U. S. DEPARTMENT OF TRANSPORTATION
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WASHINGTON, D. C. 20590

STATEMENT OF JAMES M. BEGGS, UNDER SECRETARY, DEPARTMENT OF TRANSPORTATION, BEFORE THE SENATE AND HOUSE DISTRICT COMMITTEES REGARDING AUTHORIZATIONS FOR A RAPID TRANSIT SYSTEM FOR THE NATIONAL CAPITAL REGION (S. 2185 AND H.R. 11193), TUESDAY, JUNE 10, 1969.

Mr. Chairman and members of the Committee:

I appreciate this opportunity to appear before you in support of S. 2185 and H.R. 11193, bills which would authorize a Federal contribution for the development of a rapid transit system in the National Capital Region.

The Department of Transportation has a threefold interest in these bills. First, as the Department responsible for the development of national transportation policies and programs, it is very much interested in seeking solutions to our urban transportation problems. Second, it will be the agency responsible under the bills for channeling the Federal contribution to the Washington Metropolitan Area Transit Authority. Finally, the Department is a tenant of Southwest Washington and is vitally concerned as a user of transportation services.

A major task confronting our Nation is the rehabilitation of its urban areas as desirable places to live and work. One of the essential ingredients in any rehabilitation effort is the development of efficient and economical public transportation systems.

Our cities are rapidly approaching a state of transportation strangulation. The suburbanites who make their living at jobs in the center city are wasting millions of man-hours in the traffic jams that accompany their trips to and from the office every working day. The

disadvantaged who live in the center city, and who have seen their job opportunities move to the suburbs, are left with no efficient means of reaching those job opportunities except at prices they cannot afford.

Given the nature of urban growth, regional transportation systems designed in conformity with regional planning objectives are absolutely essential. The Department through the Urban Mass Transportation Administration (UMTA) is embarked on a nationwide program of supporting the development of such systems. The UMTA has given substantial support to the BART System in the San Francisco Bay Area and to the improvement and extension of systems in Boston, Chicago, Cleveland, and New York. It has also contributed to planning studies in Los Angeles, Atlanta, and Seattle.

With respect to Washington, the Federal Government has a special obligation. As President Nixon stated in his Message to Congress of April 28, 1969, "The condition of our Capital city is a sign of the condition of our nation -- and is certainly taken as such by visitors, from all the states of the Union, and from around the globe."

The proposed Federal contribution to the construction of the Washington regional transportation system is also a sound investment. The system adopted by the Washington Metropolitan Area Transit Authority culminates 17 years of organization, planning, and engineering. The legislation before the Committee extends the presently authorized 25-mile system to a 97-mile regional system. The system would, as the President stated, "facilitate the free flow of resources and labor, and would benefit all eight jurisdictions involved in its planning and approval."

The role of the Department under this legislation is primarily that of a channeling agent for Federal funds, a function we perform for the Transit Authority under existing law. Section 3 of the bills would authorize the Secretary of Transportation to make annual contributions as necessary to finance construction in a total amount not to exceed $1,047,044,000 or two-thirds of the net project cost of the adopted regional system, whichever is lower. Annual appropriation requests for this purpose would be developed, of course, with the complete participation of the WMATA and the Bureau of the Budget. As under the present arrangement, funds would continue to be made available to WMATA through the establishment of letters of credit. The Department would be responsible for establishing such accounting procedures as it deemed necessary to assure that the funds were expended for the purposes appropriated. It would not be responsible for the development of proposed annual program content.

In closing, I would like to emphasize the need for the adopted regional system from the Department's vantage point as a user of regional transportation services. Six years ago, the southwest area of Washington in which the Department is located employed 25,000 people; today, 46,000 people are working in the area; within four years, based on construction now underway, there will be 83,000 people employed. It is difficult for anyone entering and exiting the area today to imagine the circumstances under which this many people can be moved given the existing transportation system. Yet, even if we start now, the Independence Avenue line of the

adopted regional system will not be completed before the end of 1975. Long before that date, it is clear beyond any doubt that we will face some very serious transportation problems in Southwest Washington.

I believe it imperative that the Congress act promptly to authorize the funds requested in S. 2185 and H.R. 11193.

This concludes my prepared statement, Mr. Chairman. I shall be happy to answer any questions the Committee may have.

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NATIONAL TRANSPORTATION NEEDS AND THE APPLICATION OF TECHNOLOGY

BY

THE HONORABLE JAMES M. BEGGS

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PRESENTED AT THE NSIA RESEARCH AND DEVELOPMENT SYMPOSIUM ON

FEDERAL RESEARCH AND DEVELOPMENT IN THE 70's - ITS NEEDS AND SCOPE

WASHINGTON, D. C.

JUNE 11, 1969

A group of my friends and associates have for a number of years now been working at night on a study of technology and society over the ages. They have found a strong cyclic trend in history which bears directly on my topic for you. One society after another has had a period of pre-eminence, and held sway over ever increasing numbers of people and areas of the globe. History has usually attributed the success of these emergent powers to the military organization or military leadership within the particular dominant society.

