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REMARKS PREPARED FOR DELIVERY BY CHARLES D. BAKER, ASSISTANT SECRETARY OF TRANSPORTATION FOR POLICY AND INTERNATIONAL AFFAIRS, BEFORE THE ALUMNI ASSOCIATION OF THE ARMED FORCES, FORT MCNAIR OFFICERS OPEN MESS, WASHINGTON, D. C., SEPTEMBER 3, 1970

Gentlemen, I am delighted to be here today and am honored to have been asked to address this the opening session of the 1970 - 1971 school year. General Lang informs me that you have several new members among you today. To Vice Admiral Smith of the U.S. Navy, Commandant; Major General Pierce, Jr., of the U.S. Air Force, Deputy Commandant; and the Honorable Delmar R. Carlson, State Department and Foreign Affairs Advisor to ICAF, I wish to extend particular welcome.

I think that an opening meeting such as this is a most appropriate time to pause, to take stock, and reflect on who we are, where we have come from, where we appear to be going, and, above all, where we should be going. Now, I know transportation per se is not your specific line of work, nevertheless it is a subject in which you are (or should be) vitally interested. Our national transportation system is vital to our total national security as well as to our economic prosperity. And your interest as ICAF graduates means an interest

in the whole range of transportation and logistics.

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So today, I'm going to discuss transportation as I see it and I'll not restrict myself to MSTS or MTMTS (begging your pardon General Lang) or some of the other alphabet soup organizations that the Pentagon whomps up from time to time. In short, I want to remark on our whole National transportation system because in one way or another I think all of it is of concern to you. The DOD concern with air transportation is clear. But I think you gentlemen--concerned among other things with the industrial mobilization here--are also concerned with such issues as urban public transportation which has much to do with how people get in, out, and around town. If public transportation stops, strangulation is not far behind.

Today the field of transportation accounts for approximately
20 percent of the Nation's GNP and employs more than 10 million
persons (some 10 percent of the Nation's work force). Yet we know
as we enter a new decade that the growth of our transportation
system is just beginning. This growth must be carefully planned
and intelligently directed—our National security, economic health,
and the quality of the life in our country depend upon it.

To put it another way, it's the transportation system of this country that makes the country hum! Now, it seems clear from the work of the President's National Goals Research Staff that we do require a steady growth of our economy--and that means in our transportation system. Some, to be sure, would submit that a

concomitant of this growth is environmental destruction and that consequently we must stop growing. But I think that deeper analysis is showing that we must grow if we are to improve our physical and social environment. We need resources to solve problems and it is economic growth that generates those resources. But we must plan this growth rationally! We must enhance the environment, not debase it. And I believe we will! But we will have to pay for it--and that means a balanced, rational increase in output! And, believe me, that means transportation!

Now, how are we going to accomplish this? Let's reflect a bit.

What have we accomplished already? What has transportation done
in the first 70 years of this century? In the field of aviation we have
made fantastic strides. From our first tentative efforts at Kitty Hawk
in 1902 we have, in less than 70 years, grown to a point where in 1968
we had 168 million commercial passenger enplanements, 128,000
general aviation aircraft, and 3.11 billion ton miles of air freight.

But getting back to Kitty Hawk where all this supposedly started, most people don't know that there were really three Wright Brothers -- Wilbur, Orville, and George. Now George it was that really took the first flight. And the reason that people don't know him is that he took off directly over Long Island and found himself in the traffic pattern over Kennedy. Unfortunately, he's still there -- along with a lot of other people. We've had progress, but with it some problems.

Like aviation, the highway field has also been a 20th century phenomenon, and here, too, progress can be measured in both quality and quantity. At the turn of the century there were 8,000 so-called automobiles buzzing around on 141 miles of "hard-surfaced" roads (150,000 additional miles of the 2,000,000 total were classified as "improved"--i.e., most of the stumps were removed and not much grass grew between the ruts). By 1910, as a result of the first Federal highway construction project, there were 269,000 miles of surfaced roads accommodating nearly 2 million cars. This growth trend has continued, and today we have approximately 89 million automobiles and 2.7 million miles of improved highways.

