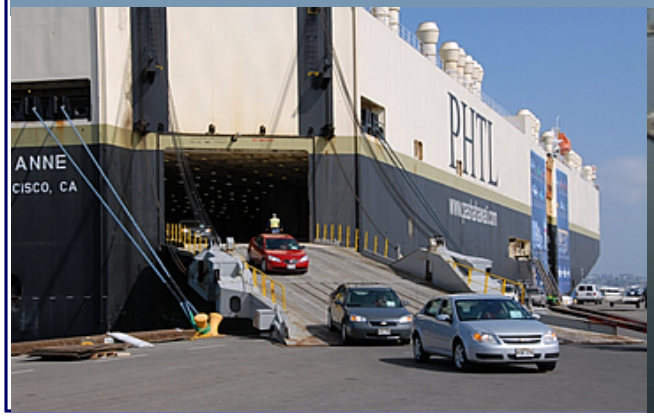
MERCATOR INTERNATIONAL LLC
Logistics & Infrastructure Advisors

Unified Port of San Diego

Assessment of Land/Rail Capacity Needs For National City Marine Terminal

Final Report
February 03, 2013




National City Marine Terminal Study
Report Outline

- EXECUTIVE SUMMARY
- BACKGROUND ON NATIONAL CITY MARINE TERMINAL (NCMT)
  - NCMT's Competitive Environment
  - NCMT's Traffic Growth Prospects
  - NCMT's Operating Practices
- OPTIONS FOR INCREASING RAILCAR STORAGE CAPACITY
- REQUIREMENTS FOR VEHICLE STORAGE CAPACITY
- CONCLUSIONS ON NCMT OPTIONS

National City Marine Terminal Study
Executive Summary

❖ BACKGROUND FOR STUDY

- **Pasha Automotive Services (PAS) has new business opportunities to significantly increase its volumes through NCMT**
  - *PAS is accordingly seeking to amend its TOA with SDUPD to control more land, increase terminal capacity, and improve operations efficiency*
- **Moreover, much of PAS' targeted incremental business would arrive to or depart from NCMT by rail transport**
  - *PAS is therefore also seeking to obtain new rail tracks at NCMT to support the increased volumes, and BNSF's preferred solution is to re-activate its rail yard along Marine Way*
- **The PAS proposal/plan would impact implementation of NC's Marina District Vision Plan**
  - *SDUPD consequently retained Mercator International to evaluate the PAS proposal and to identify alternative terminal reconfigurations and rail track options that could best support both NC and PAS*
- **Mercator International is a consulting firm specializing in maritime transportation operations, port infrastructure planning, and international freight logistics, and headquartered in Seattle**
  - *Mercator's principals each has 25+ years of industry experience, along with 10+ years of consulting experience, and the firm has worked for port authorities and terminal operators around the world*

National City Marine Terminal Study
Executive Summary

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❖ COMPONENTS OF MERCATOR'S PROJECT TASK PLAN

- Review of SDUPD goals for NCMT's maritime operations
- Review of National City's Marina District Vision Plan
- Interviews with key stake-holders: SDUPD, PAS, BNSF, GB Capital, Sycuan Tribe
- Analysis of PAS' current and projected operations and cargo flows at NCMT
- Assessment of PAS' future requirements for terminal capacity
- Analysis of BNSF's train service patterns in serving NCMT
- Assessment of site options for creating more railcar storage capacity to support PAS/NCMT
- Assessment of terminal reconfiguration alternatives for consideration by SDUPD Board to address PAS' requirements and National City's objectives

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National City Marine Terminal Study
Executive Summary

❖ KEY OBSERVATIONS ABOUT NCMT AND THE PAS OPERATION AT NCMT

- **NCMT is the most efficient RO-RO marine terminal in California,** and among the most efficient on the US West Coast, in terms of vehicles handled per year per acre
- **NCMT's acreage, berth positions, and on-dock rail track infrastructure are highly competitive** with other RO-RO terminals on the West Coast
- **About 90% of PAS' current volumes through NCMT are imported vehicles,** 45% of which move inland by BNSF train service
  - ***This means that NCMT needs to receive regular supplies of empty multi-level railcars to evacuate import vehicles from the terminal to their inland destinations***
- **BNSF typically delivers empty railcars to (and departs loaded railcars from) NCMT only 4-5x per week,** because of restrictions regarding when freight trains can run on the San Bernardino – San Diego line and due to irregular daily volumes of empty railcars
  - ***Consequently, PAS needs to have a buffer inventory of empty railcars to avoid congestion***
- **The number of vessels delivering import vehicles to NCMT fluctuates widely (from 1 to 7) on a week-to-week basis** (due to the nature of the international automobile market), causing the number of vehicles parked on the terminal to swing significantly up and down
  - ***Consequently, PAS needs to have sufficient acreage to handle the majority of the peak volumes of import vehicles***

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National City Marine Terminal Study
Executive Summary

❖ PRIMARY CONCLUSIONS ON PAS' GROWTH PROSPECTS AND LAND REQUIREMENTS

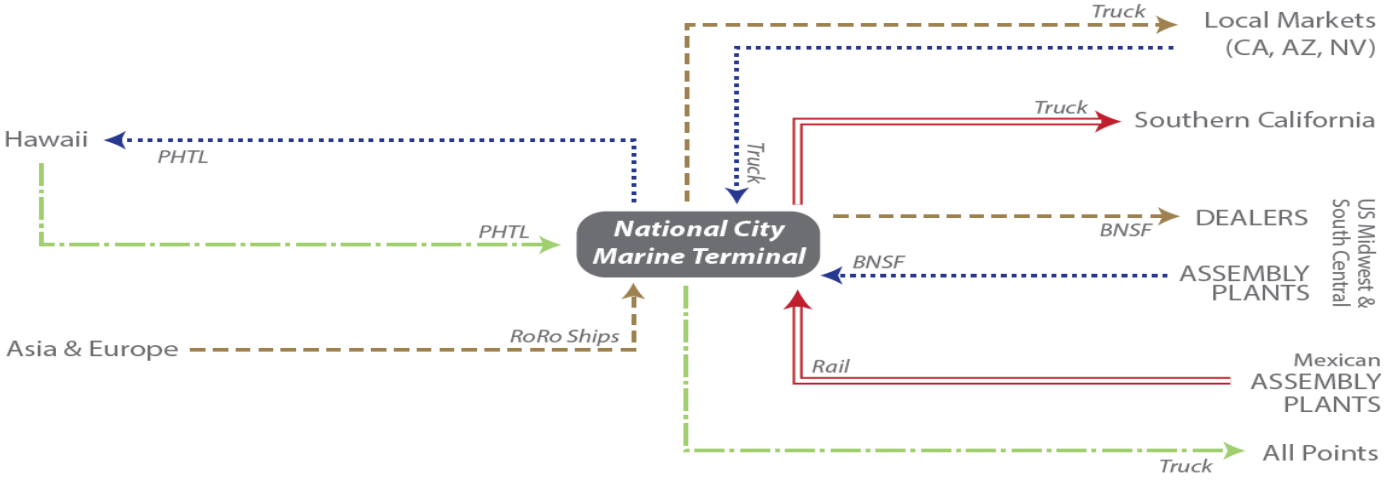
- The supply of marine terminal land in Southern California ports that is available for vehicle RO-RO operations is constrained and the ability to expand that supply in the future is highly limited
- The future demand for NCMT's acreage for vehicle-handling operations is underpinned not only by this limited supply of land but also by expected growth in US imports of automobiles/trucks
- Based on the expected volumes and average vehicle dwell times in 2013 of the auto manufacturers that are currently using NCMT, PAS will need ***117 acres of open storage area*** to effectively handle these customers
  - The projected volume growth of PAS's current customers, if in line with the overall market, will cause this requirement to increase to nearly 140 acres by 2020
- Should PAS be successful in 2013 in securing a new major customer (whose business would be relocated from another California vehicle terminal) and in gaining the processing work for an existing customer (that now uses NCMT mainly as a rail gateway), it would need ***another 38 acres of open storage area***
  - *This additional business would further increase the need for on-dock railcar storage, which could be provided with an alternative to the PAS proposal (of using the BNSF yard)*
- Of the 163 acres of total SDUPD land currently available to PAS at NCMT – through TOA and TUOP permits – only 115 of those acres are presently usable for vehicle storage
  - It therefore apparent that ***over time, PAS will be to effectively utilize as much additional acreage as the Port is able to provide for the vehicle-handling business***

National City Marine Terminal Study
Discussion Outline

- ❖ EXECUTIVE SUMMARY
- ❖ BACKGROUND AND OVERVIEW OF STUDY
  - ➢ *NCMT's Competitive Environment*
  - ➢ NCMT's Traffic Growth Prospects
  - ➢ NCMT's Operating Practices
- ❖ OPTIONS FOR INCREASING RAILCAR STORAGE CAPACITY
- ❖ REQUIREMENTS FOR VEHICLE STORAGE CAPACITY
- ❖ CONCLUSIONS ON NCMT OPTIONS

NCMT'S Competitive Environment: Overview of Current PAS Business

- PAS presently handles five basic types of vehicle traffic through NCMT
  - Newly-built or personally-owned vehicles shipped from the mainland to Hawaii, arriving by truck or rail
  - Rental-car company returns or personally-owned vehicles shipped from Hawaii back to the mainland
  - New Asian or European produced units being imported to West Coast metropolitan markets, particularly California
  - New Asian produced units being imported to Midwest and South Central markets, moving inland by rail service
  - New domestic or Mexican produced units arriving to NCMT by rail, that are then trucked to Southern California points
- A schematic diagram of these traffic flows is presented below:



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NCMT'S Competitive Environment: Competition for PAS and New Traffic Prospects

- NCMT, and its customer PHTL, compete with Matson Navigation, via the Ports of Long Beach and Oakland, for the first two flows listed on the prior page (i.e., vehicle movements to and from Hawaii)
- For Asian and European imports into California's local markets (the third flow on page 8), NCMT and PAS are competing mainly with dedicated RO-RO terminals in the San Pedro Bay ports, with Port Hueneme, and with two San Francisco Bay RO-RO ports (although to a lesser extent, due to the costs of trucking vehicles from there to the much larger Southern California markets)
- For Asian imports into Midwest and South Central markets (the fourth traffic type on the preceding page), NCMT and PAS are competing with those same California RO-RO terminals, but also, to some extent, with RO-RO facilities in selected Pacific Northwest ports (principally, Portland, Vancouver (WA), and Tacoma)
    - These Asian/European imports – whether to California, the Midwest, or to South Central markets, represent the majority of the volume handled by PAS
- Finally, for the fifth flow – vehicles railed to NCMT from assembly plants in the US and/or Mexico, and then trucked to dealers in Southern California, NCMT and PAS are competing with RO-RO marine and rail terminals in the greater Los Angeles Basin
- At the present time, NCMT handles a minimal volume of vehicles that are exported to other continents, although this could change in the future
- In addition, if imports from Japan decline (as the Japanese manufacturers shift production for the US market to new Mexican assembly plants), replacement volumes to NCMT could potentially be found from vehicle imports sourced from Chinese and other Asian plants, as well as from those new Mexican plants
- The following brief review of competing terminals focuses on the other California-based facilities