An interesting corollary, however, seems to be the application of technology to support first the military conquest, but then, more importantly for retention of power, to maintain support logistics, to exploit the resources of the conquest and simply to roam the domain and observe its status. All these latter requirements are, of course, transportation. Hence, when a nation spread its will over large reaches of the globe (large reaches is a relative term), its ability to preserve dominion depended upon transportation. The extent of man's domain or area of influence has grown historically with his ability to travel on land, on sea, and now in the air and in space.

Notwithstanding our important military needs which Dr. Foster has already discussed, our present way of life has evolved to a point that all of Western Civilization is critically dependent upon civilian transportation. In the United States, for example, 20 percent of our Gross National Product is attributable to transportation. The fact that it is such a large portion of our national activity and until recently received scant attention in the list of national priorities is somewhat surprising.

Despite the recommendations and urgings of numerous federal officials and three Presidents, and despite the growing economic importance of transportation, this nation had not looked upon transportation as an entity before the creation of the Department of Transportation. What we have in the way of a transportation system is to my mind a glowing accomplishment of the free enterprise system, answering the demand despite a proliferation of decentralized and often uncoordinated local and federal regulations. While there are many areas where the free enterprise system has fallen short of the mark, we in DOT are in no way inclined to scrap what has made our transportation system, and indeed our country, second to none. What we have set out as our goals are within the framework of continued free enterprise in transportation. The federal role will be primarily one of providing leadership in national policy and developing a coherent plan for a balanced and integrated transportation system. It is through this role that industry can be given a direction to follow in service to the public.

Even though much of the Federal R&D program and some of the regulatory responsibilities are consolidated in DOT, we must not suppose that all solutions will become evident and be implemented overnight. On the research and development side we must evolve a viable role for the Federal Government whereby national values and priorities can be weighed, appropriate R&D tasks undertaken, and through demonstration and/or regulation, insure the application of technology to improve transportation safety, efficiency, and economy.

Our most pressing areas of needed R&D are aviation and urban transportation. We must also carefully evaluate our inter-city and transcontinental rail links and highways to determine what steps are appropriate in light of the rapidly changing proportion of service between these two modes of surface transportation. All in all, we must evolve a clear picture of the relative values of each means of transportation, facilitate interchange between modes, assess investment criteria, and provide for competitive operations between carriers to provide the services needed by our society.

Air Transportation

As you are well aware, the question of the extent and direction of government R&D in civil aviation has been debated in the halls of Congress, its numerous antirooms, and within the Executive Branch - practically from the time the Wright Brothers first flew. The Department of Transportation is presently undertaking an extensive study with NASA on this very question which will hopefully provide some of the overdue answers on this topic.

One area, however, that clearly must be undertaken by the Federal Government and needs no debate, is Air Traffic Control. This critical element of air safety has been under discussion over the years in ex-post-facto debates following major aviation accidents, and has been the subject of numerous high level studies. Most recently, ATC has come under close scrutiny as a result of terminal area congestion and the resulting traffic delays, especially during peak hours.

The FAA is now at work in a phased program of automation to increase the capacity of our enroute system. By 1973 we look forward to having fully computerized flight data handling and alpha-numeric displays operational in all 20 FAA air route control centers. Planning is also well along for the urgently needed extension of automation to include traffic conflict prediction and collision avoidance commands, enroute flow control, and terminal sequencing. New systems in the terminal area also must be developed to safely handle the increasing density of operations and to squeeze out the fullest measure of runway capacity to meet the ever increasing traffic demands placed upon the nation's airport facilities.

Let's pause briefly to look at this demand. In 1964 there were 83 million air carrier passengers. This figure grew to nearly 153 million in 1968. The number of air carrier operations (take off and landings) grew accordingly from 7.4 million to 9.9 million in meeting this passenger demand. In addition, general aviation - including pleasure flying, business aircraft and the burgeoning air taxi operations - has grown by leaps and bounds. In terms of number of daily operations handled by FAA terminal control services, general aviation comprises over four fifths of the total.

Our present control system, although the best in the world today, cannot cope with the peak demands at certain locations and must be replaced with a system designed for the growth that will continue. We must also encourage and support development of new airports and take steps to increase the safe capacity of existing facilities. We will need some $250 million per year investment in airways and $3 to 5 billion in airport construction to catch up with present and projected demands. I might add that under present circumstances, adequate investment in both of these areas appears doubtful without a program of user charges.

One of our biggest problems here is not so much new technology, but rather application of what we know. The terminal congestion problem illustrates this well. We can and have produced the computeres, the radars, the transponders, the landing aids and most of the components necessary to make up a wholly adequate system. The need now is mainly for time and money to support the diligent efforts of many engineers and technicians in industry and government to design, test, build and integrate the overall system while simultaneously keeping the present operations going.

On the other side of the coin -- the new airports -- we have the same time and money needs but we also have the problem of evolving effective action on the local level to accomplish the required planning, design, local approval, and, ultimately, the implementation.

Our work with the local organizations, which must carry the greatest burden of these tasks, is hampered by a lack of free communications and by the social forces placed upon these planners as a result of a known impact of a new airport on an otherwise auite and peaceful area. Aircraft noise, traffic noise, pollution and congestion on access arteries and the other attendant problems brought to a community by a new airport are causes for resistance by residents and their elected local officials. Effective local action which must be taken to meet the greater economic needs of the city is thus delayed or completely frustrated. We

must assist these local officials by effective research and development on aircraft noise, by assisting in the planning of the airports and ground access, and by providing adequate funding assistance to produce the kind of system which will provide the needed services with minimal disruption to the residents and their activities in the area.

