

CHALLENGES IN DEVELOPING INLAND CONTAINER TERMINALS

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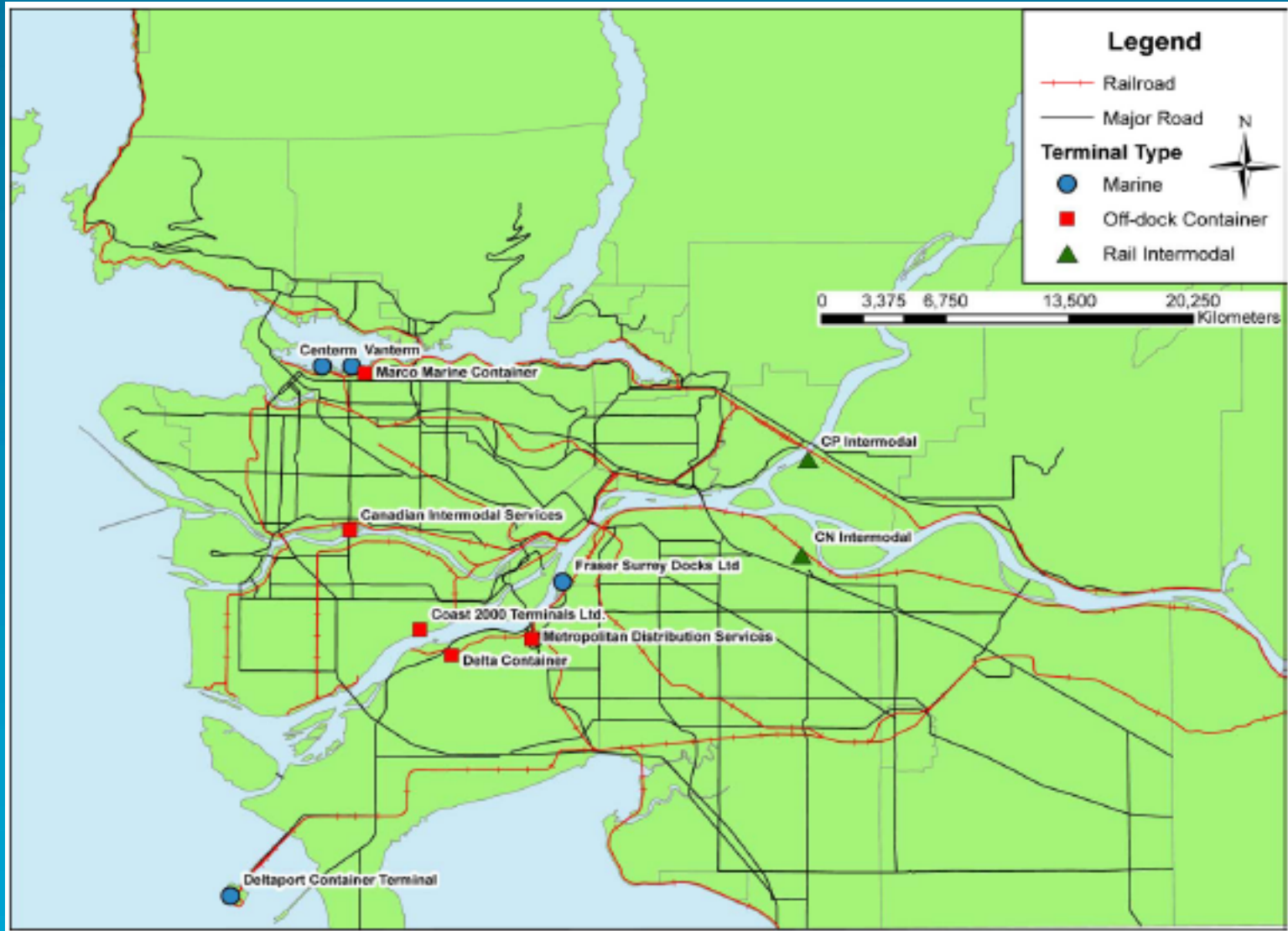
National Urban Freight Conference
Long Beach CA December 6, 2007

- **BC Inland Container Terminal Study**
- **Background on Lower Mainland container logistics**
- **Study results**
- **Southern California similarities**

