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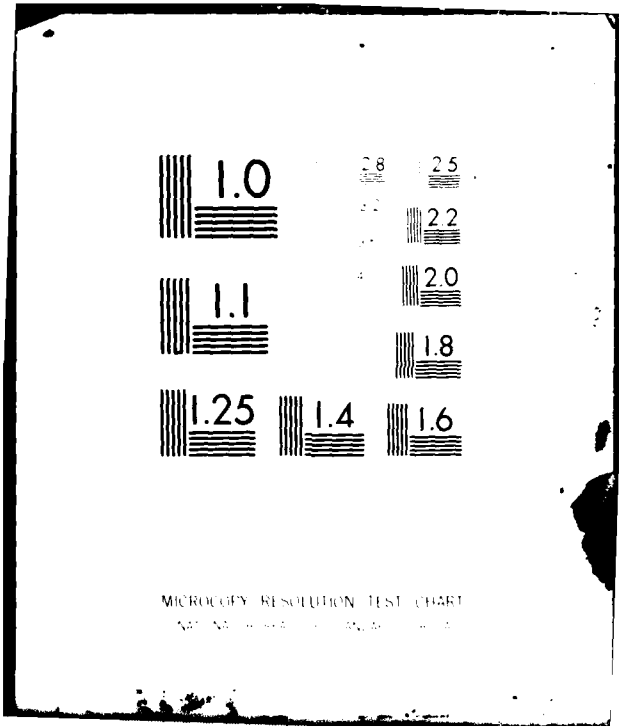
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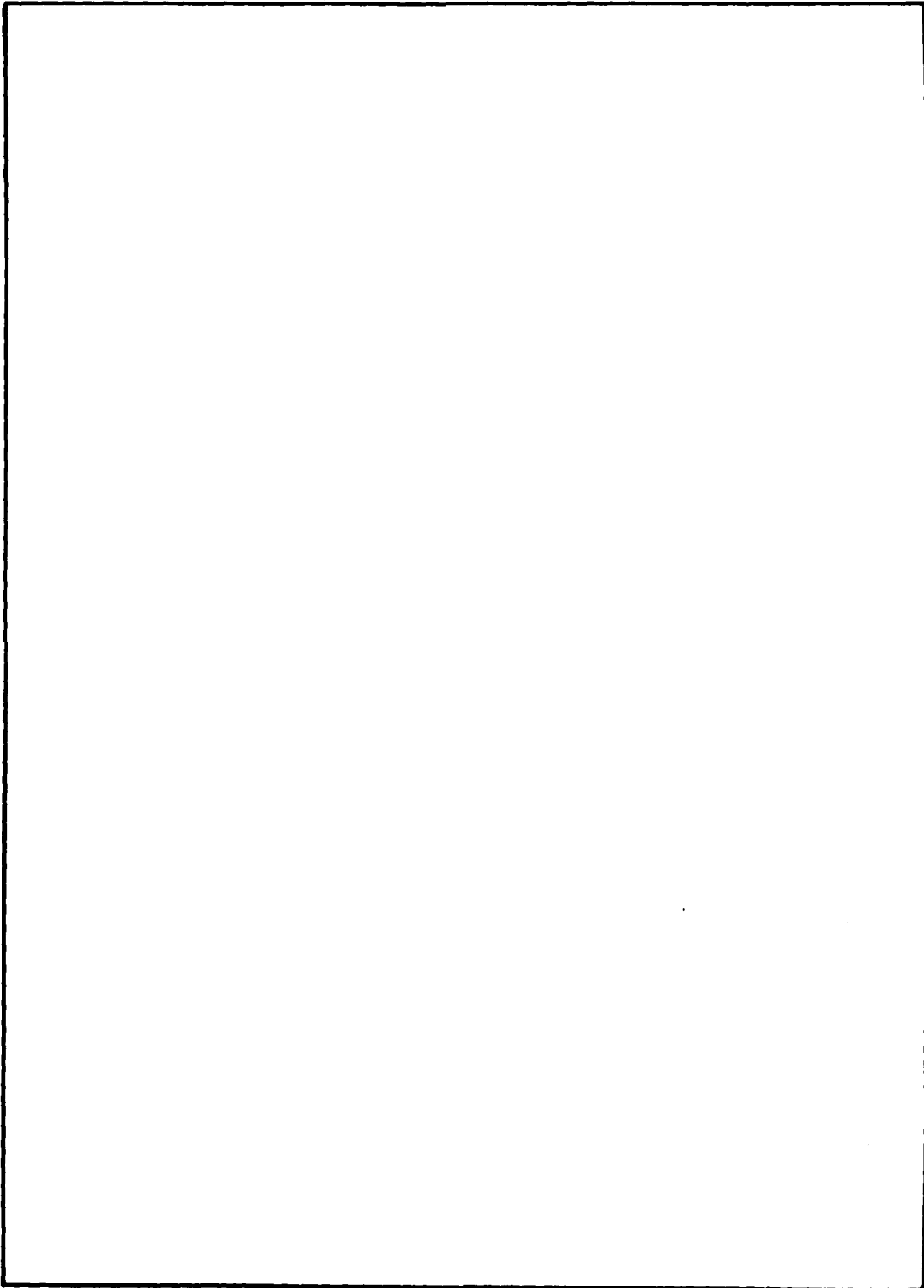


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STRATEGIC MOBILITY

A Civilian/Military Effort

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LTC Al Koestring
Seminar #1
20 April 1982

