Port of Oakland Outer Harbor Intermodal Terminal

TIGER 2012





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NOTE: All Supplementary Materials can be found at the project website:

http://www.oaklandglobal.com/tiger4.php

Contact Info

Mark Erickson Senior Maritime Projects Administrator Port of Oakland 530 Water Street Oakland, CA 94607 Phone: 510 627-1549

Email: merickson@portoakland.com Application ID: OaklandPort79393





I. Project Description

The Port of Oakland's Outer Harbor Intermodal Terminal Rail Access Project (hereafter "the Project") outlined in this TIGER 2012 application improves rail access to the Port of Oakland, including constructing additional trackage to raise Union Pacific's (UP) volume limitations on the existing Port of Oakland manifest railcar business for frozen food products, lumber, grain and other commodities. The Project is a discrete, but essential, first phase of the larger Oakland Global development program. Today, trains accessing the Port's Joint Intermodal Terminal must cross through the UP's yard. This requires all trains accessing the Port to slow significantly (no more than 5 miles per hour) and essentially limits UP operations – causing significant delays to both Burlington Northern Santa Fe (BNSF) and UP operations at the Port. By eliminating this conflict, the freight operations are improved, with spillover benefits for the 60 passenger trains (commuter and Amtrak) that pass by the port every day and share the corridor. The key components of the Project described in this application include:

- Rail access improvements from UP mainline to the Port of Oakland
- New Joint Intermodal Terminal (JIT) lead tracks
- New Knight Yard, 7-track flat switching yard
- Fuel line and other utility relocation and protection

TIGER 2012 funds will be used for all of the above improvements. Details on the major components are provided below. Detailed drawings on the technical details of the project are available at http://www.oaklandglobal.com/tiger4.php.

Rail Access Improvements to the Port. The Project includes the construction of a 6,000-foot arrival track within UP's existing right-of-way from just south of Powell Street to the Port's property. The improvements include a high speed turnout off the mainline, allowing trains to arrive and depart the congested Union Pacific mainline at full speed. These improvements will allow UP, BNSF and Amtrak passenger trains on the mainline to interface with Port related train traffic with minimal conflicts.

New Joint Intermodal Terminal Lead Tracks. Two 9,300-foot double track leads from the north end of the Port's property, across 7th Street into the existing JIT will also be constructed. This work requires a reconfiguration of UP rail tracks near 7th Street. These improvements will remove the conflict of the BNSF tracks crossing the UP tracks to get to the Port's rail terminal – resulting in time savings for both BNSF and UP trains destined for the intermodal terminal. This time savings also generates inventory savings and emission savings as the locomotives are able to reach the terminal and receivers in less time.

Knight Yard. Knight Yard replaces the former Oakland Army Base manifest yard with a new 7track flat switching yard with a 200-railcar storage capacity. The through-put capacity of the yard is estimated to be between 100 and 150 railcars per day, supporting between 13,000 and 20,000 revenue railcars per year. The yard design provides an interchange connection with the UP's adjacent Desert Yard. The current manifest yard is operating at capacity and the Union Pacific Rail Road (UPRR) must turn away additional business.





The UP mainline through Oakland is designated as a restricted access corridor. These designated areas are, "the most operationally challenged" sections of the railroad's national network. The new yard will increase manifest capacity at the Port, allowing shippers to save on shipping costs by both significantly reducing truck drayage costs to the Port, and allowing shippers to take advantage of the overweight corridor within the Port area. In the Port area, shippers can fill containers up to the maximum ocean shipping container weight, rather than a reduced amount due to gross vehicle weight limits on state highways. The overweight corridor within the Port allows shippers to move more freight per container, while maintaining the same ocean transportation freight rate. The reduction in truck drayage also generates emissions, pavement, congestion, and safety benefits due to the reduced truck VMT on interstates and highways between Stockton and the Port.

The Project represents the first phase of the larger Oakland Global Project that will revitalize the former Oakland Army Base. A subsequent second phase will be developed concurrently, if the Project moves forward. This second phase includes the build out of a City-owned 170 acre development area with trade and logistics warehousing, a new bulk marine terminal, and further improvements to serve new customers seeking access to Oakland's deep water port. Efficient rail service is a critical component of Oakland Global's master plan to revitalize the Oakland waterfront, increase international trade, and promote economic growth.

Project Background

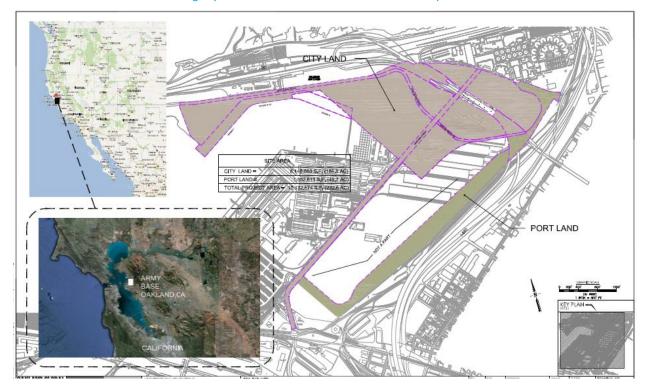
The Oakland Army Base (OAB) was decommissioned in 1999, resulting in the loss of more than 7,000 jobs in the region and the dismantling of a national maritime and military asset. Located at the base of the Bay Bridge on the north, the neighborhood of West Oakland on the east, and the Port of Oakland marine terminals to the south and west, this 330-acre former base is at a nexus of maritime, rail and highway transportation. After a decade of strategic planning for the redevelopment of the base and the surrounding lands, the implementation of a bold vision to revitalize Oakland's working waterfront is underway—Oakland Global.