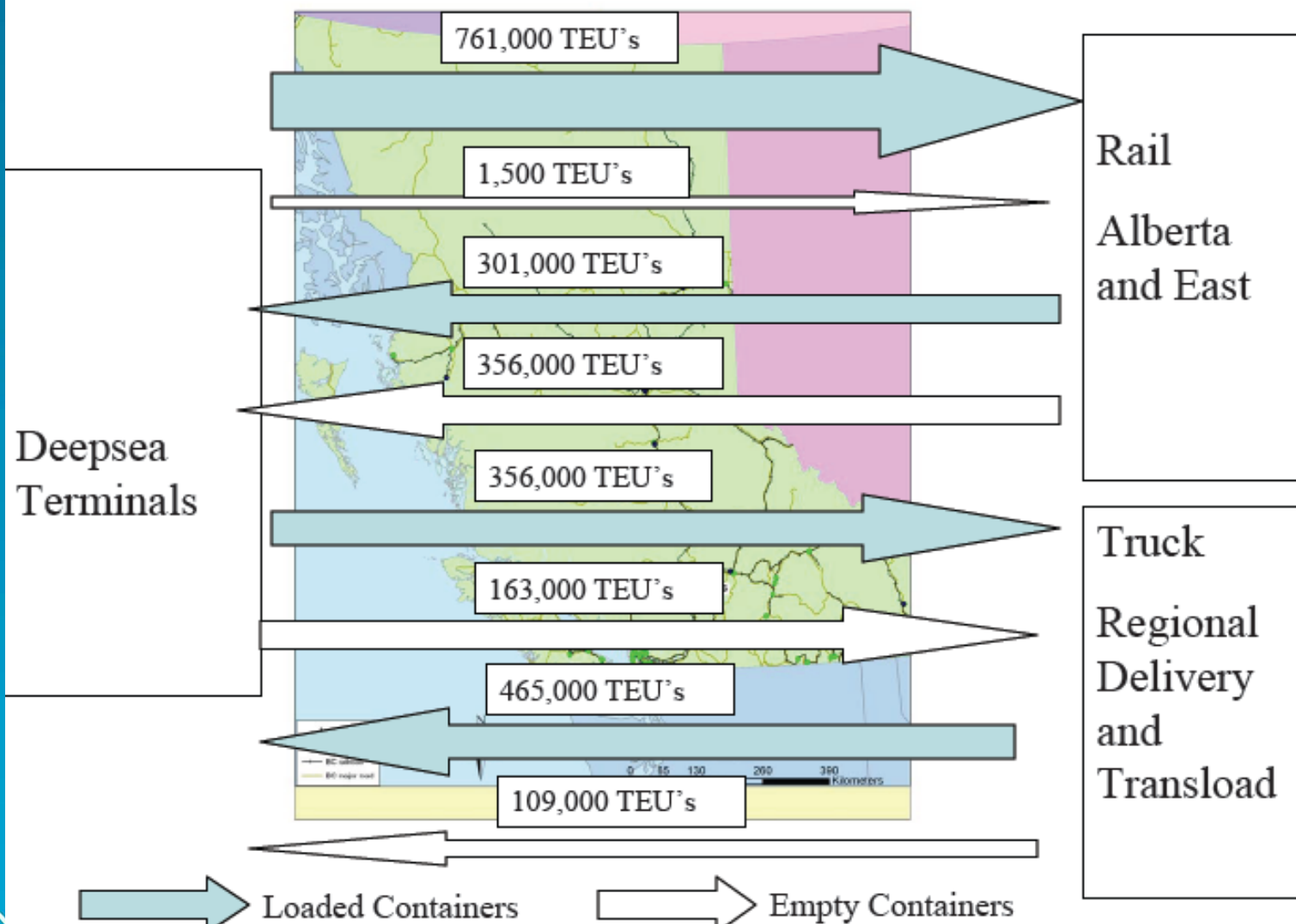
- **Inland Container Terminal Study for BC Ministry of Transportation 2006**
- **To examine the feasibility of an Inland Container Terminal in BC**

- **More efficient use of port lands**
- **Modal shift to reduce traffic, congestion and emissions**
- **Expansion of the port market area**