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In his White Paper, General E. C. Meyer, the Army Chief of Staff, outlined the challenge for the U. S. military as follows:

The most demanding challenge confronting the U. S. military in the decade of the 1980s is to develop and demonstrate the capability to successfully meet threats to vital U. S. interests outside of Europe, without compromising the decisive theater in Central Europe. In short, the Army of the 1980s faces a strategic requirement for unprecedented flexibility in tactical employment options; in strategic deployability; in our thinking; as well as in our force structure.¹

If the challenge of successfully dealing with an adversary who threatens our vital interests anywhere in the world is to be met, we must be ready and capable of responding rapidly and with the necessary combat power. Today we lack the lift capability to get the right forces to the right places in a timely fashion. We need increases in all areas of lift capability--more airlift, more sealift and more prepositioned equipment--if we are to be able to deal with the threat in any area of the world.²

A brief look at a world map (figure 1) reveals that we are separated by substantial distances from such areas as Southwest Asia, Northwest Asia, and NATO Europe. Our principal adversary, the Soviet Union, is relatively close to these areas which are of vital interest to the United States.

Recent world events have focused attention of the contingency response options which are available to the United States. The role our military forces can play in the national strategy depends greatly upon strategic mobility.

Figure 1



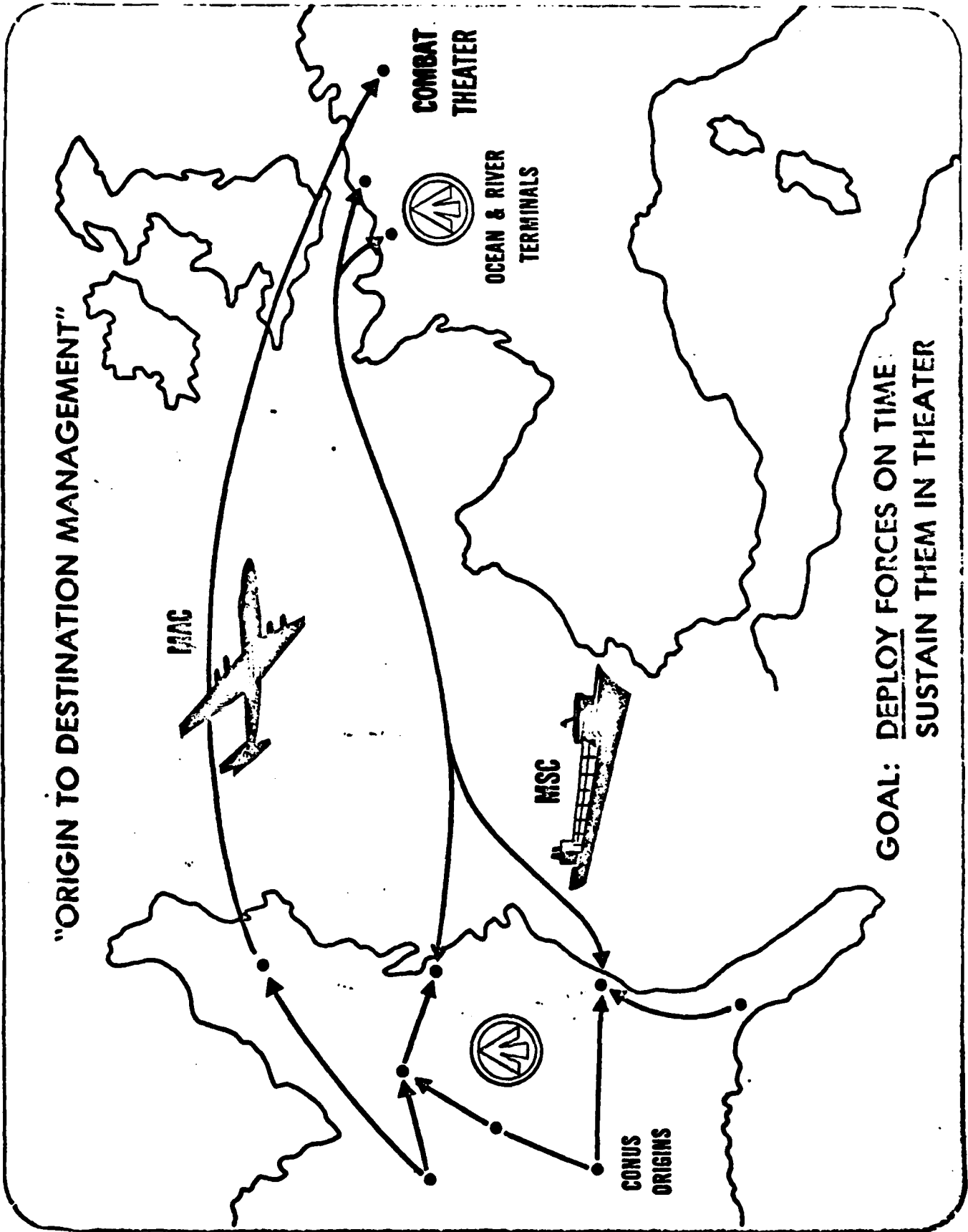
Simply stated, strategic mobility is the ability to deploy fighting forces from the Continental United States (CONUS) to overseas theaters on time and to sustain those forces in combat. Actual movement capability is scenario oriented and depends upon type cargo, distance, destination, fuel and facilities available. The Army is by far the largest user of strategic lift capability. The ability to deploy the Army's 24 division force and support units rapidly is essential to the credibility of conventional deterrence. ³