The First World War saw the demise of the cavalry and proved that trucks were far more efficient for carrying freight overland than horse-drawn carts. In 1910 there were 10,000 registered trucks--by 1920, 900,000. By 1960 nearly 12 million trucks of all descriptions accounted for nearly 600,000 intercity miles and in 1967, the latest year for which statistics are available, they accounted for approximately 640,000 miles.

Now, again, as with aviation, the picture is one of tremendous growth and similarly some attendant problems. In spite of a massive road building program over the last decade and a half, we continue to be plagued--particularly in urban areas--by congestion. In 1916 the good roads movement pressured President Wilson into establishing

the first Federal highway construction program. Today, nearly half a century later we have a superb highway system, but congestion has not disappeared and we increasingly recognize that collateral issues such as environment and safety are concerns to be recognized.

While the stock of the automotive industry has been going up (usually), that of the public transit companies has been going down. The first electric car line (Richmond) as well as the first subway (Boston) appeared at about the same time as the automobile. And during the first quarter of this century, while automobiles were still a rich man's toy, transit enjoyed increased ridership. In 1905, local urban transit carried 5 billion passengers. Twenty years later ridership had trebled and reached its peak. From this time on (except for one brief shining moment after World War II) public transit ridership, revenue, and service declined steadily. In 1950, there were 1,400 urban transit companies operating 87,000 vehicles and carrying 13.8 billion passengers. By 1967, there were 300 fewer companies and 25,000 fewer vehicles carrying 6.6 billion passengers. In that same period, operating income dropped from a \$66 million surplus to a \$67 million deficit. Hardly a rosy figure -- although the figure is red! And that doesn't include all the deficits of the large public systems. New York alone, for example, showed a deficit of over \$100 million, while my hometown, Boston, is in the red to the tune of \$40 million a year.

Water transportation of one sort or another is hardly a 20th century phenomenon, rather it's as old as civilization itself. This country's history and success have been inextricably bound to water transportation--both inland and deep sea. In fact, until the advent of the railroads in the mid-19th century, water was the only feasible means of making large-scale shipments of freight. Although the improved inland waterway mileage has actually decreased slightly during this century as rivers straighten and change, domestic commerce has shown a steady increase. In 1900 there were 166 million tons being shipped on our inland waterways. By 1969 that number had increased to 1.5 billion tons.

U.S. oceanborne imports and exports have also increased fourfold from 1940 to 1967, but the percentage of total world tonnage carried
by U.S. flag ships has decreased significantly in the last 15 years (from
43% in 1951 to 7% in 1966). At the same time, however, the total value
of all U.S. oceanborne shipments has increased from \$7 billion in the
mid-fifties to over \$8 billion in 1966. The percentage of U.S. exports
and imports carried on U.S. flag ships has declined more slowly in
value than in tons because the liner fleet—which carries the high
value cargo—received direct subsidy and thus the liner fleet has been
able to remain considerably more competitive than the bulk and
irregular carriers.

Last, but certainly not least, are the railroads. Here, as in urban public transportation (and for some of the same reasons), the picture is not so rosy. During the first two decades of the 20th century, the railroads continued the growth trend established (both in passengers and in freight) during the last half of the 19th century. Track mileage increased from 13 miles in 1830 (the B&O's horsedrawn service from Baltimore to Endicott's Mills) to 193,000 miles in 1900 and finally reached its peak in 1916 at 254,000. Since that time, trackage has decreased steadily and by 1968 had fallen to 209,000 miles.

Rail passengers have shown a similar--although more marked--decline. Reaching a peak of 47.4 billion in 1920, the number fell to 483 million in 1950, 325 million in 1960, and, finally, 296 million in 1968, of which the bulk were commuters, not intercity travelers. And there is no indication that this trend will not continue. As ridership has decreased, so too has profit. By 1963 the railroads assumed an out-of-pocket deficit of \$9 million for the passenger service they were providing. Five years later, in 1968, the avoidable deficit for intercity traffic alone had grown to \$170 million and is now over \$200 million.