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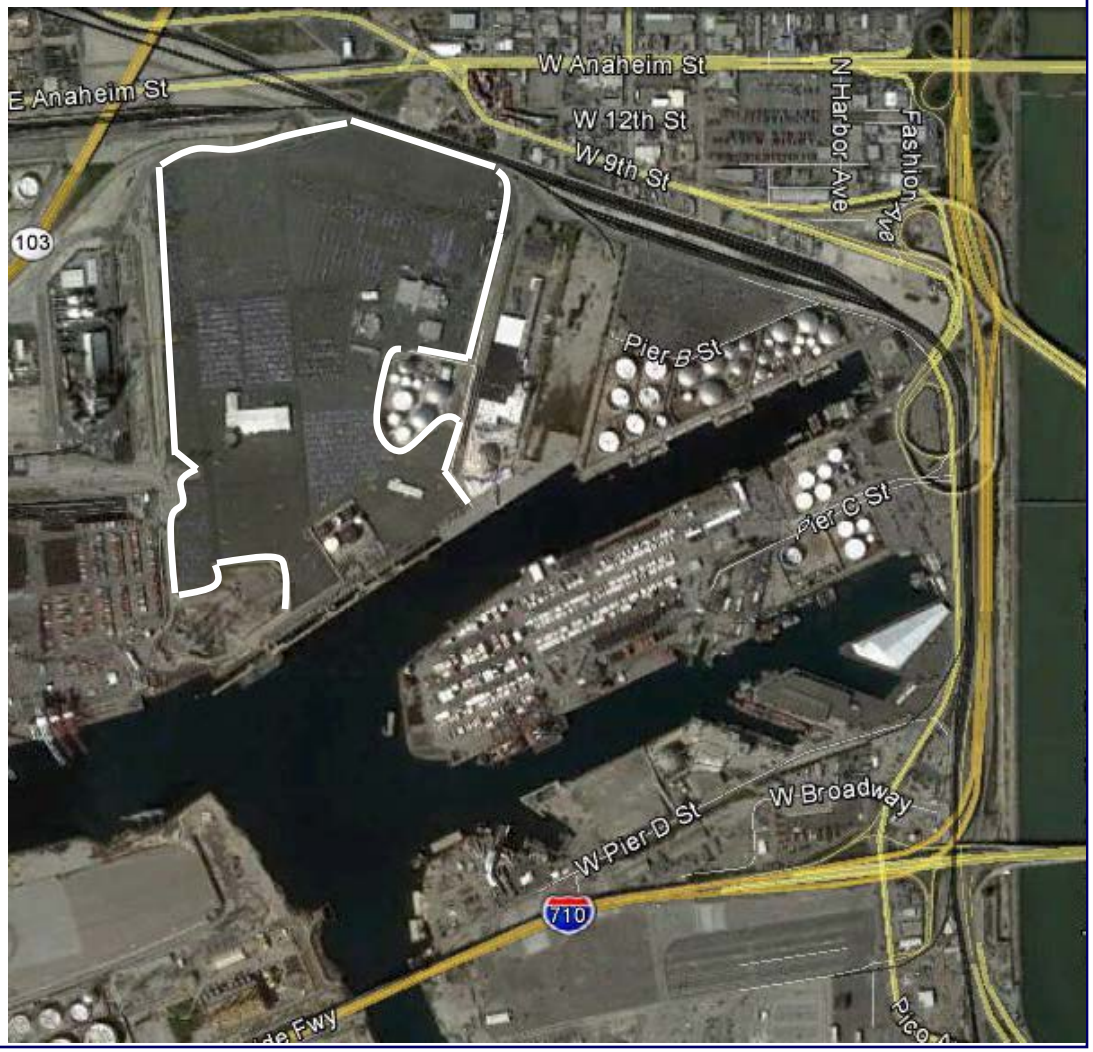
NCMT's Competitive Environment: San Pedro Bay RO-RO Terminals

- The Port of Long Beach's primary facility for handling dedicated car carriers is its Pier B terminal, located in the north part of the harbor, and outlined in white in the photo to the right
- The terminal has 3000' of linear berth (although shares the berth with bulk ships) and also has about 100 acres available for vehicle storage
- It also has 3 loading/unloading rail tracks, with a combined capacity of about 36 railcars
- The terminal is leased and operated by Toyota Distribution Services, and functions as the primary import gateway for Toyota Motors on the West Coast
- We estimate the annual through-put of this terminal at about 180,000 units
- Separately, SSA Marine receives imports of Mercedes vehicles at its break-bulk terminal and trucks them to an off-dock storage area



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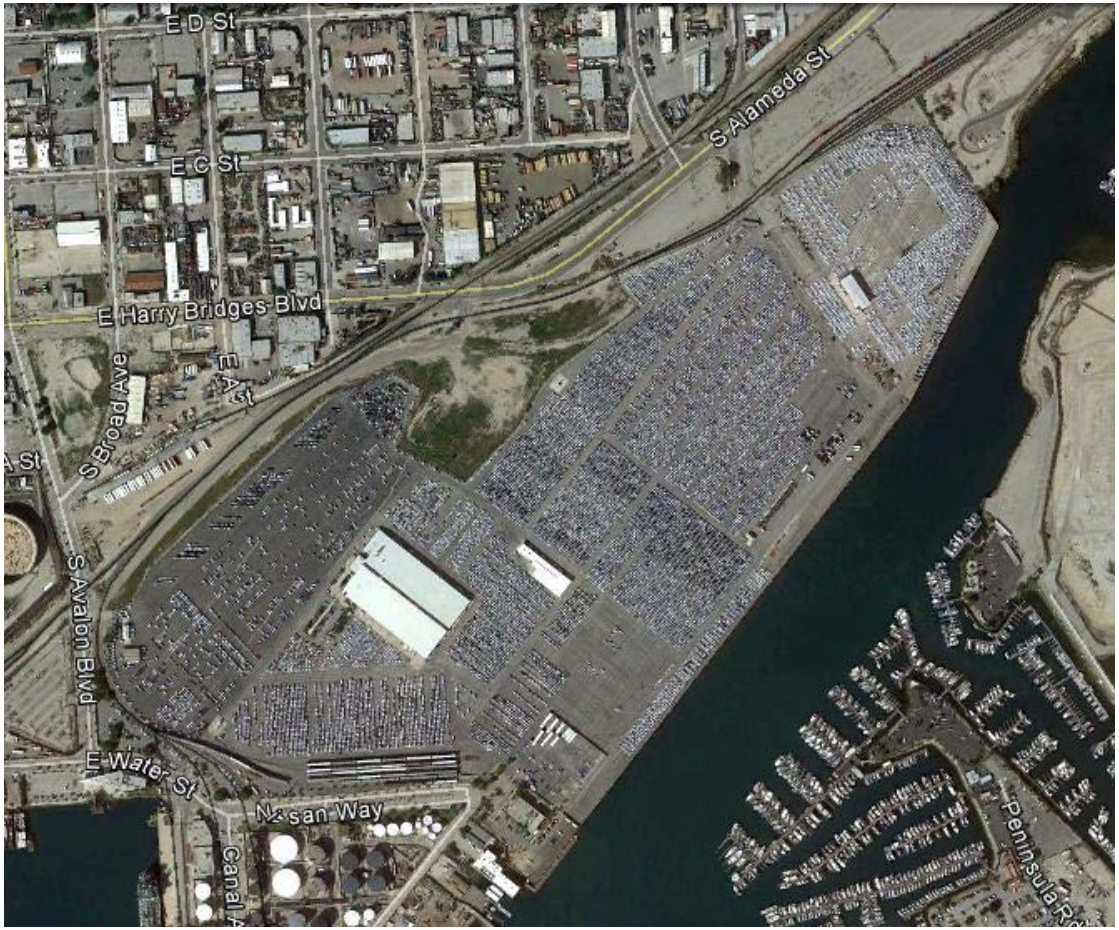
NCMT's Competitive Environment: San Pedro Bay RO-RO Terminals

- The Port of Los Angeles's primary facility for handling dedicated car carriers is its terminal at Berths 195-199, also located in the north part of the harbor, and shown in the photo to the right
- This terminal is leased and operated by Wallenius Wilhelmsen Logistics (WWL), although was previously a proprietary facility for Nissan Motors, and is served by both UP and BNSF
- The terminal has 85 acres of ground storage for vehicles, together with 2250' of linear berth
- It also has 6 loading/unloading rail-tracks on-dock, with a combined capacity of about 36 multi-level railcars
- Nissan Motors is still the main customer for this facility, which handles about 120,000 units/year



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NCMT's Competitive Environment: Port Hueneme RO-RO Terminals

- Port Hueneme has three separate vehicle processors/distributors using its terminal facilities
- WWL leases an 18-acre waterfront parcel from the Port Authority for its stevedoring and marshalling operations, and has off-dock acreage as well
- WWL's key customers are Mitsubishi, Suzuki, Ford, and Land Rover, and its total volumes are over 80,000 units/yr
- BMW also leases some waterfront acreage from the Port, but has a nearby off-dock site – its West Coast Vehicle Distribution Center, with 124 acres of storage space
- BMW is handling about 100,000 units there presently
- The Port's other key RO-RO customer is Glovis America, the affiliated distributor of Hyundai Motors, which leases 55 acres of off-dock property from the US Navy for vehicle storage and handles about 60,000 units/year

With its confined harbor, Port Hueneme has relatively limited on-dock acreage available for vehicle parking, and the three processors/distributors have locked up all of that acreage, making it difficult for the Port to bring in a fourth processor

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NCMT's Competitive Environment: San Francisco Bay RO-RO Terminals

- There are no dedicated RO-RO terminals within either the Port of Oakland or the Port of San Francisco

- The Port of Richmond, however, has a 55-acre facility that is leased to Auto Warehousing Corporation (AWC) and is rail-served solely by BNSF
- This terminal has a 1600' linear berth that was renovated in 2010, along with a 7-track on-dock rail transfer yard
- The on-dock rail yard has a capacity for about 84 multi-level railcars, but there is an off-dock support yard located one-half mile to the north, with supplemental capacity for another 80+ railcars
- Honda Motors is AWC's main customer here, and the Port is estimated to handle less than 70,000 imports/year

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NCMT's Competitive Environment: San Francisco Bay RO-RO Terminals

- In the City of Benicia, Amports operates a marine terminal and multiple off-dock storage yards for RO-RO traffic
- The wharf and waterfront acreage for this facility are actually freehold land owned by Amports
- The wharf is 2400' long, and the collective amount of vehicle storage space is approximately 160 acres, although less than half of that is proximate to the wharf
- The facility has 6 rail-tracks for loading/unloading, with a combined capacity of about 80 railcars, but has support tracks capable of holding an additional 90 railcars
- Amports' main customers here are Toyota and GM, and this terminal is estimated to handle about 130,000 units/year

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NCMT's Competitive Environment: Additional Comments

- **As the following table indicates, NCMT compares very favourably to the other dedicated RO-RO terminals in California, in terms of land use efficiency:**

