APPENDIX I-14: TREND ANALYSIS – INLAND PORTS

Trend Statement

Since the early 2000's, there has been a renewed interest by supply chain stakeholders in developing inland ports as a means of improving the competitiveness and efficiency of trade hubs like seaports and border crossings. Inland ports can also provide flexibility, access and additional capacity to rail networks. However, developing new inland ports often requires complex, collaborative private and public partnerships. Success depends upon a thorough analysis of the proposed inland port's potential costs and benefits to key stakeholders.

Background

There is no single definition of an inland port, although most include the presence of multi-modal and multi-purpose activities often tied to the activities of a trade gateway:

- "An inland port is a site located away from traditional land, air and coastal borders" that carries out the same functions of a seaport "with the vision to facilitate and process international trade through strategic investment in multi-modal transportation assets and by promoting value added services as goods move through the supply chain."[1]

- "A rail or a barge terminal that is linked to a maritime terminal with regular inland transport services. An inland port has a level of integration with the maritime terminal and supports a more efficient access to the inland market both for inbound and outbound traffic. This implies an array of related logistical activities linked with the terminal, such as distribution centers, depots for containers and chassis, warehouses and logistical service providers."[2]

Inland ports may play a key role in the transfer of full or transfer of empty containers to railcars. For planners and elected officials at the local level, inland ports are sometimes viewed as an opportunity to move cargo processing and distribution away from congested areas.

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[1]Christensen Associates (2013) "Inland Ports," the University of Texas Center for Transportation Research, Grow & Bruening, P.C. for Transportation Research Board of the National Academies. http://www.envisionfreight.com/modes/default.aspx%3Fid=inland_ports.html.

[2]Rodrigue, J-P. "Inland Ports / Dry Ports." The Geography of Transport Systems, 3rd edition., Dept. of Global Studies & Geography , Hofstra University, New York, USA . 2013. http://www.google.com/url?sa=t&rct=j&q=&esrc=s&frm=1&source=web&cd=2&cad=rja&sqi=2&ved=0CDcQFjAB&url=http%3A%2F%2Fpeople.hofstra.edu%2Fgeotrans%2Feng%2Fch4en%2Fappl4en%2Fch4a4en.html&ei=-MazUtjKIMbloASclYHoDQ&usg=AFQjCNHzhld4Xm2KdUuK3AXcMwVSYY2soQ&sig2=eSZKmEgayMQV8ArEig0cjA&bvm=bv.58187178,d.cGU

The closure of military bases in the 1990's and projections of dramatic growth in containerization in the early 2000's prompted freight carriers and public agencies to explore strategies to reduce approaching port congestion by adding new cost-effective inland ports to their supply chains. At about the same time, public agencies were seeking transportation strategies to lower truck emissions by reducing vehicle miles travelled.

Although there are numerous intermodal terminals across the nation, there are less than a dozen that function on the scale of a port. These include Houston, Chicago, Kansas City, Saint Louis, Atlanta, Memphis, Columbus and Charlotte. Newer inland ports have been created in Greer, South Carolina, Front Royal, Virginia, and Alliance, Texas. Some former terminals, such as Joliet/Elwood, Illinois, have grown in size and level of service integration to be considered inland ports.

California has several inland terminals that might be considered inland ports including: Sacramento, Stockton, Fresno, Lathrop and San Bernardino.[3] A 2008 study of the potential for rail shuttle service to a potential new inland port in the Inland Empire of Southern California concluded that, though the project was technically feasible and would produce a small amount of vehicle miles traveled reductions, it was not justified for a variety of institutional issues and could not compete with more pressing freight-related investment options.[4]

Freight System Implications

Some inland port facilities are located outside of urban areas to be near manufacturing and distribution centers; others are located adjacent to large urban areas to take advantage of pre-existing networks of suppliers and customers. Successful inland ports tend to have the following characteristics however: 1) an adequate catchment area (market proximity to at least 3 million people within 200 miles[5]); 2) availability of suitable land at relatively affordable prices for warehousing, distribution and transloading facilities and related services (such as truck and chassis repair); reliable and competitive rail service with a direct Class 1 railroad link to a major

[3] "California State Rail Plan," Caltrans. 2013. http://californiastaterailplan.dot.ca.gov/

[4] The Tioga Group, Inc., Railroad Industries, Inc., Iteris (2008)"Inland Port Feasibility Study, Project No. 06-023, Final Report." Prepared for the Southern California Association of Governments, August, 2008. http://www.google.com/url?sa=t&rct=j&q=&esrc=s&frm=1&source=web&cd=42&ved=0CDAQFjABOCg&url=http%3A%2F%2Fwww.tiogagroup.com%2Fdocs%2FTioga_Grp_SCAGInlandPortReport.pdf&ei=sSOzUvj3J5DmoASboIGQCQ&usg=AFQjCNEjRTN7YGVaki3J_Lxwyw1ez7mutA&sig2=ISRCObO8zDjSZvXHehbUIA

[5]Jones Lang LaSalle IP, Inc., (2011) Perspectives on the Global Supply Chain: Emergency of Inland Ports. http://www.us.jll.com/united-states/en-us/emergence-of-inland-port

port; 3) good access to a highway network; and 4) abundant reasonably priced labor compared to coastal areas.[6]

In addition, key conditions must be met for inland ports to be viable, particularly for facility users. These include: 1) coastal on-dock and near-dock terminals that are unable to accommodate the growth in container volumes; 2) costs related to truck travel time and vehicle miles traveled are significantly reduced; 3) truck emissions are significantly reduced; 4) there is an acceptable impact on national railroad delivery times; and 5) the inland port is located where there are minimal potential conflicts with other land uses so that congestion community, and environmental impacts are insignificant or able to be mitigated. An inland port may also add value to the supply chain by: 1) being designated a free-trade zone; 2) having large volumes of unloaded empty containers; 3) having a clear governance structure; 4) having a state and local government climate that is enthusiastic about inland port development and willing to offer strong incentives to participants; and 5) ensuring the logistics costs savings significantly offset the costs of locating operations further from the coastal ports.

Planning Considerations

The primary planning goal in developing a new inland port is to ensure there is a strong and sustainable economic benefit from the capital investment in which the total logistics costs (capital, fuel, labor, transit time) are lower, and flexibility and reliability are significantly higher than expanding in the vicinity of the coastal port area would be. Inland port strategies that do not improve regional truck flows are not likely to find support.[7] Another planning concern is the uncertainty of future growth in trade volumes. Investment in new capacity simply to relieve current congestion may be risky if that volume is not sustained or shifts to other locations.[8]

Resources

Inland Rivers, Ports, and Terminals, Inc., an association. 1635 W. First St., Granite City, IL 62040. www.ipt.net

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[6] IBI Group (2006) "Inland Container Terminal Analysis Final Report." http://www.th.gov.bc.ca/PacificGateway/documents/061215_Inland_Container_Terminal_Analysis.pdf

[7] Rahimi, M., Asef-Vaziri, A. Harrison, R. (2011) "Integrating Inland Ports into the Intermodal Goods Movement System for Ports of Los Angeles and Long Beach. METRANS Transportation Center Report No. 07-01. http://ntl.bts.gov/lib/42000/42500/42540/07-01-Final-Report.pdf

[8] "The waves of containerization: shifts in global maritime transportation." (2013) Presentation made by Jean-Paul Rodrigue, Hofstra University, NY. http://www.youtube.com/watch?v=KGROHv1AcLY