Greater Vancouver Goods Movement Study

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The Lower Mainland is Canada’s Gateway for Asia-Pacific Trade
Transportation system congestion is a major issue
Federal and Provincial Asia-Pacific Strategies – massive growth in gateway traffic
Set priorities for infrastructure investment to accommodate freight movement
• Translink
• Transport Canada
• BC Ministry of Transportation
Project Partners

- Halcrow Consulting Inc.
- Cambridge Systematics
- Garland Chow of the University of British Columbia
• Phase 1: Environmental Scan and Scoping
• Phase 2: Data Collection and Model Development
Major West Coast Ports International Container Balances 2006 (000 TEU's)

- Long Beach
- Los Angeles
- Oakland
- Seattle
- Tacoma
- Vancouver

Legend:
- Empties
- Loaded Export
- Loaded Import
Total Port Traffic - Lower Mainland Gateway
2002 - 2006 (000 Tonnes)
- International Trade
- Domestic Trade
- Local Goods Movement
International Trade Challenges

- Port capacity
- Rail Connections
- Industrial Land Availability
- Road congestion
• Dominate by rail shipments (80% of Tonnage)
• Bulk commodities, long distances
Local Goods Distribution Challenges

- Land use
- Road Congestion (Conflict with auto traffic)
Phase 1 Data Gaps

- Current truck data (last major survey in 1999)
- Goods movement data
Phase 2 Overview

- Supply Chain Data Collection and Analysis
- Economics of the Greater Vancouver Goods Movement System
- Goods Movement Profiles and Bottleneck Prioritization
- Strategy Development
- Strategy Assessment
Data Collection Stage 1

- **Port freight**
  - Obtain largest 200 importers and largest 200 exporters by container through 4 container ports in lower mainland
  - Use 80 – 20 principle to determine sample frame and sampling objectives for Stage 1
  - Estimate up to 200 shippers to be interviewed in Stage 1

- **Cross border freight** – Sample size to be determined at a fixed number of businesses (20-30) to represent percentage of freight using land border crossings
Data Collection Stage 2

Judgment sample for both Port and Cross border based on:

• Largest inbound and outbound shippers
• Representative of demographics required for developing Supply Chain typologies
• Additional information to complete Phase 1
• Unique situations or issues from Phase 1
• Estimate 50-100 shippers to be surveyed in Stage 2
• Characteristics of International Supply Chain Network
  – Where does off shore freight come from
  – How is it transported here
  – What is the port of entry and terminal of entry

• Characteristics of Domestic Supply Chain Network
  – Where is freight ultimately destined
  – What are the nodes and links in the domestic network
  – Use of third parties
Import Retail Survey Structure (cont)

- Characteristics of Local (Lower Mainland) Supply Chain Network
  - How much?
  - When?

- Links and Nodes involved in local supply chain
  - 1\textsuperscript{st} destination from port terminal
  - Leads to 2\textsuperscript{nd} and 3\textsuperscript{rd} destination if appropriate
Supply Chain Mapping
• Trucking/transportation costs on overall business cost structure (Input-output tables)
• Conduct business surveys to gain response to cost increases, congestion, and reduced reliability
  – Reduced profits
  – Higher prices
• Combine survey results with regional truck model to estimate the costs to the regional economy
Goods Movement Performance Profiles

- Develop Tools to examine system performance
  - Spreadsheet scenario analyzer
  - Port trip generation and distribution model
  - Border travel demand model (developed for IMTC)
  - Existing regional truck model with updated input data
• Identify Major Infrastructure Project Opportunities
• Identify Operational Strategies
• Identify Policy Needs
Complementary Studies

- Inland Container Terminal Study (BC Ministry of Transportation)
- Shortsea Shipping Study – Container on Barge (Transport Canada)
- Industrial Land Demand/Supply Study (BC Ministry of Transportation)