The Oakland Global Trade and Logistics Center (Oakland Global) is a project of national significance that seeks to transform the former Oakland Army Base into a world-class intermodal trade and logistics center. The Port of Oakland is the only international container trade gateway for the Northern California MegaRegion; it is the leading U.S. export gateway on the West Coast and is the fifth-ranked U.S. seaport by containerized cargo movements. A map is provided in Exhibit 1.





Exhibit 1: Location and Geographic Context of the Rail Access Improvements



The Port of Oakland is a strategic trade gateway that has seen over a billion dollars in investment over the past decade to support the growing demand for global trade through the nation's limited trade gateways. These investments include:

- Vision 2000 Development Program Constructed five new shipping berths, nearly 300 acres of container terminal development, an 85 acre near-dock intermodal rail terminal, and a new shoreline park and shallow water habitat within the seaport.
- 50 Foot Channel Deepening Under a joint effort by the U.S. Army Corps of Engineers and the Port, Oakland's navigational channels have been dredged to 50 feet. Oakland is one of six U.S. ports with at least a 50 foot harbor, allowing the largest container ships in the world to call at the Port of Oakland.
- Port Facility Modernization Projects With the increases in vessel sizes and cargo activity through the Port of Oakland, the Port has upgraded its facilities with its partners, including wharf strengthening, new cranes, terminal renovations, security improvements, and air quality improvement projects.

A Strategic Military Seaport

The Port of Oakland is one of the nation's designated Strategic Ports within the United States, making it a critical link in the logistics transfer to our military forces overseas. The military provides both national defense and response to domestic natural disasters; both types of missions rely heavily on national surface transportation infrastructure to fulfill those support requirements.



Strategic ports face the challenge of maintaining commercial service while also serving military needs. This has become more difficult in recent years as the military has transitioned from relying on its own capabilities to deploy and sustain missions to a greater reliance on commercial providers of transportation, logistics and maintenance support where possible. This places a greater burden on the nation's intermodal infrastructure, thus impacting mobility, capacity, and productivity throughout the U.S. For example, more than 95 percent of the equipment and cargo shipped to Operation Desert Shield moved on commercial carriers¹. The military's current policy of downsizing, while at the same time maintaining its ability to be a rapid and precision response force, places even more importance on the U.S.-based forces ability to move swiftly, efficiently, and without impediment.

Following Operation Enduring Freedom (OEF), the U.S. Maritime Administration (MARAD) undertook an assessment of lessons learned that highlights how the benefits of the rail improvements proposed in this TIGER application could impact the Port's military role²:

- Many infrastructure improvements and process changes made by the U.S. Department
 of Defense (DoD) since Operation Desert Shield increased DoD's ability to accelerate the
 speed and amount of surge equipment moved from military forts to commercial ports.
- During OEF, the increased cargo flow to the ports via rail and commercial truck provided a significant operational challenge to the ports and Transportation Terminal Brigades/Battalions. The high flow was not anticipated and never evaluated or discussed during training or port readiness exercises.
- In some ports, the port-rail capacities were quickly exceeded, forcing railcars to be staged outside the port in non-secure areas. This posed security challenges to the military and civilian agencies supporting the operation. In two ports, the accelerated cargo flow highlighted the need for additional tracks and staging area improvements at the port.

¹ TRB Millennium Study: "U.S. Military Transportation," Sarah Brown, Henry M. Bennett, and Robert B. Honea (Washington, D.C.: 2000), referenced in "Military Deployment Support: Evaluation of the System's Ability to Support Future Military Deployment Needs," technical paper prepared for the National Surface Transportation Policy and Revenue Study Commission.

² Quoted from "Military Deployment Support: Evaluation of the System's Ability to Support Future Military Deployment Needs," technical paper prepared for the National Surface Transportation Policy and Revenue Study Commission. U.S. Maritime Administration, Operation Enduring Freedom Lessons Learned Report (September 2003), p.3.





A Global Gateway for Northern California and the Nation

The Port of Oakland is the leading U.S. gateway for exports. The total value of all exports was \$14.8 Billion (2010). Moreover, Oakland is one of only six U.S. ports with a 50-foot depth that can accommodate the largest ships. It is a key port for agricultural producers in Central and Northern California, at a time when rising incomes in China create strong world demand for their products. Additionally, investments by the railroads have improved accessibility between the Midwest and Oakland.

BNSF and UP have been planning and investing to improve their intermodal network out of Oakland. The railroads continue to invest in their infrastructure.

- The UP recently invested nearly \$30 million at Donner Pass, which improved regional and cross-country rail movements across the Sierra Nevada mountain range in Northern California. Donner Pass, almost 200 miles northeast of Oakland, is the main gateway to the Midwest.
- The BNSF is engaged in a nearly \$90 million public-private project to expand rail capacity at the Tehachapi Pass.

The rail improvements proposed in this TIGER eliminate a bottleneck at the Port, leveraging investments made by the railroads in their networks and making the intermodal transportation system function more reliably and efficiently. The railroads, Northern California shippers and Midwestern shippers are poised to benefit from the proposed rail investments described in this TIGER application.

