

Short Sea Shipping

The Next Mode of Transportation



**Presented By:
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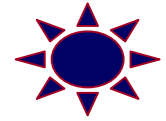
What is Short Sea Shipping



- Short Sea Shipping is the diversion of domestic and international cargos that move by highway from major metropolitan areas to major metropolitan areas by water along coastal routes.
- It is also the diversion of International cargos from large municipal ports to the smaller ports closer to the cargos final destination. This provides port congestion relief, faster through put, and takes trucks off the Highway between the ports.



West Coast Short Sea Shipping Model



- Thousands of trucks that currently run on the Highway daily between these port service areas could be diverted off the Highways between them.
- Any type of trailer can be routed onto the ships or barges.
- This includes vans, reefer vans, tankers, flat beds, and international containers on chassis.
- Ships will provide next day service in 400 mile markets, matching today's truck service.
- Ships will carry 700 trailers each.
- Barges will carry 500 trailers each.



An estimated 5,600 trucks per day could be diverted in the start-up model

Currently 15,000 trucks per day travel into L.A. and 15,000 trucks travel out of L.A. each day.

40 tons of NOx per day
Lodi to Gorman

13 tons of NOx per day
Gorman to Los Angeles

PHASE 1

Build Barge System First

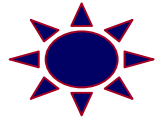


KEY

-  Ships
-  Barges
-  Trucks



Port of LA or Long Beach



Coastal Ro-Ro
Ships

Empty
Berths
Docks
Piers

Future
Expansions

Dedicated land is necessary, like rail!

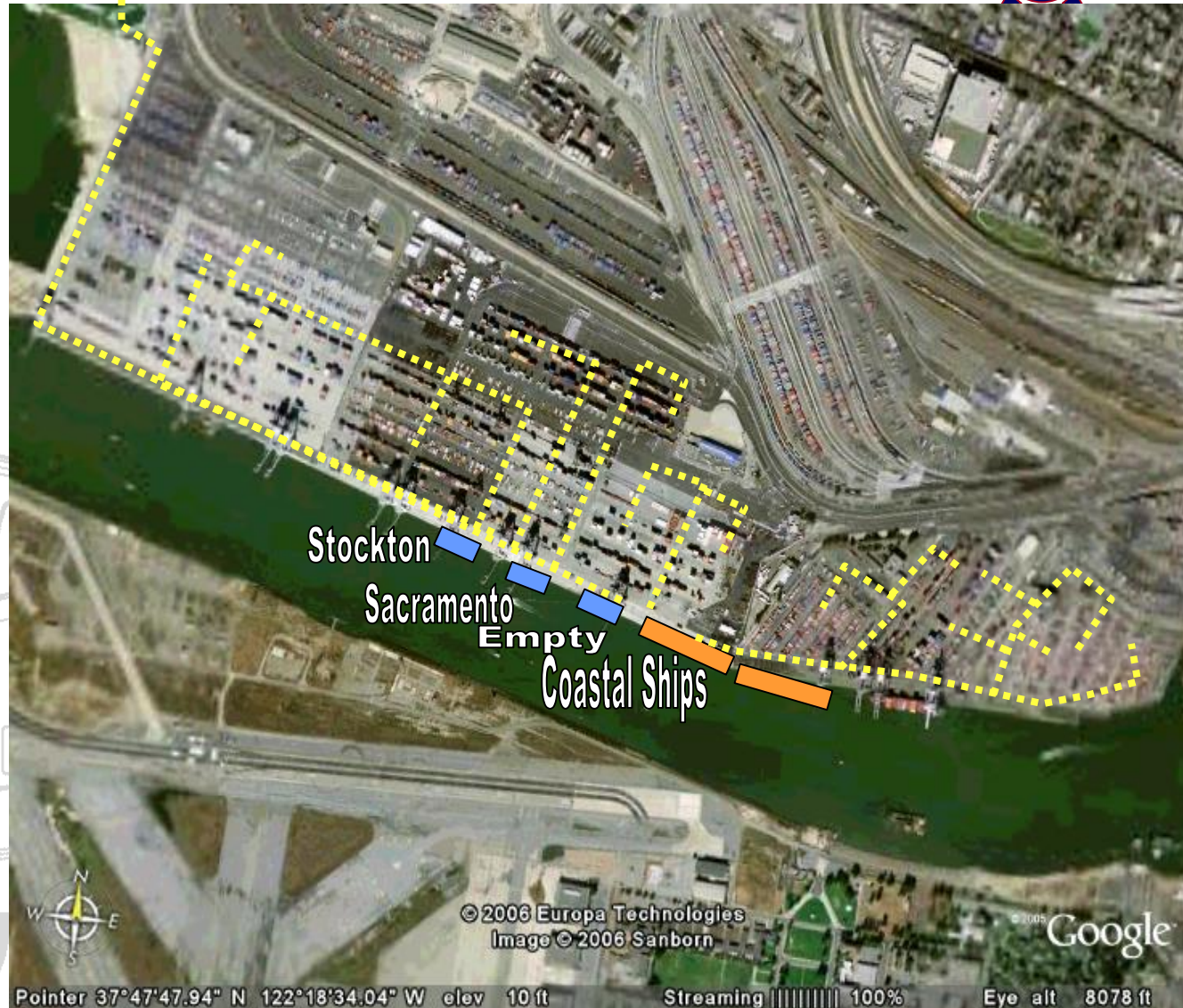
How the barge feeder will pull containers from all terminals at the Port of Oakland