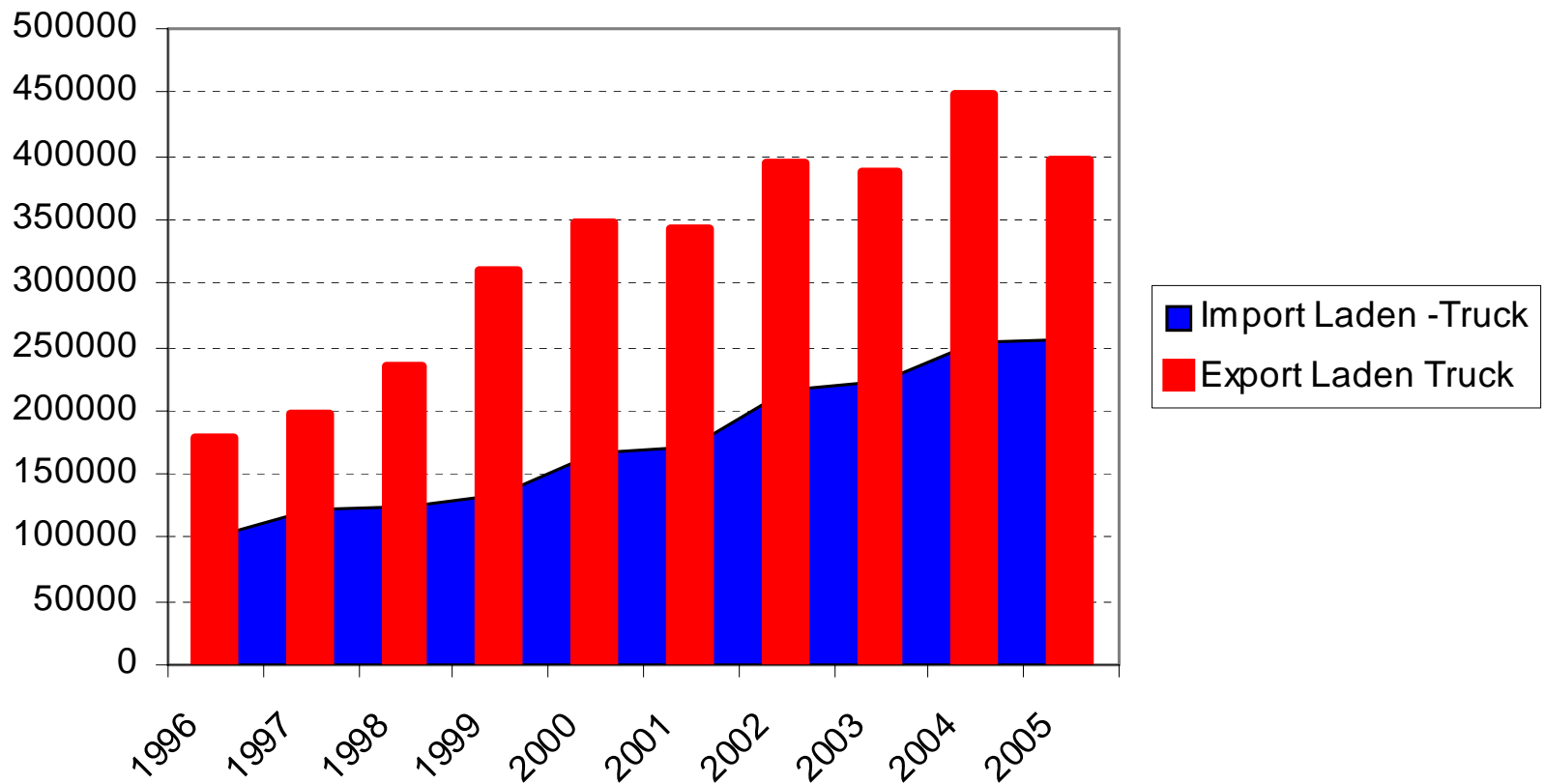
Lower Mainland Container Terminals



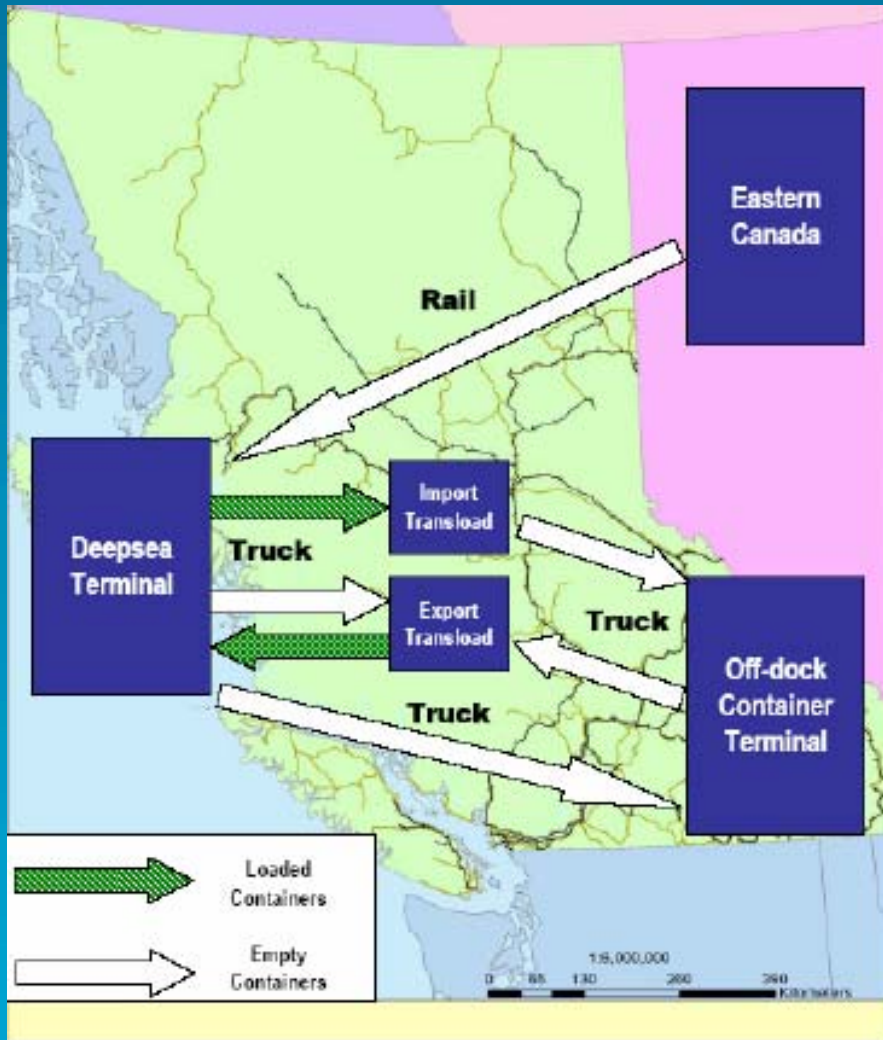
Vancouver Port Terminals Laden and Empty Container Flows 2006