COMPARATIVE LAND USE INTENSITY - CALIFORNIA RO-RO PORTS

PORT	APPROX STORAGE AREA (Acres)	EST. 2012 THRU-PUT (Units)	ANNUAL USAGE RATIO (Units/Acre)
PAS - San Diego*	160	336,000	2,100
Long Beach	145	240,000	1,660
Los Angeles (Berths 195-199)	85	120,000	1,410
Port Hueneme**	220	280,000	1,270
Richmond	50	60,000	1,200
Benicia***	160	130,000	810
Average for State	***820***	***1,166,000***	***1,420***

* PAS San Diego area - includes TOA and TUOP areas (165 ac), plus land leased from BNSF (14.8 ac) and temporary use / overflow areas (10.7 ac), less the undeveloped Tank Farm (5.7 ac) and less the area for PHTL cargo marshalling (24.3 ac). PHTL cargo is in addition to the 336,000 PAS units

*** Port Hueneme includes off-dock storage areas for BMW, Glovis, WWL*

**** Benicia includes hill-top area, but excludes acreage leased to UPRR*

- **Moreover, NCMT compares favourably to all of the other California RO-RO terminals, in terms of being accessed with a rail loop track and in terms of railcar storage**
  - **None of the other terminals profiled have loop tracks that enable train crews to efficiently arrive and depart unit trains**
- **Single-carrier rail service for NCMT is also not a major disadvantage, given that Port Hueneme, Richmond, and Benicia are also served by only one Class I railroad**

Review of SPB Fleet Forecast Discussion Outline

- **BACKGROUND AND OVERVIEW OF STUDY**
  - **NCMT's Competitive Environment**
  - ***NCMT's Traffic Growth Prospects***
  - **NCMT's Operating Practices**
- **OPTIONS FOR INCREASING RAILCAR STORAGE CAPACITY**
- **REQUIREMENTS FOR VEHICLE STORAGE CAPACITY**
- **CONCUSIONS ON NCMT OPTIONS**

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NCMT's Traffic Prospects: Recent History

- Vehicle volumes moving through NCMT and handled by PAS have rebounded sharply since 2009, after contracting during the recession of 2008-2009, as indicated in the table below:

PAS Vehicle Volumes at NCMT

YEAR: / VOLUME CATEGORY	2009	2010	2011	2012
	---------- 000s units ----------			
Import Autos - To Truck	100	143	136	175
Import Autos - To Rail	101	95	102	134
Outbound Vessel (PHTL to Hawaii)	13	22	21	27
Total Vehicles Handled	***214***	***260***	***259***	***336***
> Y-on-Y growth rate		21.6%	-0.5%	29.7%

- Notwithstanding the modest growth in outbound shipments to Hawaii, the preceding data clearly demonstrate that NCMT's requirements for marine terminal space are driven by import activity levels, with international inbound vehicles (to both truck and rail) accounting currently for 89% of total marine vehicle through-put

- It should also be noted that in addition to the vehicle volumes handled by PAS, NCMT is also the gateway for a modest volume of personally-owned cars/light trucks that are shipped to and from Hawaii by PHTL (but which are not handled by PAS and not included above), as well as for shipments of machinery, trucks, and other non-automotive RO-RO traffic on PHTL.

NCMT's Traffic Prospects: Customer Base Composition

- As a result of sustained marketing efforts by PAS, and superior infrastructure (relative to other RO-RO terminals in California), the Port of San Diego has a much more diverse automotive customer base than any of the other ports in the state that handle export/import vehicles
  - As pointed out in previous pages, the two main RO-RO-terminals in San Pedro Bay each handle primarily one manufacturer (Nissan or Toyota), plus the Port of Long Beach also handles material volumes of Mercedes-Benz imports
  - Port Hueneme's volumes are dominated by BMW and Hyundai Motors import shipments, although it also handles Mitsubishi and Suzuki, plus smaller volumes for Land Rover, Jaguar, and Ford
  - Richmond's traffic is mainly comprised of Honda movements, while Benicia's is dominated by Toyota and GM traffic
  - However, NCMT is handling significant volumes of six different manufacturers – Audi/Volkswagen, Honda, Mazda, Hyundai, Chrysler, and Porsche – as well as smaller volumes from another seven other companies
- This degree of diversification enhances NCMT's ability to grow its volumes

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NCMT's Traffic Prospects: Long-Term Outlook

- In terms of aggregate volumes, NCMT should have solid long-term growth prospects, due to favourable demand and supply conditions
- With regard to aggregate demand, the Center for Automotive Research is forecasting that US light vehicle sales will increase about 2.3% per year - from about 14 million units in 2012 to about 16.5 million units/year by 2020 and then to about 18 million units by 2025 *[Other forecasters of the automotive industry, such as LMC, have even more aggressive projections]*
    - Moreover, imports are projected by IHS Global Insight to maintain a 20-22% share of the US light vehicle market during this same forecast period
- From a supply perspective, it is unlikely that the amount of acreage available for on-dock vehicle storage in the San Pedro Bay port complex will increase in the future from current levels, given the competing demands for terminal space from cargo types (particularly containers) that tend to generate higher revenue per acre than RO-RO traffic for the two port authorities there
    - Indeed, it is conceivable that one or both port authorities in San Pedro Bay will eventually scale back the on-dock acreage allocated to vehicle imports/exports, and the availability of near-dock acreage in the harbor area in the future is likely to be extremely limited as well
- Unless the US Navy significantly contracts its base at Port Hueneme, it is also unlikely that the amount of on-dock acreage available for RO-RO traffic will be increased in the future, even though the existing supply is fully utilized, and the supply of off-dock acreage is also becoming constrained
- Hence, the supply of on-dock and near-dock acreage available for vehicle storage and marshalling in Southern California's other ports, besides San Diego, is quite constrained

Review of SPB Fleet Forecast Discussion Outline

- BACKGROUND AND OVERVIEW OF STUDY
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  - *NCMT's Operating Framework*
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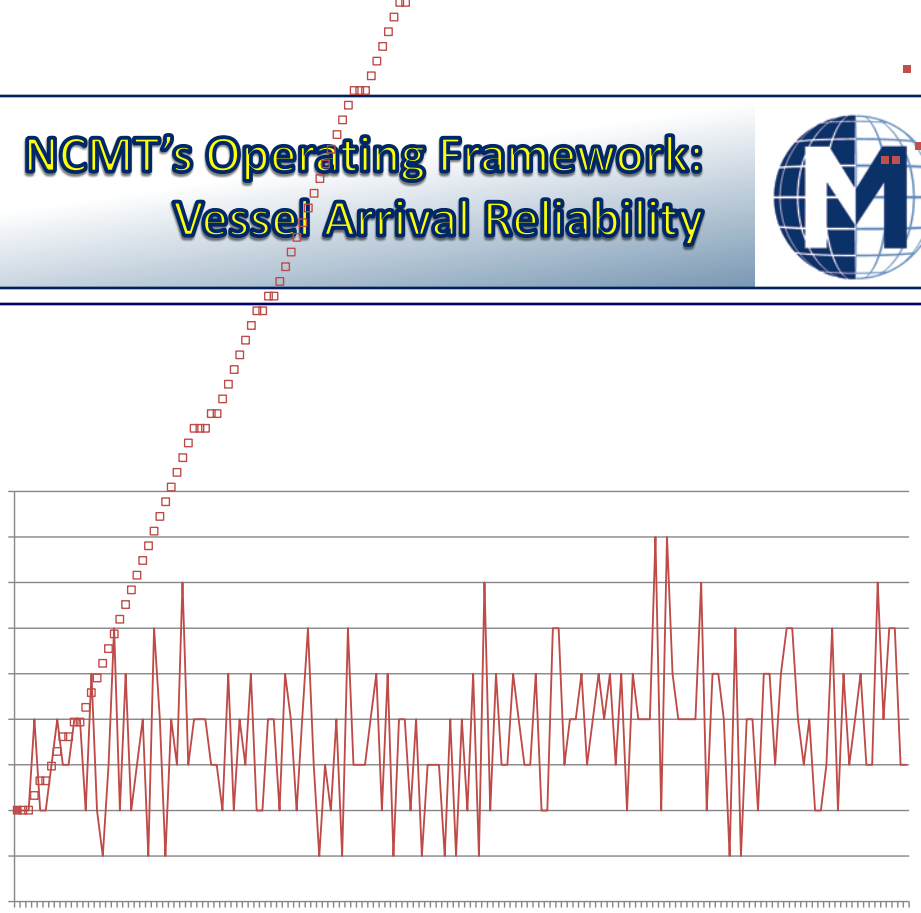
NCMT's Operating Framework: Vessel Arrival Reliability

- As the preceding section indicated, the majority of NCMT's vehicle volumes are imports, which tend to be discharged in lots of 1000 units or more per vessel call
- Unfortunately for NCMT, pure car carriers (PCCs) and other RO-RO ships serving the North America automobile import trades tend ***not*** to operate on fixed day-of-the-week voyage schedules (which is the norm for all major container trades and services), but instead on more fluid schedules
- As a result, compared to most container terminals, NCMT has a much higher degree of variability in the number of inbound vessel calls it receives from week to week, and relatively little consistency in the days of the week in which these vessels arrive
- The accompanying graph plots the number of inbound vessel calls each week at NCMT, excluding PHTL ships, since the beginning of 2010:



This week-to-week fluctuation in the number of vessel calls creates significant peaks and troughs in the number of vehicles discharged, ***thereby increasing space requirements beyond what would accommodate the average weekly volume***

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NCMT's Operating Framework: Train Service Constraints

- NCMT is located at the tail-end of a BNSF branch line that connects with that railroad's Los Angeles – Chicago main line at Atwood Junction, 107 miles north of National City
- BNSF uses a classification yard at San Bernardino, another 45 miles northeast of Fullerton Junction, at which to collect loaded and empty railcars (including empty multi-level railcars) destined for the San Diego switching district and assemble them into trains
- Because of the density of commuter trains on this branch line, and because it is primarily a single-track line between San Diego and Mission Viejo (a distance of over 80 miles) with some short passing sidings, long freight trains are largely confined to late night – early morning windows
- Therefore, long southbound trains of automotive multi-level railcars from San Bernardino to the BNSF San Diego Rail Yard near Tenth Avenue have to get south of the downtown Amtrak Station by 5AM
- Similarly, northbound trains from National City need to wait until around 9PM before they can move north of the Amtrak Station in downtown San Diego

Thus, unless the local switching crew brings them from Tenth Avenue, NCMT receives inbound railcars , at most, once per day – in the early morning – and is able to evacuate outbound railcars with the same frequency – in the mid evening

When train arrivals are less than daily– due to track maintenance operations and/or insufficient southbound volumes – NCMT quickly becomes pressed for car supply

National City Marine Terminal Study
Discussion Outline

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NCMT Railcar Holding Capacity: Overview of Current Rail and Train Volumes

