WATERFRONT COALITION MISSION STATEMENT

The Waterfront Coalition is a group of concerned business interests representing shippers, transportation providers, and others in the transportation supply chain committed to educate policy makers and the public about the economic importance of U.S. ports and foreign trade, and to promote the most efficient and technologically advanced ports for the twenty-first century.

The coalition is committed:

- To be the unified voice supporting the implementation of available technology and transportation infrastructure in order to build efficient and secure ports and intermodal facilities that can meet future demand.
- To be the main source of information for all supply chain stakeholders about the importance of cooperative efforts to increase port efficiency and address issues that affect the international intermodal transportation system, often referred to as the Marine Transportation System.
- To be an agent of change on the waterfront through education, pilot projects and advocacy.
- To educate and communicate with the public, media and government officials about the importance of ports to America's manufacturing, agricultural, transportation industries and consumer product industries, and the need for improved infrastructure, predictability, reliability, productivity and safety at the nation's seaports.

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EXECUTIVE SUMMARY

America depends on international trade that is imported and exported in marine containers. Our farmers find customers in foreign lands, our manufacturers use parts, raw materials, and inputs that come from the four corners of the globe, and sell their finished products to customers here and abroad. American brand names depend on supply chains that stretch globally, and reach consumers around the world with their American presence. And the domestic retail industry--which provides American consumers with the best quality, price, and selection anywhere on Earth--depends on trade for everything from fresh produce to hand tools.

About half of international commerce travels to and from America by water, most of it in either twenty-foot or forty-foot shipping containers. In 2004, 25.2 million TEU (twenty-foot equivalent units) of exports and imports traveled through America's ports, 50 percent was handled by West Coast ports (12.7 million TEU), 43 percent by Atlantic seaboard ports (10.7 million TEU), and 7 percent by Gulf ports (1.7 million TEU). In 2004, West Coast ports handled about 57 percent of the nation's 16.5 million TEU of imports, the vast majority of them from Asia. In 2004, trade with Asia grew at a rate of 12 percent[1]. Many forecasts have projected that imports through West Coast ports will double by the year 2010.

Maritime commerce does not begin or end at the ports, however. An intermodal transportation system links American ports to consumer markets, manufacturing and distribution centers, and agricultural production and processing facilities throughout our nation. That network--comprised of waterways, railroads, highways, distribution warehouses, container yards, and terminal facilities--is the U.S. Marine Container Transportation System.

Maintaining the health of the U.S. Marine Container Transportation System is essential to ensuring America's continued economic dominance. And yet, the United States Government has no clearly defined national policy with respect to this system, or, indeed, to the domestic goods-movement transportation system upon which our prosperity depends.

Today, the Marine Container Transportation System is facing serious challenges that could significantly constrain American prosperity in the future. The system is experiencing capacity constraints in dealing with new trade and manufacturing paradigms that have significantly increased imports. Port growth and concomitant highway congestion have burdened local communities, resulting in calls for growth limits or extreme reductions in the air pollution generated by trucks, railroads and vessels. The events of September 11, 2001 have imposed new costs on port operators that have gone largely unfunded. Poor business planning and capacity overuse have resulted in significant and chronic supply chain delays that go directly to the bottom line health of U.S. businesses.

This current situation has led the Waterfront Coalition to the following six major conclusions for improving the Marine Container Transportation System:

- *We must improve the productivity, efficiency and through-put of all American blue-water ports. There are several business practice issues that must be addressed mostly by the private sector, they include:*

[1] Source: Port Import Export Reporting Services (PIERS)

- Making harbor trucking a profitable business,
- Operating ports during extended hours,
- Developing regional or national chassis pools,
- Rethinking "free time" and managing it more efficiently,
- Developing port-wide truck appointment systems,
- Spreading out vessel sailings and arrivals in the trans-Pacific trade to make maximum use of terminal capacity, and
- Developing "best practices" for measuring capacity and productivity at the Nation's ports and terminals

❖ *We must encourage the development of Oakland, California and Pacific Northwest ports as key alternative Asian gateways. Congestion at Los Angeles and Long Beach combined with exponential growth in Trans-Pacific trade require the further development of Asia gateway ports on the West Coast of the United States. Among the business practice issues that must be addressed:*

- More sailings to alternate ports,
- Improving intermodal rail service from alternate Western gateways, and
- Addressing the issues that preclude Oakland as a transload center for large importers.

❖ *We must quickly invest in intermodal rail to increase the velocity of equipment moving container cargo and to address choke points at East/West interchanges.* Rail congestion has become pandemic in the Untied States, not just on the West Coast, but on the East Coast and Gulf Coasts as well. Private investment by class I railroads needs to be stepped up to support intermodal freight and to remove freight bottlenecks throughout the United States.

❖ *We must expend public resources on freight projects wisely, where they will have the biggest return, and only after consulting with shippers to understand business trends affecting the value of future capacity enhancements.* The United States needs a clear policy on goods movement that would increase funding specifically for freight projects, provide federal operating assistance for short-haul shuttle trains, and provide assistance for short-haul truckers to improve the efficiency of their equipment.

❖ *We must develop better trade and transportation forecasting that will allow stakeholders to minimize the impact of equipment and labor shortages.*

❖ *We must promote and improve infrastructure to support Asian trade to the East Coast and Gulf Coast.*

INTRODUCTION

America depends on international trade that is imported and exported in marine containers. Our farmers find customers in foreign lands, our manufacturers use parts, raw materials, and inputs that come from the four corners of the globe, and sell their finished products to customers here and abroad. American brand names depend on supply chains that stretch globally, and reach consumers around the world with their American presence. And the domestic retail industry--which provides American consumers with the best quality, price, and selection anywhere on Earth--depends on trade for everything from fresh produce to hand tools.

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One reason for this could well be that, historically, large portions of the U.S. Marine Container Transportation System have been developed, paid for, and maintained by private entities, such as railroads, shipping lines, marine terminal operators and even importers and exporters, themselves. Indeed, the commercial terminal facilities at most of our seaports have been largely developed and paid for with private dollars, even though the underlying real estate is publicly owned and managed by public port authorities. The federal highway system is the only portion of this transportation network that is largely developed and maintained by the public sector, through a dedicated tax regime based on gas taxes. Federal support for highways and mass transit obviously provides benefits beyond the moving of marine containers.

Nevertheless, today, the Marine Container Transportation System is facing serious challenges that could significantly constrain American prosperity in the future. The system is experiencing capacity constraints in dealing with new trade and manufacturing paradigms that have significantly increased imports. Port growth and concomitant highway congestion have burdened local communities, resulting in calls for growth limits or extreme reductions in the air pollution generated by trucks, railroads and vessels. The events of September 11, 2001 have

imposed new costs on port operators that have gone largely unfunded. Poor business planning and capacity overuse have resulted in significant and chronic supply chain delays that go directly to the bottom line health of U.S. businesses.

Clearly, new investment in capacity is needed. But capacity building alone cannot solve all the problems. Geography on America's coast lands and at the Mid-Continent, East-West rail gateways puts real constraints on our ability to simply build our way out of the problem. Additional measures to boost productivity and efficiency, through improved business and labor practices and more coordinated supply chain efforts will, therefore, also be needed.

This white paper is the Waterfront Coalition's attempt at defining a set of significant issues facing the Marine Container Transportation System and to outline several suggested actions that both the private and public sectors can take over the short and long term to ensure that America's Marine Transportation System can support the projected doubling of imported containers by 2020. Today we are at a critical juncture that requires immediate action in a comprehensive manner by all of the stakeholders in the marine transportation supply chain. America's future GDP growth will depend upon our ability to quickly and aggressively address the infrastructure challenges we face as outlined in the remainder of this paper.

MAJOR CONCLUSIONS

Seventy percent of all U.S. imports come from Asia. Trans-Pacific trade is forecasted to grow significantly, fueled not only by the manufacturing might of China, but by other factors such as the elimination of import quotas on textiles and apparel.

Despite a clear trend on the part of importers to diversify ports of entry, the fact remains that in 2004 the United States had an imbalanced gateway for Asian imports. Fully 40 percent of all U.S. containerized imports--virtually all of them from Asia--enter the country through the ports of Los Angeles and Long Beach, California. In 2004, this increase in trade from Asia, coupled with inaccurate business forecasting by stakeholders resulted in 6 to 8 days or more of additional transit time for U.S. businesses for most of the June through October peak shipping season.

The overload was felt in virtually all aspects of marine terminal operations and spilled over onto the region's highways and railroads. For example, intermodal rail network congestion resulted in 2 to 3 days of additional transit time for cargo moving off the West Coast to the Midwest and points East of the Mississippi. With trade continuing to grow, virtually everyone in the business community is expecting chronic delays and congestion, especially through Southern California, but not limited to that region. As shippers divert cargo to other blue-water ports, we will see mounting congestion in the Pacific Northwest and on the East Coast.