- Containers may be consolidated by short haul clean fuel trucks from all terminals and moved by barge to Sacramento and Stockton by ship, for Los Angeles bound freight. This can be done using 2007 truck models with less diesel or LNG.

- Dedicated water front for three barges and 2 ships will be required for the system to work properly

- This system will move containers faster from the terminals, providing 10 to 20 percent better through put, and will provide increased capacity at the container terminals.



PHASE 2

Build consortium, market to trucking companies, and brokers



KEY

-  Ships
-  Barges
-  Trucks



PHASE 3

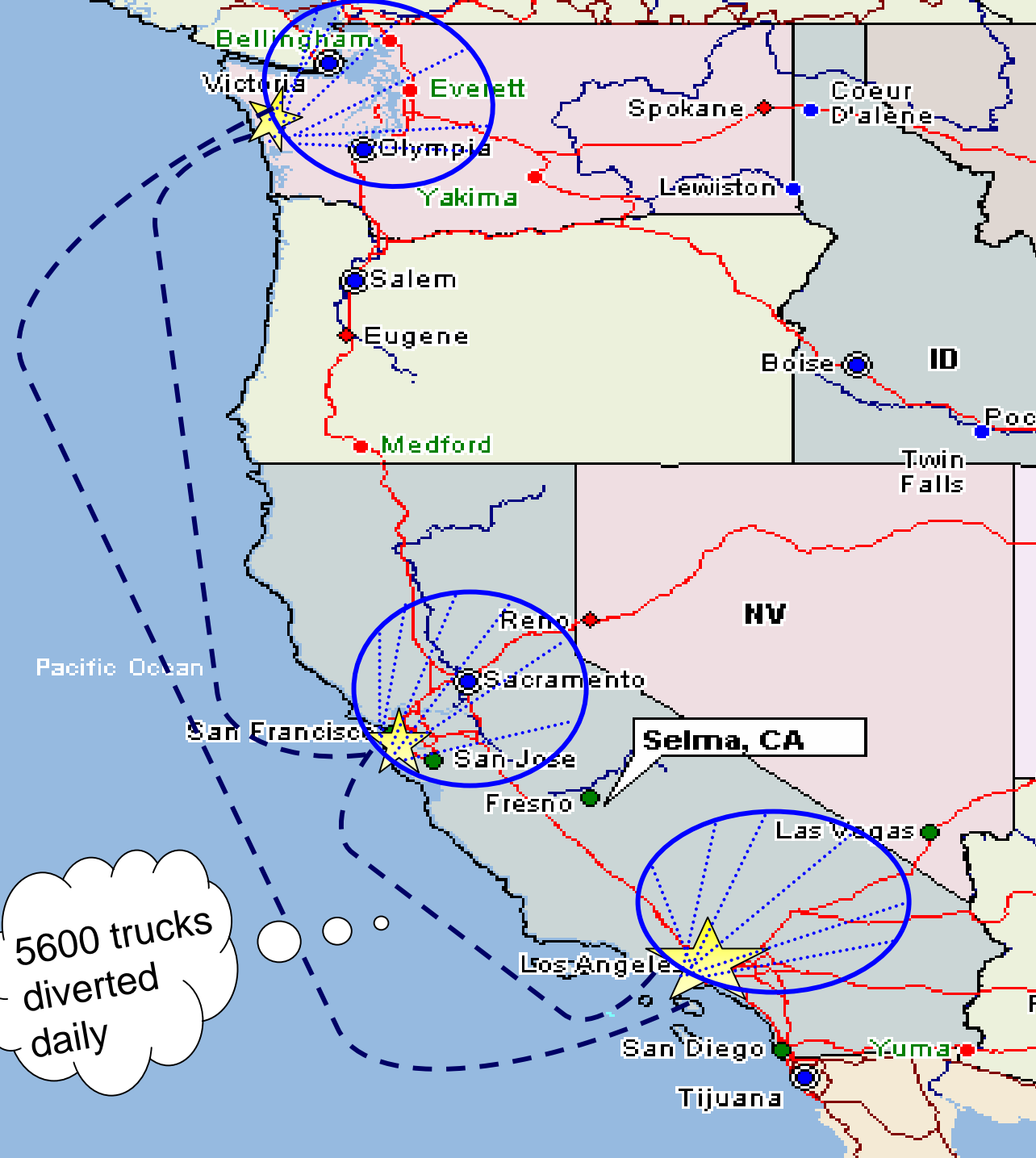
Bring Coastal Ships On Line



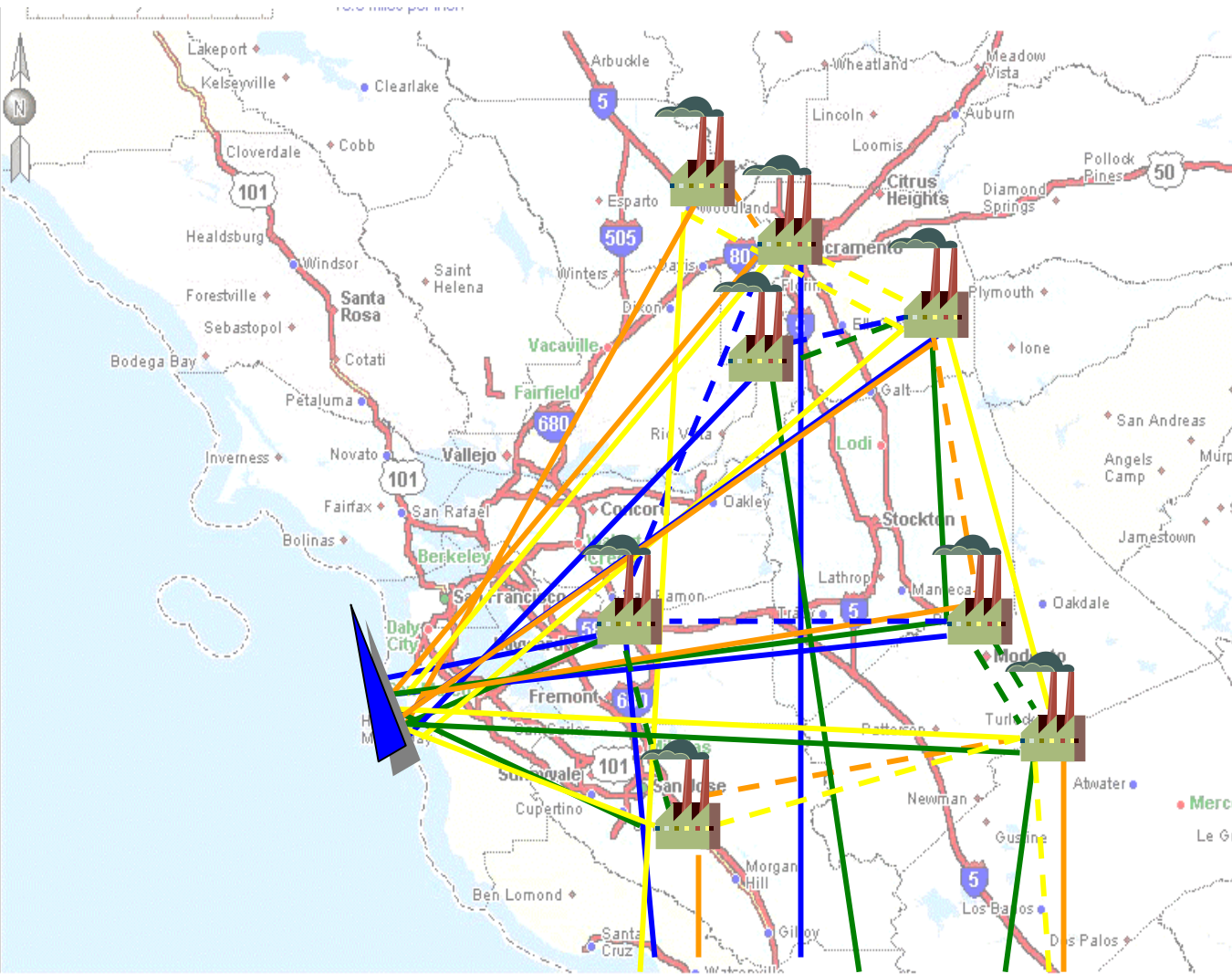
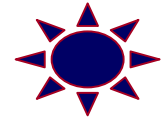
KEY