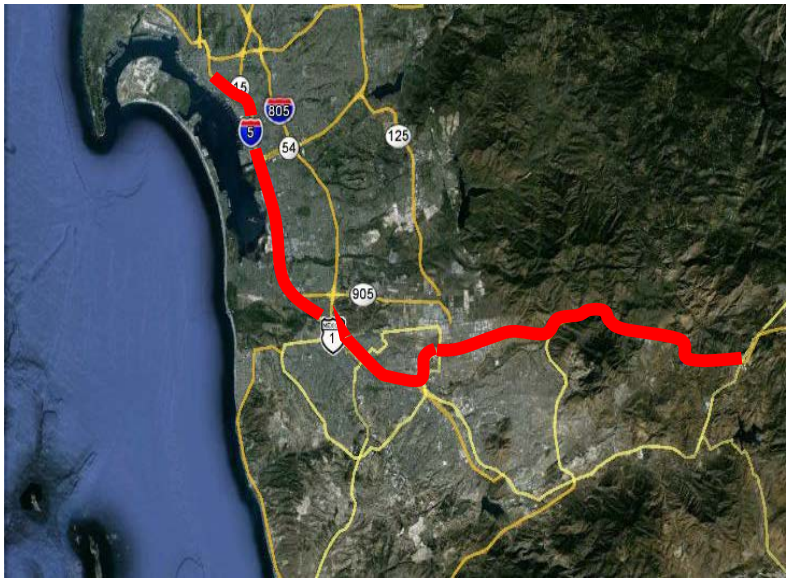
- NCMT vehicle volume moving out of the terminal by rail:
  - 2009 100,660
  - 2010 95,030
  - 2011 102,200
  - 2012 133,600
- In 2012, represented about 41% of the total units handled by Pasha Automotive Services.
- Moves 75% on tri-levels/25% on bi-levels
- Equates to about 9700 railcars/year, or 186 railcars per week
- ***Departures average 4 trains per week***, or about 46 multilevel railcars per train

NCMT Railcar Holding Capacity: Overview of Current Rail and Train Volumes

- Given the variability of the number of inbound ships per week, as well the limited frequency of inbound train arrivals, PAS needs to have a buffer inventory of empty multilevel railcars on-hand to avoid severe congestion within NCMT
- To enhance operating efficiency of the terminal, this buffer inventory should be located close by, so that a PAS-controlled switch engine could reposition railcars from the buffer storage area to the on-dock loading tracks
    - This would enable BNSF to save operating costs on railcar switching, and simultaneously improve NCMT's switching service levels
- However, at present, the only available area for railcar storage is two siding tracks located along the branch line between S. 32nd Street and the drainage canal just north of W. 8th Street (shown in yellow on the accompanying satellite photo)
- While these two tracks can hold about 60 conventional multi-level cars, their capacity is also used to support other BNSF operations, and they are not close enough to NCMT to allow PAS to switch the cars from there to the marine terminal

NCMT Railcar Holding Capacity:
New Rail Volumes and Required Rail Car Storage

- Moreover, PAS is seeking to transfer the railcar loading of about 65,000 Toyota vehicles per year to NCMT from BNSF's San Diego Automotive Facility
  - These vehicles are being trucked to San Diego from Toyota's plant in Tecate
  - They are then processed for delivery, loaded into railcars, combined into trains with railcars loaded at NCMT, and then transported to various US markets
  - If PAS is successful, the vehicles would be prepared for distribution and loaded onto railcars at NCMT.
  - Railcar volume ex NCMT would increase to about 14,000/year, an increase of 4800 cars
  - Train size out of NCMT would increase by about 20 - 24 cars per train.
- The projected increase in railcar traffic would create a need for additional railcar storage within or adjacent to NCMT
- The BNSF San Diego Yard presently supporting this traffic has storage capacity for 29 railcars.
  - To handle this traffic at NCMT, a similar amount of additional rail car storage is being sought.

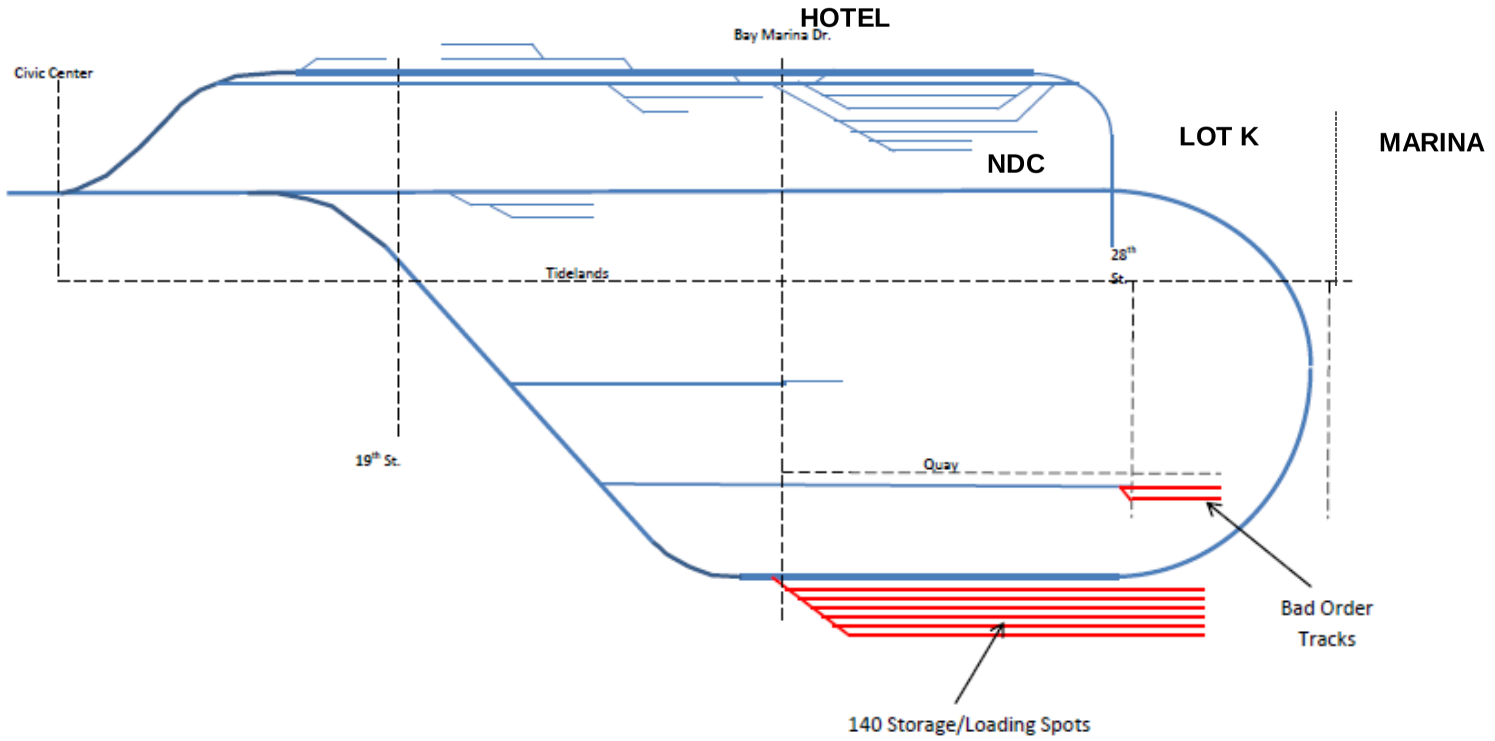


Switching this business to NCMT would have two strategic benefits for the San Diego area –

- *It would position NCMT to be the export gateway terminal for Toyota Baja California when the latter's Tecate plant eventually produces vehicles for overseas exports*
- *It would enable BNSF to backfill the capacity at its Tenth Avenue Yard with vehicles produced in a Midwest or South Central assembly plant and distributed in the Southern California area*

NCMT Railcar Holding Capacity: Current Track Configuration and Railcar Spots

- NCMT presently has 6 on-dock tracks usable for railcar loading or unloading
- Combined nominal holding capacity of these 6 tracks is about 140 railcars, depending on the mix of railcar-types, but because of the need to have breaks in between sets of cars, effective capacity is closer to 120 railcars
- As shown in the schematic diagram below, these 6 tracks are stub-ended, so cuts of railcars are shoved in, or pulled out, from the north end



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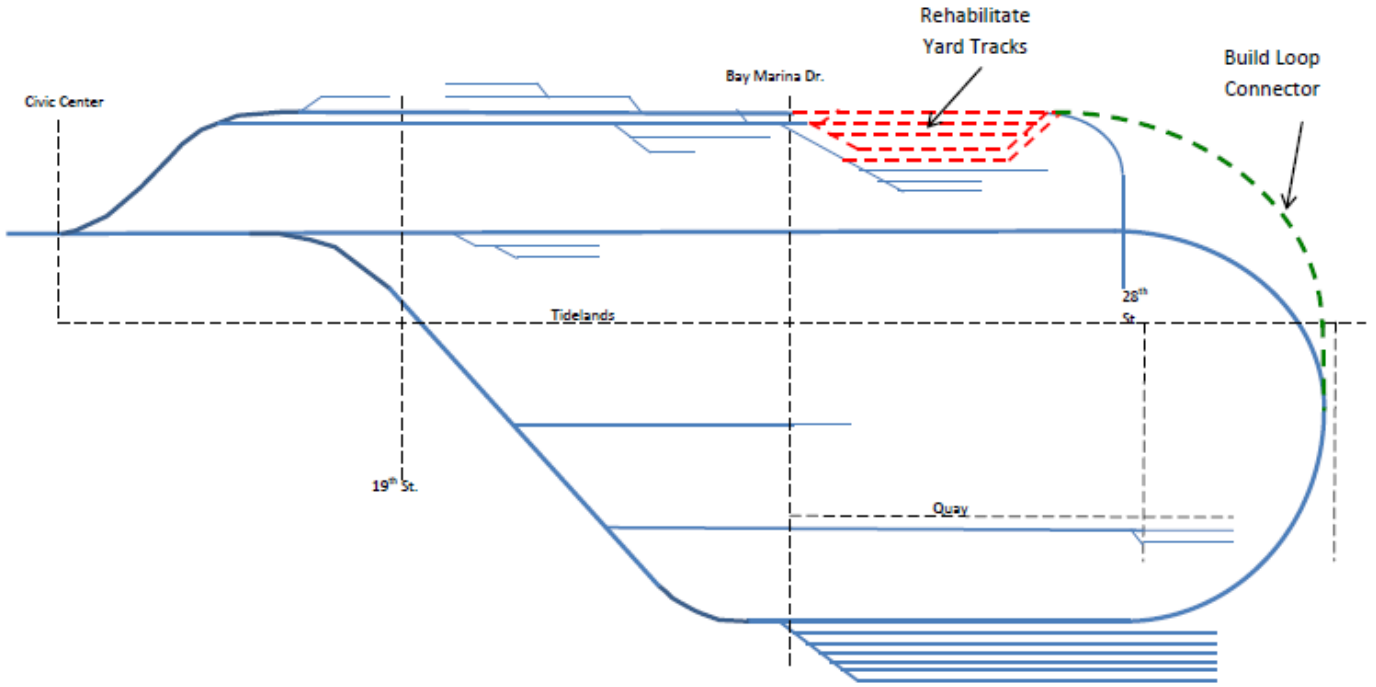
NCMT Railcar Holding Capacity: PAS Proposed Track Changes

