

# CWG Design Work Session West Hayden Island – Multi-use Rail Served Port Facility

April 2, 2010

**Attendees:**

- Corky Collier (CWG)
- Chris Hathaway (CWG)
- Victor Viets (CWG)
- Brad Howton (CWG)

Ann Beier (Office of Healthy Working Rivers)  
Kevin Kilduf (Office of Healthy Working Rivers)

- Tim Van Wormer (Port staff)
- Greg Theisen (Port staff)
- Kurt Reichelt (HDR consultant)
- Rachael Hoy (BPS staff)
- Phil Nameny (BPS staff)

At the request of the CWG, the Port and HDR facilitated a work session for CWG members to further explore rail design, operations and access to WHI. These notes were taken by Greg Theisen and reviewed by attendees.

**Agenda:**

TOPIC	DISCUSSION	OUTCOME/CONCLUSION
<p>Review of CWG February meeting discussions:</p> <ul style="list-style-type: none"> <li>• Fundamentals of rail service, operations and design requirements.</li> </ul>	<p>Revisited design requirements for various facility types. 1.5% grade is the maximum off of main line to reach a running grade. Need at least one arrival and one departure track.</p> <p>Using the existing Ford Lead to access Hayden Island would minimize impacts to mainline capacity.</p> <p>Negotiated agreements for rail service to site are more likely if greater layout flexibility is built into the footprint.</p> <p>A 14 hour dwell time is the</p>	<ul style="list-style-type: none"> <li>• Bulk unit train design requirements are the “driver” for layouts.</li> <li>• 10,000’ is the new standard for the planning horizon. Anything less would decrease feasibility.</li> <li>• BNSF will not support a new interchange off the mainline unless built to unit train facility minimums.</li> <li>• Check with planners and/or BNSF on official plans for the Columbia River bridge over the planning horizon – 20-30 years.</li> </ul>

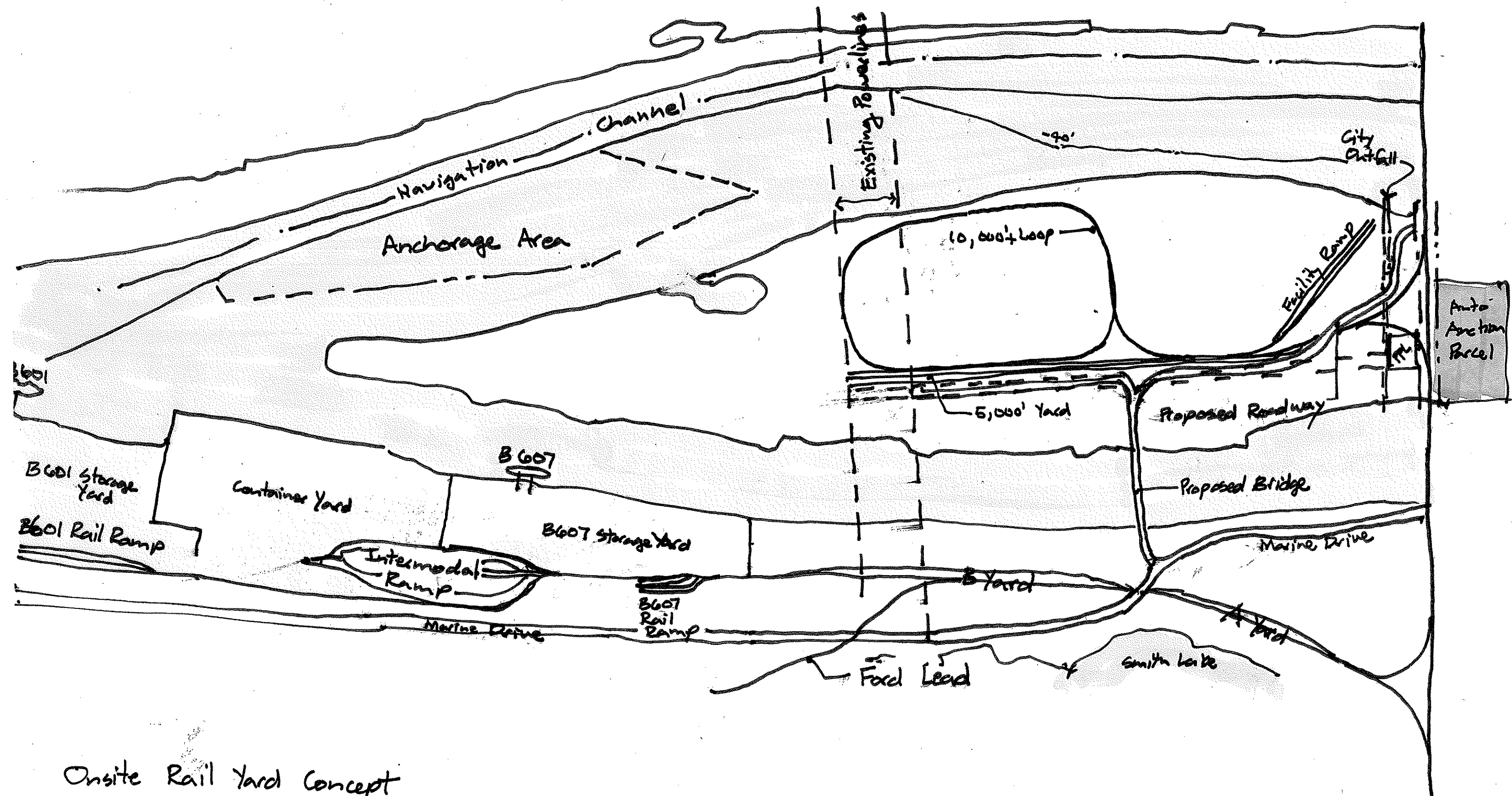
	<p>standard for bulk unit trains. Is there a middle ground design that results in the right proportion of efficiency and competitiveness?</p>	