-  Ships
-  Barges
-  Trucks

5600 trucks diverted daily



Truck's Waisted Miles

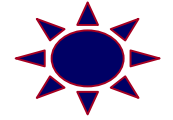


Northern California shown:

Trucks today run to and from their next load. With SSS we can eliminate wasted miles, eliminate unnecessary emissions, and increase the safety on the roads!



Local vs. Long Haul Trucks



Comparison:

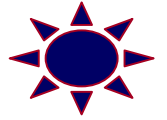
- Hauling Capacity
- Air Emissions
- Highway and Inter-city Safety
- Driver Safety
- Increased Utilization
- Cost Efficiency
- Better in Secondary Market

SSS Local Operation:

- Reduce dead head miles
- Utilize trucks better
- Stacked flat beds allows 3 trailers to 1 spot on vessel



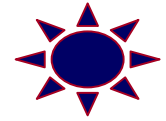
Benefits of Short Sea Shipping



- **Congestion**
- **Pollution**
- **Highway Safety**
- **The State and Federal Budget**
- **Home Land Security**
- **Ports Through-put**
- **Truck Driver's Quality of Life**
- **Future Freight Capacity Demands**



Dual Use



Roll-on Roll-off vessels can be used in time of need and during peace time to move military cargo. Vessels can also move goods in and out of areas when natural disasters or terrorist attacks make roads inaccessible.

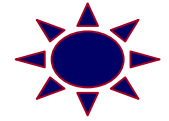


Roll-on, roll-off vessel Great Land at the TOTE facility in Tacoma unloading cargo of military vehicles.