- PAS and BNSF are proposing to rebuild several tracks within the under-used BNSF-owned switching yard located in between the National Distribution Center and Bay Marina Drive, and to build a new track connecting the south end of the existing loop track with that BNSF Yard
- This proposal would add 30-45 railcar spots, depending on the extent of the yard rehabilitation
- However, the loop connector would bisect land parcel 025-101 (a.k.a "Lot K"), immediately north of the marina, and impair the implementation of National City's Vision Plan for the area around the marina – it would also increase noise levels for guests staying at the Marina Gateway Hotel, particularly in rooms facing the rail yard



NCMT Railcar Holding Capacity:
Other Location Options for Railcar Storage

- Mercator identified four options for adding rail-car storage capacity in support of PAS' operation at NCMT, as alternatives to the PAS proposal described on the preceding page
- These options could be developed sequentially or in tandem, and their respective sites are shown below

NCMT Railcar Holding Capacity:
Other Locations for Railcar Storage – Option A

- Option A entails the construction of a storage track parallel to and immediately east of the eastern portion of the existing loop track, between 19th Street and Bay Marina Drive, as shown below
- This option would add at least 11 railcar spots, after allowing for the FRA-required setback from Bay Marina Drive

This new track is believed to be located on BNSF property and if so, its construction would thus require that railroad's agreement

Cell Tower

he loss of about 10 trailer parking spots, west of the central part of the NDC (where the distance from the loading dock nceline is only about 185')

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Option B-2 would entail the construction of a second track, adjacent to the B-1 track and also on Port property, but might result in a further loss of trailer parking spots for NDC's clients

agreement from BNSF, and would entail the loss of about 0.5 acres of space currently used by PAS for vehicle storage

Cell Tower

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NCMT Railcar Holding Capacity: Other Locations for Railcar Storage – Option D

- Option D involves the construction of two storage tracks, each about 1400’ long, on the east side of the western portion of the loop track, between the entrance to the current NCMT rail yard and the turnout to the curve of the loop, as shown below
- This option would add 27 railcar spots, but would entail the loss of a 30’ x 1600’ strip of land (about 1.1 acres) to allow room for realigning the northern half of the current service road inside the terminal

- Moreover, this option would enable empty railcars to be stored in close proximity to the working tracks, thus reducing the time to reposition cars from storage to loading

NCMT Railcar Holding Capacity: Additional Comments on Options A-D

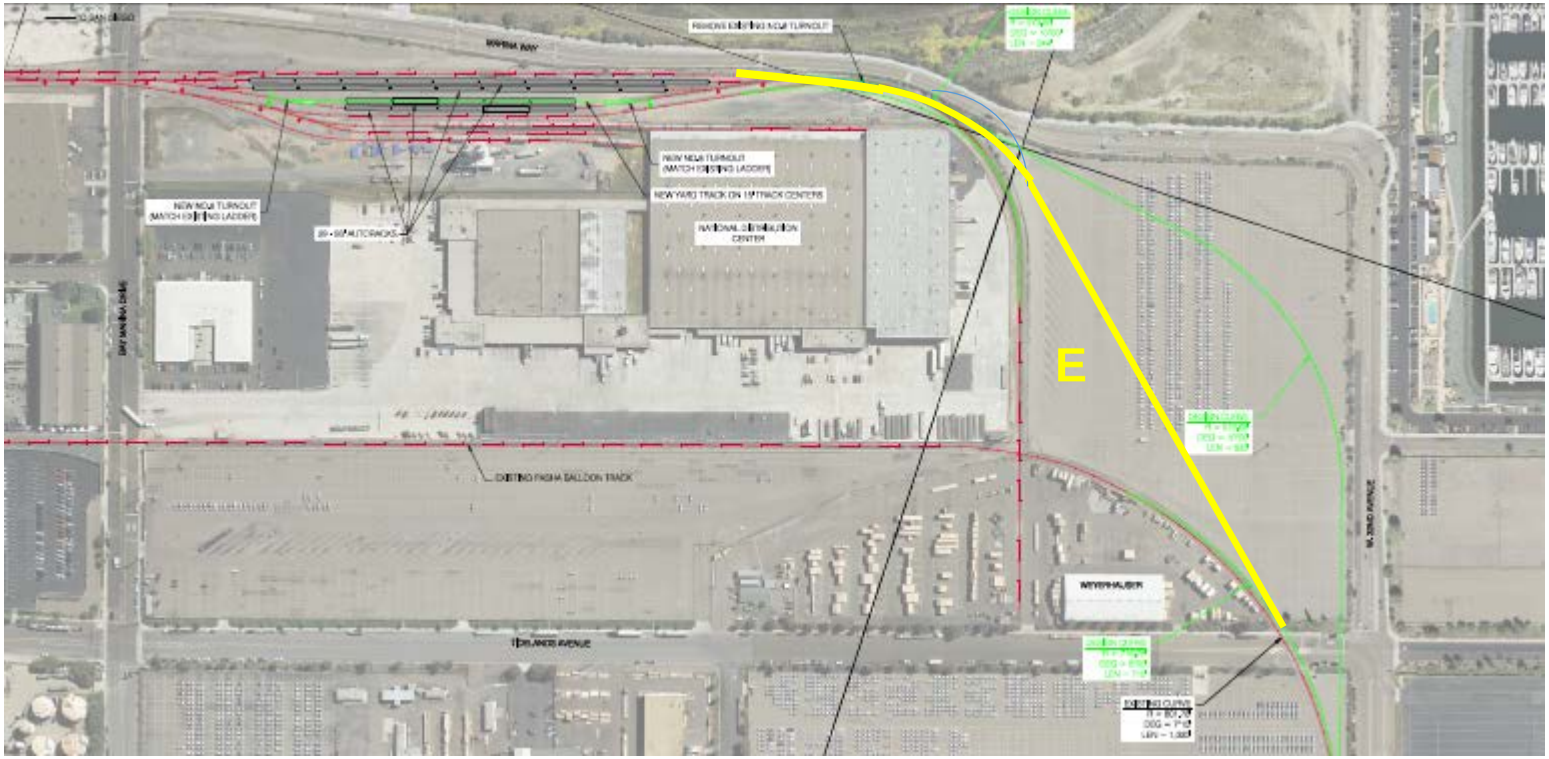
- With each of the A-D options, BNSF train crews would be able to spot empty railcars onto the proposed storage track(s) by either "pulling" or "shoving" in, as each track would have a turnout on each end
- Although the A-D Options could be constructed independently (or sequentially over time), if A and B are built concurrently, it would avoid the cost of building two turnouts, and….
  - It would allow Track A and Track B to be connected with each other, and the number of engine switch moves would be reduced by having a single track nearly 3000' long (as compared to several tracks of 600-800' long in the BNSF Yard)
- Rough estimates of the costs to construct these four track options were developed by Mercator, based on using 115-pound second-hand rail, wood crossties, recycled turnouts, and basic grading (i.e. with no cut and fill required, and without allowances for environmental permits, no modifications to drainage arrangements or the cost of relating the transformer at the NDC) ---these estimates are summarized below:

OPTION	ESTIMATED TTL GRADE-FEET OF SIDING(S)	ESTIMATED LENGTH OF TANGENT TRACK	# OF TURNOUTS	ESTIMATED APPROX COST TO BUILD	RAIL-CAR SPOTS
A alone	1275	960	2	300000	11
B-1 alone	1745	1425	2	400000	16
A + B-1	3120	2805	2	680000	32
B-1 + B-2	3175	2540	4	740,000	28
A + B-1 & B-2	4550	3920	4	1020000	44
C alone	1685	1365	2	390000	15
A + B-1 + C	4805	4170	4	1070000	47
D-siding 1	1720	1405	2	400000	15
D-siding 2	1405	1090	2	330000	12
D - sidings 1/2	3125	2495	4	730000	27

- *Note -- the preceding figures do not include allowances for moving or adding crossing gates for Bay Marina Drive*

NCMT Railcar Holding Capacity: Option E

- In addition to the A-D options, Mercator also reviewed a variation of the PAS proposal, in which the track that connects the south end of the BNSF Yard with the existing loop track traverses through Land Parcel 025-010 (Lot K) farther away from the marina and, while still having a curvature suitable for automotive railcars.
- This alternative track alignment is shown below……Mercator estimates that the construction cost of this option could potentially be less than the cost of the PAS proposal because it avoids a new at-grade crossing of Tidelands Avenue.



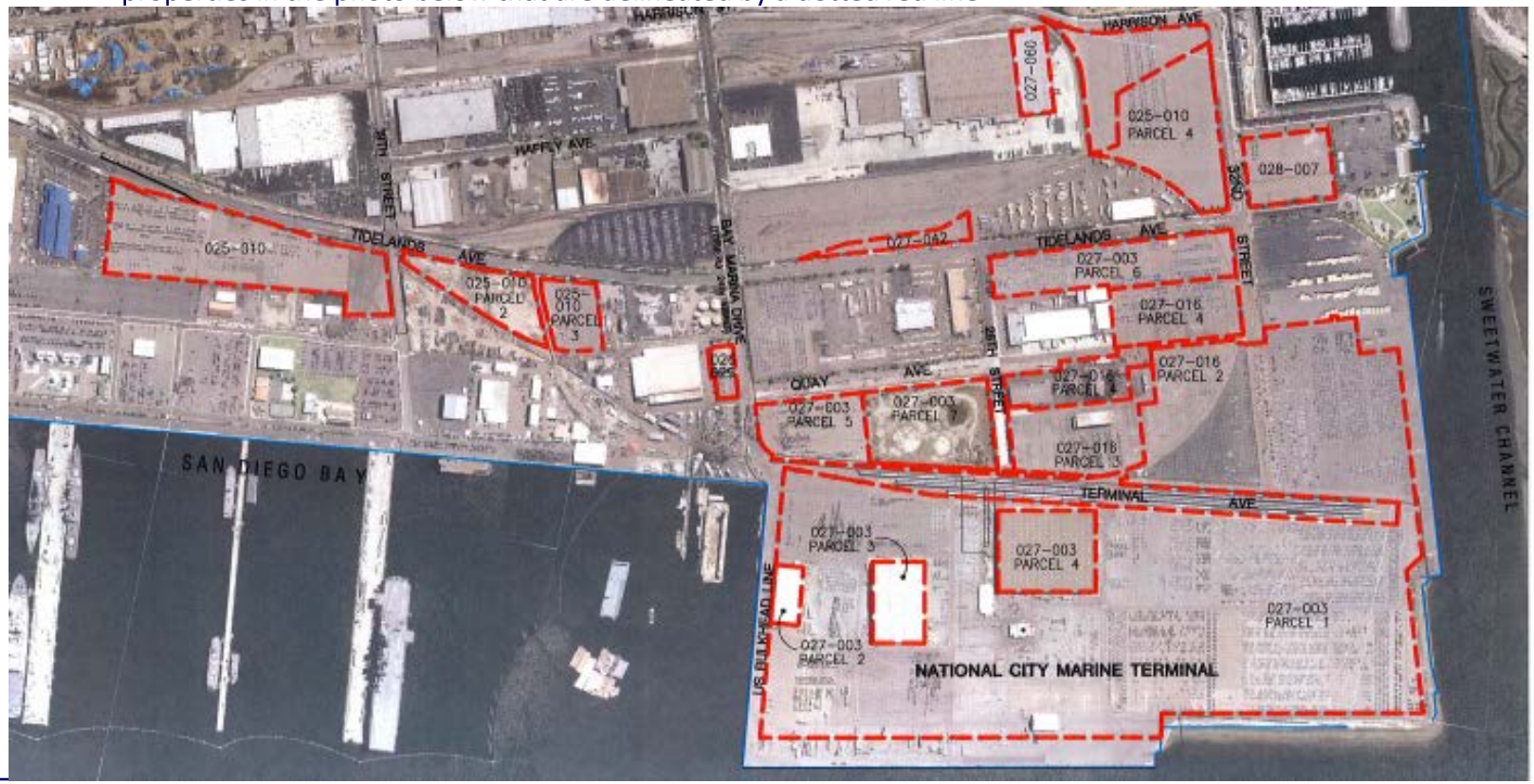
- However, this variation could potentially have fewer railcar storage positions than the plan proposed by PAS, because of where the connector track would tie into the yard track