As noted above, Marine Container Transportation System stakeholders have already begun the process of trying to develop additional Trans-Pacific Gateways, principally at the ports of Seattle, Tacoma, and Oakland. In addition, many shippers with distribution warehouse capacity on the East Coast are increasingly using all-water-routes to alternate ports such as Savannah, Charleston, Virginia, New York/New Jersey, and the Gulf Coast.

While Eastern, Gulf, and Pacific Northwest ports have some unused capacity, there are constraints. The Panama Canal is operating above 95 percent of capacity, although the mix of bulk-rate and container ships could and has been changed to accommodate more intermodal cargo. Clearly this comes at the expense of other types of businesses. The growth in post-Panamax ships, with capacities in excess of 6,000 TEU, is another constraint impacting all-water service through the Panama Canal. As mentioned above, rail networks serving alternative gateways need attention. And finally, while trade through the Suez Canal from Southeast Asia and the Indian subcontinent could be increased, a lack of available ships and optimal transit times constrain this option.

This current situation has led the Waterfront Coalition to the following six major conclusions for improving the Marine Container Transportation System:

- *We must improve the productivity, efficiency and through-put of all American blue-water ports.*
- *We must encourage the development of Oakland, California and Pacific Northwest ports as key alternative Asian gateways.*

- *We must quickly invest in intermodal rail to increase the velocity of equipment moving container cargo and to address choke points at East/West interchanges, particularly Chicago.*
- *We must expend public resources on freight projects wisely, where they will have the biggest return, and only after consulting with shippers to understand business trends affecting the value of future capacity enhancements.*
- *We must develop better trade and transportation forecasting that will allow stakeholders to minimize the impact of equipment and labor shortages.*
- *We must promote and improve infrastructure to support Asian trade to the East Coast and Gulf Coast.*

The Waterfront Coalition has identified a number of discrete action items and/or projects within the scope of each of these broad conclusions. These action items may be directed at either private sector stakeholders, public sector stakeholders, or both. The remainder of this paper further reviews each of these specific findings.

We must improve the productivity, efficiency and through-put of American blue-water ports.

We know that international trade is increasing and can be expected to increase over the mid-term, barring unforeseen circumstances. With land in scarce supply, and environmental permitting activities making it difficult to build new port capacity, it is becoming essential to make sure that marine terminal operations are as efficient as they can be.

In addition, operational capacity and productivity are often a matter of fierce competition among marine terminal operators and U.S. port authorities. Clearly throughput at the nation's ports could be increased by some conceptually straight forward steps, such as extended hour terminal operations for all services, not just loading and unloading of vessels. Productivity, however, is a much more difficult problem.

Nevertheless marine terminals must become more productive and efficient.

The Waterfront Coalition has identified the following action items that we believe can have an immediate impact on port productivity, efficiency and throughput. None of these action items require public financing or public sector action. Indeed, the Coalition does not believe that government can legislate improved business efficiency.

Make Harbor Trucking a Profitable Business: U.S. Ports depend on short haul trucks that move cargo from marine terminals to distribution warehouses where marine containers are unloaded and shipments are deconsolidated and put on over-the-road trucks for eventual delivery to stores and factories across the nation. The amount of short-haul trucking at each American port depends, in part, upon the availability of near-dock and on-dock rail, and investment by large-scale importers, exporter and trade intermediaries in warehousing facilities. Even in ports like those in Southern California where on- and near-dock rail facilities are relatively more available, about half of all marine containers are trucked to and from the port.

Harbor trucking relies on "owner-operators," who own their own tractors and who contract with trucking companies. These independents are usually paid by the trip. Consequently, road and terminal congestion, rising fuel costs, government regulation of hours of service, and air pollution emissions all have conspired to make harbor trucking increasingly non-economic.

Much attention has been focused on the difficulties truckers face within marine terminals. When marine terminal "turn times" average as much as an hour or more this has an immediate impact on trucker economics and must be addressed.

Marine terminal wait times, however, are only part of the problem. When truckers have to deal with congested roads and highways, it takes a toll.

The inability of small, owner-operator truckers to make a sufficient number of "turns" (to the port and back to a warehouse or container yard) is one of the principal reasons that short-haul truckers--who get paid by the trip--are leaving the industry in large numbers.

The Waterfront Coalition believes that cargo owners and shippers, ocean carriers, and marine terminals must recognize their dependence on harbor trucking and make immediate business practice changes that will ensure the health of this industry in the future. We believe that many of the business practice changes that we recommend in the following pages will have a net positive impact on independent owner-operator truckers.

Operate Ports During Extended Hours: Conceptually, the easiest way to move more freight through our ports is to begin the process of moving marine terminal operations to twenty-four hours a day, seven days a week. Today, it may be that many terminals do not have enough cargo to actually justify 24/7 operations, but in the port complex of Los Angeles and Long Beach, steps are now underway to increase the number of off-hour truck gates available through a program called PierPass. The Waterfront Coalition has been a long supporter of extended hour truck gates and believes that 24 hour port operations--not just off-hour truck gates--is the way of the future.

There are constraints. 1) Labor agreements make off-hour operations exceptionally expensive for marine terminal operators. 2) For many years, terminal operators have claimed that importers, exporters and truckers are opposed to off-hour operations, and that is probably true of some, but not all of these stakeholders. 3) Off-hour operations on the trucking side will not succeed unless there is cooperation about hours of operation among all the terminal operators at a specific port. 4) Truck driver availability and federal hours-of-service rules also put constraints on off-hour gates. 5) Cargo owners have not uniformly shown a willingness to keep their warehouses open to receive cargo after hours.

The PierPass project in Los Angeles/Long Beach is an attempt to address all of these constraints, by making it more expensive to move freight during day-time hours for cargo owners. The hope is that this project will induce shippers to change business practices, in order to move a critical mass of container pickup and delivery to non-peak hours. This will allow terminals to provide port-wide gates on a regular schedule and address the issue of the added labor costs of opening off-hour gates. The PierPass project required terminal operators to use their anti-trust immunity to cooperate on hours of operation.

The Waterfront Coalition believes PierPass may provide a model at additional ports where capacity/throughput issues demand that shippers change their business practices. Further expansion should wait until after a working model is actually in place and has been tested in Los Angeles and Long Beach, and has proven to reduce congestion and improve turn times.

Develop Regional or National Chassis Pools: Marine shipping containers are designed to be "intermodal", meaning that they move from one mode of transportation to another: from a ship to a truck to a railroad. To move a container by truck it must be placed on an intermodal chassis, which is nothing more than a frame with wheels that is, in turn, attached to a trucker's rig or power unit.

In the United States, unlike the rest of the world, harbor truckers do not own chassis. Instead, they are owned by pools of Ocean Carrier companies and marine terminals

that provide them to truckers for short periods of time in order to move the containers of that ocean carrier. There is no national chassis pool.

The U.S. business model creates inefficiencies in two key ways. First, harbor truckers must make additional trips around the harbor to drop off and secure chassis. This limits the number of trips a trucker can make in a day with concomitant negative impacts on traffic, air pollution and trucker economics. Second, chassis storage takes up valuable land resources at the nation's ports that could be better used for cargo containers.

There are two possible solutions: adopt the European model where truckers own the chassis or, alternatively, develop regional and national pools. While it may be that ultimately the Untied States needs to follow the model of other countries, over the short-term requiring truckers to own their own chassis will put even more economic burdens on a trucking industry that has significant economic problems. A better solution over the short term is to develop regional chassis pools.

During 2004, the Virginia Port Authority's operating company, Virginia International Terminals, Inc., successfully implemented a port-wide chassis pool. The chassis pool relieves shipping lines of having to maintain, repair and keep track of equipment, and accelerates the pick-up and delivery of containers, improving trucker turn times per day. The chassis pool also standardizes and improves the quality of chassis available at the terminals, including standardizing the quality of maintenance and repair. It has lowered the cost of chassis use at the terminal, users are charged for the use of chassis based only on the cost of operating the chassis pool.

We believe the Virginia model should be attempted at other, larger and more complex ports and in other regions. The development of port-wide and regional chassis pools ought to be one of the highest priorities for carriers and terminal operators, with a view toward creating a single, national chassis pool.

Rethink "Free Time" and Manage it Better: Efficient marine terminals are essential if imports and exports are to flow correctly. Consequently, it ought to be clear that using our nation's port and terminal facilities as warehouse space exacerbates the congestion problem--especially for those terminals that do not have sufficient space to accommodate on-terminal container storage. And yet this is a practice that is widely used today.