**Ro-Ro Terminals are Strategic Terminals!
Ro-Ro Vessels Provide Benefits to Military...**



Ro-Ro Operations Already Successful in Niche Markets

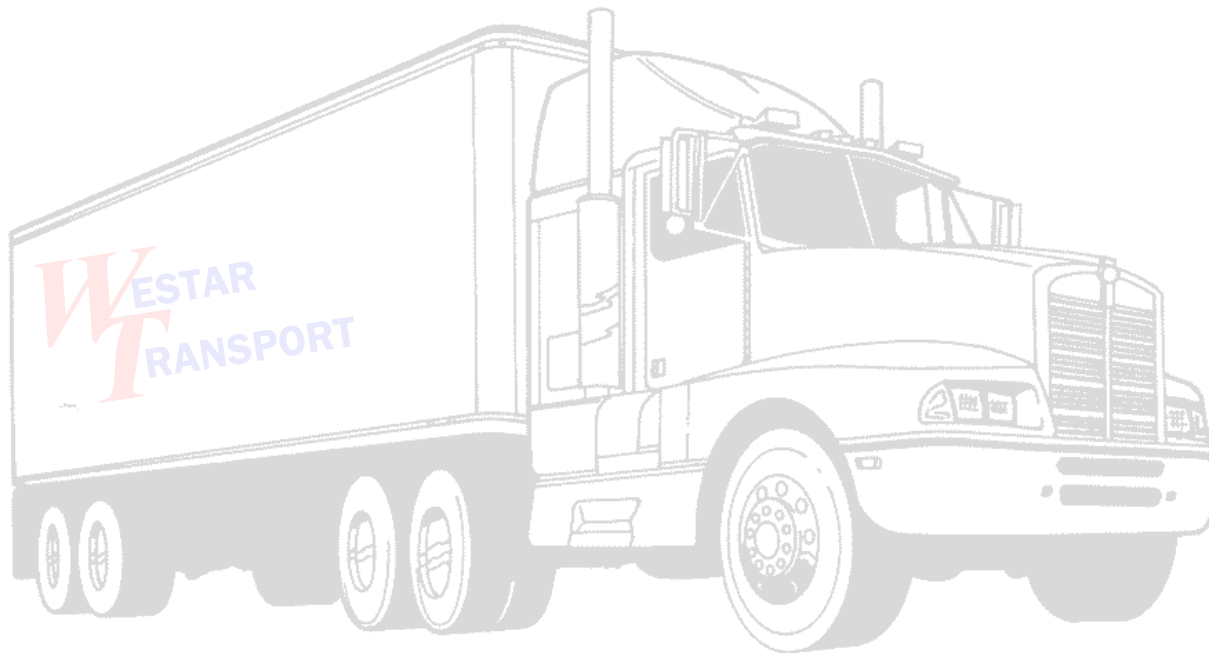


- Tote

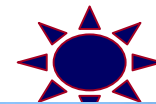
- Seattle, Wa and Alaska

- Crowley

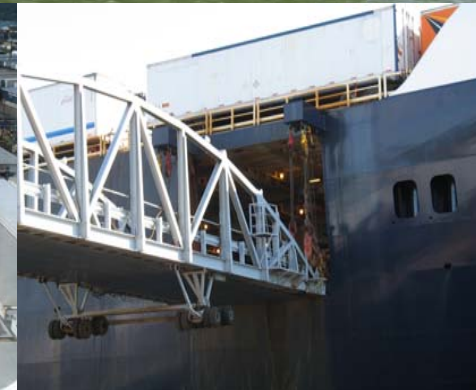
- Florida to Puerto Rico



TOTE: Existing Roll-On/Roll-Off

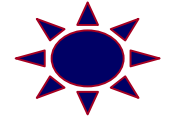


- Conventional displacement vessel
- Length Overall: 839' - 0"
- Beam: 118' - 0"
- Maximum Draft: 29' - 6"
- Speed 24 kts
- Trailer Capacity : 600 F.E.U.
- Auto Capacity: 200
- Cargo Deck Area: 360,000 sq. ft.
- Load/Unload time less than 9 hours
- Cost per vessel ~ \$175 M (2002 dollars)
- Two vessels, NASSCO, 2002/2003