Turning to the airborne portion of the aviation system, R&D needs are diffuse and the role of the government is less clear. Having seen these needs from the viewpoint of both industry and government, I can say the needs in aeronautical research are very broad indeed -- much broader than is evident in light of our country's success in civil aircraft development and marketing. Improvement of safety is, of course, a needed area of R&D and of continuing government regulation. Improvement of efficiency of current aircarft types, however, has generally been the forte of industry -- witness the upcoming wide body commercial jets.

But the development of entirely new aircraft types -- perhaps capitalizing on new technology developed by NASA or DOD -- represents another situation. In some of these cases the investment risk in the application of military systems technology or laboratory findings may be too great for industry to undertake. The SST is an example in which a single airframe company could not undertake the technical risk nor sustain the delay between investment and return.

This is not to say that American industry has grown soft with federally supported development projects. Industry funded development of the new jumbo jets involves vast investments in engineering, facilities and inventories risked by each company on a single product in a highly competitive market.

Other new aircraft are also going to be needed -- soon. STOL and VTOL aircraft will be needed to fill the gap between metropolitan centers and to ease the burden of city center-to-hub airport transit. The role of government R&D is going to be substantial in this field if for no other reasons than basic aircraft safety and integration of these vehicles into the airport and ATC systems.

I believe we must evolve a way for industry to perform the needed R&D to the maximum extent of their ability and to shoulder the risk as much as is feasible. Federal research and development should be geared to keep America at the very cutting edge of technology and to ensure that technology is developed and demonstrated to a point that much of the risk of its application by free enterprise is removed. This, of course,

means federal programs to develop advanced research vehicles, to perform full-scale proof-of-concept demonstrations, and to sponsor prototype aircraft where appropriate. Secretary of the Air Force Seamans has noted the need for flexible development and more prototypes in military aircraft; and NASA is moving in the direction of more major engineering hardware and proof-of-concept programming. The Department of Transportation, in its role as the leader in establishing national transportation policies and priorities, will play an active part in the application of these developments to real operating systems. The immediate challenge in this development chain has been addressed to the government, but the challenge may equally be given to the investment community to evolve a way to privately finance much of the future civil aviation development without interposing takeover threats to the justifiably proud managers of the aviation industry.

Ground Transportation

One of the major reasons for forming a Department of Transportation was to integrate the federal planning and regulation of air and ground transportation. I personally hope and believe that the Congress also had in mind the infusion of advanced aerospace R&D techniques into the vital ground transportation portion of the economy which until recently has not kept pace with the technology explosion. The Department of Transportation recognizes the need to improve ground transportation -- particularly urban public transportation -- in a continuing cycle of application of developed technology and the replenishment of our technological storehouse.

Since our urban transportation R&D needs have grown unfulfilled for so many years, our first emphasis is on application of proven technology. An example is the recent extension in Cleveland of the rapid transit to Hopkins Airport. In a technology sense, this was no great breakthrough. But by the application of existing technology, an air traveller going between Airport and Central City now has a choice between a 40-minute limousine ride for $1.60, plus tip; a $6.00 plus tip cab ride; or a 40-cent 20-minute rapid transit ride. This extension of an existing rapid transit system and purchase of newer cars has provided an almost unique convenience to American air travelers and simultaneously diminished the crush on the airport access and arterial roads. I might add that noise and air pollution considerations of transportation are also well served by such rapid transit systems.

We need to find more opportunities to apply existing or new technology to unsnarl our city traffic and to make convenient, low cost public transit available for all. We believe that more and more cities and surrounding

counties will have to face the needs of their citizens for area rapid transit systems, planned and built responsive to the wide range of social and economic needs of the area. A whole new approach must be developed within our metropolitan areas to include the traditional research and development planning and go beyond the hard sciences to include the local regulators, operators, riders, businessmen and financiers in a true community involvement.

We have just entered into a pilot program in five cities to affect such a community planning effort of urban transportation. I feel the investment community has a great opportunity in such a venture. There are so many local organizations that must effectively be brought into this "thing" we call the transportation system that no matter how good federal and local officials may become in dealing with local transportation, (and I assume we will become quite effective with full political and public participation), private enterprise can and must provide the technical nucleus around which local development and operation of these systems will evolve.

Industry must work with the local governments in a new partnership. Close local regulation will need to be continued to retain political responsibility with the citizens and to oversee utility franchises.

I do see, especially, a need for changed investment objectives from the bare minimum acceptable services and facilities (with the resultant rider indifference) to a posture whereby wholly adequate and attractive facilities and services begin to attract new customers and evolve into a full fledged service having a chance to show an earned profit. Cities and industry must plan for this; must take the steps to convince the citizens of the wisdom of the approach.

What industry today can be complacent about its image, its marketing, its production techniques and expect to attract customers? Some claim that the blame must be laid to over-regulation, but I cite as a counter to this the philosophic difference which has led to progressive growth of the airline industry. Here, bold investment has led to growth in a very tightly regulated industry and the investment has been pretty risky at times. In fact, the whole philosophy of airline investment practices has been totally predicated upon continued growth -- a sort of highly sophisticated pyramid club. The investment practice in a ground transit has by and large been one of skepticism of success and maintenance of minimum inventories against the probability of failure.