National transportation policy dictates that the military place primary reliance on the commercial transportation industry. ⁴ We do not have a military transportation capability to meet all of the Department of Defense requirements. The civilian transportation industry not only performs the majority of our peacetime day-to-day requirements but it is the backbone of our planning for any major contingency. ⁵ The transportation system of the United States is a highly capable one and there is optimism about the capacity of the domestic transportation system to meet Department of Defense needs in times of national emergency. However, the Department of Defense will not be the only claimant of available transportation resources. ⁶

TRAFFIC MANAGEMENT

As the traffic manager for the Department of Defense, the Military Traffic Management Command (MTMC) provides centralized policy, planning and direction. The result is traffic management from origin to destination through a total-system approach. (figure 2)

Figure 2



As part of this approach, MTMC assumes an interest in every segment of the transportation system used to move defense passengers and cargo. ⁷

Soon after it was chartered, MTMC was assigned the mission of administering for DOD the Highways for National Defense Program (HNDF). Working with the Federal Highway Administration (FHA) of the Department of Transportation (DOT), MTMC ensures that defense needs are integrated into the nation's highway programs. The HNDF includes those public highway systems considered to have strategic or major transportation importance to national defense. The HNDF also includes the Defense Access Road Program through which the services participate financially in public highway access roads serving military installations. ⁸

A similar program, Railroads for National Defense, was established in 1975 to ensure that the nation's rail system remains capable of supporting defense needs. In coordination with the Federal Railroad Administration (FRA) of DOT, MTMC identified a strategic network of rail corridors throughout the United States. Using this network, MTMC and FRA can evaluate the impact of proposed mergers and abandonments on defense requirements. ⁹

In 1978, an MTMC initiative established the Ports for National Defense Program. MTMC and the Maritime Administration (MARAD) coordinate in identifying civil port facilities for DOD use in contingencies. Under this program, 44 breakbulk and 5 roll-on-roll-off (RORO) berths are predesignated at East, West,

and Gulf ports for exclusive DOD use during mobilization. ¹⁰

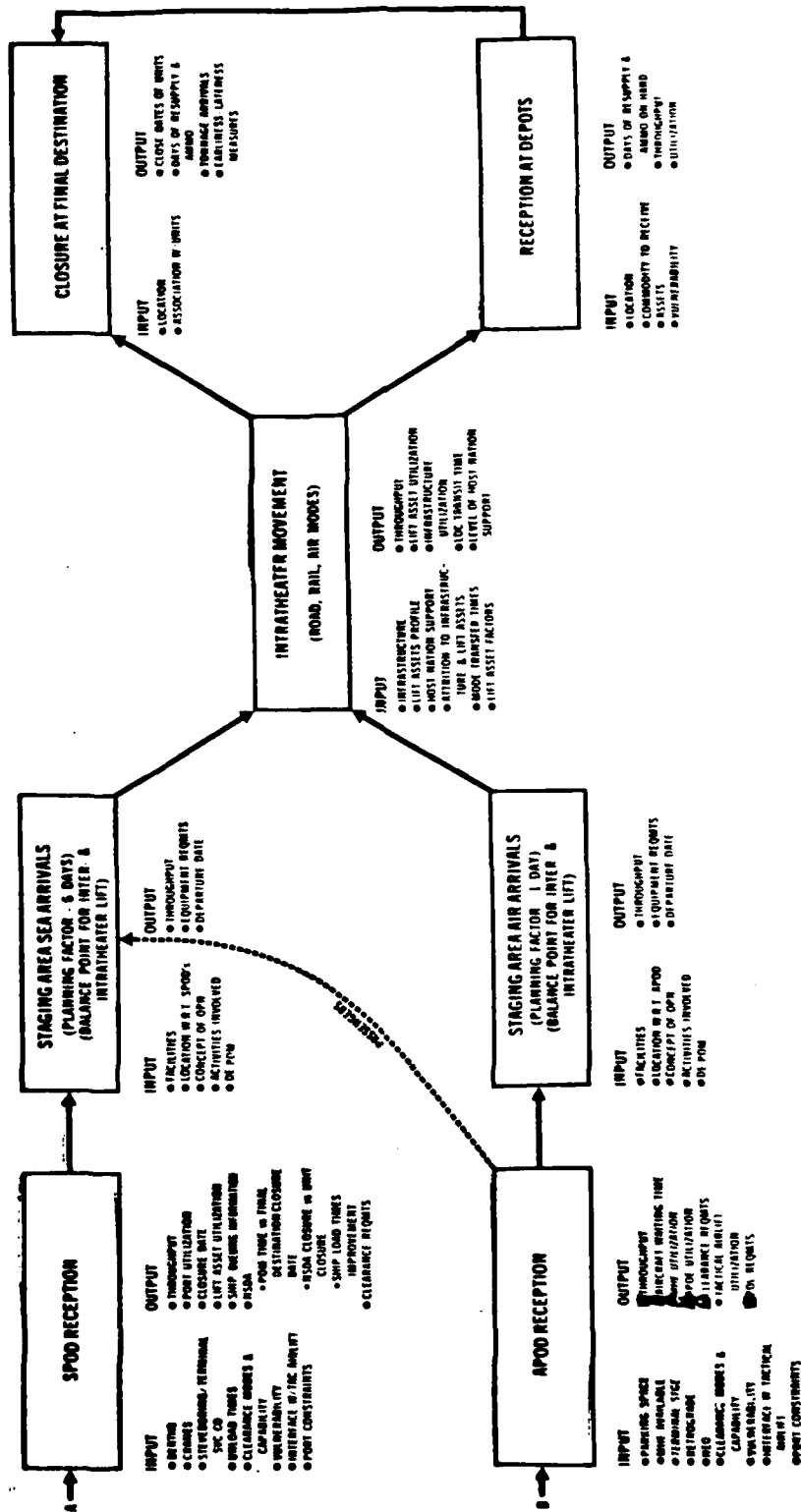
Most recently, the Pipelines for National Defense Program was formulated to identify all CONUS fuel pipelines and to assess their potential capacity to supply fuel under strategic plans.