Although terminals allow a certain amount of free-time to ocean carriers, terminals often do charge "demurrage" for containers stored beyond the allowed freetime. All terminals need to re-assess the amount of free time they offer. *Terminal operators should limit free time to accommodate time needed to position containers for customs processing and pick-up, and increase their demurrage charge to discourage on-dock container storage.*

Terminal operators have made great strides recently in upgrading their systems of collecting detention and demurrage fees to make it easier for shippers to pay in advance and for harbor truckers to avoid the "trouble window." However, problems still exist. *Providing state-of-the-art, online payment systems for detention and demurrage charges is nothing short of an industry best practice. The Waterfront*

Coalition calls on all terminal operators to allow shippers to pay for these fees via credit card or other arrangements that will reduce trouble window visits.

Often shippers and carriers are not on the same page with respect to the amount of free time that is being used, or, more important, the amount of time that a container is sitting on a pier. *Carriers and shippers should be regularly measuring dwell time and working on reducing this metric. It should be an industry best practice for shippers to know their dwell times.*

Changes may be needed in the way free time is calculated to accommodate both cargo owners and terminal operators. Today, free time starts once all the cargo on a ship is discharged--allowing extra days for the cargo that is discharged first off of a ship. This means that all free time expires at the same time for every container discharged from a specific ship, resulting in bunching of trucks calling a terminal. By the same token, calculating free time by the container would pose difficulties for cargo owners if terminals have no system for alerting cargo owners or their intermediaries as to when the clock begins ticking, or if containers are on the clock but not really available for pickup because of service failures.

Some accommodation of both sides is needed. It may make a great deal of sense to calculate free time on an individual container basis, but it must be calculated *from the time when a container is available for pickup.* Importers should not be charged demurrage if Customs and the terminal wait five days for a non-intrusive exam, if chassis are not available, or if the container is grounded in an area of the terminal that is closed to truckers. In addition, terminals need to improve their information systems in order to support counting free time on a container basis and must provide an easily understood process for cargo owners to know when containers are available.

Develop Port-wide Truck Appointment Systems: At most U.S. marine terminals, today, harbor truckers can arrive to pick up import cargo without letting the terminal operator know in advance. This long standing practice creates a disconnect between the terminal and the next critical step in the transportation flow since the terminal operator has no opportunity to make sure that container is in an accessible location and that a roadworthy chassis is ready and waiting for it. Not too surprisingly, truckers can wait many hours in a terminal to pick up loads that may be buried in a stack of containers four high.

The Waterfront Coalition believes that trucker appointment systems need to be seriously attempted, not only for the terminal's benefit, but for the benefit of truckers and cargo owners as well. In the past, such appointment systems have encountered acceptance problems with the trucking community because of the perception that the appointment windows are not long enough. California state law actually mandates appointment windows of 1 hour, but this may not be sufficient given day-time traffic.

In addition, an appointment system will only be viable if it is developed with consistency on a port-wide basis and truckers have the ability to book appointments at any terminal facility operating in any given port complex. In the past, terminal operators have viewed appointment systems as a competitive issue, with the result that there is no single portal for trucker appointments at any U.S. port (although in 2001 the Port of Authority New York/New Jersey attempted to develop an Internet

portal that could have been expanded into a port-wide appointment system). The Port abandoned the project because of lack of terminal support.

The Waterfront Coalition calls on marine terminal operators to once again explore the use of federal anti-trust immunity to cooperate in developing port-wide appointment systems. We believe such systems ought to be one of the industry's highest information technology priorities.

However, the Waterfront Coalition opposes legislation that would force individual terminal operators to offer appointment systems. Such government regulation of terminal facilities is counter-productive since it does not address the creation of port-wide systems, and it does not recognize that it will require a certain amount of cooperation between terminal operators to make viable appointment systems a reality.

Spread out Vessel Sailings and Arrivals in the Trans-Pacific Trade to make maximum use of terminal capacity. Because of manufacturing practices in Asia, there is a clear bias toward east-bound weekend sailings, which means that vessels are more likely to arrive at the West Coast of the United States on Thursdays and Fridays and Saturdays. Because of this bunching, the port complex has traditionally been strained during peak periods, and under-used during slow periods.

The advent of mega-ships carrying 8,000 TEU may have obscured this basic pattern to some degree--because it takes more days to unload a large ship--but the fact remains that there is still a bias toward weekend sailings and late week arrivals.

Changing business practices to spread out arrivals in such a way as to make better use of existing terminal, rail and truck capacity should be an issue that shippers and carriers begin to explore. New vessel sailing schedules would require shippers to make changes in their production schedules, but the results could be significant in faster transit times.

Develop "Best Practices" for Measuring Capacity and Productivity at the Nation's Ports and Terminals: To our knowledge, the marine terminal industry and the nation's port authorities have not developed any kind of common metrics that provide a true assessment of current capacity. Without this measure, the government and industry are in effect "flying blind" in terms of knowing how much additional volume of imports and exports can be managed before the Marine Container Transportation System becomes so overloaded that it collapses. TRB Studies and Information Services have recommended that the Secretary of Transportation seek a mandate from Congress for the United States Department of Commerce (USDOT) to take the lead in measuring, monitoring, and assessing options to strengthen the contribution of the Marine Transportation System to key national interests. Certainly having an accurate picture of marine terminal capacity would be a key metric for USDOT.

Shippers would benefit from having a viable barometer in understanding the true capacity of the terminals they are using or considering. Of course, terminal capacity needs to be reported in terms of the size of vessels that can utilize that capacity.

A private study conducted by JWD Group and Moffatt and Nichol has suggested that effective terminal capacity across the United States will be exceeded in 2016 based on

a 6 percent compounded annual growth in imports and marine terminals operating at 6,500 TEU/acre. Today, the average terminal operating capacity is 4,800 TEU, which suggests that marine terminal operators have work to do to increase their capacity above the existing average to at least 7,500 TEU/acre. But without any industry standards in place, it is hard to judge whether this study is accurate.

The Waterfront Coalition does not believe that it is appropriate for shippers to "dictate" best practices, information technologies, or operational efficiencies for terminal operators, any more than it is appropriate for government to do so.

However, it is appropriate for the industry associations representing ports and, more important, terminals, to develop standard industry metrics, benchmark studies with respect to business practices and technology, and best practices across the industry. Trade associations regularly engage in this kind of activity without compromising competition.

For these reasons, we call upon the trade associations representing ports and marine terminal operators to:

1. Define and compile an accurate assessment of the throughput capacity of the nation's ports in the absence of a USDOT mandate from Congress to do so,
2. Develop standardized set of terminal productivity metrics,
3. Conduct benchmark studies of the productivity, business practices, and technology used in foreign and U.S. ports, and
4. Develop a set of marine terminal operation "best practices and industry standards," based on benchmarks that are designed to boost the industry average capacity.

We must encourage the development of Oakland, California, Portland, Oregon, and Seattle/Tacoma, Washington as alternative Asian gateways.

Congestion and service delays have become a chronic issue for shippers transiting the ports of Los Angeles and Long Beach. It makes sense to take the steps needed to develop additional West Coast ports into Asian gateways. The Waterfront Coalition has identified a number of private and public sector actions necessary to ensure that these ports handle an increasing share of the trans-Pacific trade:

Provide More Sailings to Alternate Ports: One of the more important reasons that Los Angeles and Long Beach have captured more import cargo is simply because more vessels coming from Asia make their first call at LA/Long Beach. There are many reasons for this: size of the overall market, more transload centers, more rail service, more marine terminal facilities. However, there is capacity at Oakland, Seattle, Portland, and Tacoma that could be used quickly, particularly for intermodal rail shipments. For this reason, we call on ocean carriers to work with their shippers in considering a realignment of their services to provide additional sailings that make these alternative locations first ports of call.

Improve Rail Service from Alternate Western Gateways: Shippers using intermodal rail services have the flexibility to shift their ports of call in ways that other shippers (those using international transload centers) cannot do quickly or without process change. For this reason, one key to making the Pacific Northwest and the Port of Oakland key import gateways will be the development and investment in rail capacity. The Waterfront Coalition has identified the following rail projects that are needed quickly to further develop the capacity for alternate gateways.

1. **Oakland -- Donner Pass and Reno to Salt Lake City:** Clearance of Donner Pass tunnels and snowsheads to accommodate international and domestic double stacked containers. Once this is accomplished, the remainder of the line from Reno to Salt Lake City needs to be double tracked.
2. **Oakland - San Joaquin Valley:** Double track down the San Joaquin Valley is required, since freight trains compete with passenger service on the current single track. This compromises Oakland's ability to compete with other West Coast ports regarding intermodal cargo.
3. **Oakland Access Improvements**- Construct access improvements to the Port of Oakland Joint Intermodal Terminal and Union Pacific Rail Facility. This project will build new connections between the Union Pacific Rail Road (UPRR) mainline and the Port of Oakland Joint Intermodal Terminal (JIT). The improvements will include construction of

two new 8,000-foot receiving and departure tracks, additional storage tracks at the Port-controlled Knight Yard located at the former Oakland Army Base and a double-track connection to the Port JIT. The project would use both existing UPRR right-of-way and port-controlled or owned property.