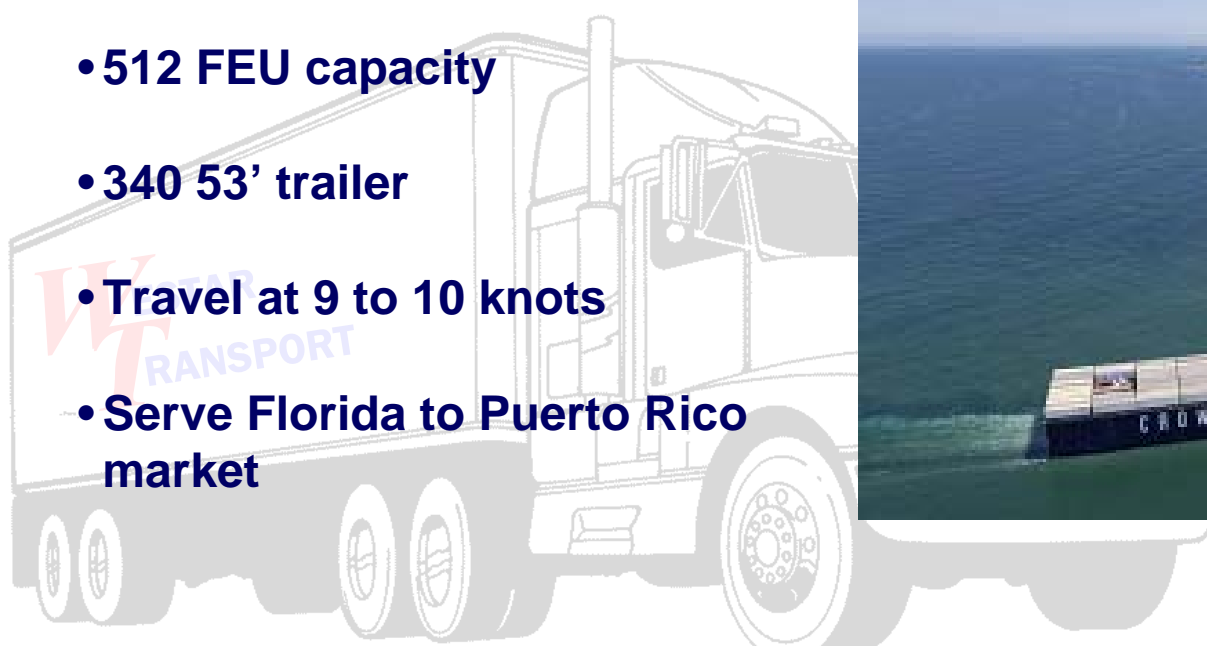


Short Sea Shipping is Already Successful in Niche Markets

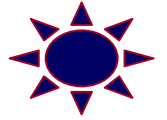
Crowley and Trailer Bridge Ro-Ro Barges



- Largest Ro-Ro Barges in the World
- Triple-Deck
- 736' x 104'
- 512 FEU capacity
- 340 53' trailer
- Travel at 9 to 10 knots
- Serve Florida to Puerto Rico market