National City Marine Terminal Study
Discussion Outline

- **BACKGROUND AND OVERVIEW OF STUDY**
  - **NCMT's Competitive Environment**
  - **NCMT's Traffic Growth Prospects**
  - **NCMT's Operational Framework**
- **OPTIONS FOR INCREASING RAILCAR STORAGE CAPACITY**
- ***REQUIREMENTS FOR VEHICLE STORAGE CAPACITY***
- **CONCLUSIONS ON NCMT OPTIONS**

NCMT Vehicle Storage Needs Assessment: Current Acreage Framework

- PAS presently operates on multiple land parcels in the National City terminal area , under two separate frameworks with the Port
  - A long-term (30-year) terminal concession agreement (referred to as the TOA), covering the parcels shown in the aerial photo below as "027-003", Parcels 1-7
  - A short-term (4-year) agreement, through a Tidelands Use & Occupancy Permit (TUOP), covering the other properties in the photo below that are delineated by a dotted red line



NCMT Vehicle Storage Needs Assessment: Current Acreage Framework

- The sizes and uses of the various SDUPD parcels shown on the prior page are summarized in the following table:

Pasha Automotive Services - Land Areas at National City - November 2012

Agreement	Clerk Document No.	Parcel No.	Tidelands Map Book No.	Square Feet	Acreage	Group Totals	Description
Terminal Operator Agreement	57251	1	027-003	4,018,355	92.25		Main NCMT Area
		2	027-003	40,491	0.93		Building 24-1
		3	027-003	104,061	2.39		Building 24-A
		4	027-003	194,218	4.46		Building 24-B
		5	027-003	185,093	4.25		Bay Marina Drive and Quay Ave.
		6	027-003	239,436	5.50		Tidelands Ave. and 28th St.
		7	027-003	248,882	5.71		Former Tank Farm
		8	027-003	4,530	0.10		Carwash Building
		9	027-009	3,609	0.08		Trailer Office
		10	027-009	1,005	0.02	115.70	Clerk Shack
Tideland Use and Occupancy Permit	58510	1	027-016	176,547	4.05		South of PLA-ART
		2	027-016	176,005	4.04		West of Parcel 1 above
		3	027-016	242,650	5.57		Terminal Ave. and 28th St.
		4	027-016	139,354	3.20		Quay Ave. and 28th St.
		5	027-016	4,853	0.11	16.97	Along 28th St.
Tideland Use and Occupancy Permit	59461	1	025-010	409,655	9.40		Tidelands Ave. north of 19th St.
		2	025-010	131,805	3.03		Tidelands Ave. south of 19th St.
		3	025-010	88,193	2.02		South of Parcel 2 above
		4	025-010	49,840	1.14		Tidelands Ave. south of Bay Marina Dr.
		5	025-010	495,411	11.37	26.97	Lot K
Tideland Use and Occupancy Permit	58513	N/A		1,459	0.03	0.03	Maintenance
Tideland Use Permit	59525	N/A	028-007	145,811	3.35	3.35	SE Corner 32nd St. and Tidelands Ave.
Lease (NDC warehouse)	57148	N/A		68,042	1.56	1.56	National Distribution Center
Lease (PAS Offices)	51255	N/A	026-029	26,582	0.61	0.61	Office Space
Grand Total Area				7,195,887	165.19	165.19	
Gross PAS Operating Area - Excluding tank Farm, NDC and Office Lease					157.3		

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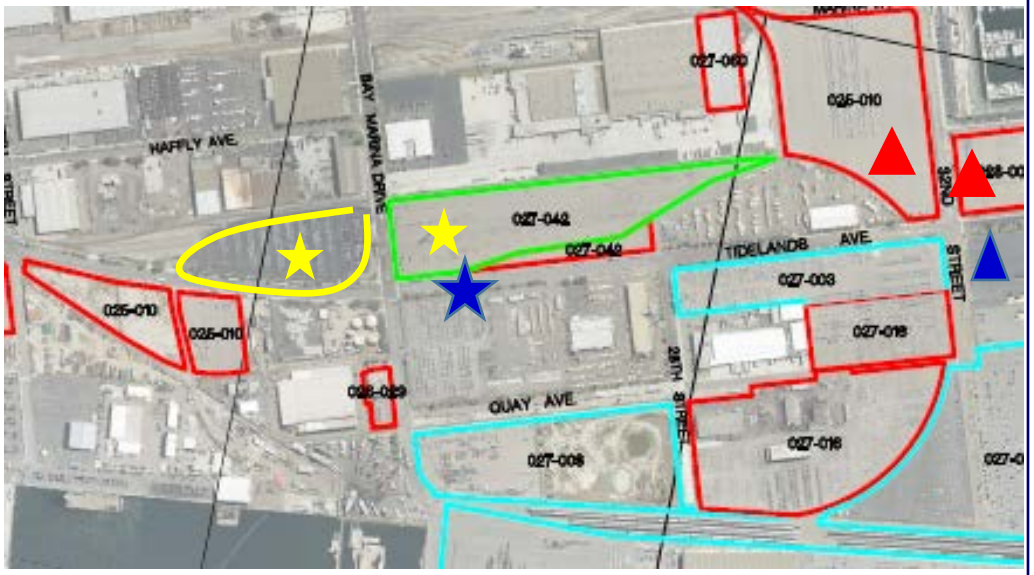
NCMT Vehicle Storage Needs Assessment: Current Acreage Framework – Part 2

- As noted on the prior page, PAS is not able to operate on all of its total SDUPD acreage. A further segmentation of the parcels in terms of usability for vehicle storage is provided in the following table:

Agreement	Clerk Document No.	Parcel No.	Tidelands Map Book No.	Square Feet	Area / Description	Total Acreage 2012	Areas NOT Usable for Auto Storage	Net Auto Storage Acres 2012
Terminal Operator Agreement (TOA)	57251	1	027-003	4,018,355	**Main NCMT Area**	92.25		64.10
					Longshore parking area (Sweetwater)		*3.84*	
					Area for PHTL Cargo, net of Bldg. 24-1		*24.31*	
		2	027-003	40,491	Bldg 24-1	0.93	*0.93*	
		3	027-003	104,061	Bldg 24-A	2.39	*2.39*	
		4	027-003	194,218	Bldg 24-B	4.46	*4.46*	
					Operational Areas around Bldgs 24-A&B		*1.19*	(1.19)
		5	027-003	185,093	**Bay Marina Drive and Quay Ave.**	4.25		4.25
		6	027-003	239,436	**Tidelands Ave. and 28th St.**	5.50		5.50
		7	027-003	248,882	Former Tank Farm	5.71	*5.71*	
		8	027-003	4,530	Carwash Building	0.10	*0.10*	
		9	027-009	3,609	Trailer Office	0.08	*0.08*	
		10	027-009	1,005	Clerk Shack	0.02	*0.02*	
Subtotal TOA Areas				5,039,680	**Subtotal TOA Areas**	115.70	43.04	72.65
Tideland Use and Occupancy Permit (TUOP)	58510	1	027-016	176,547	**South of PLA-ART**	4.05		2.36
		2	027-016	176,005	**West of Parcel 1 above**	4.04		2.35
					Haul-away operations area (S. of PLA ART)		*3.39*	
		3	027-016	242,650	**Terminal Ave. and 28th St.**	5.57		5.57
		4	027-016	139,354	**Quay Ave. and 28th St.**	3.20		3.20
		5	027-016	4,853	**Along 28th St.**	0.11		0.11
Tideland Use and Occupancy Permit (TUOP)	59461	1	025-010	409,655	**Tidelands Ave. north of 19th St.**	9.40		9.40
		2	025-010	131,805	**Tidelands Ave. south of 19th St.**	3.03		3.03
		3	025-010	88,193	**South of Parcel 2 above**	2.02		2.02
		4	025-010	49,840	**Tidelands Ave. south of Bay Marina Dr.**	1.14		1.14
		5	025-010	495,411	**Lot K**	11.37		9.80
					Haul-away operations area 2 (at Lot K)		*1.57*	
Tideland Use and Occupancy Permit (TUOP)	58513	N/A		1,459	Maintenance	0.03	0.03	
Tideland Use Permit	59525	N/A	028-007	145,811	S. of 32nd & East of Tidelands	3.35		3.35
Subtotal TUOP Areas				2,061,583	**Subtotal TUOP Areas**	47.32	4.99	42.33
NDC & Office Leases				94,624	NDC & Office Leases	2.17	2.17	-
Grand Total SDUPD Areas					**Total Areas From SDUPD**	165.19	50.20	114.99

NCMT Vehicle Storage Needs Assessment: Current Acreage Framework – Additional Notes

- In addition to the 115 acres of SDUPD property that PAS has agreements for and uses for vehicle storage, the company also presently leases two separate parcels of land owned by the BNSF, with an estimated 14.8 acres for vehicle storage.
- These parcels are on the west side of the eastern portion of the loop track, as shown in yellow & green (w/ yellow stars) in the aerial photo to the right.
- However, because these parcels are leased on a short-term basis and because BNSF could have other uses for them over time, *we have not assumed that these acres will be available to PAS for meeting its long-term space requirements*
- PAS is also sub-leasing a 3.7 acre-parcel of land from Dixie Line (where the blue star is)
- PAS also stores cars in the 7-acre first point of rest area for the lumber barges (where the blue triangle is), as these latter vessels arrive infrequently



Note -- Two of the TUOP land parcels that are in use by PAS, and that are also about 14.8 acres in size, have been requested by the City of National City to implement its Vision Plan for the Marina area (shown with red triangles)

- Depending on SDUPD's plans for its lumber business, *these latter two parcels may or may not be available to PAS for its long-term space needs*

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NCMT Vehicle Storage Needs Assessment: Unconstrained Aggregate Volume Projection

- To assess how much acreage PAS is likely to need at NCMT to handle its RO-RO business in a commercially acceptable manner, Mercator first constructed a forecast of the aggregate volume of vehicles to be handled through the terminal from 2013 to 2020
- In doing so, we assumed that PAS would retain all of its current accounts and traffic flows, and that its volumes would increase – in aggregate – at an average annual rate of 2.5% (which is a slightly higher rate than the effective rate forecasted by the Center for Automotive Research (2.3%) but is less than what other industry analysts have projected)
- We also included two tranches of new business that PAS hopes to secure in 2013-2014 : a new traffic flow from one of its existing customers, and an entirely new customer *[not included is incremental PHTL business to Hawaii]*
- The resulting forecast is presented below:

PAS Vehicle Throughput	**2009**	**2010**	**2011**	**2012 F**	**2013 F**	**2014 F**	**2015 F**	**2020 F**
Volume Growth Rates						**2.5%**	**2.5%**	**2.5%**
Customer 1				98,867	108,754	111,472	114,259	129,274
Customer 2				86,829	91,170	93,449	95,786	108,373
Customer 3				24,907	24,907	25,529	26,167	29,606
Customer 4				3,020	3,020	3,095	3,173	3,589
Customer 5				91,313	103,184	105,764	108,408	122,654
Customer 6				315	381	391	401	453
Customer 7				10,604	11,346	11,630	11,920	13,487
All Others				19,948	18,886	19,358	19,842	22,449
Total Autos - Base (Existing) Activities	214,028	260,177	258,967	335,802	361,647	370,689	379,956	429,885
Customer 2 - New Flow					15,000	15,375	15,759	17,830
Customer 8 - New Business					65,000	66,625	68,291	77,265
Total New Business Vol 000s					80,000	82,000	84,050	95,095
Total Vehicle Throughput (000s) (Existing + New)	**214,028**	**260,177**	**258,967**	**335,802**	**441,647**	**452,689**	**464,006**	**524,980**

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NCMT Vehicle Storage Needs Assessment: Vehicle Dwell Time Data and Projections

- Because the amount of acreage required for cargo storage is directly a function of the average amount of time that a unit of cargo stays (or "dwells") on the terminal, Mercator, with input from PAS, also developed average dwell time figures for our NCMT capacity planning model
- For the existing business, historical data on dwell time (provided by PAS) was used to construct projections for each type of traffic currently handled at NCMT
- For the two tranches of anticipated new business, the estimates were based on input from PAS
- The combined set of assumptions is provided in the following table:

Vehicle Dwell Time at NCMT	2009	2010	2011	2012 F	2013 F	2014 F	2015 F	2020 F
Dwell Time - Days on Terminal - Existing Traffic								
Customer 1				10.8	12.9	12.9	12.9	12.9
Customer 2				3.7	4.4	4.4	4.4	4.4
Customer 3				8.4	10.0	10.0	10.0	10.0
Customer 4				48.0	48.0	48.0	48.0	48.0
Customer 5				10.0	12.0	12.0	12.0	12.0
Customer 6				186.2	186.2	186.2	186.2	186.2
Customer 7				10.0	12.0	12.0	12.0	12.0
All Others				12.7	15.2	15.2	15.2	15.2
Total Autos - Base (Existing) Activities	14.8	10.0	9.5	9.15	10.9	10.9	10.9	10.9
Customer 2 - New Volume (w/processing)					10.40	10.40	10.40	10.40
Customer 2 - Extension to Dwell Time (w/Processing)					6.00	6.00	6.00	6.00
Customer 8 - Processing and Rail Loading					15.00	15.00	15.00	15.00
Total New Business Vol 000s					9.47	7.00	7.00	7.00

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NCMT Vehicle Storage Needs Assessment: Average Vehicle Inventory On-Terminal

- Dividing the projected volume for a particular traffic flow type by the number of inventory "turns" per year (which itself is 365 divided by average dwell time) yields the ***average*** number of vehicles expected to be on the terminal at any given time, over the course of the year
- Average inventory figures considering current traffic flows are summarized in the following table:

Average Vehicle Inventory on Terminal at NCMT Existing PAS Traffic	2009	2010	2011	2012	2013 F	2014 F	2015 F	2020 F
Customer 1				2,920	3,854	3,950	4,049	4,581
Customer 2				877	1,099	1,127	1,155	1,306
Customer 3				570	684	702	719	814
Customer 4				397	397	407	417	472
Customer 5				2,512	3,406	3,491	3,579	4,049
Customer 6				161	195	200	205	231
Customer 7				291	374	383	393	444
All Others	-			694	788	808	828	937
Total Avg Auto Inventory - Base (Existing) Activities	8,678	7,128	6,740	8,422	10,798	11,068	11,344	12,835

- The combined impact of expected increases in dwell time and growth in existing traffic flows would increase average inventory on terminal by about 50% between 2012 and 2020.

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NCMT Vehicle Storage Needs Assessment: Average Vehicle Inventory On-Terminal

- There are two sources of incremental inventory that could need to be accommodated at National City – new throughput traffic and new processing activity.
  - Inventory for new throughput traffic from Customer #2 and separately for Customer #8 is estimated in the same way as inventory for current traffic –i.e., the incremental volume is divided by the expected average turns per year for each new flow
  - Taking on the processing work for Customer #2 would add an estimated 6 days dwell time to the existing traffic of that company (which is currently moving by rail to an inland location for processing), requiring an adjustment to the average turns per year for that customer
- These calculations are summarized in the following table:

Average Vehicle Inventory on Terminal at NCMT	2009	2010	2011	2012	2013 F	2014 F	2015 F	2020 F
New Activity								
Cust 2 - New Volume (Add'l. traffic attached to processing work)					427	438	449	508
Cust 2 - Extended Dwell (Add'l. time to do Processing work)					1,499	1,536	1,575	1,781
Cust 8 - Processing and Rail Loading					2,671	2,738	2,806	3,175
Total Avg Auto Inventory - New Business / Activities					4,597	4,712	4,830	5,465
Grand Total Average Daily Inventory	**8,678**	**7,128**	**6,740**	**8,422**	**15,395**	**15,780**	**16,174**	**18,300**

- With additional throughput traffic and additional processing activity, average NCMT inventories would increase from about 8,400 units in 2012 to about 18,300 by 2020
- However, as is shown on the following page, the amount of inventory on the terminal can fluctuate significantly on a week-to-week basis, from well above to well below the annual average figure

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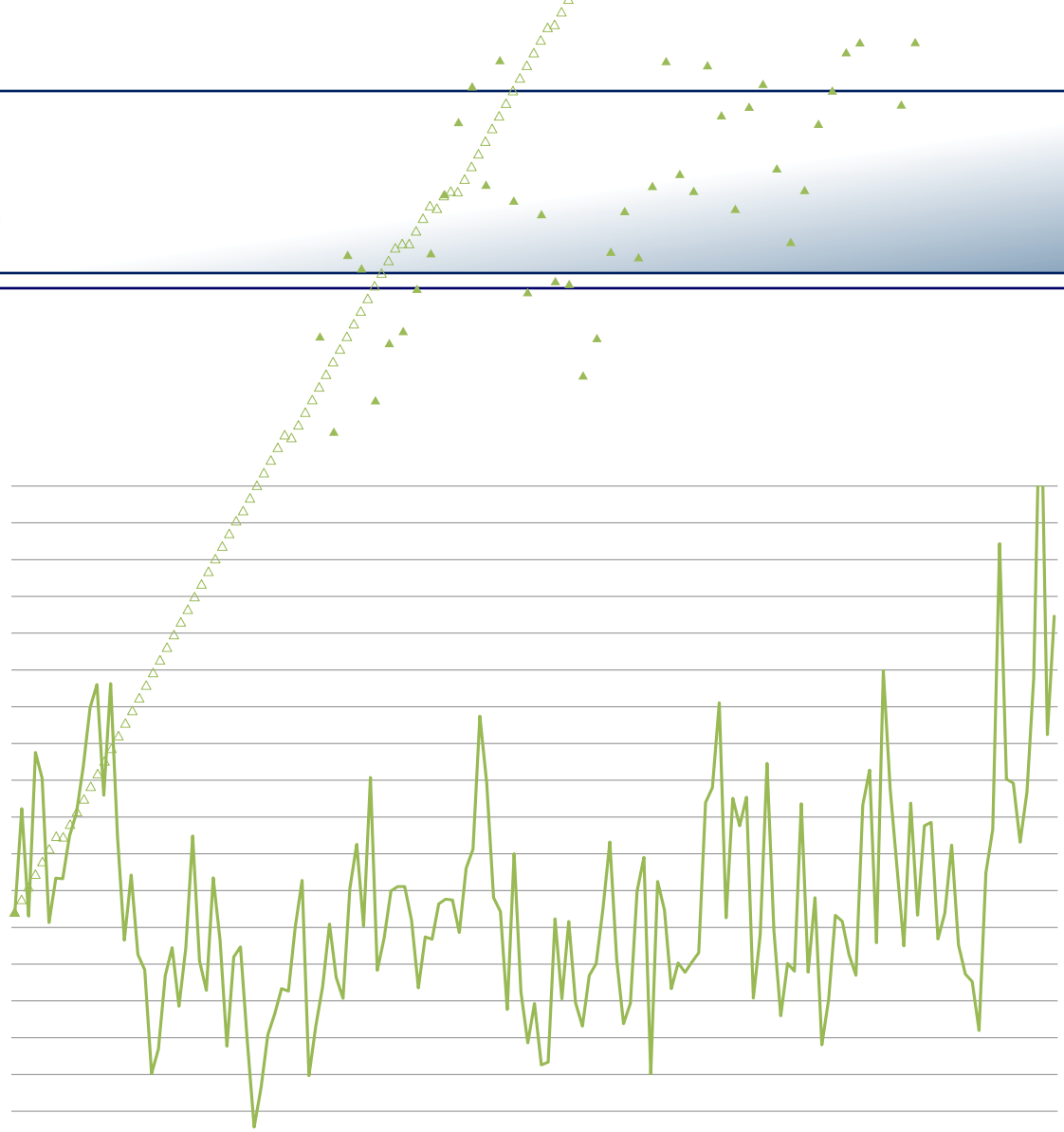
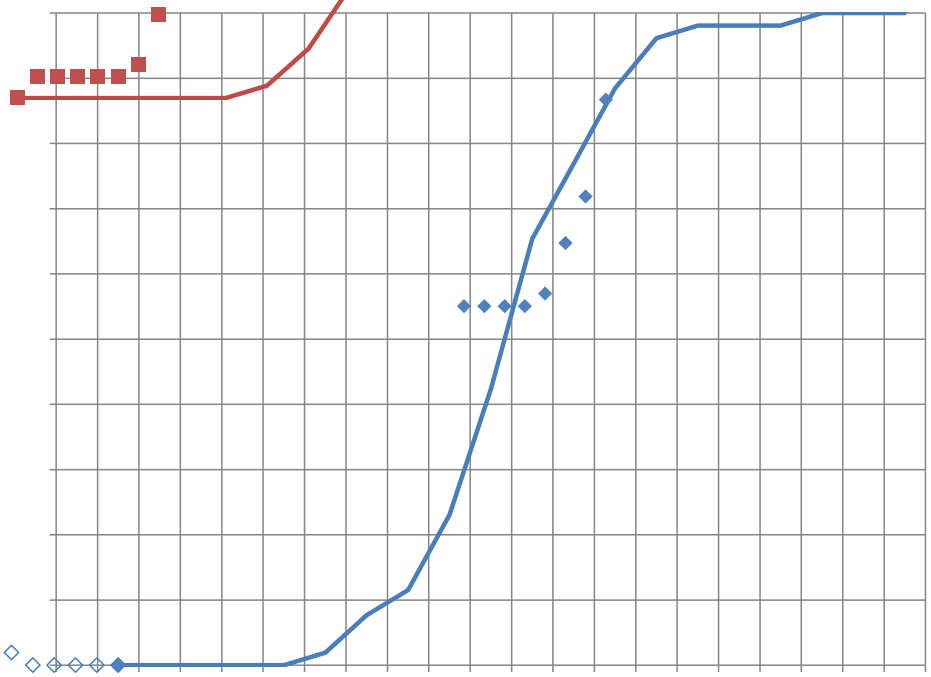