4. **Oakland -- Martinez Upgrade**: This project will rehabilitate the UPRR "waterside" drill track to mainline standards, including new signals and track connections. This project will effectively provide a third mainline into Oakland. In addition there are opportunities to construct new sidings to allow trains to pass. There are also opportunities to grade separate crossings and upgrade warning devices.
5. **Oakland -- The Outer Harbor Intermodal Terminal (OHIT):** This project will construct an expanded intermodal rail terminal at the former Oakland Army Base. The OHIT Project will include constructing container loading and unloading tracks, parking areas for over 2000 containers and connections to the railroad mainlines. This new facility will increase the rail terminal capacity at Oakland from approximately 640,000 containers per year to 1.7 million containers (1.2 million TEUs to 3.1 million TEUs).
6. **Pacific Northwest--Grade separations and track additions:** This is an extension of the successful FAST corridor project. The project is designed to insure that the rail main lines between Seattle and Tacoma and through the two urban areas are free of grade crossings. This insures the two western rail carriers access to unobstructed urban corridors through which to build capacity improvements. This would also include grade separated and operationally efficient access from the main lines to the two ports.
7. **Pacific Northwest--Stampede Pass:** upgrade tunnel to accommodate double-stack trains.
8. **Pacific Northwest -- Burlington Northern Santa Fe Rail Road (BNRR) & UPRR co-production opportunities.** Better asset sharing between the western railroads in the Pacific Northwest would improve operational efficiencies. (asset sharing/directional running)
9. **Pacific Northwest -- Connect BNRR A & B yards** in North Rivergate that support Terminal 6 in the Port of Portland
10. **Pacific Northwest** -- Development of Pacific Northwest regional intermodal yard support capacity.

Address The Issues That Preclude Oakland as a Transload Center for Imports: Oakland, California is a significant export port, but it has not met expectations as an import port of call. There are several reasons for this:

1. There is limited land available near the port for warehousing, and what is available is quite expensive relative to other western alternatives, which drives freight support activities farther away from the port into inland areas.
2. The lack of land has generated longer, unwanted truck trips over the region's highways and streets, contributing to congestion.
3. Like many ports today, the Port of Oakland, is facing zoning restrictions that are increasingly putting residential areas closer and closer to the port, driving out warehouse and other truck-oriented port support businesses.
4. Shippers who regularly build transload centers consistently say that they face shortages of fifty-three foot over-the-road equipment within the Oakland area. This could be a chicken and egg situation, but it remains an important perception among big box retailers who require fifty-three foot over-the-road trucks to distribute products from their international warehouses to stores across the country.

The region also faces significant political constraints. Local cities and counties would most likely never support dedicated truck lanes on existing freeways. There is no funding for new highways, which would, similarly face local opposition if their goal was to increase truck traffic. For this reason, the Port of Oakland and the State of California have supported short-haul and shuttle train rail options within the port area, along with several modest road improvements, like truck bypass lanes at key freeway interchanges, and a truck climbing lane over Altamont Pass. Among the discrete projects that merit attention:

California Inter-Regional Intermodal System (CIRIS): This is a shuttle train between the Port of Oakland and one or more points in the Central Valley, designed to divert container movements from truck to rail. The cost would be approximately $6 million to $12 million for development of Central Valley intermodal facilities, plus the costs of making needed access/egress improvements at the Port of Oakland, which would directly benefit CIRIS as well as general intermodal growth at the Port of Oakland. Elsewhere in this paper, the Waterfront Coalition provides general views on shuttle train options, and our view that highway improvements may make more sense. We remain deeply concerned that shuttle trains may not attract sufficient freight unless they compete favorably with short-haul trucking on freight velocity and cost--something that has yet to be proven. While we are skeptical, generally, of shuttle train proposals, it is clear that the rail option may be the only viable option for attracting additional transload centers to the Port of Oakland. But the success of this option is, by no means, guaranteed. Further discussion with large scale shippers is warranted to make certain that the kind of development needed will actually occur if the investment in shuttle trains is made.

Re-establishing Rail Service between Martinez and Tracy: The UPRR "Mococo" branch line between Martinez and Tracy has been in limited service for several years. Re-opening of this line will provide new capacity in the region's rail system and provide significant operational flexibility for the railroads. This project would include track rehabilitation, signal work and construction of two new sidings and could provide the added capacity between the Central Valley and the Port that CIRIS trains might demand.

City of Shafter Shuttle Train: The Port of Oakland and the City of Shafter are also exploring a shuttle train concept that would include the development of an integrated statewide logistics center which would distribute goods railed down from Oakland via truck to the relatively nearby markets in the Los Angeles Basin. Shafter would also serve as a hub for consolidating loads from California and sending containers east by rail. The Waterfront Coalition believes this project merits further study, keeping in mind our concerns that the economies of shuttle trains have yet to be proven and need quite a bit more study before large amounts of public money are spent supporting a concept that may not attract the hoped-for warehousing investment.

We must quickly invest in intermodal rail to increase the velocity of equipment moving container cargo and to address choke points and East/West interchanges.

The nation's intermodal rail system is responsible for moving about half of all international cargo. In 2004, it was reported that 35 to 40 container trains per day moved out of Southern California for points east. This figure is projected to increase to 200 trains per day to handle the import volume projected for 2010. The rail network is largely a private network and stakeholders are dependent upon the nation's Class 1 railroads to ensure that there is sufficient capacity to meet the growing demands of international trade.

Congestion caused by staffing issues, lack of adequate track and terminal capacity, and increased volume has resulted in a reduction in average train speed. According to an article appearing in the March 29, 2004, Journal of Commerce, for one western railroad a one-mph drop in average train speed creates a need for 300 more locomotives, 250 operating personnel and 250 double-stack railcars. Other railroads indicate that a one-mph drop in average speed creates a need for only 175 locomotives. Either way, this is an issue of growing concern.

There are several constraints with respect to rail investment in America.

First, U.S. freight railroads are privately owned and must finance their infrastructure investment needs through their own earnings and from outside capital markets. Railroad stockholders increasingly insist that railroads focus their limited investment dollars on projects that promise a direct significant financial benefit to the investing railroad. This kind of imposed discipline by the financial markets is necessary and appropriate in a market economy. However, it also discourages investments for many of the projects discussed in this White Paper that would yield significant public benefits but provide only limited financial benefits to the railroad.

Second, the national intermodal system relies on several key Mid-Continent interchanges, where western railroads hand cargo off to eastern railroads and visa-versa. There are only a handful of interchanges--some as old as the continental rail system itself. These interchanges are in large cities, such as Chicago, St. Louis, Memphis, Kansas City and New Orleans that have grown up around the railroad for more than a hundred years. Three of these interchanges are constrained by Mississippi River crossings. These urban areas are difficult to bypass not only because of the urban nature of the locales, but also due to the geographical barrier of the Mississippi River, itself.

Third, intermodal rail capacity is governed not only by the amount of track, but by the number and size of terminal facilities. Terminals are difficult and expensive to build because of land use constraints and environmental permitting requirements. They are considerably more expensive than laying mainline track.

The Waterfront Coalition has identified the following actions for public and private sector stakeholders to improve intermodal capacity on the nation's railways:

Encouraging Investment in Intermodal Rail Capacity Through Tax Incentives. This White Paper identifies a number of key rail investments necessary to increase the capacity of the nation's freight transportation system and provide both public and private benefits. However, the needed investment may not be made if only the private benefit to the investing railroad is used to justify the investment. The benefits accruing to the public from the investment must be evaluated and funded by the public sector in order to ensure the investment is made.

For this reason, the Waterfront Coalition supports efforts to enact federal and state tax incentives for railroads that invest in railroad infrastructure capacity, especially intermodal freight capacity, as a means to promote investment in this critical national need. For a modest public outlay, private railroad investment would be stimulated to increase intermodal rail capacity and produce substantial public benefits such as less congestion, less pollution, less fuel consumption and safer highways.

Improving East-West Interchanges: As noted above, the major interchanges between eastern and western railroads are now among the most significant choke points in the nation's rail transportation system. For this reason, the Waterfront Coalition supports the following projects:

1. **Chicago - CREATE project**: This project is designed to provide grade separated corridors through the Chicago area that can then be used by the railroads to construct high capacity rail routes through the city. The rail industry has already pledged $250 million in private funds to the rail projects necessary to complete the routes. However, the public funds to implement the grade separations have not yet been committed. These grade separations will also provide significant traffic congestion relief in the Chicago area including relief for highway freight movements.
2. **New Orleans – Gateway Infrastructure Improvement Projects:** This project would create a grade separated, multiple track corridor efficiently connecting all rail carriers through the metropolitan area, and remove rail traffic from the congested riverfront area.