Exhibit 2: Major Exports by Value, 2010

Commodity	Value in \$ millions
Edible Fruit and Nuts	1,802
Meat	1,064
Machinery	652
Beverages	546
Inorganic Chemicals/Rare Earth	521
Vehicles	472
Cereals	420
Electrical Machinery	408
Optical/Medical Instruments	363
Misc. Chemical Products	275

Source: Bureau of Census, U.S. Department of Commerce, Port of Oakland





II. Project Parties

The following entities play a major role in the Port of Oakland Outer Harbor Intermodal Terminal Rail Access Project.

Port of Oakland, California

The Port of Oakland is the only international container trade gateway for the Northern California MegaRegion. It has the third highest volume of international trade on the U.S. West Coast and leads as a U.S. export gateway. The Port of Oakland's role for the Project includes:

- TIGER 2012 Discretionary Grant Applicant
- Existing grant recipient for an allocation of \$242 million in State of California Trade Corridor Improvement Funds (TCIF) for the Project
- **Property Owner**
- Participant with the City in a Cost Sharing Agreement—see details in City section below
- Aids in ensuring efficient integration of the TIGER 2012 Project into the existing rail operations at the Port, as well as planned projects

State of California

The State of California is one of the nation's leading producers of agricultural exports and serves as an international gateway for the nation as a whole. Recognizing the critical role that infrastructure plays in supporting this aspect of the economy, the California Transportation Commission established a Trade Corridor Improvement Fund (TCIF) to support such investments. The California Transportation Commission's role in this Project is:

Funding participant through the TCIF fund allocation of \$242 million for infrastructure components of the former Oakland Army Base's "Outer Harbor Intermodal Terminal Rail Access" Project.

City of Oakland, California

The City of Oakland is home to over 390,000 residents according to the 2010 U.S. Census. The recession has hit the City's economy particularly hard; the City of Oakland's jobless rate (14.4) percent in November 2011) is well above the U.S. rate (8.2 percent in November 2011) and ranks among the highest in the state. The City of Oakland's role for the Project includes:

Participant with the Port in a Cost Sharing Agreement, whereby the City has agreed to advance \$32 million towards the planning, design and construction of the entire OAB, and the Port agreed to share the state TCIF grant with the City. That agreement enabled the City to initiate final infrastructure master planning, committing \$14.1 million of its funds. That master planning process has created the design and cost basis for the TIGER 2012 application and the plan to be analyzed pursuant to the California Environmental Quality Act (CEQA) environmental review process.





III. Grant Funds & Sources/Uses of Project Funds

The following outlines the funding strategy for the Outer Harbor Intermodal Terminal Rail Access project.

Amount of Grant Funding Requested

The Port of Oakland, on behalf of its funding partners, is requesting \$20,000,000 of TIGER 2012 Discretionary Grant funds to implement the Project.

Availability/Commitment of Funds Sources and Uses of All Project Funds

Capital. A non-federal match of \$23,000,000 is committed to the project. Every dollar of TIGER funding leverages \$1.15 of state and local funding.

Exhibit 3: Summary of Non-TIGER Funding Partners, Amounts and Sources

Funding Partner	Amount of Committed Funds	Source
California Transportation Commission	\$21,500,000	TCIF Grant
City of Oakland	\$1,500,000	Joint Infrastructure fund already committed to master planning
Total	\$23,000,000	

Operations and Maintenance

The Project consists of rail and utilities infrastructure and will be maintained by the public (the port) in the case of the rail yard improvements, and utility owners in the case of the utility services that require relocation and protection. Relocation and protection of existing utilities will not translate into additional operating costs, though their relocation and protection are included in the capital costs of the Project.

Total Project Costs

The Project's total capital cost is \$43,000,000 (\$2012). Exhibit 4 summarizes the major cost categories. Detailed cost information is provided with the supplementary materials provided with this application located at www.oaklandglobal.com/tiger4.php.





Exhibit 4: Summary of Capital Costs by Major Project Element (\$2012)

Capital Element	Estimated Cost
Knight Yard Improvements	\$11,900,000
Rail Access Improvements	\$22,500,000
Site Preparation	\$4,600,000
Relocation and Protection of Utilities	\$4,000,000

Note: Site preparation and utilities relocation benefit both rail yard improvements; these cost categories are allocated to the two elements of the project in the BCA analysis.

Percentage of Project Costs that Would be Paid for with TIGER Funds

If selected for TIGER 2012 award, TIGER funds would represent 46.51 percent of total capital project costs. The balance of the Project costs would come from state and local funding sources. Every dollar of TIGER funding would leverage another \$1.15 in non-federal sources.

Exhibit 5: Proposed Capital Funding Breakdown

Sources of Capital	Amount	Percentage
TIGER 2012 Federal Share	\$ 20,000,000	46.51%
California Transportation Commission	\$21,500,000	50.00%
City of Oakland	\$ 1,500,000	3.49%
Total	\$43,000,000	
Total Federal	\$ 20,000,000	46.51%
Total State & Local	\$23,000,000	53.49%

IV. Selection Criteria

The rail improvements proposed in this TIGER application will generate a variety of benefits for shippers, the railroads, and for the local Oakland community. Some of these benefits can be quantified; many cannot be. Before moving to a discussion of each of the long-term outcomes, Exhibit 6 provides a summary overview of how the Project aligns with the evaluation criteria.