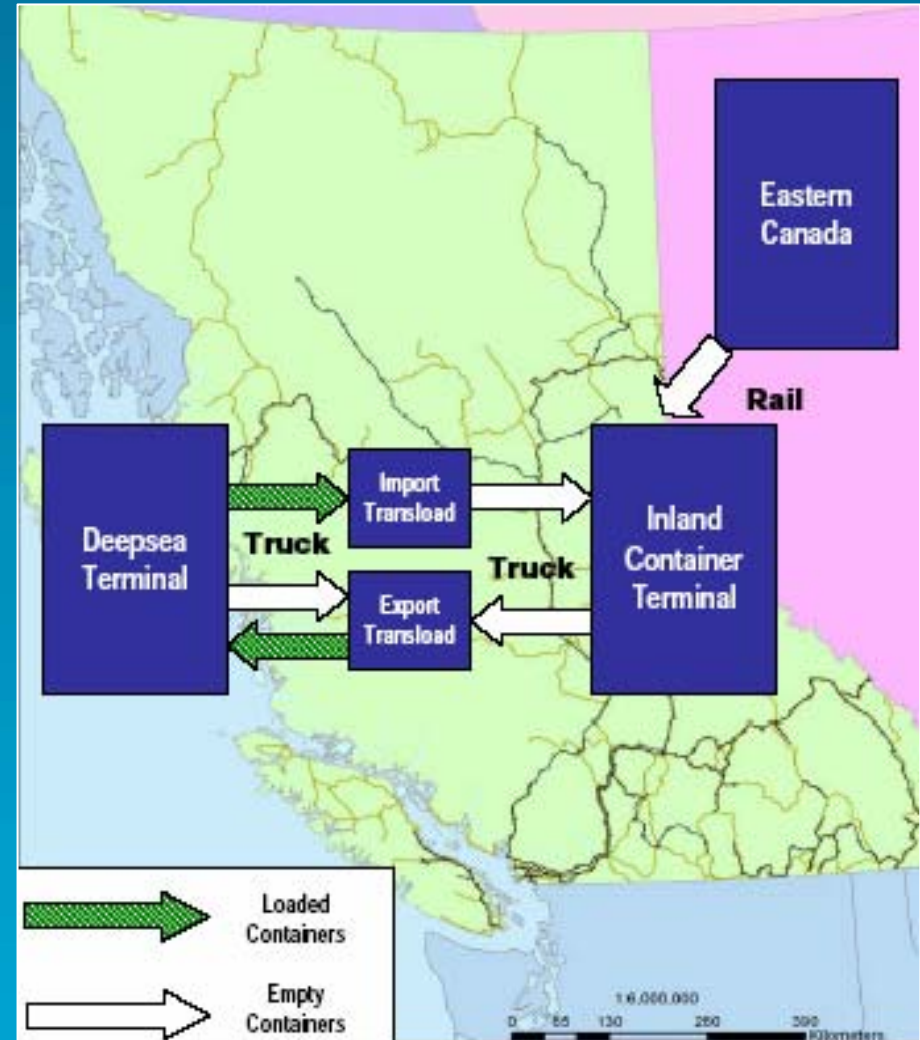
Lower Mainland Empty Container Gap - Export Laden minus Import Laden Deliveries by Truck (TEU's)