Key Southern California Rail Projects: Regardless of efforts to develop alternative West Coast gateways, Los Angeles and Long Beach will remain the primary entry points for eastbound imports into the United States. While focus needs to be placed on developing infrastructure in other areas it would be a mistake to ignore rail infrastructure supporting Southern California. The following are critical projects:

1. **Port of Los Angeles --Southern California International Gateway Project**: The Port of Los Angeles has just approved a major new near-dock international rail yard for the BNRR. The expedited completion of this project will provide additional capacity, improve throughput from the San Pedro ports, and reduce truck trips into Los Angeles.

2. **Cajon Pass:** Additional mainline capacity is necessary to move the ever increasing volume of freight traffic in and out of Southern California.
3. **Colton to El Paso:** A second main track is needed between Colton, California and El Paso, Texas. Other capacity projects are needed between El Paso and the Mid-Continent gateways.
4. **"Alameda Corridor East":** This project would create grade separations to establish rail corridors between the downtown Los Angeles and Colton, California.
5. **Port of Long Beach--Pier B Rail Yard Expansion:** This project is designed to provide longer arrival and departure tracks, additional storage tracks for rail cars, and additional lift capacity. The Pier B Rail Yard Expansion is located in the north harbor area, extending from Dominguez Channel to Pico Avenue.

Key Eastern Gateway Projects that need immediate funding: The Ports of Savannah, Charleston, Virginia and New York remain important gateways for Atlantic and North-South trade. Increasingly, as shippers move to all-water routes to the East, load centers in the Mid-Atlantic and Southeast will take on more importance. The following rail projects have been identified as critical to East Coast port infrastructure and capacity:

1. **Norfolk--Heartland Corridor:** The Heartland Corridor initiative consists of a series of projects designed to significantly improve mobility and increase rail freight capacity from The Port of Virginia through West Virginia and on to markets in the Mid-West. The initiative has several parts: The Central Corridor Double-Stack Initiative will increase the vertical clearances on the high-speed, high capacity Norfolk Southern Main Line between Columbus, OH and Roanoke, VA, thereby making it suitable for double-stack trains. New Intermodal Terminal Facilities in Prichard, WV, Roanoke, VA and Columbus, OH will provide efficient container transfer between road and rail at key intersections along the Heartland Corridor. The Western Freeway Rail Corridor component will relocate the West Norfolk Spur of the Commonwealth Rail Line away from a densely populated neighborhood area in Portsmouth, VA to a secure highway rail corridor, allowing for the faster and safer movement of trains.
2. **New York/New Jersey:** ExpressRail Elizabeth, slated for completion between 2007 and 2009, includes the construction of a second lead track to ExpressRail Elizabeth, the completion of ExpressRail Elizabeth's on-dock rail terminal, which will ultimately have 18 tracks; and construction of the ExpressRail Corbin Street rail support facility to provide capacity to stage, arrive and depart two-mile-long trains, and integrate rail traffic from the three on-dock ExpressRail facilities.

   Over the longer term, New Jersey and New York wants to create three seamless routes -- the River Line to the North, the Lehigh Line to the West and the West Trenton Line to the South. The upgrade of these lines, along

with feeder track within the immediate vicinity of the port, will create effective capacity to help meet the long-term intermodal and general freight needs of the region. Projects for which collaborative funding is being sought, include:

- Oak Island Yard, NJ -- Expansion
- Pt. Reading, NJ Secondary -- Line Improvements
- Chemical Coast, NJ Secondary Line -- Second track and signaling improvements
- Lehigh Line, Manville NJ- Easton PA -- Double Track
- West Trenton Line, Manville - West Trenton NJ -- Double Track
- River Line, Teaneck NJ– Nyack NY, Double Track with additional improvements to Selkirk NY
- Lehigh Line, Newark – Aldene NJ -- Third Track
- National Docks Line / Bergen Tunnel NJ -- High Cube Clearance

We must expend public resources on freight projects wisely, where they will have the biggest return, and only after consulting with shippers on business trends that will affect the long term value of proposed capacity projects.

By and large, the Waterfront Coalition believes that private-sector actions can reap the highest rewards in improving the nation's Marine Container Transportation System. However, there are several areas in which public-sector involvement is necessary and even desirous, such as highway projects and large public-works projects designed to demonstrate new ways of doing business. However, since public resources are finite, we believe freight projects should only be pursued when the return is likely to be high, and where the project clearly meets the needs of shippers. Investing in intermodal freight movement projects without consulting the ultimate customer--the importer/exporter--is not wise and should be avoided by public sector stakeholders. We have the following specific recommendations:

Rewrite federal highway funding laws to increase funding for freight projects. Unlike the rail system, where freight movement capacity is built largely with private funds, highways have always been a matter of public money. Traditionally, federal highway and road projects have been funded out of the federal highway trust fund that is funded through gasoline taxes and then distributed to the states using a federal formula. In the past, federal formulas have provided no requirement that any portion of federal funds be directed toward goods-movement projects. Indeed, federal highway funds as applied to urban areas have been used largely to support commuter and mass transit demands. While some highway investment has inured to the benefit of freight stakeholders, there is and has been no federal policy designed to enhance or direct needed funds to freight-related projects. The old adage that "freight doesn't vote," has ensured that federal highway funds are applied on a hit-or-miss basis to freight-related projects.

The 109th Congress is expected to take up a major highway reauthorization bill that will set the rules for highway funding for the next few years. A bill that made it most of the way through the legislative process during the 108th Congress called for significant changes that would require states to consider more freight-related projects. The Waterfront Coalition supports additional efforts to direct highway funds toward freight as part of the reauthorization process, and believes Congress should enact new funding rules that will ensure that more money is directed at freight projects in the future.

Develop Key Port Connector Projects as Quickly as Possible: A full listing of "port connector" projects appears in Appendix 1 of this white paper.

Federal Operating and Development Assistance for Shuttle Trains Without New Taxes or Fees. Because of road congestion and air pollution issues facing communities that are near the nation's ports, many in the public-sector have called for the development of shuttle trains that will move cargo very short distances from the marine terminal to warehousing and transload centers less than 100 miles from the port. Today such centers are serviced entirely by short-haul truckers.

The economic feasibility of such shuttle-train operations over these short distances, where there is not an adequate back-haul volume of export cargo to match the import volume, has not been demonstrated. Indeed, we see several key obstacles to the development of this concept: First, the rail network serving ports has been developed largely by class I railroads that are not particularly interested in the short-haul or shuttle train business. Second, class I railroad facilities--terminals and track--are already congested. Forcing railroads to provide track and terminal space for shuttle trains would divert this capacity from its current and most-productive use--supporting interstate intermodal traffic. Third, most rail experts do not believe that shuttle train service could provide the same speed or pricing that short-haul trucking can, making it unlikely that shippers would use such a service even were it offered.

In our judgment, at this time, only a large-scale public works program can surmount the economic impediments to shuttle trains. Such a program would have to pay for track, terminal facilities and, most important, provide operating subsidies that would offset the higher costs of rail versus truck. For this reason, we believe careful study is merited before moving forward with such a concept. Unless shuttle trains can provide service that is as fast and as economical as harbor trucking, they simply won't be used by importers or exporters.

In addition, we know that public funding is not readily available for such large-scale projects and imposing container fees or other new taxes to develop shuttle train concepts defeats the purpose. Supporters of this concept may wish to seek out amendments to the federal highway bill to encourage spending on such projects, including the provision of operating subsidies.

A pilot program to test the shuttle train concept is under negotiation between the Alameda Corridor Transit Authority and a Class I railroad. Until such a "proof of concept" project has been successfully completed and there is an understanding of the capital and operating costs associated with this type of program it is premature to recommend this particular type of alternative. We believe much more study is needed on the economic viability and ultimate public-sector cost of such projects. For this reason, shuttle trains are not a top priority of the Waterfront Coalition.

Provide Assistance to Short-Haul Truckers to Improve Equipment. While the Coalition remains unconvinced of the merits of shuttle trains, we are cognizant and concerned about air-pollution issues posed by harbor trucking. Most short-haul truckers are owner-operators, who own their own tractor rig and work as independent contractors for harbor trucking companies. Very often these truckers do not have the wherewithal to invest in state-of-the-art tractor equipment, or equipment that is specifically designed for short-haul trucking. As a result, short-haul trucks are old, fuel inefficient, and not as clean burning as they could be.

To improve this situation, the Waterfront Coalition supports a federal grant or tax incentive program designed to provide assistance to owner-operator truckers so that they can improve and modernize their equipment by purchasing equipment that is specifically designed for short-haul trucking. Providing more efficient equipment to owner-operator truckers will not only improve air pollution around the nation's ports, but it will improve the economic viability of short-haul truckers who face increasingly difficult times because of rising diesel prices. We believe that dollars spent on improving short-haul trucking equipment would return a much better return than dollars spent on large-scale shuttle train projects.