<p>Our discussions focused on three themes all of which affect expense/cost: Efficiencies, Competitiveness and Design. All themes are integrated such that design affects how efficient an operation is, how competitive it is in attracting business and rail service and how economically viable it is in relation to other service and facility options.</p> <p>1). Efficiencies for the railroads translates into site layouts that minimize inefficient rail car movement, minimize employees needed to operate, allow for mechanization, minimize impacts to the mainline, allow for economical use of rail cars and provide “hook and haul” opportunities .</p> <p>2). Competitiveness for a facility is built on flexibility. This can be based on accommodating current and future design and operational requirements. A competitive facility is also designed to operate in the local/regional environment. For example LA/LB to Chicago is planning for 12,000’ long unit trains. Their route characteristics include triple tracking and sidings to accommodate such lengthy trains. Future plans for the PNW route to the Midwest includes, related to trackage, 10,000’ long unit trains.</p> <p>3). Design for the railroads and the facility is based on geometries, arrival and departure track lengths and numbers, length of loading/unloading tracks, provision of yard air and adequate track length to couple all the tracks/cars together.</p>		
TOPIC	DISCUSSION	OUTCOME/CONCLUSION
<p>2). Presentation of surrounding rail and marine operation affecting site design.</p>	<p>The existing Y rail interchange (Ford Lead Y), serves Terminal 6. The Terminal 6 area is served by both Class 1 railroads. The UP RR has permission to use BNSF track onto the Y from the south, but not the north. There are two railyards in the Terminal 6</p>	<ul style="list-style-type: none"> <li>• The mainline is dedicated for through service – new operations/facilities that enter the mainline should be designed to minimize impacts to overall system capacity.</li> <li>• The capacity for</li> </ul>