The rail freight picture is slightly more optimistic. Although overall rail net income is not now (\$600 million in 1968) what it was back in 1929 (\$900 million) and the percentage of total intercity freight carried by the "roads" continues to drop (61 percent in 1940 and 41

percent in 1968), revenue ton miles have continued to rise since the depression years—the rails accounted for 447.3 billion ton miles in 1929, down to 379 billion ton miles in 1940, but up to an impressive 755 billion ton miles in 1968.

On balance the railroads have declined over the last quarter century. Passenger ridership has declined in absolute numbers as has income from this service. Rail freight (and income) have dropped in relative terms, although in terms of absolutes freight tonnage has increased.

So much for who transportation is and where it has been.

Now where do all these facts and figures leave us? Today we have a transportation system that can boast of some tremendous successes. Just as clearly, however, there are some problems which must be solved. We must do something about congestion in our airports and our airways. The challenge here is not really one of quality or even of technology. Our air traffic control system is the best in the world and our airports are among the finest. But we simply do not have the capacity in our airways and airports to fulfill our present—let alone our future—needs. Obviously, the purpose of air transportation is to save time, but the ability of our aviation system to do this is diminishing.

In the highway area, we also have congestion and capacity problems, particularly in our cities. Even with a massive Federal and State highway construction program, we do not now have adequate highways to accommodate

all our automobiles. In urban areas we are running out of room--today as much as half the land of some cities is devoted to highway and related services (parking, etc.) and there is a physical limit to how much we can expand the central business district.

With the decline in public transit we are faced with ever-increasing numbers of automobiles on already choked urban streets. With an ailing transit industry, with increased indebtedness on the part of the localities who try to support these systems, large segments of our urban population (the young, the old, the handicapped, and the poor) are frequently without adequate transportation service. And as our urban population increases in the coming decades, these problems will become still more severe.

The challenge presented by the railroads is one of infusing some new life into an industry that is seemingly lacking vitality. On the one hand, we have an unwanted and unprofitable passenger operation which provides the public with poor service and prevents the industry from investing in equipment which might improve its other service. The freight operation, in turn, although carrying more tonnage, is capturing a decreasing share of the total market and making less profit.

Generally speaking, the inland water carriers are in fairly good shape--tonnage is increasing and so is the industry's share of the total. But in one area there does appear to be a problem. The Great Lakes ports and the Saint Lawrence Seaway--which a decade ago opened a fourth sea coast--has not yet developed traffic levels that were projected in 1959.

And of course, U.S. deep sea transportation has its share of troubles. World trade, and U.S. foreign trade, continue upward as output increases but the share of this carried by U.S. flag ships (and the ships themselves) is decreasing. Clearly there is a challenge here to reinstate the U.S. to its once major position.

Above and beyond these direct transportation concerns are a number of general considerations which in heavy measure determine and mold the action we take to effect solutions to our transportation problems. Increasingly we are becoming aware that transportation has a profound impact on our environment and our society. We are realizing that we can no longer simply deal in transportation objectives alone. A new airport in the Everglades would have solved Miami's air congestion problems, but perhaps at the expense of the ecology of the Everglades region. An extension of I-93 in New Hampshire would speed foliage watchers and skiers through Franconia Notch--on the other hand, such a construction project might have seriously endangered the Old Man in the Mountain, one of the natural wonders that attracts so many tourists to that region. In cities, we must worry about housing that transportation projects displace and the effect these projects will have on land-use patterns in the community once they are operational. And then there is air! We have invested large sums in highway systems to accommodate more automobiles and we have built airports for growing numbers of aircraft and air passengers, but what about the pollution these create?

Safety is another serious consideration. Transportation-related accidents kill over 60,000 people a year to say nothing of property damage. Highway accidents account for the highest number, but we have serious problems in aviation with the railroads, and recreational boating.