The government is obviously going to have to increase its participation --

put its money where its mouth is -- to cause the changes in public transportation that are needed. We have been concentrating our efforts on highway construction to the tune of $4.5 to 5 billion each year, but federal support of public or mass transit has been at a rate of only $140 million. America has been said to have had a continuous romance with the automobile, but the day has come when we awake each morning and see the "hair curlers, the face cream" etc. of urban strangulation which have been wrought by the romance. We must invest now in efficient means to facilitate public mobility whether it be express bus lanes, rapid rail transit systems or other currently proven means to meet the needs. We must also explore the advanced possibilities of new technology. The federal R&D role should be as I described in aviation - one of developing technology to remove the risk of implementation and then being able to confidently recommend the right system for each city in need. We will have to study all the possibilities from improvements of current systems of buses and rail transit to the more exotic tracked air cushion vehicles, gravity tube vehicles and others as yet unconceived.

Intercity rail passenger service has been another example of rapidly declining service and standards. The federally initiated metroliner and turbotrain experiments are now beginning to have an impact on public opinion, and I hope soon the balance sheets will also reflect the wisdom of these investments. The advanced bookings for the metroliners have been a positive indication in this direction. Here again we must not stop short of giving these attempts an opportunity to pay off. We will need competitive fares and block times to complete the provision of choice for the traveler.

As the risk of applying present technology begins to be diminished (as I am sure it will), we must have new technology well along in the laboratory and at the test areas. Improvement in safety devices and signalling, and new technology such as tracked air cushion vehicles, advanced tunnelling techniques, and bi-modal systems must be explored in depth if the renaissance of rail passenger service is to be sustained beyond the initial surge. We will need a full measure of effort in these ventures from DOT, ICC, HUD and other federal agencies, the local and State authorities, and most importantly, from free enterprise investment and technical know-how.

In rail freight service, DOT is particularly concerned with safety in engines and in the shipment of hazardous materials. We feel that the rising incidence of rail accidents makes it increasingly important that rail safety standards be strengthened, but as yet this role has not been included in our charge. We are hopeful, however, that following a

successful program of passenger demonstrations, we may see an aggressive program of industry-sponsored R&D pertaining to freight service and maintenance of right-of-way.

Thus far I have discussed matters which are essentially independent of or in direct competition with highway travel. It is obvious, however, that as Administrator of the Highway Trust Fund we in the Department have a keen interest in the $4-1/2 to 5 billion we expend annually in this area. As of the beginning of May, nearly 28,000 miles of the 42,500 mile national system of interstate and defense highways were open to traffic and construction is now underway on more than 5,000 miles of the remainder of the system. This effort has been mainly one of acquisition and construction, but a great deal of R&D planning is reflected within this effort. Many new safety features in the system are also direct products of ongoing R&D in materials, signs, guard rails, embankments, emergency shoulders, freeway entrances and exits, etc. This research has contributed greatly to the present high standards of our interstate system. We are also working in new areas such as roadway heating systems for snow removal, motorist communications systems, and electronic sensors to further improve the highway network. Continued analysis of performance and safety statistics will guide our future research for the interstate system; as well as the nation's other primary and secondary road systems.

The network of highways is a vital element of our overall transportation system which today supports about 90 percent of our intercity travel. Through road planning construction and continued R&D to improve the highways we have made progress in enhancing the efficiency and safety of highway travel. But we must also take all practical steps to ensure the achievement of higher levels of safety in present highway vehicles.

Accordingly, extensive R&D into vehicular safety has been undertaken by the Department. Careful studies of contributors to accidents and possible preventative measures have been initiated in areas such as brakes, personnel restraints, fuel tank protection, vehicle handling qualities, tires, glare and driver vision, rear lighting, and overall crash worthiness.

Many of the findings of such studies are now evident in all new automobiles and tires, but much more work is ahead if we are to reduce the fatality and injury rates on our highways.

In 1968, over 55,000 persons lost their lives on the nation's roads. The cost of this carnage is incalculable. The solutions are not entirely evident, but the direction in which we must continue is clear.

Marine Transportation

I have not spoken at all about the third basic mode of transportation, the all important maritime area. There are two main reasons for this - first, it is an area to which I could devote the entire time allotted and still not cover adequately; and secondly, it is an area in which federal responsibility is fragmented and any attempt on my part to outline a definitive R&D plan would be presumptuous.

Suffice to say that there is a need for a maritime policy which is tied to our overall transportation planning, and a parallel need for a better organized approach toward the whole marine scinece area. Within the Coast Guard in DOT we have plans for an active marine science, marine transportation, and marine safety R&D program. These plans are familiar to most of you and I will not elaborate on them today. We are vitally concerned with this aspect of our transportation system and intend to play a major role in improving the nation's maritime posture over the next few years.

Summary

In conclusion, may I emphasize that research and development supported by DOT will have to be expanded greatly in the coming years to solve the problems of our present transportation system and to develop new technology for future application. The work must go forward in each of the individual modes and must also breach the gaps between the modes.