Exhibit 6: Evaluation Criteria Narrative Matrix

Criteria		How the Project Satisfies Criteria
Primary	State of Good Repair	New manifest yard and intermodal rail access improvements and support yard eliminate the conflict between BNSF and UP tracks entering the Port. This conflict requires all trains accessing the Port to slow significantly (no more than 5 mph) and essentially drops UP operations from two tracks to one – causing significant delays and limiting capacity for BNSF and UP.
		Manifest yard operates at capacity, requiring the UP to turn away rail business and causing customers to truck their goods to the terminal. With the increase in manifest capacity allowed by the Project, shippers will reduce truck drayage to the Port, removing VMT from the region's interstates and highway and thereby reducing the truck wear and tear on these roads.
	Economic Competitiveness	Project is an initial and essential step to transforming the decommissioned Oakland Army Base into a community asset that supports the economy of Oakland and the larger region to which it is connected through commerce and trade.
		Improved access for both intermodal and manifest traffic generates operating savings for both shippers and rail service providers. The faster intermodal rail travel times yield operational savings to the rail providers and inventory savings to the shippers. The manifest improvements offer savings to shippers by shifting freight from trucks to rail.
		New manifest yard will allow train lengths to increase from 18 railcars to 104 railcars, which permits UP to increase service to existing industries and more fully utilize existing facilities.
		Improves CCJPA Capital Corridor commuter train reliability by reducing delays caused by freight trains delayed from entering the Port.
		Accommodates a 40% increase in intermodal traffic once subsequent phases of the project are constructed, up to 2,136 trains per year. This capacity expansion is not included in the benefit analysis but is noted as a future opportunity.
	Livability	Shifting from trucks to rail reduces truck traffic, reducing congestion in the community. Generates a positive impact on the air quality of West Oakland due to the truck diversions to rail and reduction in intermodal train delays.





Criteria		How the Project Satisfies Criteria
	Environmental Sustainability	Eliminates truck drayage to/from the Port facilities and reduces train delays entering the Port, resulting in a steep reduction in truck and rail air pollutants.
	Safety	Reduces the number of trucks on the region's roads and the potential for auto and truck conflicts, thereby reducing vehicular crashes, injuries, and fatalities.
	Job Creation and Near-term Activity	Represents a large capital investment in the economically distressed City of Oakland as well as the regional economy. This spending increases employment and earnings in the City and the region for the duration of the construction process, beginning during the Q2 2013 and finishing in less than 2 years.
Secondary	Innovation	Leverages the only freight trade corridor-focused bond funding program of any state in the U.S.
	Partnership	Project is the result of collaboration between the public and private sectors. Takes an integrated approach to transportation, land use, and supportive project delivery policies (for example, ensuring that neighboring communities benefit directly from the Project); and the Project embodies a multidisciplinary approach to urban investment. The Project also improves the Port's ability to meet its obligations as a Strategic Seaport supporting military logistics.

a. Long-Term Outcomes

Over 20 years the benefits of Outer Harbor Intermodal Terminal Rail Access Project will exceed the costs of the restoration by a factor of 2.60 to 1.00 when discounted at 7 percent. This ratio rises to 3.72 to 1.00 when benefits and costs are discounted at 3 percent. The benefits are shown for the Intermodal and Manifest components individually, as well as the combined total as directed in the TIGER 2012 guidance. Please see the supplementary material provided with this application for a description of how the assumptions and methods used to develop the benefit cost analysis were determined.