Upon mobilization, initiated by a declaration of national emergency, DOD gets high priority for use of transportation assets. However a nonmobilization contingency, which is the most probable scenario for a Rapid Deployment Joint Task Force (RDJTF) deployment, until recently rated no such priority. Because of this, MTMC has established a major emergency preparedness program, the Contingency Response (CORE) program, to ensure that DOD receives priority commercial transportation services during contingencies prior to a declaration of national emergency.

Civilian industry may be called on to respond to a wide range of contingencies with little or no warning. This response must be in hours--not days or weeks. This means a close working relationship with industry as well as the cooperative effort of all who have a stake in strategic mobility. No one element of strategic mobility can be considered more important than another. Forces must be ready when strategic lift is available. Line-haul assets must be available where and when needed. Ports must be managed properly to ensure the rapid thru-put of cargo and equipment. Installation support must be adequate. There must also be efficient, integrated management throughout. (Figures 3 and 4)

Figure 4

THE MOBILITY PROBLEM (CONT)



The CONUS transportation system must be capable of meeting the strategic deployment schedules. However, it is the ability of the transportation industry to provide this kind of support for the national defense effort that is in question.

MOTOR CARRIERS

This industry represents a valuable strategic mobility asset. There are more than 30 million trucks registered in the United States. Under existing economic conditions, much of this fleet is underutilized and there is, therefore, capacity for expansion. As of 1977, there were approximately 1.3 million combination units in the U. S. and approximately 2.1 trailers per power unit. However, about 30 percent of this equipment is out of service with a large percentage of it in need of repair. The heavy equipment transporters (HETs) are extremely important. Procedures are being developed through the Federal Emergency Management Agency (FEMA) and DOT to obtain critical motor assets for moving tracked vehicles situated close to a port of embarkation. For example, if enough HETs were available early, they could be used in shuttle service between Ft. Lewis, Washington, and the port of Tacoma. ¹¹

There are many serious problems facing the mobilization of the motor carrier industry. A recent ICAF study indicated that neither short nor long range defense mobilization/surge requirements for the motor carrier industry have been identified. ¹² Requirements determination, in terms of origin, destination, and cargo tonnages, is a critical task and the basic start point

for determining the utilization of assets. The bulk of motor carrier transportation assets would be utilized to move materials to industry, military supplies, and products required for day to day support of the economy.

A difficult task for the Federal government will be that of managing truck transportation during mobilization. No overall command center exists to assume responsibility for truck mobilization. The larger trucking firms have implemented automated management systems for their fleet operations; however, there is virtually no compatibility of the software systems, and therefore no interoperability even among the largest companies.

The motor carrier industry is so de-centralized that with the exception of ICC regulated carriers, effective management and control during mobilization will be difficult. Currently there is no clear capability to catalog over 90 percent of the registered truck assets, and there is no system for the allocation of these assets to military and civilian priorities.

Indications are that currently an adequate number of drivers are available for that portion of the fleet in operation. Since driver training is not a lengthy process (two weeks maximum) it is probable that mobilization/surge requirements for drivers could be met. There is a potential shortage of qualified diesel mechanics for mobilization which will grow worse if existing mechanics are drafted during an emergency. The training of diesel engine mechanics requires up to two years.

The major problem that faces the motor carrier industry

during a mobilization is the availability of fuel. Mobilization planning is essential to assure diesel fuel allocation to truck fleet operations.

The highway system is adequate to handle the increased traffic resulting from mobilization requirements. However, the current system of Interstate and National Defense highways are reaching the end of their twenty year design life and increased attention to maintenance programs is required.

RAILROADS

Railroads have played, and will continue to play, an important role in our strategic mobility system. Rail provides the majority of the heavy-lift needed for moving wheeled and tracked vehicles long distances. It also maintains unit integrity from origin to port of embarkation, so that the unit is ready to load and deploy intact.

In any national emergency, railroads will be the major mover of freight. Historically, the railroad industry has met every wartime requirement from the Civil War through Vietnam. However, the railroads face a serious problem in that no guidance has been issued by the Federal government which specifically identifies mobilization requirements for railroads.

It is not anticipated that labor availability will be a problem since the railroads already employ more personnel than are required for operational requirements. Also, there are many able retired railway personnel who could be recalled and most essential jobs should be exempt from a military draft.