Across-the-board efforts in preserving the environmental quality of life as affected by transportation must also achieve a vigor dictated by the times. Noise abatement, air pollution reduction, clearing oil spills and preservation of natural beauty and landmarks must all be given emphasis. Safety before the fact and location and rescue after the fact are responsibilities which the Department must meet through integrated research and development.

Our needs are too complex for simple answers, and complex but narrow solutions will be little better. Our roads, rails, waterways and airways have given this country greater mobility than any other nation in history. We have been conditioned by this mobility and by the American attitude that anything we choose to do - we can do.

The Department of Transportation is dedicated to the purpose of putting American innovative talents to work to maintain our unparalleled mobility

lead coupled with the achievement of the highest standards of safety and quality of life.

Above all, our goal is a better transportation industry, not a government operated transportation industry. And so, we heartily endorse meetings of this kind with industry, to carry on an effective dialogue to meet the challenges ahead.

REMARKS PREPARED FOR DELIVERY BY JAMES M. BEGGS, UNDER SECRETARY OF TRANSPORTATION, BEFORE THE ASSOCIATION OF ICC PRACTITIONERS, HOUSTON, TEXAS, JUNE 26, 1969

THE NEW LOOK AND THE NEW OUTLOOK AT DOT

I. INTRODUCTION

Ladies and Gentlemen, I am honored to be able to participate in the convention of this distinguished association. It is also a pleasure to have the opportunity of once again visiting Houston -- this time under somewhat different circumstances. The last time I was here I was representing another Federal agency -- one which is concerned, among other things, with transporting a man to the moon and returning him safely. Now I am with a department which is worrying about how a man can get to work and safely home again without spending 20% of his time behind a steering wheel; and how to transport freight more efficiently on a through bill of lading. Our problems may seem more mundane, but they are no less complex, and at times I feel that NASA is making more progress solving their problems than we are in solving ours! I do feel, however, that the results of our efforts to improve the nation's transportation system will be equally as far-reaching as the lunar-landing program. And so, I have looked forward to joining you -- not only to discuss areas of mutual interest, but also to enjoy your fine hospitality. You certainly share with me a common interest in Federal transportation policy. I note that this is your 40th annual meeting of the Association; which leads me to forecast -- as a representative of the over-40-generation -- that you are now entering the best years of your life!

This is in contrast with the official age of our Department, which was opened for business on April Fool's Day, 1967. With that auspicious beginning, it has legally been in operation for just over two years.

In fact, however, it goes back a good deal further. In 1805, then Secretary of the Treasury, Albert Gallatin, proposed the formation of a National Transportation Planning Agency. And so, with characteristic Federal speed, DOT came into being some 160 years later.

Actually, several of the component parts of DOT were in being long before 1967. The Coast Guard was founded in 1790, the Bureau of Railroad Safety

was organized in 1911; the Bureau of Public Roads came into being in 1918; the Alaska Railroad began operations in 1923; and the ancestors of the FAA were created in 1926 in the Department of Commerce.

So, it is clear that much of DOT has been around for quite a while. One obvious question is "Why bother to put it under one roof"? Why should we address ourselves to the topic of "The New Look and the New Outlook at DOT"; or more properly "The New Look in Transportation"?

The answer lies in the revolution in the transportation industry itself, and of most interest to you, the impact of this on the regulatory process. I would like to pose a few questions to you today concerning this process -- not necessarily as recommendations, but rather as subjects we all must think through carefully as we try to improve the current system.

II. REVOLUTION IN TRANSPORTATION

First, what are the major changes in the industry itself? The transportation industry today is a good deal like the old gray mare, "She ain't what she used to be." When your Association was in its infancy, railroads carried a very large share of inter-city travelers. Air transportation was essentially a mail business, with passenger traffic just starting to grow. Highways were okay -- as far as they went, but frequently that wasn't very far, and long distance driving, whether for business or pleasure, was often difficult. At sea, a freighter might do 12 knots and perhaps haul 20 or 30,000 tons a year. In five cities there was a subway system of some kind, but most urban transportation was street railway or bus.

As you are well aware, during the last decade or two we have seen some truly amazing changes. (1) the railroads have gotten away from passenger service and have concentrated on freight, but often in radically new ways: trailer on flat car, unit trains, and now rent-a-trains have all brought techniques of volume operations to rail transport. (2) Air transportation has zeroed in on the passenger market and now carries 150 million people a year, with air freight, a relative newcomer, growing at rates of 20 to 40% per year. (3) In the last decade, almost 28,000 miles of interstate highway have been built, more than the distance around the world. (4) In the maritime field, the new C-5's now connecting with the Far East can maintain over 20

knots and can handle over 200,000 tons a year of cargo, while tankers have grown from 50,000 DWT, which used to be considered large,to the size of the two 320,000 DWT mammoths now at sea. And in the future, million-tonners are not beyond the realm of possibility. In fact, the real constraint on size is the port area, not the ship design. (5) And also in pipelines immense quantities of fluids are now being transported; while experiments are being conducted with solids in slurrys.

No, the industry certainly "ain't what it used to be," and all indications are that it is going to change even more in the 70's and 80's than it did in the 50's and the 60's.

But statements about speed or size or growth tell only part of the story. What is of equal importance is the emergence of transportation systems as opposed to simply transportation modal operations.