Exhibit 7: Summary of Quantifiable Long-Term Benefits and Project Costs

Intermodal a		Intermo	dal Only	N 4 'C				
	N 4:11: 2012¢		uai Offiy	Manifest Only				
	IVIIIIIONS 2012\$	20 Year Total ir	Millions 2012\$	20 Year Total in Millions 2012\$				
Discounted at 7% Discounted at 3% Di			Discounted at 3%	Discounted at 7%	Discounted at 3%			
0.96	\$ 1.47	\$ 0.96	\$ 1.47	na	na			
2.71	\$ 4.13	\$ 2.71	\$ 4.13	na	na			
64.40	\$ 101.49	\$ 64.40	\$ 101.49	na	na			
33.28	\$ 50.43	na	na	\$ 33.28	\$ 50.43			
0.35	\$ 0.50	na	na	\$ 0.35	\$ 0.50			
0.27	\$ 0.27	na	na	\$ 0.27	\$ 0.27			
1.30	\$ 1.98	na	na	\$ 1.30	\$ 1.98			
1.51	\$ 2.29	na	na	\$ 1.51	\$ 2.29			
3.26	\$ 4.94	na	na	\$ 3.26	\$ 4.94			
1.18	\$ 3.73	\$ 0.79	\$ 2.50	\$ 0.39	\$ 1.23			
109.24	\$ 171.23	\$ 68.87	\$ 109.58	\$ 40.37	\$ 61.65			
38.69	\$ 41.05	\$ 24.53	\$ 26.03	\$ 14.15	\$ 15.02			
3.28	\$ 4.97	\$ 2.19	\$ 3.33	\$ 1.08	\$ 1.64			
41.96	\$ 46.03	\$ 26.73	\$ 29.36	\$ 15.24	\$ 16.66			
2.60	3 72	2.58	3 73	2.65	3.70			
	0.96 2.71 64.40 33.28 0.35 0.27 1.30 1.51 3.26 1.18 109.24 38.69 3.28	0.96 \$ 1.47 2.71 \$ 4.13 64.40 \$ 101.49 33.28 \$ 50.43 0.35 \$ 0.50 0.27 \$ 0.27 1.30 \$ 1.98 1.51 \$ 2.29 3.26 \$ 4.94 1.18 \$ 3.73 109.24 \$ 171.23 38.69 \$ 41.05 3.28 \$ 4.97 41.96 \$ 46.03	0.96 \$ 1.47 \$ 0.96 2.71 \$ 4.13 \$ 2.71 64.40 \$ 101.49 \$ 64.40 33.28 \$ 50.43 na 0.35 \$ 0.50 na 0.27 \$ 0.27 na 1.30 \$ 1.98 na 1.51 \$ 2.29 na 3.26 \$ 4.94 na 1.18 \$ 3.73 \$ 0.79 109.24 \$ 171.23 \$ 68.87 38.69 \$ 41.05 \$ 24.53 3.28 \$ 4.97 \$ 2.19 41.96 \$ 46.03 \$ 26.73	0.96 \$ 1.47 \$ 0.96 \$ 1.47 2.71 \$ 4.13 \$ 2.71 \$ 4.13 64.40 \$ 101.49 \$ 64.40 \$ 101.49 33.28 \$ 50.43 na na na 0.35 \$ 0.50 na na na 0.27 \$ 0.27 na na na 1.30 \$ 1.98 na na na 1.51 \$ 2.29 na na na 3.26 \$ 4.94 na na na 1.18 \$ 3.73 \$ 0.79 \$ 2.50 109.24 \$ 171.23 \$ 68.87 \$ 109.58 38.69 \$ 41.05 \$ 24.53 \$ 26.03 3.28 \$ 4.97 \$ 2.19 \$ 3.33 41.96 \$ 46.03 \$ 26.73 \$ 29.36	0.96 \$ 1.47 \$ 0.96 \$ 1.47 na 2.71 \$ 4.13 \$ 2.71 \$ 4.13 na 64.40 \$ 101.49 \$ 64.40 \$ 101.49 na 33.28 \$ 50.43 na na na \$ 33.28 0.35 \$ 0.50 na na na \$ 0.35 0.27 \$ 0.27 na na na \$ 0.27 1.30 \$ 1.98 na na na \$ 1.30 1.51 \$ 2.29 na na na \$ 1.51 3.26 \$ 4.94 na na na \$ 3.26 1.18 \$ 3.73 \$ 0.79 \$ 2.50 \$ 0.39 109.24 \$ 171.23 \$ 68.87 \$ 109.58 \$ 40.37 38.69 \$ 41.05 \$ 24.53 \$ 26.03 \$ 14.15 3.28 \$ 4.97 \$ 2.19 \$ 3.33 \$ 1.08 41.96 \$ 46.03 \$ 26.73 \$ 29.36 \$ 15.24			

^{*}Climate Change benefits are only discounted at 3% per Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866, Interagency Working Group on Social Cost of Carbon, Feb 2010

State of Good Repair (Long-term Outcome)

The rail yard improvements are the initial and essential step to transforming the decommissioned Oakland Army Base into a community asset that supports the economy of Oakland and the larger region to which it is connected through commerce and trade.

(i) The Project is consistent with relevant State, local and regional efforts and plans to maintain transportation facilities/systems in a state of good repair. The overall Project is part of the local effort to return the decommissioned Oakland Army Base (OAB) to a productive non-military use that benefits the local and regional economy. The OAB site is a large strategically located land site that has the potential to be an economic driver for the regional and national economy. The site's potential was identified in the Port's Marine Development Alternatives Study (MDAS), which allows planners to evaluate development proposals in the context of projected demand and long-term build-out scenarios. One of the findings of the MDAS was that a 160-acre portion of the OAB could be used as a near-dock/on-dock intermodal terminal. The rail facilities would increase the Port's rail. The Project outlined in this TIGER application is consistent with the findings of that plan. The success of such a strategy also hinges on complementary planning coordination with the railroads. BNSF and UP have been planning and investing to improve their intermodal network out of



Oakland. The railroads continue to invest in their infrastructure. For example, the UP recently invested nearly \$30 million at Donner Pass, which improved regional and cross-country rail movements across the Sierra Nevada mountain range in Northern California. Additionally, the BNSF is engaged in a nearly \$90 million public-private project to expand rail capacity at the Tehachapi Pass. The Port has coordinated with these efforts and worked to support the railroad initiatives.

(ii) An important outcome of the Project is the ability to make existing assets more productive. The elimination of the conflict between the UP and BNSF at the intermodal yard and the other yard and rail access improvements will improve mainline velocity by allowing all trains to enter/exit the mainline at higher speeds (35 mph verses 5 mph for BNSF trains). This increases mainline operational reliability by providing parallel train movements from the JIT, UP Oakland intermodal rail yard, and new Knight Yard (manifest). By allowing freight trains to leave the mainline more quickly CCJPA/Amtrak Capital Corridor commuter train reliability also is improved by reducing delays caused by freight trains delayed entering Port of Oakland. The investments also accommodate growth in intermodal traffic once subsequent phases of the Project are constructed, up to 2,136 trains per year, or a 40% increase over current capacity. This 40 percent capacity expansion is not included in the benefit analysis but noted here as a future opportunity.