In the area of equipment, the railroad industry contends that it has the capability to move the freight in a mobilization situation. In 1944, when the railroads were moving over 90 percent of all military freight traffic, the railroads owned 2.1 million freight cars and 44,000 locomotives and carried 737 billion ton miles of freight. By contrast, in 1979, the railroads possessed only 1.7 million freight cars and 28,000 locomotives, yet carried 914 billion ton miles of freight.¹³ There is, however, very little capability to handle troop movements by rail. Only AMTRAK provides substantial intercity passenger service and AMTRAK equipment is already overcommitted. Proposed AMTRAK budget cuts, if implemented, will further restrict AMTRAK operations.

For the past several years, the track mileage of U. S. railroads has been decreasing. The industry still has substantial line redundancy, particularly in the critical industrialized Northeast sector. As a result of modernization actions, the existing line trackage is believed to be adequate except for access to some military installations--a problem area which requires improvement.

The majority of railroad power equipment operates on diesel fuel. Because of this, it is obvious that mobilization planning must assure adequate fuel allocation for the railroads.

Although the railroads have weaknesses in certain areas of mobilization planning, they now appear to be better prepared for an emergency than at any other critical period. One major

strength is that all major railroads have sophisticated computer systems which can locate any car almost instantaneously.

Major components of the U. S. mobility programs are airlift, sealift, and prepositioned equipment (both land-based and afloat). These mobility components are complementary and interdependent.

(Figure 5)

AIRLIFT

The U. S. airline industry constitutes a major airlift asset during mobilization and is perhaps the most prepared industry for rapid transition to war. The Civil Reserve Air Fleet (CRAF) is designed to identify and contract industry assets in peacetime and use them in wartime. It is a voluntary civil/military partnership. Although the CRAF has never been formally activated, the CRAF does in peacetime what it would do in wartime--haul passengers and cargo on a daily basis. The only form of compensation for CRAF participation are charters to carry military passengers and cargo. This use of CRAF aircraft provides military airbase personnel with experience in handling international commercial aircraft.

The use of civil aircraft by the Military Airlift Command (MAC) on a daily, work as usual basis, or as a part of the CRAF, is a contract operation. Not all carriers participate in MAC's peacetime business; some offer aircraft and crews for wartime use, but decline to participate otherwise. In any event, the contracts between the carriers and MAC provide for aircraft, materiel, and crew support sufficient to yield a utilization rate

Figure 5

MOBILITY OPTIONS

PREPOSITIONING

SEALIFT

AIRLIFT

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ADVANTAGE

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<ul style="list-style-type: none">• SMALL CAPACITY• AIRFIELD DEPENDENT	<ul style="list-style-type: none">• SLOW• SEAPORT/SEALANE DEPENDENT	<ul style="list-style-type: none">• STATIONARY• EQUIPMENT NOT AVAILABLE FOR TRAINING
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DISADVANTAGE

of 10 hours per day per aircraft. A lot of coordination is needed to determine the capability necessary to fulfill military airlift requirements. DOD determines the capability needed to overcome shortfalls in MAC airlift. MAC evaluates the estimated shortfalls and computes the number and types of aircraft required. After determining the requirements, MAC evaluates the civil carrier capability and requests DOT make formal allocation of civil aircraft to the CRAF. ¹⁴

Three stages of the CRAF have been established which allow for a tailored response to worldwide contingencies:

Stage I consists of aircraft called up by the Commander in Chief, MAC. (These aircraft are in addition to those civil aircraft performing regular MAC airlift services.) Stage I is sized to provide maximum augmentation to meet DOD needs for a minor emergency, while permitting the civil carriers to continue peacetime operations.

Stage II is sized for a minor contingency and is designed to provide augmentation during an emergency not requiring national mobilization. This stage is activated by the Secretary of Defense after conferring with the Secretary of Transportation. Stage I consists of 46 airplanes and Stage II consists of 64 airplanes (including those in Stage I). In Stages I and II, carriers have 24 hours from notification to provide their aircraft. Stage II provides for an increase in augmentation without having to resort to full mobilization or the declaration of a national emergency.

Stage III is the total capability of the CRAF. The Secretary of Defense will activate this stage in the event that the President or Congress declares a national emergency. In Stage III, carriers have 48 hours to make their aircraft available after notification of a mission. For January, 1982, a total of 324 commercial jet aircraft were available for CRAF Stage III.

THE CRAF FLEET

	Stage I	Stage II	Stage III
<u>PASSENGER</u>			
Narrow-body	0	0	10
Wide-body	<u>2</u>	<u>20</u>	<u>205</u>
Total	2	20	215
<u>CARGO</u>			
Narrow-body	19	22	56
Wide-body	<u>25</u>	<u>22</u>	<u>53</u>
Total	44	44	109
Grand Total	46	64	324

An advantage of CRAF is that it will experience no major delays for training personnel, putting equipment into operation, or reconfiguring aircraft. Flying hour utilization rates, even in a mobilization scenario, probably would not exceed those now experienced in daily commercial operations.