(1) Containerization is perhaps the most dramatic manifestation of this change. No longer is a movement from Chicago to Yokohama a series of separate and perhaps haphazard actions. On the contrary, fast through-service with increasing cooperation and integration among modes and through ports and cities is becoming commonplace.

(2) In air transportation, the air freight people are learning the same lessons and pursuing the same courses. An integrated system that gets the cargo through the terminal and over the road is recognized as being just as important as the fast air freighter.

(3) The traveler is not being overlooked. In the past, air transportation was concerned with how fast the traveler could move, terminal to terminal. Increasingly, it is being recognized that this is only part of the exercise and what really matters is how fast and how conveniently the traveler can get from his point of origin to his ultimate destination. This means increasing concern for things like terminal baggage handling, ticketing, and airport access.

In short, the efficiencies of a particular mode are becoming less important, and instead, whole systems concentrating on what is to be moved -- rather than how -- are being looked at by industry, municipality, state, and Federal Governments.

What does this revolution in our industry mean? It means that transportation

can no longer be considered a group of isolated modes. And this, in turn, means that a company in the transportation business will be faced with increasingly difficult investment decisions.

III. CHANGES IN GOVERNMENT EMPHASIS

It also means that on the Government side, we must take our Department, which is concerned with almost all modes of transportation (I say almost, because the Maritime Administration is not included)--but which has been functioning somewhat as a group of independent federated agencies -- and turn it into a unified administrative body to work with industry to develop the type of systems necessary to move goods and people more effectively.

Our first action will have to be the development of a plan for an integrated transportation system which must evolve from the network which presently exists. In my judgment, this is the single most important role of the Department of Transportation.

It is, in fact, the charge that has been laid on us by President Nixon. When Secretary Volpe and I met with the President in January, he specifically told us to avoid spending all our time putting our fires out, but rather to devote our attention to longer term planning. He recognized this as a top priority objective whose effects will probably not be recognized for several years.

We are now embarked upon this course. From a policy standpoint, we are trying to look at the inter-modal aspects of transportation and the complex inter-relationships which exist in terms of investment, regulation, and private versus public interest.

Some of this latter effort is evidenced by our recent submission to the Congress of the Airport/Airways Bill which will provide for user charges applicable to the service received. I do not say that we have found the optimum user charge structure. However, we are strongly recommending that the concept of user charges be applied where such costs can be readily identified.

Another area where much work must be done concerns the collection of transportation information. We have prepared a five-year program to develop the kind of data base needed to make broader policy decisions. I understand your special committee on statistics has copies of our report, and

and I hope we will have your support in implementing such a program. And I solicit your advice and counsel in this area.

We are attempting to draw on other fields such as the aerospace industry for existing technology to be applied to our transportation needs in all areas -- in urban public transit, intercity rail, civil aviation, and to the extent possible in the maritime area. Furthermore, we need to carry development programs through the demonstration phase to provide industry with better information on which to base its investment decisions.

It is clear to us that if the Federal Government is to take the leadership role in bringing a systems approach to transportation, we must provide the initiative in the areas of management, policy, data, and technology.

IV. NEED FOR A BROADER VIEWPOINT

And here I would like to pose my second question to you. Don't all of us -- including the regulatory agencies -- have to face up to the realities of the changing industry and look at transportation from a much broader viewpoint?

This thought is certainly not new, nor unique. The Eisenhower Administration published in 1960 a report on "Federal Transportation Policy and Program," which called for an economically balanced transportation system, as did President Kennedy's Transportation Message in 1962. We in the Department have been making sounds about this since our formation.

More recently, you may have noted that Senator Magnuson has talked about a new regional approach for developing a coordinated transportation system for the nation. Even the Federal Bar Association is being enjoined to look for a new concept in lawyers -- the intermodal attorney.

V. CHANGES IN THE REGULATORY PROCESS

Tightly interwoven with this whole question of a broader viewpoint on transportation policy is the very real trend in the industry toward multi-modal operations.

With concentration being placed as it is on the goods to be moved -- from origin to destination -- the fact that a container of the same size can be moved on barge or rail, and then be shifted to a truck for local delivery is creating new competitive relationships.

So, my third fundamental question to you is: must not regulatory policy recognize these basic changes in transportation systems and perhaps allow market forces a stronger voice in the determination of prices and the provision of services?

It seems to me that being able to ship a container by many modes provides a basic dilemma for the regulatory policymaker. For instance, highly regulated industries become subject to intense competition from unregulated competitors. One approach to this dilemma is to extend the scope of economic regulation over the competitor, and thus effectively define competition by regulatory rulings.

This has been the basic United States policy for the past forty years. The Motor Carrier Act of 1935, Transportation Act of 1940, and subsequent actions have all tended to broaden regulation to protect that segment of the industry which is already regulated.

An alternative approach would be to go to the other extreme -- to deregulate. This approach would, of course, allow effective competition in the market place to play a more decisive role in the overall economic structure of the industry. Still another approach might be some middle ground.

Perhaps we should all look more closely at our northern neighbors in Canada and see what we can learn from their experience in this regard. As many of you know, the new Canadian Transportation Legislation of 1967 generally provides for less specific regulation, while maintaining a broad policy position to safeguard the public interest.