Develop Truck-only Lanes at Highways Servicing Ports. The Coalition is also very concerned about road congestion, because congestion strikes at the heart of the viability of short-haul trucking. For this reason, we support public works projects that include dedicated truck lanes. Separating truckers from commuters should be a priority in developing port road infrastructure projects in the future, since such separation would speed traffic for both commuters and truckers, and improve road safety. In our judgment, building truck-only lanes would be a better use of limited public resources than investing in shuttle trains.

Short-Sea Shipping Faces Significant Impediments. The public and private sector advocates of short-sea shipping suggest it is a modal alternative that could prove itself in some markets where landside capacity is not able to keep up with demand, the water routes are direct, and the service, especially the price, is competitive with truck and rail on a sustainable basis.

The Waterfront Coalition is skeptical about the ability of short-sea shipping to attract enough cargo to be an effective and sustainable option for international containerized cargo. Given the logistical requirements for high volume, imported goods, the state of current vessel technology and cabotage constraints, we have reason to believe short sea alternatives are unlikely, in most instances, to provide the same speed to market or pricing structure that either trucking or rail provides today. Some of the apparent disadvantages of short-sea services include slow, infrequent transit times, a high cost structure driven by Jones Act requirements, added container transfer costs, and scarce berth space at some major hub ports. Short-sea shipping is unlikely, in most instances, to provide the same speed to market or pricing structure that either trucking or rail provides today.

The Waterfront Coalition believes the US government should move cautiously on short-sea shipping until it conducts further study about the economic viability of such service and develops performance metrics to help gauge public and private benefits. Its advocates suggest that short-sea shipping compares favorably to the cost of inducing greater system capacity in other modes in certain markets. The government and port users would benefit by knowing what the cost potential of short-sea improvements would be. Until that information is in hand, the Coalition remains doubtful and believes any large expenditure of public monies would be better spent in bolstering truck and rail services in ways suggested elsewhere in this paper.

We must develop better trade and transportation forecasting that will allow stakeholders to minimize the impact of equipment and labor shortages.

In 2004, the Marine Container Transportation System experienced unprecedented difficulties, specifically in the ports of Los Angeles and Long Beach. The inability of those ports to handle the influx of large container ships, and, in some cases, intermodal rail cargo, caused significant delays for importers and exporters.

While ports are facing capacity issues in the future, at least part of the operational deterioration in 2004 appeared to be caused by poor forecasting on the part of marine terminal operators, and to some degree, the western railroads. Many of the transportation service providers completely missed or significantly under-forecasted the growth of China.

Carriers, terminal operators and railroads complain that one reason they missed this change in international sourcing was poor communication to and with importers. Indeed, carriers often say that shippers overestimate trade and that carriers largely discount their projections. A frequent manifestation of this problem is in terms of the forecast that each shipper provides operators on their own expectations of growth of their markets and of their market shares. When the carriers sum the individual market shares across all shippers they serve, they frequently find that the total forecast exceeds the total market size.

For this reason, the Waterfront Coalition calls on the trade associations representing importers and exporters to consider developing best practices for the timely forecasting of trade flows, recognizing that providing key sourcing information is often considered business confidential.

We must promote and improve infrastructure to support Asian trade to the East Coast and Gulf Coast.

As Asia grows as a source of supply, it is clear that we need to develop alternative Asian gateways on the West Coast. In addition, many U.S. importers and exporters with distribution networks east of the Mississippi could make better use of Eastern ports by moving cargo via "all-water" services through the Panama Canal and the Suez Canal.

Carriers should expand and improve Asia to East Coast service through the Suez Canal. Shipments from South China can be routed to New York/New Jersey and Virginia through the Suez Canal with transit times that are only one to two days longer than shipments routed across the Pacific Ocean through the Panama Canal. As US importers source more cargo in Southeast Asia and from the Indian subcontinent, the Suez Canal option becomes a more viable option and does not restrict post-Panamax vessels. Today, carriers are not providing an optimal transit time to the East Coast through the Suez Canal, but this could change with shipper commitment to using this service, and with carriers devoting more ships to this service.

Immediate expansion of the Panama Canal should be a high priority. The Panama Canal provides an option to Western gateways for imports from Asia. However, there are several constraints to this strategy. First, the Panama Canal is not large enough to handle the large (post-Panamax) container ships that now regularly sail out of Asia. Second, the canal is operating at more than 95 percent of capacity, although additional capacity for containerized cargo could be found by moving more container ships through the canal at the expense of break-bulk ships.

Building a third set of locks that can accommodate ships carrying up to 10,500 TEU will cost $8 billion and possibly more. It will also take between seven and ten years, and it must be undertaken by a foreign government that faces its own sovereign issues. Nevertheless, U.S. economic prosperity depends on upgrading the Panama Canal. Both the public and private sectors in the United States should support efforts to expand the Canal as quickly as possible.

CONCLUSION

America depends on international commerce, much of which travels through America's ports and marine transportation system--a network comprised of railroads, highways, distribution warehouses, container yards, and terminal facilities.

Maintaining the health of the U.S. Marine Container Transportation System is essential to ensuring America's continued economic dominance. And yet, the United States government has no clearly defined national policy with respect to this system or, indeed, with respect to intermodal transportation. In the meantime, many private sector stakeholders pursue business practices that put this system under extreme pressure and impose external costs on port communities. As a result, the Marine Container Transportation System is facing serious challenges that could significantly constrain American prosperity in the future.

Given these facts, the natural inclination has been for state and local governments to step in, imposing regulations and legislation that increasingly seek either to tax the system for needed infrastructure improvements, or, worse yet, to impose regulations that attempt to mandate business practices, improved productivity, and efficiency. It is one thing for state and local governments to impose regulations designed to address pollution or road congestion, and quite another when the government begins to entertain legislation that seeks to define specific business practices for terminals, truckers, or cargo owners in an attempt to legislate efficiency.

There clearly is a role for the public sector, in identifying the intermodal Marine Container Transportation System as a national priority for infrastructure funding that crosses the various modes of transportation, to support efforts that encourage private investment in this system, to find ways to encourage cooperation between private stakeholders that do not run afoul of anti-trust laws, and to support advanced solutions such as shuttle trains that may not yet be economically viable. National and state attention, especially to the infrastructure outlined in this White Paper is, therefore, critical.

It is also critical for the private sector to focus its attention on the many business practices outlined in this paper that require no public sector mandates. While funding is needed for longer-range infrastructure, business practices hold the key to driving productivity and throughput. They must be the highest first priority, because they are necessary and they can deliver very fast results.

In conclusion, therefore, we call on the federal government to make the Marine Container Transportation Infrastructure a national priority, and to work with state and local governments to address critical infrastructure problems. We call on private sector stakeholders--carriers, terminals, railroads, trucking companies, labor and cargo owners--to work together on business practices and productivity issues outlined in this White Paper.

APPENDIX 1
PORT CONNECTOR HIGHWAY PROJECTS

Location	Description	Source
California		
Port of Long Beach	Ocean Blvd (Port to Sr-710), 9th/10th St (Santa Fe to Pico), Pico Ave (9th/10th to Ocean Blvd), Santa Fe (Anaheim to 9th), Anaheim St (Sante Fe to Alameda)	FHWA
Long Beach (Carson) Rail Yard	Sepulveda Blvd. (Facility to Rt. 47)	FHWA
Long Beach -- SR47	Port Access Expressway will build a four-lane elevated highway from Terminal Island to Alameda Street north of Anaheim Street and South of Pacific Coast Highway. In addition, the project will provide for the replacement of the seismically deficient Heim lift bridge over the Cerritos Channel with a fixed span bridge. The draft EIR is being prepared with circulation planned for August 2005 and approval in 2006. Funding for the $40 million design and $350 million construction has not yet been determined. This project would reduce approximately 6-7 percent of the port-related truck traffic off the I-710 freeway. Completion date is approximately scheduled for 2011, but is based on available funding.	POLA

Location	Description	Source
Long Beach -- I-710 Corridor/Gerald Desmond Bridge Gateway Program	The I-710 Corridor/Gerald Desmond Bridge Gateway Program is a comprehensive, strategic approach to addressing the congestion, air quality, and safety issues in the Corridor between the Ports of Long Beach/Los Angeles and State Route 60. I-710 Program consists of the replacement of the Gerald Desmond Bridge in the Port of Long Beach, and improvements to the I-710 Corridor itself. The I-710 Corridor/Desmond Program is included in the following transportation programs/plans: Southern California Association of Governments' (SCAG) "Southern California's Consensus Program for TEA-21 Reauthorization," the Los Angeles County Metropolitan Transportation Authority Mobility-21 Coalition "Top Ten Traffic Busters (which is endorsed by the Southern California Congressional delegation), the State of California Global Gateways Development Program, the State's Marine Transportation System Infrastructure Needs Assessment, and SCAG's Regional Transportation Improvement Program (Desmond Replacement component) and Regional Transportation Plan. The project is also designated as a "high-priority project" in Section 1804 of the proposed TEA-21 Reauthorization legislation (H.R. 3). The Port of Long Beach and the Gateway Cities Council of Governments have also requested a $745 million earmark in the bill under the "Projects of National and Regional Significance" (Section 1304). SCAG has endorsed this request.	POLB