CRAF has historically provided 50 percent of total DOD strategic lift capability.¹⁵ The CRAF in its present configuration offers sufficient capability to satisfy DOD passenger airlift requirements even in a full mobilization scenario. Cargo capability is a different story. Regardless of the scenario, the combined total of strategic military and commercial cargo airlift

is short of meeting the requirement. This is even more serious when types of cargo are considered. There are no commercial freighters capable of carrying outsize cargo over international routes because of fuselage or loading door size limitations. The cargo situation is worsening as a result of the retirement of many of the narrow-body aircraft in CRAF, the 707s and DC-8s, by 1985. ¹⁶

The increased need for airlift and the decrease in capability resulting from projected narrow-body retirements contributed to the formation of a new program called CRAF Enhancement. Up to now, CRAF availability has not required any capital investment by the taxpayers. The airlines have invested in the equipment and crews, and have responded voluntarily when DOD has required additional airlift. The CRAF Enhancement program requested the appropriation of funds to pay participating carriers for the addition of air cargo features to new wide-body passenger aircraft built by U. S. manufacturers and for modifications, such as the addition of a nose visor, side-loading cargo-access door, and strengthened floor, to existing aircraft. The carriers would also be reimbursed for the additional operating expenses they will incur during the projected sixteen year airplane life. By compensating the airlines for the additional procurement and operating expenses, our wartime airlift potential would increase for about 10 percent of what it would cost DOD to procure and operate comparable military aircraft. ¹⁷

In August, 1980, MAC awarded the initial CRAF Enhancement

contract to United Airlines for a new DC-10 convertible aircraft which is to be delivered in September 1982.¹⁸ On January 26, 1982, however, the Air Force terminated the proposed modification of existing passenger aircraft (none had ever been retrofitted) because of the increased costs of this option and the range limitations of the DC-10-10. The CRAF cost estimates were \$17-19 million for a new DC-10 and \$19.3 million for a retrofit. Costs for a new B747 were \$27-37 million and \$35 million for retrofit. The program will now apply only on new production, wide-bodied, long range aircraft and funds are tentatively budgeted in FY 84 and beyond for this program.

The Air Force also has several programs to improve the capability of existing military aircraft. The C-5A wing modification program will extend the service life of the current wing by 30,000 hours. These modifications began in February 1982 and all 77 aircraft will be completed by July 1987.¹⁹ The C-141 stretch modification program will increase the length of each aircraft by 23 feet, the lift capability by about 30 percent, and add aerial refueling capability. These modifications will provide the equivalent of 90 additional C-141s at a fraction of the cost. To date, 150 C-141s have been modified and the modification of all 270 aircraft is to be completed by December 1982.²⁰ In addition to these programs, considerable emphasis has been given to assuring that adequate spare parts and support equipment will be available to sustain the airlift force for a minimum period of 120 days.

Even with all of these improvements, a significant airlift shortfall exists as DOD has recognized in seventeen major studies over the past several years. The most recent of these, the Congressionally Mandated Mobility Study (CMMS-1981) recommended immediate action to add 20 million ton miles per day of inter-theater airlift capability above the FY 1986 baseline, of which at least 10 million must be outsize capability. This will require the acquisition of additional aircraft. The fact that a compelling and urgent need for airlift exists now was the overriding consideration in the January 26, 1982, Air Force decision to select the C-5N over the proposed C-17 aircraft.²² Production deliveries could be made earlier than under the C-17 program--a good program soon was chosen over a somewhat better program later. At the same time, the decision was made to purchase 44 KC-10 tanker/cargo aircraft (a military version of the DC-10) over the next 5 years. The KC-10s refueling capabilities enable C-5s and C-141s to make non-stop flights to any trouble spot in the world. The plane has an almost unmatched cargo capability, twice that of the new C-141 stretch model and three-quarters that of the C-5.²³ If the KC-10 is used in the cargo mode, the C-5N and KC-10 purchase will increase our airlift capability approximately 13.1 million ton miles per day by 1987.

NATO has agreed, in principle, to provide some kind of airlift augmentation to the U. S. during a NATO reinforcement. Our NATO allies presently have 123 wide-body and 80 narrow-body long range aircraft in their civil fleet. By 1986, the wide-body

total will increase to 220. The U. S. must work aggressively with NATO to insure that this strategic airlift is made available to us during the initial stages of a European conflict. If a firm agreement can be reached, our strategic airlift problem for a NATO reinforcement could be minimized in the very near term. ²⁴

SEALIFT

In a major contingency, commercial sealift, because of its flexibility and massive capability, will carry approximately 95 percent of logistical support such as equipment, ammunition and petroleum products. ²⁵ In April 1981, CNO, Admiral Thomas B. Hayward, warned members of the House Armed Services Committee that, "without adequate and reliable sealift, literally none of our military plans is executable." ²⁶

The privately owned U. S. Merchant Marine Fleet, which is maintained only partially by government construction and operating differential subsidies, has far from maintained pace with the growth of the economy. Today U. S. flag ships carry less than 5 percent of our foreign trade while at the end of World War II over 60 percent of our foreign trade was carried on our own ships. The average age of U. S. flag vessels is 17 years which is well above the 12 year average for the rest of the world's fleets. ²⁷

The shipping industry is undergoing many changes, with the trend toward fewer, larger, more sophisticated firms operating highly specialized ships, many of which are poorly suited to the

military deployment mission. For example, much of the break-bulk trade has been taken over by large, fast, modern container-ships which are generally considered unsatisfactory for Army unit deployments because much of a unit's equipment cannot be containerized. An infantry division can containerize only about 32 percent of its equipment, and an armored division can containerize only about 19 percent. Most of the large container-ships are not self-sustaining and require large berths equipped with container handling cranes. ²⁸

The U. S. Navy does not maintain significant numbers of cargo-carrying ships for other than fleet support purposes; therefore, the support of force deployments relies almost completely on the sealift assets of the maritime industry. Of the 724 ships in the U. S. Merchant Marine inventory, only 579 are ocean going ships which would be available to move heavy divisions and sustain combat operations during wartime. ²⁹

MARAD has preparedness planning responsibility and responds to requirements for DOD support which are channeled through the Navy's Military Sealift Command (MSC). ³⁰ MSC as the single manager for sealift, manages a fleet of ships to support the continuing peacetime operations of DOD. The MSC controlled fleet consists of the MSC nucleus fleet of 6 U. S. government owned cargo ships and approximately 25 commercial U. S. flag cargo ships which are chartered by MSC to support currently deployed forces. In contingency operations or wartime conditions, augmentation from other sources would be required.