	<p>vicinity which are operated by the BNSF and are called the A and B Yard. There are three rail ramps at T6: Berth 601, T6 Intermodal, and Berth607. For the BNSF, the A and B Yards serve as a switching yard for their Honda, Hyundai, and Subaru accounts.</p>	<p>switching, marshalling and loading or unloading on the mainline is prescribed; that is while Subaru may shuttle cars from Vancouver to the A &amp; B yards for building into unit trains, the situation is not efficient or necessarily repeatable.</p>
<p>3). Exploration of design alternatives</p>	<p>We compared and contrasted two service opportunities:  1) New rail interchange on Hayden Island (as discussed at 2/2010 CWG meeting), and  2) Rivergate Y with additional rail bridge to WHI.  The details of this exercise follow, with discussion revolving around facility operations relative to natural resource/site impacts.</p>	

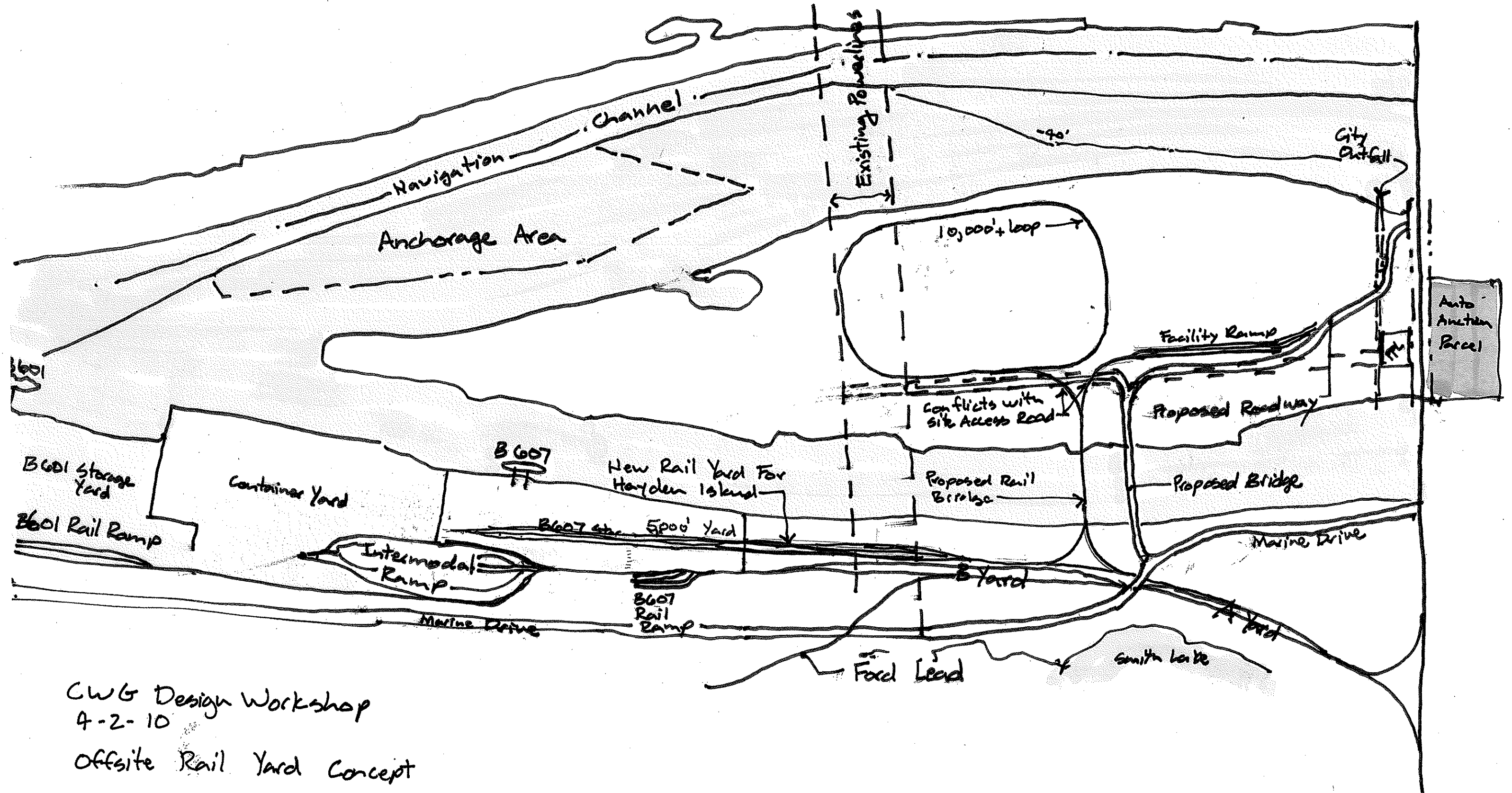
Service Options		
New Hayden Island Rail Interchange	Rivergate Y Both locations provide similar service options	
	Rail bridge west of BPA lines	Rail bridge adjacent to proposed WHI vehicle bridge
<ul style="list-style-type: none"> <li>• Must be able to land a unit train via loop or tail track.</li> <li>• Loop location to west allows for greater flexibility in facility terminal design.</li> <li>• Would need partnership to build bridge.</li> <li>• Utilization of the existing Auto Auction facility would expand acreage for storage area for import autos.</li> </ul>	<ul style="list-style-type: none"> <li>• Expense of additional rail bridge – roughly \$100 – 200 million.</li> <li>• Would need partners to build bridges.</li> <li>• Doubles impacts on in-water habitat in Oregon Slough because of bridge piers and shading.</li> <li>• Permitting this through the Federal EIS process is complicated by the alternatives analysis – have to describe why the project alternative with the least impacts to listed resources was not chosen.</li> <li>• Still need to accommodate a loop track on the island..</li> <li>• May allow for “shifting” facility to east, under PBA lines, especially with inclusion of Auto Auction, lessening footprint on WHI.</li> <li>• Loop location to the east affects access to docks such that location limits access to deepest water (minimizes construction and maintenance dredging)</li> <li>• Creating a rail yard at T6 would eliminate the Berth 607 rail ramp,</li> </ul>	<ul style="list-style-type: none"> <li>• Expense of additional rail bridge – roughly \$100 – 200 million.</li> <li>• Would need partners to build bridges.</li> <li>• Doubles impacts on in-water habitat in Oregon Slough because of bridge piers and shading.</li> <li>• Permitting this through the Federal EIS process is complicated by the alternatives analysis – have to describe why the project alternative with the least impacts to listed resources was not chosen.</li> <li>• Loop location to the east affects access to docks such that location limits access to deepest water (minimizes construction and maintenance dredging)</li> <li>• Creating a rail yard at T6 would eliminate the Berth 607 rail ramp, berth, processing facilities and storage yard for autos.</li> <li>• Utilization of the existing Auto Auction facility would expand acreage for storage area for import autos.</li> </ul>

	<p>berth, processing facilities and storage yard for autos.</p> <ul style="list-style-type: none"><li>• May require relocation or redesign of A &amp; B yards.</li><li>• Utilization of the existing Auto Auction facility would expand acreage for storage area for import autos and layouts but may have greater impacts on nearby residents.</li></ul>	
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Onsite Rail Yard Concept



CWG Design Workshop  
 4-2-10  
 Offsite Rail Yard Concept