Location	Description	Source
Long Beach -- Terminal Island Freeway/Ocean Boulevard Interchange	This project is a TEA 21 "High Priority Project." This project also connects directly with the I-710 Corridor/Gerald Desmond Bridge Gateway Program. This project was originally administered by the State DOT (Caltrans), but was transferred to the Port of Long Beach (POLB). Upon completion of this project and also the Gerald Desmond Bridge Replacement project, Ocean Boulevard between the Vincent Thomas Bridge and the Long Beach Freeway (I-710) will be relinquished to the State. Construction has started, and is expected to be completed in the first quarter of 2007.	POLB
Port of Los Angeles	Seaside Ave (Ferry St to Sr 47) Gibson Blvd (Port to B), B St (Gibson to Alameda), Alameda St (B to Anaheim) - B St is now Harry Bridges Blvd Figueroa St (B to C), C St (Figueroa to I-110)	FHWA
Los Angeles--I- 110 Freeway/SR47/Harbor Blvd Interchange	Adding an additional lane to the westbound SR 47 connector for northbound I-110; reconstruct Harbor Blvd/SR 47 ramp intersection; construct new on-ramp from Gaffey St to SR47, estimated completion January 2009	POLA
Los Angeles -- Mormon Island Transportation Access Improvement	Construct grade separations at Mormon Island to separate vehicles and trucks from active rail lines. This will help access to TRAPAC. Established completion August 2007	POLA
Los Angeles--110 Freeway/C Street Interchange	Local street improvement for on and off at C Street. Will help TRAPAC and West Basin Container Terminal. Estimated completion December 2010	POLA
Los Angeles BNRR Rail Yard	Washington Blvd. (Hobart Yard to I-710) Shelia St (Arrowmile to Atlantic), Atlantic Blvd (Shelia to Bandini), Bandini Blvd (S Downey to I-710) - Connector 2 is proposed)	FHWA
Los Angeles/Long Beach Truck/Rail	Los Angeles/Long Beach – Direct truck focused connections to existing UPRR International Container Transfer Facilities (ICTF), and proposed new BNRR facility.	UPRR
Los Angeles-- TRAPAC on dock rail	This project is an on-dock rail-yard where containers can be loaded onto trains directly at the marine terminal without draying containers to rail facilities. Estimated completion date 2007	POLA

Location	Description	Source
Los Angeles-- Navy Way Connector to Westbound Seaside Ave.	Construct a flyover from Northbound Navy Way to westbound Seaside Ave. This would help containers departing APL and Maersk that are traveling westbound. Estimated completion 2007	POLA
Los Angeles--Vincent Thomas Bridge	This bridge is projected to be at capacity by the year 2010. There is a study underway to analyze alternatives, including the modification of the existing bridge	POLA
Port of Oakland -- 7th Street Grade Crossing	This project will replace the railroad bridge crossing at 7th Street that provides access to the JIT and to the UPRR intermodal facilities. Replacing the bridge will allow the widening of 7th Street, a major arterial street that connects the Port with I-880 and will improve the grade separation of the access tracks that serve the JIT. 7th Street also provides the main access for the public to the Port's 40-acre Middle Harbor Shoreline Park. The current rail bridges and roadway were constructed in phases between 1930 and 1954 and cannot meet the rail infrastructure requirements for future Port growth.	Port of Oakland
Eastbound I-80 Truck Access Ramp.	This would be a largely at-grade truck-only ramp accessing the base of the viaduct connecting northbound I-880 and eastbound I-80 from the adjacent frontage road. Currently, trucks exiting the Port along 7th Street must traverse the entire frontage road, negotiate a four-way signaled intersection at West Grand Ave. and enter the viaduct at elevation. This causes congestion at the intersection, which could become significantly worse if the City of Oakland pursues plans to develop a major retail complex at the site of the Oakland Army Base. Estimated cost of this project is $5 million and could be less if the work is done entirely at grade.	Port of Oakland

Location	Description	Source
I-880/5th Street Ramp Improvements	I-880/5th Street Ramp Improvements This project consists of restriping and constructing some minor geometric improvements at the base of the Alameda/Broadway exit ramp from southbound I-880 at 5th Street. This ramp is heavily used by trucks accessing the Port's Middle Harbor Terminals, by making a right turn at the bottom of the ramp at 5th Street. Currently, there is no dedicated right turn lane, so vehicles making a right turn frequently have to wait behind others going straight through the signalized intersection. This results in delays and longer queues backing up the ramp. The estimated cost for this project is $550,000. It is likely that the Port would want to partner with Caltrans on this project.	Port of Oakland
Rebuild Adeline Street Overcrossing	Reconstruct this major truck entrance into the Port area to regrade for more efficient and effective use by trucks and to make it better able to withstand a seismic event. Cost: $60 million.	Port of Oakland
Georgia		
Ocean Terminal, Savannah	From W Lathrop Ave (CR 1142), SE 0.65 mi on Lathrop Ave (CR 740) and 0.16 mi on River St (CS-014507) to the terminal	FHWA.
CSX Rail Yard, Savannah	From I-516: N&W 0.70 mi on Tremont Rd, N 0.1 mi on Tremont Ave, W 0.2 mi on Safety First Rd	FHWA.
New Jersey/ New York		
Port Newark/ Elizabeth Road-Way Intersections	Improve intersections, install traffic lights and signs to advance safety and to increase traffic flow at Tyler St., Polaris St., McLester St., Port Newark Container Terminal (PNCT),Intermodal intersection and Export Street.	PANYNJ
New Jersey McLester St./North Ave. Curve	Widen roadway and create intersection improvements to increase traffic flow, improve safety and support warehouse development.	PANYNJ/
New Jersey Brewster Road/Port Street Intersection	Modify intersections and signals to improve safety and increase major airport and seaport traffic flow.	PANYNJ/

Location	Description	Source
New Jersey Bay Avenue	Reconfigure roadway to accommodate space for Express Rail dual lead tracks and, in doing so, improve overall facility access.	PANYNJ
New Jersey Corbin Street between PNCT and Building 1400	Expand highway capacity to improve safety and increase traffic flow in/out on the port's "Main Street".	PANYNJ
New Jersey Corbin Street/Port Street	Reconfigure (i.e., elevate roadway) Corbin Street and Port Street to improve major northern access to New Jersey Marine Terminals (NJMT).	PANYNJ/ r
New Jersey Port Street/NJTP/ Rt. 9N/Rt. 78	Widen Port Street, provide new access to the New Jersey Turnpike (NJTP) 14A entrance, improve access to Rt. 9N and Rt. 78 in order to improve safety and increase traffic flow exiting NJMT.	PANYNJ/
North Avenue Port Newark/Elizabeth	Phase construction of North Avenue/Kapkowski Road, a major seaport and airport connector, to separate the Port from non-port traffic.	PANYNJ/
Port Newark/ Elizabeth	Eliminate traffic spill back from Delancy Street that causes recurring congestion at its intersection with airport/seaport connector Route 1&9.	PANYNJ/ Liberty * Corridor
NYMT, Staten Island, New York	Improve New York Marine Terminals (NYMT) access to the interstate transportation system by constructing roadways and ramps to be connected to the replacement of the Goethals Bridgea major regional corridor facility..	PANYNJ/

Location	Description	Source
Port Newark/ Elizabeth, Northern NJ Rail Terminals	Build Portway, a series of road projects designed to relieve access congestion to marine and rail terminals within a seventeen mile corridor stretching from Port Newark and Elizabeth in the south to Bergen and Hudson Rail yards to the north. Advance the design and study of a Phase II program of related projects is also underway. Major yet to be completed Phase I projects, include: Hackensack River Bridge(s). Construction of a new bridge across the Passaic River to supplement the existing Route 1 & 9 Truck Crossing and better link South Kearny between intermodal rail and truck terminal and distribution facilities and the port access via Doremus Avenues. (A logical future extension includes construction of an additional bridge linking the South Kearny Peninsula to the Bayonne Peninsula and JerseyCity/Bayonne port and distribution facilities.) Tonnelle Avenue Reliever (Conrail Way). Creation of a new truck only right-of-way to relieve congestion between the port and off-port railhead improvements. Extension to Little Ferry. Extend the northernmost Portway connector to create a direct link to the NJ Turnpike in the vicinity of the Vince Lombardi Park-N-Ride. This would effectively create a third north-south spine for travel between the port district and points north.	NJDOT,
Oregon		
Leadbetter St. Extension/overcrossing	Complete leadbetter St. loop to Marine Dr. (Pacific Gateway/T-6 intersection) and construct road bridge over the rail line.	Port of Portland
11th/13th Ave. rail overcrossing or closing (at Columbia blvd. and Lombard St.	Construct a new three-lane roadway connecting Lombard and Columbia to include a rail overpass. Could include reconfiguration of local rail network, resulting in street closure	Port of Portland
I-5/Columbia Blvd. Improvement	Construct a full interchange at Columbia Blvd. or functional equivalent	Port of Portland