Current System



Inland Container Terminal - Rail



- **Fluidity - minimize terminal dwell times**
- **Equipment balance – avoid empty movements**

- **Ideal Class 1 operating scenario is long haul unit trains between terminals**
- **CN Intermodal trains 11,000 feet**
- **Don't want to “stop the trains”**

- **Efficient handling of 11,000 foot trains – need large initial scale**
- **Estimated terminal size 50 acres**
- **Capacity 150,000 TEU's – determines location requirements**



Conceptual location

Present

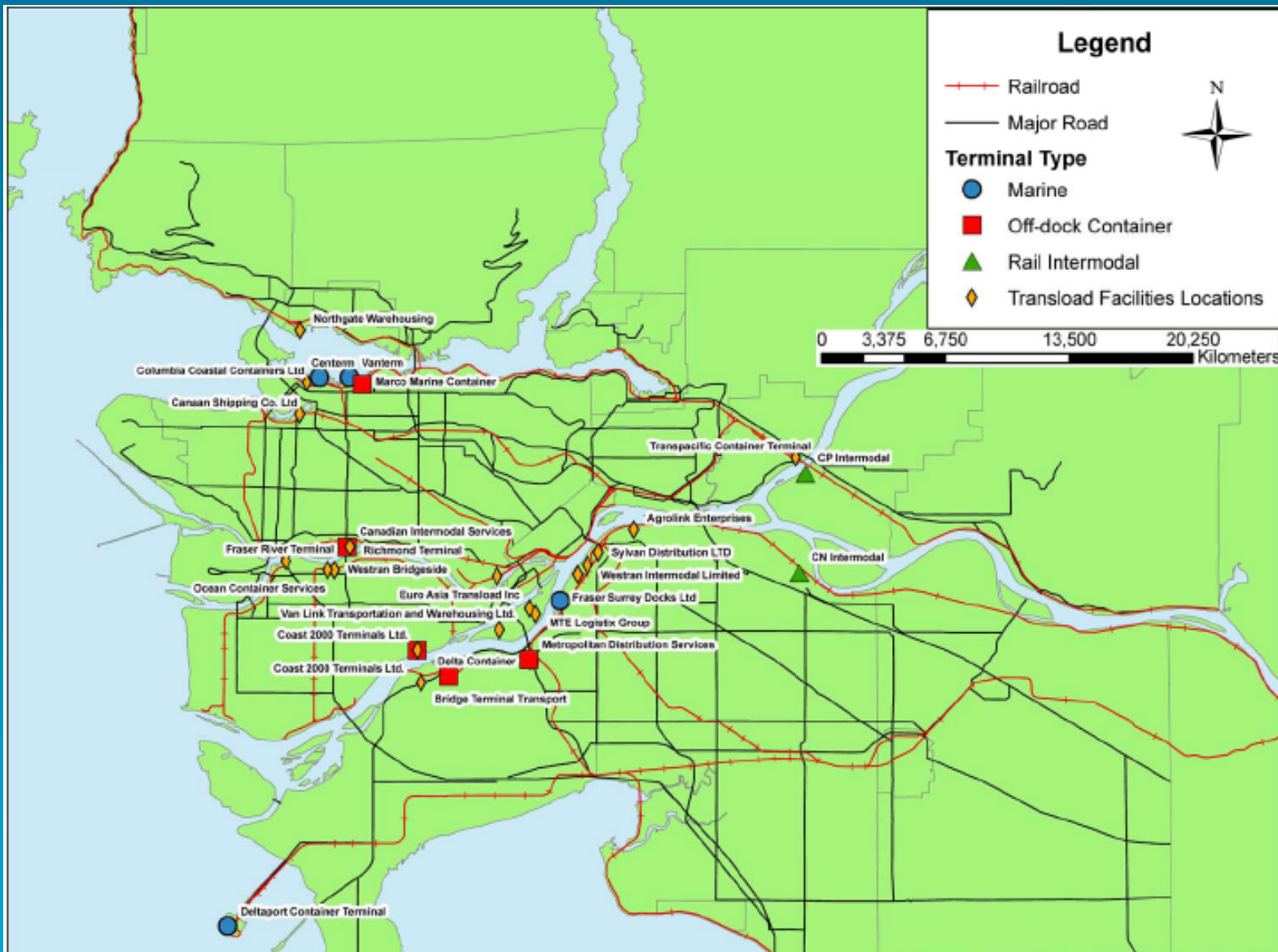
- Centerm 1 served by CN
- AU Elevator 2 Vanterm 3 PAC 1 & 3 Elevators 4 are jointly served by CN and CPR
- CPR traffic over CN to North Shore (Neptune 6 SWP, JRI 7)
- CN traffic over CPR to PCT 8 & Cascadia 5