The Sealift Readiness Program (SRP) established the procedures for calling upon commercial carriers under conditions less than full mobilization. Under the SRP, commercial carriers commit at least 50 percent of their ships for military use in return for the right to bid on MSC cargo. The ships in this program would be called in preplanned phases--20 percent in 10 days, an additional 30 percent in the following 20 days, and the remaining 50 percent in the next 30 days. The U. S. flag ships for which MARAD has paid either operating or construction cost differential subsidies are also available under the SRP, but not in the above phases. Approximately 200 ships are available for MSC to provide sealift in a non-mobilization situation.

The President, under the Merchant Marine Act of 1936, can direct the requisitioning of U. S. flag ships during wartime. This is different from the SRP in that it covers all U. S. flag ships and is not voluntary.

The National Defense Reserve Fleet (NDRF) positioned at selected East, Gulf, and West coast ports, consists of inactive merchant ships (approximately 140) owned by the government, which can be activated in time of mobilization. These ships (mostly World War II Victory Ships) were built in the United States under a construction subsidy program, operated with U. S. crews on government specified routes, and were traded in to MARAD at the end of their commercially useful life. They are equipped with required defense features and are suitable for military transport. Within the NDRF there is a contingency sealift force of about

30 ships, the Ready Reserve Force, that have been upgraded and maintained in such condition that 10 can be manned and placed on berth within five days after notification and the remainder within ten days. This force is expected to increase to approximately 43 ships by FY 1986. ³¹

Many U. S. owned ships (over 400) are registered under flags of convenience such as Panama or Liberia. The majority of these ships are bulk cargo carriers with only a small number of dry cargo ships and tankers. These foreign flag Effective U. S. Controlled Fleet (EUSC) ships are usually manned by foreign crews and do not have the same incorporated defense features as U. S. flag ships; however, they do offer another source of sealift upon mobilization. The theory is that since the ship's owners are U. S. citizens, the U. S. government controls the ships in wartime. Whether or not foreign nations would make these ships available to the U. S. in a crisis situation is an unknown variable in defense sealift planning.

Because of the importance of fast sealift to strategic mobility and the inadequacy of current and programmed sealift forces to meet Army requirements, the Navy has undertaken programs to improve sealift. One of these is the purchase of eight high speed (33 knot) SL-7 containerships and their conversion to roll-on/roll-off ships by July 1985. The high speed of these ships allows transit from East Coast ports to the Persian Gulf via the Suez Canal in 11 to 13 days, and they can move a mechanized division with some non-divisional support.

The current Defense Guidance directs the Navy to provide dedicated sealift for simultaneous lift of a two-division Army corps. In addition to the SL-7s, the CMMS identified a minimum dedicated RORO lift requirement of 100,000 tons. The Navy also plans to charter one Seabee class ship (barge carrier) in 1982. This is the only U. S. flag ship capable of transporting the Army's barge mounted temporary container discharge facility.

In a NATO emergency, the United States would have some 400-600 merchant ships available from NATO nations to assist in meeting early support requirements for military deployment and our sealift would probably be adequate. In other scenarios, the adequacy of our sealift depends on how quickly forces and supplies need to be moved and the type of units or equipment to be moved. 32

PREPOSITIONING

With the Reagan Administration reshaping U. S. strategy to prepare for war anytime, anyplace in the world, prepositioning of equipment is taking on new and critical significance. 33

There are two basic types of prepositioning programs, land based and maritime. The Army's Prepositioning of Materiel Configured to Unit Sets (POMCUS) program was designed to store most of a unit's TOE equipment in a potential combat theater so that rapid reinforcement would require the airlifting of only personnel and some minor equipment. Until strategic lift capability increases, POMCUS offers a method for meeting the NATO force requirements of 10 U. S. divisions for the initial defense in Europe. Four

U. S. divisions are forward deployed and ultimately six division sets are to be prepositioned.

Land based prepositioning, the deterrent value of which is limited to the region in which it is located, is not a substitute for additional airlift and fast sealift. It is considered vulnerable to enemy attack or sabotage prior to issue and it restricts flexibility since rapid shifting of stored materials to other regions is difficult. The execution of the global strategy requires a flexible response which only airlift and sealift can satisfy; however, prepositioning of selected supplies and materiel does reduce early airlift requirements.

In general, land based prepositioning is a cost effective mobility program.

