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REMARKS PREPARED FOR DELIVERY BY SECRETARY OF TRANSPORTATION
ELIZABETH HANFORD DOLE
TO THE 63RD ANNUAL MEETING OF THE TRANSPORTATION RESEARCH BOARD
WASHINGTON, D.C.
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In preparing my remarks for my time with you today, I was thinking about some of the parallels between you in the research community and we in government who make use of your findings. We both owe much of our existence to the taxpayer. We both function best with our minds and doors kept open. We both keep an eye on tomorrow.

This Board is a generous supplier of essential information, and DOT's reliable right arm in making transportation work for people. We need your guidance and insights -- your scientific, technical and academic expertise for our traveling and shipping publics. We are all part of a common experiment -- or rather a series of experiments sheltered beneath the broad umbrella of democratic government.

The last three years represent another kind of experiment -- to create opportunity, bring big government under control and renew the confidence of the American people in their institutions. Our progress toward those goals will be reported one week from tonight in the President's State of the Union address.

The news he brings will, I'm sure, be welcomed. For 1983 was a year that many thought couldn't happen, at least not until the 1990's, and some said would never happen. Inflation dropped -- to less than three percent. The GNP rose -- to better than six percent. Civilian unemployment declined 2½ percentage points, while employment reached record levels. Industrial production increased 15 percent and consumer confidence soared. For the first time in recent memory, our economy achieved a favorable combination of consistent growth, low inflation and falling unemployment. That is truly good news for America.

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Nineteen eighty-three was also a banner year for transportation. Your 63rd annual meeting, like the State of the Union message, provides a focus on the state of the art and the challenges before us. Here, too, the news is good -- the omens favorable. Many of America's recent transportation achievements are the direct result of your research, and many of tomorrow's gains will come from the research reported at the 200 technical sessions being held this week, and from your ongoing scientific activities.

Together we begin a new year. As anniversaries go, we are about 62 years apart. Last year at this time I was preparing for Senate confirmation hearings following my nomination by the President. So you'll forgive me if I indulge in a little looking back. The view, broadly speaking, is an encouraging one. Even if we haven't gone the total distance or resolved every frustration, at least we have made a good beginning.

Let me turn first to safety. It has a high priority with me as I believe it has with you and our fellow citizens across the country. Americans are increasingly aware of the senseless loss of life and productivity caused by unsafe transportation habits and practices. There has been a groundswell of outrage over the costs and pain of drunk driving. There is greater private and public sector support for the use of safety belts.

Especially encouraging are the national efforts to eliminate drunk driving. Just before Christmas President Reagan, in observance of National Drunk and Drugged Driving Awareness Week, urged community leaders, businesses, civic groups and citizen organizations to join in reducing the tragic toll drunk driving usually takes over the holiday period. While we haven't had time to analyze all the data, it's clear that an intensified effort at all levels to get the drunk driver off the road has had an impact. Drunk driving incidents were down dramatically all across the country. As the President said in his radio talk earlier this month, the 1984 New Year's weekend was the safest on our highways in 35 years. Here in the Washington area police reported no alcohol-related traffic fatalities -- not one -- during Christmas or New Year's. Isn't that good news for America?

Of course, we still have a long way to go. There are still too many drunk drivers; there are still too few motorists using safety belts. And I continue to look to you and to others sharing a commitment to greater highway safety for further leadership in technical and behavioral safety research. We need your help.

A year ago I said that we could expect the unexpected -- that I would look for new opportunities and new initiatives, both to improve transportation and to extend its contributions to economic growth and prosperity.

Let me touch on some of the ways we are moving toward those objectives.

Centuries ago, explorers ventured into the unknown in pursuit of fabled rivers of gold. Columbus himself was not above searching for certain economic gains. The myth of El Dorado bewitched generations of Spanish adventurers. Since then, we have vastly expanded the domain of human exploration -- and human transportation has followed in the wake of our imagination. Both sea and air have yielded up riches of the intellect and commercial routes far more valuable than any imagined city of gold. And now we have entered the newest and most distant frontier of all -- that realm of space where entrepreneurs already have begun to lay the groundwork for an entirely new industry.

Their vision has been echoed by President Reagan, who -- last May -- announced his support of a private sector satellite launch capability. He quickly grasped the

potential of such an industry to the U.S. economy and U.S. leadership in space. Since then, to speed its development, the President designated the Department of Transportation as the lead agency for commercial space transportation using expendable launch vehicles. This is no small responsibility. We are talking about a whole new industry -- with growth prospects estimated at perhaps $10 billion over the next decade.