Similarly, the new Knight Yard will allow train lengths to increase from 18 railcars (1,170-ft) to 104 railcars (6,670-ft). This will permit UP to increase service to existing industries, allowing them to fully utilize existing facilities. UP currently has an embargo to new manifest traffic³ at the Port; it is literally turning away manifest business—demonstrating excess demand for this service. The additional trains will permit more freight to come to the Port by rail rather than truck, eliminating 12,000 truck trips/year from the Stockton area (70 miles away) to the Port, which is the current practice. This avoids wear and tear on the region's congested highway system. Applying the marginal pavement cost to the annual truck VMT avoided and discounting at 7 percent yields a total pavement cost savings of \$1.51 million. Similarly, applying the marginal

³ Manifest traffic refers to a diverse set of railcars moved by the railroad that originated from various points and are delivered to the site for multiple customers. Alternatively, rail traffic can move in unit trains, where the railroad moves a full train, often 100-railcars or more, from a single origination point to a single destination point.



- congestion cost to the annual truck VMT avoided and discounting at 7 percent yields a total congestion cost savings of \$3.26 million.
- (iii) The Project is adequately capitalized for both the maintenance of capital and the ongoing operations. The capital construction budget is based on thorough engineering cost estimates. The detailed construction cost estimates and engineering designs are available at http://www.oaklandglobal.com/tiger4.php. The Project has a contingency budget that is consistent with industry standards and appropriate to the level of design. Detailed estimates of the ongoing maintenance needs have been prepared based on field visits, consultant reports, and engineering experience.
- (iv) A sustainable source of revenue is available for long-term operations and maintenance of the Project. The expansion of the rail yards will entail a small incremental increase in existing operation and maintenance costs.

Economic Competitiveness (Long-term Outcome)

The Project improves economic competitiveness at both the local and regional/national level by improving the long-term cost competitiveness in the movement of goods. By providing improved access for both intermodal and manifest traffic, both shippers and rail service providers realize savings. The faster travel times of the intermodal goods yields operational savings to the rail providers and inventory savings to the shippers. Multiplying a conservative train delay cost by the annual hours of delay and discounting at 7 percent yields a total intermodal rail operating cost savings of \$0.96 million. Similarly, applying a discount rate of 7 percent, the intermodal rail inventory savings to shippers totals \$64.40 million. The manifest improvements that permit freight traffic destined for the Port to be diverted from truck to rail, saves shippers \$300 per truck. Annualizing and applying a discount rate of 7 percent, the total shipping savings is \$33.28 million over the analysis period. These savings allow the railroads and shippers to be more competitive in the global economy.

Livability (Long-term Outcome)

Although the benefit cannot be monetized directly, the Project will significantly benefit the livability of the Oakland community. As explained in the Sustainability section below, the shift from trucks to rail will reduce truck traffic in the vicinity of the Port, making the Port a better neighbor. It will also have a positive impact on the air quality of West Oakland and is factored into the estimated value of the improved air quality associated with the diversions from trucks to rail and the intermodal rail time savings.

Sustainability (Long-term Outcome)

The operation of the Project's intermodal facilities at the Port of Oakland will eliminate truck drayage to/from Port facilities. As a result, the region will experience a steep reduction in truck vehicle miles traveled (VMT) and the associated air pollutants.

This reduction in VMT decreases the amount of Carbon Monoxide (CO), Nitrogen Oxides (NOx), Volatile Organic Compounds (VOC), Particulate Matter (PM2,5 and PM10), Sulfur Dioxide (SO2), and Carbon Dioxide (CO2) in the atmosphere. Federal Motor Carrier Safety Administration



guidance for the pollutant factors associated with truck drayage from the Hours of Service Environmental Assessment were applied to the annual VMT avoided. The economic benefit of the decreased emissions is estimated by applying the economic cost of air emissions to the reduction of CO, NOx, PM2.5, PM10, SO2, and VOC. Applying USDOT guidance for the pollutant factors and discounted at 7 percent, the estimated value of the improved air quality associated with these diversions is \$0.35 million. Alternately, using the Interagency Working Group on Social Cost of Carbon quidance, the value of carbon dioxide benefits are discounted at 3 percent, which yields a total savings of \$0.27 million in greenhouse gas (or climate change) benefits.

By improving access to the intermodal terminal at the Port and reducing the hours of delay associated with the intermodal trains crossing through the UP yard, the Project reduces the hours of locomotive travel, and therefore, the associated air pollutants. This reduction in train delay hours decreases the amount of CO, NOx, and VOC in the atmosphere. Applying USDOT guidance for the pollutant factors and discounted at 7 percent, the estimated value of the improved air quality associated with these diversions is \$2.71 million.

Safety (Long-term Outcome)

By providing additional manifest rail capacity to the Port, the Project eliminates the need for freight to be trucked to the Port. As a result, drayage will no longer be necessary, yielding a reduction in annual truck VMT of 840,000. This reduces the rate or likelihood of crashes and associated deaths, injuries and property damage on regional interstates and highways because fewer trucks will be traveling between the Port and Stockton. Applying a discount rate of 7 percent, the total projected accidents avoided savings are \$1.30 million.

b. Job Creation and Near-Term Economic Activity

Both the City of Oakland and the Oakland-Fremont-Hayward Metropolitan Division meet the unemployment rate criteria in the definition of "Economically Distressed Areas" from Section 301 of the Public Works and Economic Development Act of 1965 (42 U.S.C. 3161). For the most recent 24-month period, the City has an unemployment rate of 16.4%, which is more than 7 percentage points above the U.S. average of 9.3%. Because the unemployment rate at the city level lags the U.S. data by one month, the 24-month span reported here runs from December 2009 – November 2011. The Metropolitan Division unemployment rate of 10.9% for Oakland-Fremont-Hayward was 1.6 percentage points above the U.S. average. This is the most recent data available at the time of this application. As these data are subject to revision in the time period following the application deadline, copies of the downloaded unemployment data are provided for the reviewers' verification in the supplementary materials provided for this application.