Proposed

- CPR to serve South Shore Terminals on behalf of CN
- CN to continue to serve North Shore Terminals on behalf of CPR
- CPR to crew coal trains for both railways to Roberts Bank

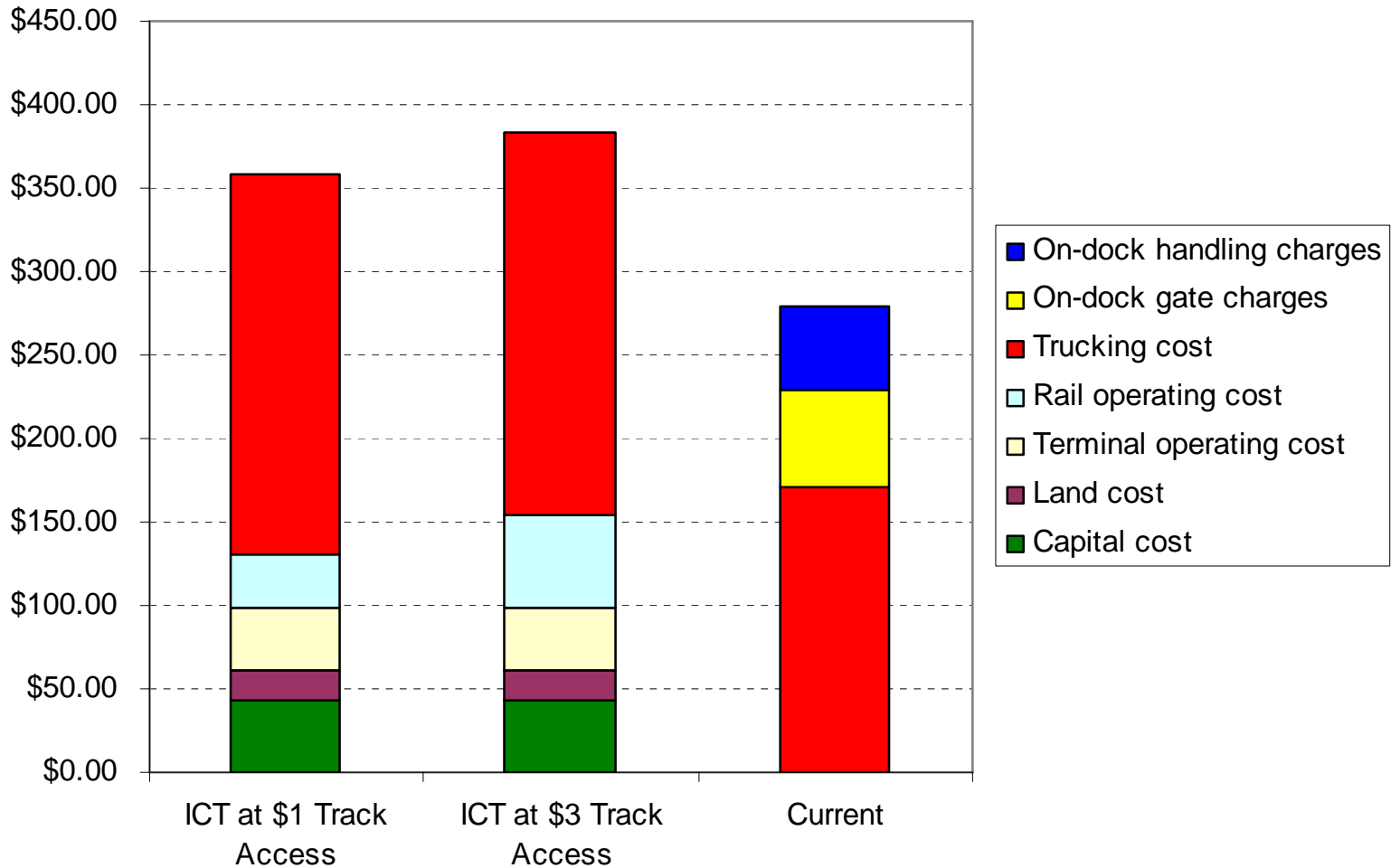
Routing

- CPR North Shore traffic over CN from Boston Bar
- CN South Shore traffic over CPR from Boston Bar
- Empties returned same route to directional running zone, east to North Bend



	Cost at \$1 Access	Cost at \$3 Access
Capital Cost (excl. site preparations and land)	\$38,000,000	\$38,000,000
Amortization period (years)	20	20
Discount rate	15%	15%
Annual Capital Cost	\$6,070,936	\$6,070,936
Land (acres)	50	50
Cost per acre	\$300,000	\$300,000
Total Land Cost	\$15,000,000	\$15,000,000
Annual Land Carrying Cost	\$2,396,422	\$2,396,422
Annual Terminal Operating Cost	\$5,400,000	\$5,400,000
Annual Rail Operating Cost	\$4,400,000	\$7,727,500.00
Total Annual Cost – Rail and Terminal	\$18,267,358	\$21,594,858
Annual Traffic (TEU's)	140,000	140,000
Rail and Terminal Cost per TEU	\$130.48	\$154.25
Total Terminal and Rail Cost per 40 ft Container	\$281	\$308
Trucking Cost Round Trip (FSD area)	\$457	\$457
Total cost	\$718	\$765
Current Cost – Deltaport to FSD		
Trucking (Deltaport to FSD)	\$343	\$343
Deltaport Gate Charges (Truck in and out)	\$116	\$116
Handling charges*	\$99	\$99
Total Cost	\$558	\$558
Cost differential: Inland Container Terminal vs. current	\$160	\$208
* Based on yard rehandling charge \$49.50 per move		

Estimated Costs per TEU ICT vs Current



- **SCAG Inland Port Feasibility Study***
- **Major application is moving laden import containers to inland DC's**
- **Same challenges!**

*Inland Port Feasibility Study Operational Strategy and Site Selection Update July 2007

- **Lower Mainland – shortline shuttle model (Class 1 Railways not interested)**
- **SCAG study – “commuter” shortline rail model**

- **Lower Mainland – Class 1 Railways control port terminal access**
- **Suggested track use charges \$3 + per car mile**
- **SCAG study – public investment in rail infrastructure**

- **Lower Mainland - estimated cost differential \$160 to \$208 per FEU**
- **SCAG study – permanent operating subsidy of \$100 + per container required**

- **Lower Mainland – proximity to existing export transload facilities**
- **SCAG study – proximity to existing DC's in Inland Empire**

- **Integrated Logistics parks**
- **Cluster of container-handling facilities to achieve efficient scale, reduce drayage costs**
- **Longer term solution**

Questions?

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