To us falls a historic challenge -- and an exciting opportunity. For this is no mere search for Spanish gold or the finite wealth that can be measured in any currency. We're looking for a different kind of enrichment. Space offers those of us in the West a chance to conduct experiments never before thought possible and to further secure our freedom. But free enterprise also has a role in space -- that frontier has commercial potentials far beyond present voice and telecommunications capabilities. For example, the recent shuttle flight demonstrated that materials could be processed in a zero-gravity environment. That means purities in certain compounds can be extracted in greater quantities and to a far more successful degree than is possible now. As a result, pharmaceutical companies someday may be able to reduce or avoid the impurities that creep into drug compounds today causing undesirable side-effects. There are also possible new biological products, and new or purer alloys awaiting our discovery in space.

Remote sensing to assist in mineral exploration holds great promise. We already know what meteorological satellites can do in plotting weather patterns, and we're using satellites to pick up signals generated by transmitters aboard downed aircraft. And we may be on the threshold of a global monitoring system capable of tracking pollutants in the air and oceans. The result: a comprehensive view of our environment never before available.

Those are just uses we see today. The potential is as vast and vivid as we dare to dream -- the only limits our human imagination. But if we are to turn our dreams into reality, if we are to maintain America's competitive edge, we must begin now to introduce American industry to the possibilities of space.

To me, this means several things. First, we must demonstrate to industry that the government is supportive -- to provide, as President Reagan has said, "a climate conducive to expanded private sector investment in civil space activities."

Second, it means removing roadblocks to private sector research and development investments in space. We have recognized companies' reluctance to commit R&D dollars until they are certain of the Federal government's commitment to space commercialization. NASA's recent steps to make its Atlas-Centaur and Delta rockets available for commerce is a clear signal of public support.

Third, we must help industry cut through the thicket of clearances, licenses and regulations that keep industrial space vehicles tethered to their pads. As many as 17 departments and agencies have rules and requirements about rockets, and satisfying them all has taken up to eight months. The recent experience of a Texas company exemplifies the problem. They learned first that they had to obtain an export license from the State Department. Then they had to apply for a gun dealer's license. Why? Because they used artillery rockets to calibrate their radar. If that weren't enough, they needed approvals from the Navy, the FAA, FCC, NORAD and the Coast Guard.

Can you imagine what such obstructions would have done to America's pioneer inventors and entrepreneurs? I'd have come here by horse and buggy and this room would be lit by candles.

We are establishing one-stop service at the Department of Transportation. I am creating an Office of Commercial Space Transportation within the Office of the Secretary. We have a working task force in place and I expect to name a Director and permanent staff by the end of the month.

Industry is not standing idly by, either. General Dynamics Corporation is prepared to proceed with the marketing and production of its Atlas-Centaur ELV for commercial purposes. The National Aeronautics and Space Administration is also negotiating with Transpace Carriers Incorporated to award exclusive marketing rights for the Delta expendable launch vehicle. As these and other commercial space programs become firm, we will work with the companies involved to assist and encourage the growth of the space freight industry.

Now let me bring you closer to earth, but keep you in the stratosphere of transportation research and development: the National Airspace System Plan.

Our present airway system might be compared to the U.S. highway network before the Interstate program of the 1950's redesigned the face of the land and the substance of our economy. For their day, such roads were safe and adequate. But capacity was limited, travel times were long and urban thruways were frequently jammed. Besides, mere adequacy is out of keeping with the long-range goals of a restless people.

Today's airways are safe for today's traffic levels, but we are using technologies from the fifties to serve the needs of the eighties. Industry's capacity to grow in the nineties and the century beyond depends on the expansion of automation technologies, modernization of air traffic control equipment, and a more efficient use of our airport facilities.

The NAS Plan will deliver these improvements. As I'm sure many of you know, the centerpiece of the Plan is replacing the present air traffic control computers with new state-of-the-art technology. The new computers will do more work than existing equipment. They will also have greater capacity and be far less expensive to operate and maintain. Right now, we have R and D contracts with both IBM and Sperry for the design competition phase of the computer replacement program. The winner of this competition will be awarded a production contract, with deliveries to begin in late 1986.

Modernization of the air traffic control computer system is just the beginning. For soon, many of the controller's routine tasks will be automated, saving money and improving efficiency. We're also acquiring new and better radar. I recently awarded a $480 million contract for 100 advanced airport radars. These will be the first operational radars to be equipped with a separate weather channel, providing controllers a display of current weather conditions "live and in color" in the terminal area.

We're working with the Departments of Commerce and Defense in research on new long-range weather radar. Our goal is a system that not only detects conventional weather patterns, recording a storm's symptoms, but one that can actually look inside a storm system -- much as an X-ray sees within -- to identify wind shear, turbulence and other adverse weather conditions that could affect the safety of flight. Wind shear, as you know, is an abrupt change in wind speed or direction, often associated with

thunderstorms. We're adding another 51 low level wind shear detection systems to the 58 already in operation, but the truth is we still don't know enough about this problem. That's why we're supporting the Joint Airport Weather Studies (JAWS) program, and the Next Generation Weather Radar (NEXRAD) program -- both important ongoing weather research projects.