And what of transportation availability? These days everyone in transportation talks about balance, but the statistics I quoted earlier give you some indication of how imbalanced we are now. Increasingly we are dependent on automobiles for both intra and intercity trips, while public transit and rail passenger service are increasingly deficient. Trucks are carrying more freight, whereas the railroads are losing business. Now some of this may be in the proper order of things, but the 15 percent of our population that lacks access to an automobile is hard pressed in a highway-oriented society.

Finally, with our present system stretched to fulfill our existing transportation needs, what are we to do in 20 years when we will require approximately double the capacity we now have? Clearly, increasing capacity is something we have to think about in any transportation projects we undertake.

Now, within the context of all this, what have we done, over the last 10 months, by way of providing some solutions? First, I'd like to talk about legislation, since that's action that's pretty concrete.

President Nixon sent to Congress a program designed to restore the U.S. Merchant Marine to its once proud position in the shipping lanes of the world. The program recognizes the fact that the old way of doing things hasn't done all the job and hasn't been the answer for our seamen, our shipbuilding industry, for operators, or, in these times of strict budgetary constraint—for our Government. And, perhaps most important, it hasn't been the answer for transportation users.

The shipbuilding program is designed to meet both problems which lie behind the recent decline in the field--low production rates and high production costs. By introducing a long-range building program and new approaches to construction subsidy, the Maritime Administration hopes to encourage builders to standardize ship design and introduce mass production techniques which have kept other American products competitive in world markets. And with these cost reductions we expect that ship operators will be able to make the required capital investments over the next decade to build the new high-technology ships -ships that will heavily determine the efficiency and competitiveness of our U.S. flag fleet. A variety of other provisions included in the program will aid the maritime research and development activities of the Federal Government. As most of you probably know, both Houses of Congress have responded favorably and I look for this program to become a reality this year.

During 1969 we sent up two other programs which hit some of the aviation and urban transportation problems I addressed earlier.

The problem in aviation is primarily one of capacity, and the Airport/Airway Development Act of 1970, which the President signed into law last Spring will go a long way toward solving our problems here!

- For airport development: a ten-year, \$2.5 plus billion grant-in-aid program (to be matched by local funds).
- For airways: equipment investment in our air traffic control system at no less than \$250 million a year.
- 3. An R&D effort of at least \$60 million a year.

This legislation, supported by user charges on the aviation community will deal directly with the capacity problem.

The urban transportation legislation Act, which has passed the Senate and is presently under consideration by the House, would provide some \$10 billion over 12 years for (1) financial assistance to large and small cities with existing bus and rapid transit systems to replace, improve, and expand equipment and facilities; (2) financing part of the capital investment for new rapid transit systems in cities such as Seattle, Pittsburgh, Atlanta, and the like; (3) an expanded research, development, and demonstration program to get technological capability in a position to be utilized in the cities before the 70's are over! The program will provide relief for the congestion that presently chokes our cities by providing automobile users with an attractive

transportation alternative. It will relieve some of the financial pressure now facing the transit companies--public and private--by providing the necessary capital for equipment investment and improvement which they can't otherwise afford. And the long-term duration of the bill and the schedule of funding authorizations establish the Federal Government commitment necessary for local agencies to develop the financial programs necessary to join in the commitment of the Federal/local partnership. And, finally, we think that the program speaks to some of the serious social problems that plague our cities by providing service for those less fortunate in our population, those who must rely on public transportation because they simply do not have access to a car.

Earlier I mentioned the intercity rail passenger problem. The Department spent the better part of a year working with Congressional Committees and within the Administration developing a proposal to address these problems. The Senate has voted out a bill for a corporation-type approach to the intercity passenger issue and the Bill is now under consideration by the House. A bill to be signed into law this year which will not only help solve the problem of cash drain on the railroads, but also concurrently do much to restore good rail passenger service where it is needed.