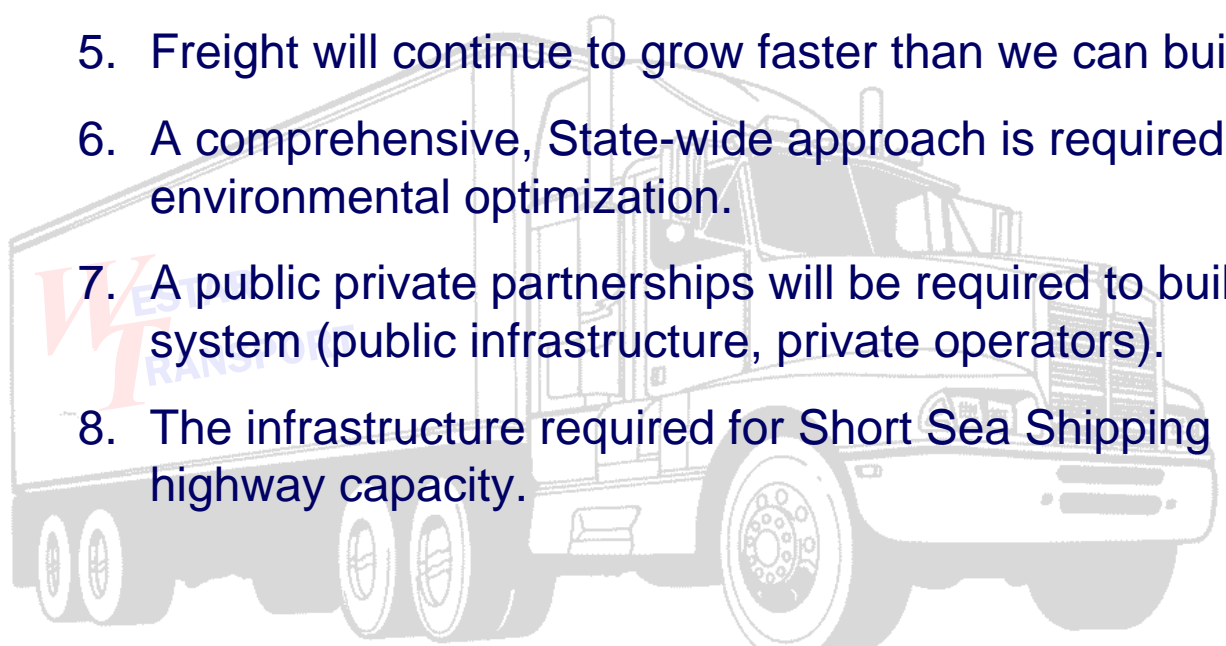


What We Know So Far

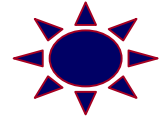


CCDOT has completed Phase One Feasibility Analysis

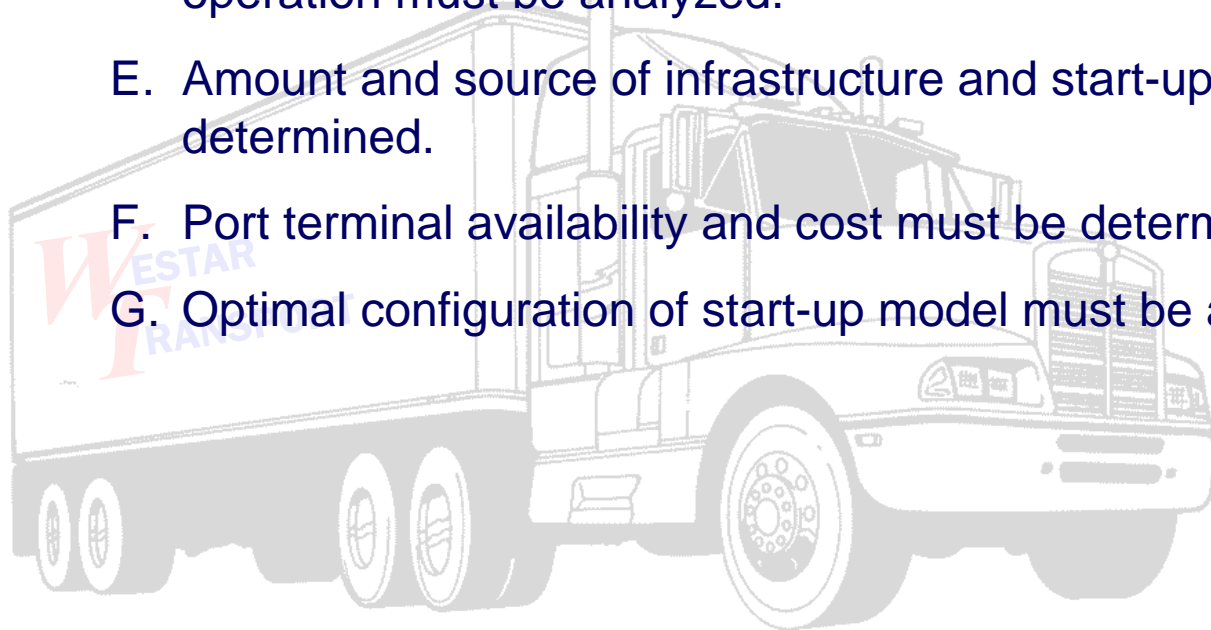
1. There is sufficient market to support coastal ships.
2. Door-to-door service can compete with current truck delivery speeds.
3. The business model can be profitable at rates comparable to trucking rates.
4. Air quality benefits are significant for the Valley, probably also for the ports.
5. Freight will continue to grow faster than we can build highway lanes.
6. A comprehensive, State-wide approach is required to achieve economic and environmental optimization.
7. A public private partnerships will be required to build this new transportation system (public infrastructure, private operators).
8. The infrastructure required for Short Sea Shipping is less costly than adding highway capacity.