The construction and operation of the Outer Harbor Intermodal Terminal Rail Access Project will support and create jobs in this economically distressed area. Construction is estimated to support or create over 511 jobs of one-year's duration, including 259 direct jobs, as detailed in Exhibit 8 on the following page. A job for one person that lasts 3 years would be three personyear jobs. These jobs are temporary; they last for the duration of the construction period, fluctuating with the construction cycle.



Exhibit 8: Quarterly Construction Schedule and Job Impacts (in job-years)

	2013				2014										
	Q1	Q2		Q3	Q4		Q1		Q2		Q3		Q4	To	otal
Construction Expenditures (Millions 2012\$)		\$ 4.80	\$	4.80	\$ 4.80	\$	4.80	\$	4.80	\$	4.80	\$	4.80	\$	33.57
Professional Services Expenditures (Millions 2012\$)		\$ 1.35	\$	1.35	\$ 1.35	\$	1.35	\$	1.35	\$	1.35	\$	1.35	\$	9.43
Direct Employment		37		37	37		37		37		37		37		259
Total Earnings (Millions 2012\$)		\$ 3.53	\$	3.53	\$ 3.53	\$	3.53	\$	3.53	\$	3.53	\$	3.53	\$:	24.73
Discounted @ 7%		\$ 3.30	\$	3.30	\$ 3.30	\$	3.09	\$	3.09	\$	3.09	\$	3.09	\$:	22.25
Discounted @ 3%		\$ 3.43	\$	3.43	\$ 3.43	\$	3.33	\$	3.33	\$	3.33	\$	3.33	\$:	23.61
Total Employment		73		73	73		73		73		73		73		511





The Project will not create any new jobs at the Manifest and Intermodal Rail Yards directly. However, the long-term job creation resulting from Project operations primarily will result from the market's response to the increased capacity and improved service that the Project supports. Without the Project, the rail terminal and private investments in the commercial uses at the Port will be limited.

These rail terminal and private investments will create opportunities for residents of the City of Oakland to have access to high quality, skilled jobs at the Port facilities. In anticipation of the project's implementation, the city has begun an outreach initiative with the Oakland community and other key stakeholders to ensure that local residents share in the economic prosperity created by the investment. Still in development, the package of benefits, once adopted by the City's Agency Board will apply to all developers and will be supported by all key project stakeholders, including Community Coalitions. Some of the key guidelines and goals, subject to coordination with any required federal regulations, identified to date include:

- All new apprentices at the Port are required to be City of Oakland residents.
- 50% (plus one) work hours for Oakland residents, craft by craft.
- Additional priority for local hire given to West Oakland residents and Enterprise Zone residents (or another proxy for areas of low-income, high unemployment etc.)
- Locating a Jobs Center in West Oakland that will be readily accessible and will serve as a resource for contractors, employers, and job seekers during Construction and Operations phases.
- The Center will connect job seekers with job training, education and other support services, such as transportation.
- A Young Adult/Re-entry Employment Program also is being developed.

These components are designed to build skills in the local community and provide employment and higher-income opportunities for the economically distressed residents in the City of Oakland.

c. Innovation

The intermodal freight movement system is inherently a partnership between the public and the private sector. The Project is innovative in its delivery approach in that it leverages the only freight trade corridor-focused bond funding program of any state in the U.S.

d. Partnership

The Outer Harbor Intermodal Terminal Rail Access Project is the result of collaboration between the public and private sectors. The Project has obtained significant support from a variety of jurisdictions, as shown by the letters of support provided in the supplementary materials with this application, located at http://www.oaklandglobal.com/tiger4.php. The Project is structured to address local community concerns about air quality and truck traffic, even as it delivers improvements to the regional/national goods movement network.

The Project development effort has been financed and supported by private sector business interests and key regional Oakland leaders and stakeholders. The Project takes an integrated





approach to transportation, land use, and supportive project delivery policies (for example, ensuring that neighboring communities benefit directly from the Project); and the Project embodies a multidisciplinary approach to urban investment. Supporters include, but are not limited to, the California Transportation Commission, Cities throughout the Northern California Mega-Region, the City of Oakland, the Port of Oakland, and West Oakland and greater Oakland community coalitions.

V. Project Readiness and NEPA

The concept to restore the decommissioned base by developing state-of-the-art intermodal facilities at the site has been underway for a decade. In that time, all necessary planning work has been accomplished for the Project elements included in this TIGER 2012 application, an implementation and funding strategy has been developed (as outlined in Section III of this application), public agency roles and private developer partnerships have been negotiated, and design work has advanced into preliminary engineering.

The initial phase of this Project is underway. Site remediation work began in 2010.

Exhibit 9: Project Schedule

Activity	Actual/ Anticipated Completion
Master Planning (completed)	Q1 2012
CEQA, NEPA Analysis	Q2 2012 (CEQA)
CLUA, INLEA AITAIYSIS	Q4 2012 (NEPA)
Construction Documents	Q4 2012
Permitting	Q1 2013
Bidding and Mobilization	Q2 2013
Construction Commencement	Q2 2013
Environmental Remediation	Q3 2013
Site Soils and Grading	Q2 2015
Rail Yards Grand Opening	Q2 2015

Environmental Approvals

NEPA was completed in 2001 with the issuance of an Environmental Impact Statement (EIS). In 2002, both the Oakland City Council and Board of Port Commissioners certified the Final Environmental Impact Report (EIR) for the "Oakland Army Base Area Redevelopment Plan," which analyzed the environmental impacts associated with the proposed development. The OAB Development has been authorized to proceed by certification of the "Oakland Army Base"





Reuse Environmental Impact Report" (EIR) as required by the "California Environmental Quality Act" (CEQA).