For example, the Canadians sanctioned multi-modal ownership (the Canadian Pacific is a true transportation company, not just a railroad -- it operates 17,000 miles of railroad, is the largest trucker in Canada, the largest steamship operator on the North Atlantic between Eastern Canada and the United Kingdom, operates a large airline domestically and internationally, operates pipelines, and has holdings in hotels, telecommunications, and natural resource operations).

There is no general rate regulation; instead, rate filing is required and maximum rates are regulated to cover monopoly situations in certain sectors of the industry. Minimum rate regulation is handled by the definition that all rates must be compensatory, or in other words must exceed variable costs. This is on the assumption that predatory practices cannot occur under such a definition of minimum rates.

While I am not suggesting that we adopt the Canadian legislation for our own use, the success or failure of this system is certainly worth studying for our own edification.

Some might wish for a new broom to sweep clean the accumulated tangle of rate regulations which are wedded to a long existing structure of transport prices. But I for one don't believe that this situation can be reversed, with a snap of our fingers, to one of free market choices. The best that seems possible is a continued and, hopefully, accelerated trend toward reduced economic controls over the transportation industry so that carriers and shippers may respond more rapidly to changing demands and to new and evolving technology. This may be a situation uncomfortable to both, perhaps, but it is essential if we are to continue to improve distribution in the future.

So, the last question I would raise today -- although there are probably many more which would come to mind -- is a straightforward one: What can be done through regulation to move us towards adopting a broader transportation outlook, while at the same time recognizing that the present system should not be changed overnight?

I would suggest that there should be a thorough review of the regulatory statutes based on national transportation policy as it evolves. I think it is fair to say that, despite the need, the regulatory statutes have not received the right amount of attention with respect to their modification. The last significant change in the Interstate Commerce Act, for example, was in 1958 -- and this dealt with only a relatively few items. Actually, the last major overhaul of the ICC statutes was the Transportation Act of 1940. Surely our progress in business and technology should be matched more rapidly by adaptation of the regulatory process.

As you know, the ICC has submitted its basic policy report to Senator Hartke's Commerce Subcommittee on Surface Transportation. Hearings began on this report this week. We are very pleased to see the ICC taking positive steps to review its policy posture in relation to present industry conditions.

But even here the ICC is limited in what it can do other than address itself to individual issues which are within its statutory authority.

One still can ask, "How do we tie together all of the regulatory processes for transportation as a whole?" This is by no means an easy question to answer. My only half facetious reply to this is to quote the old saying: "Very little good work in the world has been done by men with easy jobs."

The problems of mergers, carrier diversification and conglomerates, small shipments, railroad passenger service, and intermodal rate competition

are only a few examples of the areas which we all must consider to try to bring our laws into accord with the technology which is available. I cannot predict at this time exactly when or in what form these recommendations will be presented, but I can assure you that we will be giving them our utmost attention.

When one reviews our current system by which we attempt to regulate in the neighborhood of 20,000 firms within an environment of 100,000 providers of transportation service, it seems rather obvious that we are faced with an administrative problem of the first magnitude. I hope you will agree with me that we need to investigate alternatives in the direction of simplification of this system.

To the extent possible, we must somehow reduce the complexity of the decisions which man must make in regulating the industry. I am reminded of the statement of Professor Forrester of M.I.T., who said, "With a high degree of confidence we can say that the intuitive solutions to the problems of complex social and economic systems will be wrong most of the time." I hope we can lower the complexity, reduce the intuition, and increase the batting average!

So, in closing, I would like to ask you to consider what must be done to streamline the regulatory process to bring it into accord with the transportation systems industry. If this can be done, and I'm confident that it can, it means that the industry can not only look back proudly on its past accomplishments, but also look forward to a future filled with opportunity and excitement.

I congratulate your Association for its high degree of interest and competence over the past 40 years, and I know that we can all work together to make the next 40 years of your Association's activity truly the best years of its life.

U. S. DEPARTMENT OF TRANSPORTATION
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STATEMENT OF JAMES M. BEGGS, UNDER SECRETARY, DEPARTMENT OF TRANSPORTATION, BEFORE THE COMMITTEE ON BANKING AND CURRENCY, U.S. SENATE, REGARDING URBAN PUBLIC TRANSPORTATION, WEDNESDAY, JULY 23, 1969.

Mr. Chairman and members of the Committee:

I am James M. Beggs, Under Secretary of the Department of Transportation. I am accompanied by Mr. Carlos C. Villarreal, Administrator of the Urban Mass Transportation Administration. I appreciate the opportunity to appear here to give you the Department's views on one of the most important and vexing issues facing the Nation today, and to tell you where we stand in our efforts to develop the required solutions. As Secretary Volpe recently stated, "few topics are of more timely concern in this country, for transportation is the vital element in the making of more productive and progressive cities."

You are well aware, I am sure, of the high priority which President Nixon places on solving urban problems. He has given urgent attention to the multiple crises facing our cities and has established an Urban Affairs Council as an instrument in the struggle to master the problem. In this connection, the President has placed public transportation among his top priorities.

One of the first actions taken by Secretary Volpe after assuming office was to direct that a searching review of the Department's urban mass transportation activities be undertaken, and that a careful evaluation of the problems of urban public transportation and the potential responses of the Federal Government be assembled and evaluated.

Final evaluation of all the facets of the problem and consideration of the implications of the possible solutions is still incomplete. But even

now, certain facts are clear, and the one that emerges most clearly is that the need of the cities and towns to find the means to develop and improve their public transportation services is enormous.