Questions yet to be Answered

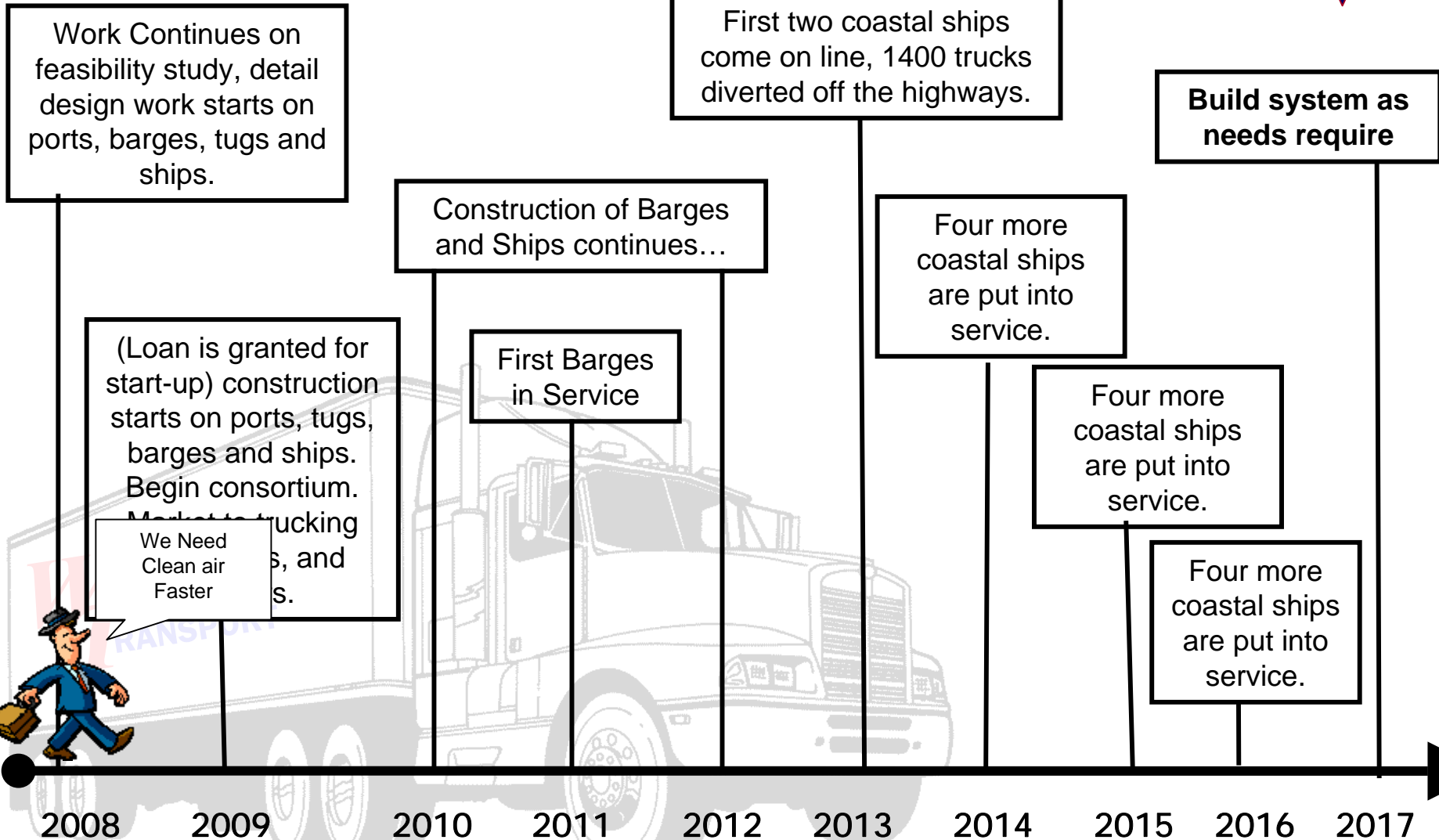
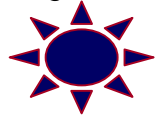


- A. Market data must be obtained to determine feasibility of the barge feeder operation.
- B. Costs of a door-to-door transportation system must be validated.
- C. Environmental impacts on all regions must be validated.
- D. System design considerations to guarantee cleanest and most efficient operation must be analyzed.
- E. Amount and source of infrastructure and start-up capital must be determined.
- F. Port terminal availability and cost must be determined.
- G. Optimal configuration of start-up model must be ascertained.



How fast can trucks be taken off the highway?

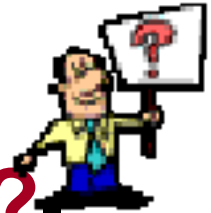
The below time line will be true if Short Sea Shipping's Study is funded, the ports are obtained and start-up capital is granted.



Short Sea Shipping

I support Red Fridays! Westar and many other wear red on Fridays to show our support for the troops past, present and future! Next Friday you should wear Red too!

Any Questions?



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