Since 2002, the Project has undergone a number of refinements. As a result, an addendum to the EIR is underway to update the original EIR finding. The anticipated completion dates for the EIR addendum and concurrent NEPA analysis is Q2 2012 (CEQA) and Q4 2012 (NEPA). Permitting is expected to be completed by Q1 2013, and construction is expected to be well under way by Q2 2013, well before the TIGER obligations deadline of September 30, 2013.

The Port has not completed a NEPA analysis at this time, in part because the Project does not currently include federal funding. The Port is confident that a NEPA analysis will be completed within the timeframe identified because the entire Oakland Global program, which includes the Project, are anticipated to have a certified CEQA finding within 4 months.

Legislative Approvals

No legislative approvals are required for the implementation of the Outer Harbor Intermodal Terminal Rail Access Project.

State and Local Planning

The Project outlined in this application is the result of an extensive state and local planning process. As described in the letters of support that accompany this application, the Project described in this application is one of only two TIGER projects endorsed by the Metropolitan Transportation Commission.

The Port began planning for how to reuse the former Navy base through implementation of its Vision 2000 Program and subsequently planned to reuse the former Army Base with its "Maritime Development Alternatives Study" (MDAS). The Vision 2000 efforts provided major expansions into land that the U.S. Navy decommissioned. Part of this expansion included new marine terminals at Berths 55-56 and Berths 57-59, and the Oakland International Gateway (OIG) rail yard (formerly known as Joint Intermodal Terminal - JIT). The MDAS planning effort subsequently identified discrete elements that could be implemented as market and customer demand warranted. During preparation of the MDAS, the Port anticipated the opportunity to redevelop portions of the former Oakland Army Base property and included multiple base redevelopment scenarios into the development planning. The Oakland Army Base property transferred ownership and became available for Port and City development in August 2006, and the Port and City then began working to advance concept development and implementation.

As described in the Environmental Approvals section, the Project has gone through both the NEPA and CEQA planning processes and is currently undergoing additional planning review to update past findings.

Concurrent with these efforts, the City has undertaken a number of local planning initiatives to advance implementation. Upon transfer of the Base to the Oakland Base Reuse Authority (OBRA) in 2003, the City completed both a Redevelopment Plan and a Reuse Plan for the former Oakland Army Base. In 2008, a Request for Qualifications (RfQ) was issued, seeking a Master Developer for the site, and in 2009, a subsequent Request for Proposals (RfP) was issued. Prologis/CCIG, formerly AMB/CCG, was selected via this process to be the Master Developer in July 2009. In July of 2011, the Oakland Redevelopment Agency (ORA) executed a





Cost-Sharing Agreement with the Port of Oakland, which enabled the concurrent master planning of the Port's portion of the Base in exchange for access to the Outer Harbor Intermodal Terminal (OHIT) TCIF grant awarded to the Port in December 2009 for the Project. Infrastructure master planning activities, being performed by the selected development team under the Exclusive Negotiating Agreement (ENA), are currently underway, and the work product submitted with this application is indicative of the substantial progress made in terms of the master plan, budget, and schedule.

The Project described in this TIGER 2012 application is included in Project ALA090026 in the TIP and in Project 3 of the Trade Corridors Improvement Fund (TCIF) Program. It is important to note that the Project described in this application is one of only two TIGER projects endorsed by the Metropolitan Transportation Commission, the author of the TIP.

Technical Feasibility

The anticipated date for having design-build bridging documents is December 2012. Preliminary engineering and other critical path elements for the Outer Harbor Intermodal Terminal Rail Access Project have been completed. This work has included the development of a rail master plan, utility plans, and surrounding site development plans. The elements of the TIGER 2012 Project are technically feasible. Site drawings and other technical information are provided in the supplementary information provided with this application, located at: www.oaklandglobal.com/tiger4.php.

Financial Feasibility

All sources and uses of the funds needed to implement this Project have been identified and secured. The Project partners have also obligated the financial commitments to ensure a positive 20-year cash flow for operations and maintenance. Both capital and operations and maintenance costs and revenues have been developed with appropriate cost escalations and conservative assumptions to assure minimal risk. See Section III for additional details on project commitments and costs. The substantial amount of engineering work accomplished to date reduces the potential for unexpected technical costs to arise as the project advances.



VI. Federal Wage Rate Certification

Certification of Compliance with Federal Wage Rate Requirements

Outer Harbor Intermodal Terminal: Phase 1 Rail Improvements TIGER 2012 Discretionary Grant Application Application ID: OaklandPort68288

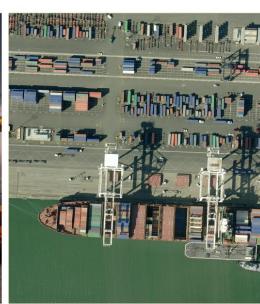
The Port of Oakland certifies that it will comply with the requirements of subchapter IV of chapter 31 of title 40, United States Code (Federal Wage Rate Requirements) as required by the FY 2011 Continuing Appropriations Act.

VII. Changes from the Pre-Application

There are no material changes from the pre-application.







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