increasingly turning to an *asset management approach* to operations and maintenance that takes into account the life-cycle of various asset features to ensure that roadways and structures for which they are responsible receive preventive maintenance in larger doses and that annual work-plans are more in synch with product or asset life-cycles.

By aggregating maintenance needs under a long-term management strategy that takes life-cycle into account and by being outcome-based rather than the traditional input-based, State agencies get a bigger bang for the buck—more services for fewer dollars with fewer internal headaches. This approach looks at maintenance from a "stewardship" perspective rather than a "necessary evil" point-of-view. The basic theory behind the performance-based contracting approach comes from Benjamin Franklin: an ounce of prevention is worth a pound of cure. This concept is as applicable to roadways, bridges, and facilities as it is to our cars, our homes, and our personal well-being. This concept moves from a "worst first, patch it" mentality to a "fix it right the first time" mentality.

Technology will continue to have a profound impact on the performance, preservation, and maintenance of the National Highway System. Examples include LED lighting, remote monitoring of highway assets, video camera-based maintenance patrols, equipment innovation such as mowers that distribute herbicides and fertilizer through the mowing deck and litter vacuums. Material innovations such as long-lasting striping and longer performing asphalts and concrete must all play a role in maintaining the highway of the future.

Changes in Demographics and Users

The Graying of America

Today's older Americans are healthier and more active than ever before. With the aging of the baby boomer generation, people over 65 are the fastest-growing population in the United States. Every day in America, nearly 8,000 people turn 60. By 2020, there will be more than 40 million licensed drivers age 65 and older and most of those people—as many as 75 percent—are likely to continue to drive. People over 65 make roughly 90 percent of all their trips in a car; however, making more trips or traveling more miles by car may not be an indicator of improved mobility, but of poorer access to alternatives. More than one in five Americans age 65 or older do not drive; among the reasons: declining eyesight, safety concerns, lack of access to a vehicle. In fact, more than 50 percent of non-drivers age 65 and older—or 3.6 million Americans—stay home on any given day at least partially because they lack transportation options.

As they grow older, this generation will continue to travel. The transportation system of the future will need to accommodate them. The mobility challenges of older persons in urban and metropolitan settings are pretty well understood, even if solutions may not yet be apparent. Public and private mobility providers will have to re-tool their service delivery strategies to serve this growing market.[1] But perhaps less well recognized is that the elderly in rural areas are perhaps even more disadvantaged from a mobility perspective. For one thing, public transit options in rural areas may be few or non-existent, and ultra low-density development patterns make it more difficult to rely on family and friends for mobility. For seniors who are able to continue to drive, their sometimes somewhat slower reflexes and reduced vision acuity is a bad match for high-speed rural roads: more than 25,000 people die each year on rural roads, a fatality rate that is 2.5 times greater than on urban roads.

In the future, rural seniors will need to be given more mobility choices so that driving is not the only option for folks who can not, do not want to, or should not drive. These choices may come from public transportation agencies or, as the market evolves, be served by private entrepreneurs. For older persons still behind the wheel, senior-friendly road designs such as intersection improvements, better signage, lighting, and road markings must be incorporated into all future transportation planning. In addition, better use of new communications technologies to provide real-time information to travelers is needed. Routes parallel to major travel corridors that would offer a slower and more enjoyable alternative to the Interstate route should be identified. All of these measures have the potential to greatly reduce death and injury to our aging population, and will also ultimately protect people of all ages.

Many of the same thoughts apply for seniors who want to travel for recreation. The joy of visiting the nation's parks, historic sites and cultural offerings should not be denied simply because someone may be unable or disinclined to drive long distances. And while it is natural for family and friends to accompany seniors on recreational trips, this should be an option, not a necessity. As in the case of rural areas, there will need to be more mobility choices for the elderly combined with improvements to the network to make it safer for seniors (and everyone else!) to drive.

Realizing the Vision: Getting from Here...to There

For over two hundred years, Americans have designed and built a transportation network that is the envy of the world. From the Erie Canal, to the Transcontinental Railroad, to the Golden Gate Bridge, to the construction of the Interstate System, our highways, bridges, and railroads have made Americans the most mobile people on earth, have supported an unparalleled level of economic prosperity, and have given us a quality of life undreamed of by our forefathers. These great achievements didn't just happen: it took visionary leadership from government, business and labor alike, combined with Americans' technological know-how, innovative spirit, and relentless pursuit of progress.

The mission that began with the initiation of the Interstate System on June 29, 1956 has largely been accomplished, but cracks in the network have begun to appear, putting our ability to compete in the global marketplace at risk and turning driving—even recreational driving—into more of a chore than a pleasure.

We stand at a transformational point in our nation's long and largely successful transportation history. Looking back, we can see how vision and courage got us to where we are, but looking back is not enough to tell us where we need to go from here—or how best to get there.

The nation stands at a figurative fork in the road. On one path lies a new mission—indeed, *vision*—of transportation in America which, if realized, will help to guarantee that our children and their children will enjoy the freedom of movement and access to employment and recreational opportunities that we have come to expect and, indeed, to assume. In that vision, the best methods and materials are used to preserve and improve the current highway network as well as to design and build new highway capacity, all to ensure that goods and services are readily available to everyone at affordable prices, to efficiently get American agricultural products and manufactured goods to world markets, and to afford every American enjoyable access to the nation's incredible array of recreational and cultural opportunities. In that vision, technological frontiers continue to be expanded to make travel safer, more enjoyable, and more reliable for everyone while minimizing energy consumption, the impacts on both built and natural environments, and the negative effects of air pollution and global warming.

But there is another path, and it is one that we might take, perhaps out of complacency, perhaps because we fail to appreciate what is at stake. At the personal level, this is the path of more congestion, more time spent in traffic and less time spent with the family, more missed deliveries, and more frustration. At the national level, this is the path of reduced economic prosperity, greater damage to the environment, and more American jobs lost to countries like India and China that *are* investing in the transportation systems and technologies of tomorrow.

The Key Ingredient: Leadership

Failure to meet the challenge is not an option. While the choice seems, in many respects obvious, there is no guarantee that we will make the right one. The key—and sometimes missing—ingredient is *leadership*. More than 50 years ago, the Interstate vision became reality because of leadership by elected, business, and labor leaders. We need that same kind of leadership today at all levels of government and industry. We must be willing to come together to choose solutions that will best address the future demands that are going to be placed upon the system. We must be willing to work together to set the stage for the kind of long-term vision that will not only keep our transportation system viable and vital, but one that will also keep this country prosperous, protected, and strong.

Endnotes

1. The issue of mobility for the elderly in metro areas is discussed in the report by AASHTO Metropolitan Mobility and Congestion Panel.