NCMT Vehicle Storage Needs Assessment: Incidence of Inventory Peaking

- For an additional insight, Mercator then constructed the following graph in order to show how the pattern of inventory peaking for PAS has been fairly consistent over the past four years



- As shown above, the terminal needs enough acreage to be able to store 1.5 times its average quarterly inventory, in order to be able to accommodate 90% of its peak volume weeks

NCMT Vehicle Storage Needs Assessment: Estimation of Acreage Requirements – Base Traffic

- Based on the statistical analysis summarized in the preceding two pages, Mercator concluded that it would be reasonable to increase the average annual inventory by 1.50 to determine the "design" inventory (which would cover bout 90% of all experienced weekly peaks since the beginning of 2010)
- This design inventory is then increased by the inverse of 90% to reflect the maximum practical utilization of vehicle storage space that can be achieved during peak periods and to thereby arrive at the amount of storage capacity required to handle over 90% of the terminal's peaks
- The resulting calculations are provided in the following table:

Estimated Storage Area Requirement - Current Traffi	2009	2010	2011	2012 F	2013 F	2014 F	2015 F	2020 F
Average Inventory - Base Activity (000s)	8,678	7,128	6,740	8,422	10,798	11,068	11,344	12,835
Peak Factor (to cover abt 90% of weeks -09-'12)	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Design (Peak) Inventory to Be Accommodated	13,018	10,692	10,110	12,633	16,196	16,601	17,016	19,252
Maximum Spot Utilization at Peak Periods	90%	90%	90%	90%	90%	90%	90%	90%
Required (Peak) Storage Capacity - Current Traffic	14,460	11,880	11,230	14,040	18,000	18,450	18,910	21,390
Cars (VINs) per Acre	154	154	154	154	154	154	154	154
Open Vehicle Storage Acres Req'd. - Current Traffic	**93.9**	**77.1**	**72.9**	**91.2**	**116.9**	**119.8**	**122.8**	**138.9**

- The foregoing analysis indicates a need for about 117 acres of open vehicle storage to support the current traffic base in 2013.
- ***Even without any new customers or flows for PAS, the base business should require nearly 140 acres by 2020***

NCMT Vehicle Storage Needs Assessment: Estimation of Acreage Requirements – New Traffic

- Expanded storage will be required to accommodate the expected new traffic from Customers #2 and #8, along with the new processing activity for Customer #2
- In estimating the space required for these new flows and activities, we assume a lower level of inventory volatility (1.2 versus 1.5) and a slightly higher space utilization, because:
  - The vehicles from Customer #8 will arrive by truck directly from the assembly plant, and therefore should not have the same variability as cars arriving on inbound ships
  - The planned inventory for Customer #2's processing work already includes a substantial buffer allowance.
- Our calculations of the additional acreage required to accommodate the incremental business being targeted by PAS are presented in the following table:

Estimated Storage Area Requirement - New / Prospe	2009	2010	2011	2012 F	2013 F	2014 F	2015 F	2020 F
Average Inventory - Related to New Throughput / Activity					4,597	4,712	4,830	5,465
Peak Factor (reduce to account for steadier domestic flows)					1.20	1.20	1.20	1.20
Design (Peak) Inventory to Be Accommodated					5,517	5,655	5,796	6,558
Maximum Spot Utilization at Peak Periods					95%	95%	95%	95%
Cars (VINs) per Acre					154	154	154	154
Incremental Open Vehicle Storage Acres Required (New Business Related)					**37.7**	**38.7**	**39.6**	**44.8**
Combined Open Vehicle Storage - Acres Required	**93.9**	**77.1**	**72.9**	**91.2**	**154.6**	**158.5**	**162.4**	**183.7**

- As indicated above, ***the "current plus new" storage area requirement will be about 155 acres in 2013, and with 2.5% average annual growth thereafter, would exceed 180 acres by 2020 , which is a substantial increase from the 115 acres of vehicle storage area provided under the TOA and TUOP as outlined on page 39.***

National City Marine Terminal Study
Discussion Outline

- **BACKGROUND AND OVERVIEW OF STUDY**
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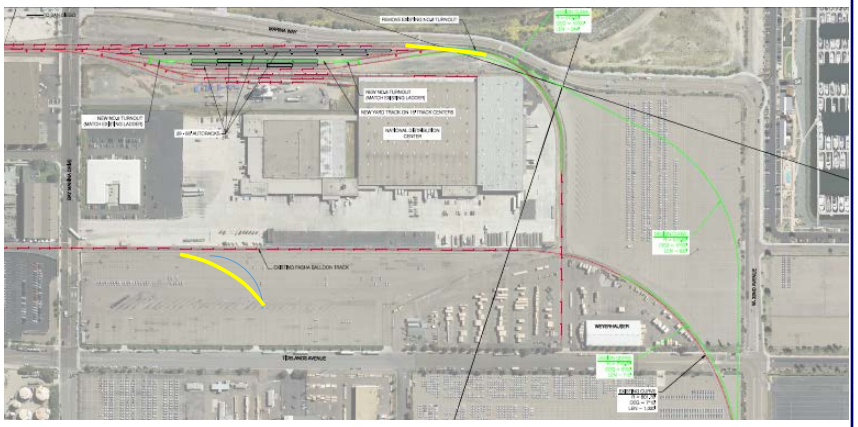
NCMT Land-Use Options: Railcar Buffer Inventory Locations

- The plan proposed by PAS, in concurrence with BNSF, would create storage positions for about 39 multi-level railcars on 5 tracks, with the rehabilitation of the railroad's yard east of the NDC
- Implementation of this plan would also provide track spots for railcars of other industries in the National City area, to be switched by PAS
- The plan also calls for the construction of a connector track linking the south end of the BNSF yard with the existing balloon track, near the intersection of Tidelands Avenue and 32nd Street
- The proposed configuration of this connector track would result in the majority of Lot K's acreage being usable for Port purposes (i.e. vehicle storage), leaving a smaller portion for commercial use (as in the artist's drawing above right, and the green line below right)
- An alternative configuration of the connector track (Option E) should be feasible from an operational/engineering perspective. This alternative would allow for a larger portion of Lot K to be available for commercial use (yellow line)
- However, Option E would likely create fewer railcar storage positions in the BNSF yard, and would still entail early morning train movements and railcar switching close to the Gateway Hotel and the Marina – as would the PAS plan



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NCMT Land-Use Options: Railcar Buffer Inventory Locations

- An alternative plan could be considered by SDUPD, PAS, and BNSF, that would entail less overall switching, less early-morning switching at the BNSF rail yard, and no train movements or track across Lot K
- This alternative would involve the concurrent implementation of Options A and B1/B2 (as described on pages 30-31 and as shown in the photo to the right), with the construction of two tracks parallel to and immediately east of the existing balloon track's eastern side
- Although this plan would require an additional grade crossing of Bay Marine Drive, it would be adjacent to the existing crossing, and would create about 43-44 railcar spots, after allowing for FRA-required setbacks from Bay Marina Drive
- With fewer tracks and turnouts, this alternative should have a capital cost comparable to, if not less than, the cost of the PAS plan
- However, this alternative may entail a reduction in the number of trailer parking spots on the west side of the NDC, and these lost spots might need to be relocated on the northern side of Lot K, just south of the Weyerhauser spur track

It should also be noted that the alternative plan put forward on this page would not preclude BNSF from rehabilitating a portion of its yard at National City, as this latter location would still be a useful site for staging the railcars of the industrial companies north of Bay Marina Drive

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NCMT Land-Use Options: Vehicle Storage Areas

- Like the global automotive market, the US vehicle import/export business is highly dynamic and volatile -- auto manufacturers have great difficulty in accurately projecting the volumes of their different products from particular assembly plants that they expect to sell in different regions of the United States beyond 12-18 months in advance
- Consequently, it is challenging for operators of vehicle-focused RO-RO terminals to forecast volumes of cars moving through a given marine terminal (especially as few manufacturers provide minimum volume commitments of longer than 12-24 months duration)
- Nonetheless, because of the extent of PAS' customer base, along with PAS' competitiveness and service position with its customers, it seems reasonable for Mercator to conclude that PAS will need 117-120 acres of open area in the near-term (2013-2014) for vehicle storage – just to handle the anticipated growth of its existing business (as summarized on page 47)
- As highlighted on page 39, PAS now uses about 115 acres of open vehicle storage on SDUPD land, under both TOA and TUOP permits, but about 11.4 of those acres are on the Lot K parcel, while another 3.35 acres constitute the parcel land south of 32nd Street and just west of the Marina (which is designated for eventual commercial use)
    - Even if PAS is able to use all of Lot K in 2013-2014, it could still lack enough acreage for its base business by 2015 if the BNSF parcels are not available and assuming the 3.35-acre parcel is developed. Expected acreage requirements of nearly 123 acres for the base business only would then exceed a supply of only just 111.65 acres
    - It is therefore apparent that ***PAS needs to proceed with redeveloping the 5.7-acre Tank Farm parcel as quickly as possible*** in order to partially mitigate this potential mid-term acreage gap
- Considering the estimated acreage requirements for the incremental business being targeted by PAS of 37+ acres (as shown on page 48), it is also apparent that in order for PAS to be able to capitalize on these or other growth opportunities, ***additional measures will be needed to increase the amount of open storage area at NCMT*** and thereby support increased vehicle inventory levels – these other measures are outlined on the following page

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NCMT Study: Land Use Allocation Concepts

- A few additional concepts were identified for increasing the amount of acreage available to PAS for vehicle storage:
  - Close off 28th Street west of Quay Avenue to create an additional 0.7 acres
  - Close off Quay Avenue between Bay Marina Drive and 28th Street to create an additional 1.3 acres
  - Close off Tidelands Avenue between 28th and 32nd Streets to create an additional 2.8 acres
- Beyond these preceding concepts, which collectively would add only 4.8 acres, SDUPD would *need to consider alternatives for its lumber business at NCMT*, which consumes about 19 acres collectively between the Weyerhauser and Dixie-Line properties
- With regard to Lot K, if PAS is able to secure one or both of its targeted new business opportunities in 2013, it will need as much that parcel's acreage as possible.
- In the long-term, it seems clear that ***PAS will be able to utilize whatever portion of Lot K is made available for port purposes***
- One option for sub-dividing Lot K between acreage for PAS and for commercial development (per the NC Vision Plan), that is consistent with the railcar storage plan discussed on page 51, is shown to the right

This option would provide about 4.5 acres of Lot K for commercial use, and retain about 6.9 acres for vehicle storage

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Assessment of Land/Rail Capacity Needs For National City Marine Terminal