Back at the turn of the century, four out of every ten Americans lived in urban areas. By 1960, that proportion had grown to seven out of ten and the estimates are that by the year 2000 approximately 90 percent of all Americans will live in urban areas. It has also been estimated that the Nation's entire projected population growth of 150 million in the next 40 years will occur in and around our cities, which means that our urban population of today will double by the end of the century!

If our cities are to remain livable and our population mobile, we must develop the convenient, comfortable, reasonably-priced transportation services that are technologically possible today. Moreover, for a rather large portion of our population -- the young, the old, the handicapped, and the poor -- adequate public transportation services offer the only real hope for participation as full members of this abundant society.

One way to measure and describe the size of the need to improve public transportation services is in dollars. Several surveys have been made in recent years of the capital investment needs of public transportation over the next decade or so. Each such survey concludes that many billions can be effectively invested, and they coincide fairly closely. The Institute of Public Administration produced one such study of the subject in 1961 which was updated by the Department of Housing and Urban Development in 1966. This ten-year estimate covered primarily the capital requirements for rail rapid

transit in the larger cities, with a small figure for bus replacement, and concluded that, adjusted for 1969 values, almost twelve billion dollars would be needed.

While the technologically more impressive rapid transit systems will be built in these areas, there is, and will continue to be, a need for a very sizeable capital investment to serve the citizens in smaller urbanized communities all over the country. The need for improved public transportation is nationwide and for some of the towns and smaller cities where help is needed, the only practical transit system is the motor bus. In the past, the program has provided assistance to such cities as Warren, Ohio, Williamsport, Pennsylvania, and San Angelo, Texas, for buses, garages, and related facilities. It is our expectation that this kind of project grant will continue to be made in the future since communities of this size throughout the country will experience the same kinds of problems as the largest cities.

In the years since the end of World War II, a time of increasing demand for public services, there has been a decline in the use of public transportation. The decline in the use of these services has had a number of effects. Revenues of the public transportation systems have declined sharply to the point where, today, the industry experiences chronic sizeable deficits. One inevitable result of this decline has been the inability to maintain needed services and to provide new services for changing residential and employment patterns.

The decline in public transportation services is the product of a number of factors. Among them are: the undeniable attractiveness to the public of the private automobile as a mode of transportation; the dispersion of the old urban residential and employment patterns into low density suburbs where the establishment and continuation of conventional mass transportation has been at a distinct disadvantage; the relatively large amounts of public -- and particularly Federal -- funds which have gone into highway construction since 1956 in support of private auto transportation. In urban areas, for fiscal 1970, $2.2 billion is available for Federal-aid highways (much of it at 90-10 ratios) while only $175 million is available for public transportation, with the Federal Government able to contribute only two-thirds of the project cost. And, of course, the smaller amounts for urban public transportation have been available only in recent years.

As a consequence of these factors, the private automobile has supplanted public transportation. For example, in 1965 almost 75 million privately-owned automobiles were registered in the United States. Under projected urban population trends, and assuming current rates of ownership continue, there will be almost 75 million additional passenger cars in use in urban areas alone by the year 2000. A self-perpetuating process has developed in which the decline in public transportation service, patronage and revenues both results from and contributes to the increased use of private automobile transportation.

This process has intensified the battery of critical problems threatening the very lives of our cities and towns. Traffic congestion and the costs

attributable to delay continue to intensify. As I have suggested, the alienation of the urban poor is in part attributable to often insurmountable obstacles in matching job opportunities with job seekers. The whole range of adverse features associated with air pollution and with haphazard land use trends are also related to the crisis in public transportation, and small cities and towns are no more immune to these problems than the large cities.

One additional and important conclusion that can be made -- and the truth of this is apparent everywhere we look -- is that previous public efforts have not been equal to the needs and that responsive new approaches must be developed. This is true of the Federal effort as well as the state and local effort. The programs at all levels of Government have been wanting in the size and duration of financial support and in the breadth and imagination of the program elements.

Ultimate solutions involve a variety of approaches, innovations, techniques, and systems. Some of them -- particularly rail rapid transit which will be the optimum system for some cities -- have long lead times. A credible Federal commitment can help the communities generate more funds for needed projects; but under the best of circumstances, the cities will not have the resources to do the job. Therefore, an increase in the level of Federal funding appears necessary.

Under existing law, on any Federally-assisted urban transportation project, the local agency is required to put up a minimum of one-third of the net project cost. This contribution, in the case of a major new municipal system, could involve substantial amounts. In this day of multiple demands

on municipal revenues, such amounts can usually be raised only through bond issues supported by the voters. There is ample reason to believe that assurance of the availability of Federal funds favorably influences voters on this kind of bond referendum. In short, any Federal program must express a conviction and determination to address this problem.

There is no question in the minds of anyone at the Department of Transportation that a strong, new urban public transportation program is needed badly. It is a most complex problem and we have not as yet come to a conclusion. When we finish our review of the problem, we will come back to you with our proposals for the legislation needed to launch a new program. Until this is done, Mr. Chairman, we are not prepared to take a position on any particular bill or legislative proposal.

That completes my prepared statement. I will be happy to answer any questions which the Chairman and members of the Committee may have.