Maritime prepositioning allows for some hedging on the location of a crisis and is more flexible than land based prepositioning. The Near-Term Prepositioning Ships (NTPS) program, with 7 ships at Diego Garcia, provides prepositioned equipment in the Indian Ocean for a Marine Amphibious Brigade. The long-term Maritime Prepositioning Ships (MPS) program is designed to increase the U. S. capability to respond rapidly to a crisis with a force having considerable firepower, mobility, and anti-armor capability. A total of 12 prepositioning ships are planned by 1987 to carry the equipment and supplies to support three brigade size Marine Air-Ground Task Forces (MAGTF) for 30 days. These ships will be positioned at sea near potential trouble spots and are scheduled to come into service

in groups of four in 1984, 1986, and 1988. 34

OTHER FACTORS

In discussing the major components of the strategic mobility system, there are always additional factors to consider. To maximize efficiency, the arrival of cargo at the CONUS air and sea ports of embarkation must be accomplished in an orderly manner and cargo and passengers must move smoothly through these ports. The same consideration applies to the ports of debarkation. The offload capability of ports in Europe is probably sufficient to meet requirements, assuming that there are no disruptions caused by enemy action. If equipment or port facilities are damaged, there is little capability to conduct Logistics Over the Shore (LOTS) operations. Our LOTS capability in Southwest Asia is almost non-existent.

Regardless of the area, port clearance and the intra-theater movement of cargo and personnel will create a challenge for host nation support and may require an increase in U. S. transportation assets.

Attrition must also be considered. In a NATO scenario, even with the assumption of NATO air superiority, one-third of our aircraft may be lost during the first 180 days of combat. Sea control is clearly imperative since the loss of 40 percent of the early convoys is possible.

The modernization of Army units will have a tremendous impact on strategic lift and specifically the requirement to move outsize cargo. For example, the modernized mechanized

division will have an increase of 11 percent in outsized cargo.

The overall key to improving our strategic lift posture will be continued Congressional funding of the various programs.

CONGRESSIONALLY MANDATED MOBILITY STUDY - 1981

A Congressionally mandated Pentagon study of U. S. mobility capabilities and needs was sent to Congress in April 1981. The study showed that current mobility forces were not able to meet the lift requirements of any of the scenarios. It recommended improving strategic lift capabilities by adding airlift, sealift, and prepositioning programs to the FY 1986 program force. Even with these additions, the shortfall was still significant. (Figure 6)

CONCLUSION

A statement by former Army Chief of Staff, General Bernard W. Rogers, in 1978 is still accurate today:

The credibility of our conventional deterrence hangs on our ability to deploy and sustain our forces worldwide. As the largest users of this nation's strategic lift, we in the Army view strategic deployment from a total systems perspective. That is, one segment has as much importance as any other. And the systems are complex, embracing men, facilities, trucks, trains, airplanes, ships and ports. Ships and planes alone will not do the job. We also need facilities to receive equipment and personnel once deployed and speed their movement to the battle area. A breakdown anywhere ripples throughout the entire system. ³⁵

During a major contingency or war, the vast majority of war materiel transported in the Continental United States would be moved by rail or truck to deployment air and seaports. While there is no denying that the rail and motor carrier capability

Figure 6

MOBILITY PROGRAM COMPOSITION

BASELINE (1986)

- CURRENT AIRLIFT ENHANCEMENT PROGRAMS - THE C-5 WING MODIFICATION, ADDITIONAL C-141/C-5 SPARES AND CREWS, AND THE CRAF ENHANCEMENT PROGRAM
- THE SL-7 FAST DEDICATED SEALIFT PROGRAM (8 FAST RO/RO SHIPS)
- SIX DIVISIONS OF POMCUS IN NATO
- ADDITIONAL USAF AND USMC PREPOSITIONING IN NATO
- MARITIME PREPOSITIONING SHIP PROGRAM - AS A FOLLOW-ON TO THE CURRENT NEAR TERM PROGRAM - FOR TWO BRIGADE-SIZED MAGTF

ADDITIONS TO BASELINE

- PROGRAM A
 - 130,000 TONS OF PREPOSITIONED MUNITIONS AND RESUPPLY IN SOUTHWEST ASIA
 - MPS FOR A THIRD BRIGADE-SIZED MAGTF
 - 20 MILLION-TON-MILES PER DAY OF ADDITIONAL OUTSIZE/OVERSIZE AIRLIFT CAPABILITY
 - DEDICATED RO/RO SHIPPING WITH CAPACITY FOR 100 KTONS
 - PROVISION OF ADEQUATE SUPPORT TO THE ARMY'S D-DAY FORCE IN EUROPE THROUGH SOME COMBINATION OF PREPOSITIONING, HOST NATION SUPPORT, OR OTHER MOBILITY MEANS TO BE DEVELOPED AFTER FURTHER NEGOTIATIONS WITH EUROPEAN ALLIES.

of the United States is deteriorating, I believe that the CONUS transportation industry will be capable of meeting the known DOD lift requirements.

Adequate mobility resources are crucial to the security interests of the United States. The deployment and sustainment of U. S. forces abroad, requires a balanced mix of airlift, sealift and prepositioned materiel. These three elements are complementary and involve military, civilian, allied, and host-nation resources. The degree to which each element is employed in a crisis depends on time, location, responsiveness, capability, and scenario requirements.

In the FY 1983 Army Posture Statement, the Chief of Staff, General E. C. Meyer, summarized the current strategic mobility situation:

U. S. Strategic mobility forces are currently unable to meet NATO reinforcement objectives of to project credible U. S. forces to areas where our national interests are threatened. Without additional outsize airlift and responsive fast sealift, our ability to respond to global contingencies is dependent upon the readiness of our forward-deployed units, upon the prepositioning of unit equipment and war material, and upon timely political decisions.

Mobility forces, both air and sea, must therefore be increased to improve our power projection capability and to preserve the flexibility needed to respond to any threat to our vital national interests. 36

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