We expect to contract this spring for a new radar beacon system -- one that will enable ground controllers to make radar contact with all the aircraft in their sector individually, instead of collectively. This "Mode S" radar -- the "S" standing for "selective" -- gives the controller a "private line" to the pilot. Weather and traffic data can be transmitted automatically and printed out by computer in the cockpit.

Still another component of the NAS Plan is the microwave landing system (MLS). This is not a new research concept, but its application will give us a whole new precision landing capability. Just last week we awarded a $90 million contract for MLS systems to be installed at major airports beginning in 1986. This system can increase airport capacity at a time when new, large commercial airports are unlikely to be built. It also represents a vast improvement over the 40-year-old Instrument Landing System (ILS). With the MLS, a pilot knows precisely where he is in relation to the runway centerline. The system can land him so accurately that when he crosses the end of the runway on final approach, he is within one tenth of one degree of the centerline. That means a deviation of no more than 20 feet horizontally and two feet vertically. In short, the MLS signal is three times more accurate than the ILS. So it means fewer delays, fewer cancellations and fewer aircraft diverted to other airports. And its operational flexibility may also provide some noise relief at certain locations. And who isn't for less airport noise?

As I noted earlier, before signing on as Secretary of Transportation I embraced safety as a continuing concern and constant commitment. That won't change now or ever. But over the last 12 months I have focused on other priorities demanding our attention. Perhaps most important are the ways we address or fail to address how transportation affects our environment.

Some things already have been achieved. Certain environment safeguards are in place. No Federally-assisted transportation project, for example -- be it a new highway or a new bike trail -- can proceed without a detailed environmental assessment. By the end of this year, the oldest and noisiest jets will have been weeded out of the US airline fleet, and aircraft engine manufacturers are now required -- as of the first of this month -- to reduce exhaust emissions by 60 to 70 percent. We have developed strict oil pollution and hazardous cargo guidelines, as a further effort to protect the environment and protect the quality of American life.

All of that is well and good. But I am not satisfied that we have probed the limits of our reponsibility. Or plumbed the depths of possibility. We should not tolerate excessive noise; we must find reasonable ways to reduce it. We should not excuse pollution; we must develop ways to prevent it. And we must not sacrifice history for progress; there is almost always a way to preserve our historic landmarks.

We have explored but the coastal plain of a vast continent of environmental concern. To speed up the process, I have formed a steering group within the Department headed by a Counselor on environmental concerns to examine the prospects for further environmental actions including the areas of reducing airport noise and oil pollution, improving the highway environment, handling the transport of hazardous materials and safeguarding historic sites. The Transportation Research Board has a

distinguished history of its own in supporting research on major environmental issues. This year's program includes sessions on air quality, transportation noise, wetlands protection and environmental procedures. I find that encouraging and am eager to do more to achieve compatability between our transportation and environmental objectives. Our people are demanding it.

According to the Census Bureau, residents ranked noise second only to crime as a reason for moving from urban neighborhoods. Emissions from cars and trucks and buses still account for a substantial share of city pollution. We need innovative planning and design to reduce transportation intrusions on urban communities. I urge you to continue to address these problems in your research efforts, and share your findings, your suggestions and your criticisms with those of us who hold the public trust.

As I begin my second year as Secretary, I will continue to "expect the unexpected." Along with you I will seek to increase our knowledge, our understanding and our use of America's transportation resources. As we ponder the possible commercial derivatives of our reach into space, the benefits of bringing the latest technology to our airways, and the means at hand to husband our environment, let's remember what a noted astronomer said only a few years before the Wright Brothers flew at Kitty Hawk: "No possible combination of known substances, known forms of machinery and known forms of force can be united in a practical machine by which man shall fly." Barely a decade before the telephone's invention, a newspaper editor wrote: "it is impossible to transmit the voice over wires and even if it were possible to do so, the thing would be of no practical value."

You are less interested in what is than in what can be. Let me say that I am with you. Our country was made great and strong by its overwhelming vision of better times ahead, made possible by the application of human spirit and ingenuity.

If we have a common faith, it is the one summed up a century and a half ago by Alexis de Tocqueville -- himself an incisive researcher -- who quickly perceived one common thread running through a diverse population.

"All the citizens of that great democracy," he wrote, "feel themselves subject to the same weaknesses and the same dangers, and their interest, as well as their sympathy makes it a rule with them to lend one another assistance whenever required."

Research, at its best, is the art of lending assistance to one another. It is what you and I seek to do together to better achieve the goals I have talked about today. Research is both our window on tomorrow and our channel to the future. It tests our knowledge and challenges our curiosity.

If, as Emily Dickinson wrote so many years ago, "we dwell in possibility," then our task is to explore, to probe, to determine what may be possible, and pursue that quest with all diligence and energy. Only thus can we keep the uncertain, the undiscovered and the untried within our reach and within the realm of possibility.

Thank you very much.

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