

Expansion of Urban Goods Movement at the Port of Oakland

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The Port of Oakland is poised for significant growth in cargo volumes, as they prepare for the final stage of channel deepening, and phase in the development of the former Naval Supply Center and Oakland Army Base properties. The demand that is driving the cargo growth comes from several sources: expanding urban areas reaching south toward Gilroy and east into the San Joaquin Valley; development of inland transload warehouse centers; and relative efficiency of intermodal service.

The Port is planning for this potential growth and one valuable tool has been the “Maritime Development Alternatives Study” (MDAS). MDAS considered development options within the Port boundaries that would respond to future needs for marine terminal space, intermodal container transfer railyards, railroad mainline system to access the Port, internal roadway improvements and access to the regional highway system. The study also considered potential TSA security requirements as well as impacts to existing facilities (such as utilities and buildings) and requirements for new or relocated facilities. MDAS did not provide a master plan for port development, but rather identified discrete elements that could be implemented as market and customer demand warranted.

The Port provides a necessary service towards the nation’s goods movement requirements, but also recognizes the responsibility it has to minimize impacts on surrounding communities. The Port developments have been planned in close coordination with adjacent city entities. One truck reduction concept is CIRIS (California Inter-Regional Intermodal System) emphasizes rail transport of cargo to areas normally served by long-haul truck transport. The Port has also committed to setting aside a significant area for truck related activities so that these activities do not occur in the surrounding neighborhoods.

The Maritime Development Alternatives Study utilized a range of tools and data collection techniques, including:

- Marine Terminal Interviews to obtain terminal operating data such as container volumes by type, gate activity, growth forecasts, and regional expansion plans.
- Rail Terminal Interviews to determine current throughput volumes by container type, international or domestic, truck haul information, and train information.
- Rail Capacity Model: this simulation model evaluates rail yard operations and was used to determine the maximum practical capacity of each proposed on-dock, near-dock and off-dock intermodal facility in the Greater Los Angeles region. An iterative analysis was performed to develop phasing of intermodal facility development to meet projected demand.
- Marine Terminal Throughput calculations considering berth utilization, terminal storage modes, container dwell times and gate activities.

The other valuable aspect of MDAS is a spreadsheet management tool that provides a linkage of the market and customer demand factors to the individual elements of Port expansion, which will indicate alternatives for phased implementation of the various discrete elements in an orchestrated and cohesive manner.

The paper will focus on the methods used to analyze rail capacity; propose rail capacity and access improvements; analyze the institutional issues that exist in working with the two Class I railroads; evaluation of the rail lines serving the northern California area; analysis of CIRIS for the truck reduction benefits; requirements for local roadways; and a summary of the development alternatives and phasing options developed through the MDAS effort.

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