Now, getting beyond purely modal programs, the Department has also taken some administrative actions which reflect our concern with other issues. In the environment area, we established in early '69 a new office--the Assistant Secretary for Environment and Urban Systems--to insure that all our programs are made compatible with the environment and further that all our planning comprises a real concern for the quality of life. This office played a major role in the Everglades Jetport and Franconia Notch decisions. It was also instrumental in establishing what to regard as significantly improved housing relocation policies under which all DOT programs now operate.

In the safety area, the National Highway Safety Bureau is now a separate organization reporting directly to the Secretary. The problem of highway safety has needed greater recognition, not only within the Department but on a national scale as well. And this organizational upgrading is simply one manifestation of John Volpe's reconition of this need.

Gentlemen, that is some of what we have done in the last 18 months.

Now, what's ahead? Our single, most pressing need is, I think, coordinated planning. There is no National Transportation Plan and transportation planning generally is at best complicated and at worst nonexistent.

Now, we must recognize that much of our transportation is privately-owned and thus privately planned—and I think this is a good thing! But to make things complex, much of this privately-owned system is regulated by the three independent Federal regulatory agencies and a host of other

such agencies at the State and local levels, all of which are independent of each other and surely of DOT. The States, for example, are heavily involved in highway planning and actually select more of the locations for their roads and highways. Highway planning in most metropolitan areas is done as part of comprehensive, areawide or community planning, which brings in various jurisdictions. So I think it's fair to say that we in transportation face a complicated and involved job by Government and industry if planning is to be coherent. In recent years State and local planning has been heavily in terms of highways because that is where the money is! Who can blame them? But it is becoming increasingly obvious in urban areas, particularly, that highways are not the only--or frequently even the best--answer--that for environmental, social and economic reasons rapid transit or another transportation alternative may be a better solution. But now as resources for other alternatives are becoming available, we need to become more sophisticated and objective about determining just which alternative. In short, we have got to really get on with transportation planning, not just highway or airport planning.

Airport access illustrates the intermodal nature of the problem.

Statistics indicate that particularly in the Northeast Corridor, the trip from the center city (say downtown Manhattan) to the airport often takes longer than to fly from LaGuardia to National Airport in Washington.

Are more highways the answer or should existing rapid transit lines be

extended to the airports (even though air traffic peaks at the same time as commuter traffic)? Is the answer to relocate airports at further distances from the city (as with Dulles or the new Dallas-Fort Worth Airports) and then service them with some sexy new high-speed ground system? Or should we think in terms of entirely new air systems such as STOL and V/STOL which envision center city ports and thus allow air trips from one center city to another? And let us not overlook the very real issues of environmental and social impact that our transportation system have. And so here we see intermodal and environmental problems and a very real need for system planning, not simply modal trade-offs to do a segment of the job. Our job is to help various government agencies--Federal, State and local--to get together, with appropriate private interests and really do this "comprehensive" planning job.

In international transportation, too, we need some new ways of thinking. President Nixon's maritime program will provide much stimulation but we need other changes as well. We have had some management and technological innovations—containerization for example—which promise to spawn really intermodal salt water and overland transportation. But if we are to realize the full potential of this and other similar systems we must overcome our natural inclination to resist change—regulatory, organization, and operational.

And the shippers' perception must be broadened. Often new service or concepts are looked at solely in terms of direct segmental rate reductions. Increasingly the National user of transportation--must consider how a new system may permit other economies in overall distribution costs.

The job we face now is no longer purely modal nor can our interests--yours and mine--be narrow and parochial. We can, should, and will continue to represent particular views. And this is all to the good. But we must recognize that we are operating in a larger context, where increasingly the various modes affect one another and where transportation itself increasingly affects our total society. If we can recognize this and rise to the occasion, if we can plan, invest, operate and utilize true transportation systems, then our industry--and our Nation--will go forward and we will have growth with fewer problems and more benefits. To date, I think we in transportation have only scratched the surface of the kind of thinking needed in the future. I believe that in the years ahead all those concerned with transportation can and will use to thus challenge!