Location	Description	Source
238th Ave Extension study	Assess the cost, feasibility and traffic implications of extending 238th Ave. north to connect marine Dr. and Sundial Rd.	Port of Portland
New I-84 interchange near or at 257th Ave	Improve current split diamond interchange configuration	Port of Portland
223rd Ave widening	Widen between Halsey St. and Marine Drive	Port of Portland
South Carolina		
North Charleston Rail Facility (Norfolk-Southern)	W Montague (I-26 to Marriott), Marriott Dr (Montague to Freight Yard)	FHWA
North Charleston Terminal	Remount Rd (Terminal to I-26 and Terminal to I-526 via North Rhett)	FHWA
Wando Terminal	Served by an Existing NHS Route	FHWA
Columbus St/Union Pier Terminal	East Bay Street South to Charlotte Street, East to Washington St., South to the Port	FHWA
Virginia		
Port of Virginia	I-564 Connector (Provides an interstate highway direct access to the north end of NIT and the south end of Naval Station Norfolk)	VPA
Port of Virginia	Hampton Roads Third Harbor Crossing (Provides an additional interstate access to PMT, NIT, NNMT, the new APM Terminal and the future Craney Island Terminal.	VPA
Port of Virginia	Rte. 460 Improvements (Provides an alternate to I-64 for traffic between Hampton Roads and the Richmond Metropolitan Area and the I-95 corridor for PMT, APM, and the future Craney Island Marine Terminal)	VPA
Port of Virginia	I-64 Widening (Continues the phased widening of I-64 between Hampton Roads and Richmond to alleviate regional traffic congestion and also improves traffic flow for all Port terminals.)	VPA

Location	Description	Source
Port of Virginia	Southeastern Parkway and Greenbelt (Provides an alternate route to the southern Virginia Beach area; thus removing traffic from congested I-64 to benefit NIT and PMT.)	VPA
Port of Virginia	Route 58 Midtown Tunnel/Martin Luther King Jr. Freeway Extension (New 2-lane parallel tunnel will alleviate congestion on the existing 2-lane tunnel to benefit PMT).	VPA
Washington	**Description**	**Source**
SR-519/ Royal Brougham Intermodal Access BN-SIG Yard (Seattle Intl Gateway) & Elliott Bay-Alaskan Way Port (Seattle)*	Critical east-west link on existing NHS route between I-5, I-90, & BN SIG Yard and POS container terminals south of downtown Seattle. Project provides direct access to POS terminal & increases safety by grade-separating a busy road & rail crossing. Phase 1 is almost complete. Phase 2 is currently in the planning/design stage. Goal is to maintain & improve bi-directional, direct freeway access to SIG Yard and the waterfront. This is one of BNRR's highest priority projects.	FHWA, FAST Partnership, POS
Port of Seattle—East Marginal Way Elliott Bay-Florida St. Port (Seattle)*	North-south grade separation on Duwamish Ave S. Relocates East Marginal Way to improve access among POS terminals, rail yards, and local warehousing and distribution centers.	FHWA, FAST Partnership, POS
Seattle—S Spokane Street Viaduct Elliott Bay-Florida St. Port (Seattle)*	Critical east-west link between I-5 and POS container terminals in the south Duwamish area, carrying 45% of POS regional truck traffic. Project minimizes conflicts among freight movement, freight & passenger rail traffic, commuter traffic and ferry access. Funding for construction has not yet been determined.	FHWA, FAST Partnership, POS
Seattle—Duwamish ITS Project Elliott Bay-Florida St. Port (Seattle)*	State-of-the-art traffic management system improves flow of traffic between container terminals and rail yards in Seattle's Duwamish area by helping trucks avoid at-grade crossings that are occupied by freight trains.	FHWA, FAST Partnership, POS
BN-South Seattle Yard	From Boeing Access Rd (just off I-5): North on Airport Way S to Facility Entrance at Hardy Street	FHWA & UPRR
BN-UP Port of Tacoma Yards	Served by an Existing NHS Route	FHWA & Union Pacific

Location	Description	Source
BN-SIG Yard (Seattle Intl Gateway)	Served by an Existing NHS Route	FHWA
Port of Tacoma	Port of Tacoma Rd (I-5 to E 11th St)	FHWA
Port of Tacoma -- SR 167 and connection to I-5	This would connect the warehousing in the Kent, Auburn and Sumner area directly to SR-509 at the Port of Tacoma and to Interstate 5 in the Tacoma area.	Port of Tacoma
Port of Tacoma SR-167	SR-167 interchange and connection to SR-509 and I-5 in Tacoma	Port of Tacoma
Port of Tacoma FAST Corridor	Road and rail grade separation along the I-5 Corridor and the Lincoln Street Overpass project in Tacoma.	Port of Tacoma

APPENDIX 2
INDEX OF RAIL PROJECTS

These projects are fully discussed in the body of the paper. This is an index only

Location	Description
California/Southwest	
Long Beach Pier B Rail Yard Expansion	This project is designed to provide longer arrival and departure tracks, additional storage tracks for rail cars, and additional lift capacity.
Los Angeles Southern California International Gateway Project:	The new near-dock international rail yard for the BNRR at the Port of Los Angeles
Oakland Donner Pass and Reno to Salt Lake City	Clearance of Donner Pass tunnels and snowsheads to accommodate international and domestic double stacked containers. Once this is accomplished, the remainder of the line from Reno to Salt Lake City needs to be double tracked.
Oakland San Joaquin Valley	Double track
Oakland Rail Service between Martinez and Tracy	Re-opening of this line will provide new capacity in the region's rail system and provide significant operational flexibility for the railroads.
Oakland Port Access Improvements-	Construct access improvements to the Port of Oakland Joint Intermodal Terminal and Union Pacific Rail Facility.
Oakland The Outer Harbor Intermodal Terminal	This project will construct an expanded intermodal rail terminal at the former Oakland Army Base.
Oakland Martinez Upgrade	This project will rehabilitate the UPRR "waterside" drill track to mainline standards, including new signals and track connections.
Oakland California Inter-Regional Intermodal System (CIRIS)	This is a the proposed shuttle train between the Port of Oakland and one or more points in the Central Valley, designed to divert container movements from truck to rail.
So-Cal Cajon Pass	Additional mainline capacity is necessary to move the ever increasing volume of freight traffic in and out of Southern California.
So-Cal Colton to El Paso	Second main track between Colton, California and El Paso, Texas.
So-Cal Alameda Corridor East	Create grade separations to establish rail corridors between the downtown Los Angeles and Colton, California.
Illinois	

Location	Description
Chicago CREATE project:	Grade separated corridors through the Chicago area that can then be used by the railroads to construct high capacity rail routes through the city.
Louisiana	
New Orleans Gateway Infrastructure Improvement Projects:	Grade separated, multiple track corridor efficiently connecting all rail carriers through the metropolitan area. Removes rail traffic from congested river front area.
New York/New Jersey	
Elizabeth ExpressRail	Completion of ExpressRail Elizabeth's on-dock rail terminal, which will ultimately have 18 tracks; and construction of the ExpressRail Corbin Street rail support facility to provide capacity to stage, arrive and depart two-mile-long trains, and integrate rail traffic from the three on-dock ExpressRail facilities.
Pacific Northwest	
Seattle/Tacoma Grade separations and track additions:	The project is designed to insure that the rail main lines between Seattle and Tacoma and through the two urban areas are free of grade crossings.
Pacific Northwest Stampede Pass:	Upgrade tunnel to accommodate double-stack trains.
Pacific Northwest BNRR & UPRR co-production opportunities.	Better asset sharing between the western railroads in the PNW would improve operational efficiencies. (asset sharing/directional running)
Portland Connect BNRR A & B yards	This would support Terminal 6 in the Port of Portland
Pacific Northwest	Development of PNW regional intermodal yard support capacity.
Virginia/Midwest	
Norfolk & West Heartland Corridor	The Heartland Corridor initiative consists of a series of projects designed to significantly improve mobility and increase rail freight capacity from The Port of Virginia through West Virginia and on to markets in the Mid-West.