

# An Analysis of Possible Alternative Models for the PierPass OffPeak Program

Final Report to  
PierPass Inc.



The Tioga Group  
World Class Logistics Consulting

April 30, 2018



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April 30, 2018

John Cushing  
President & CEO  
PierPass

Dear Mr. Cushing:

The Tioga Group team is pleased to present this report on Possible Alternative Models for the PierPass OffPeak Program. Tioga and World Class Logistics (WCL) appreciate the confidence PierPass and WCMTOA expressed in our team, and the cooperation we received from all involved.

Since 2005, the PierPass OffPeak program has been an effective means of mitigating day time truck traffic at San Pedro Bay marine container terminals. In recent years marine terminal operators and industry stakeholders have recognized some limitations in OffPeak's effectiveness, notably the loss of productivity near the 6 PM peak/offpeak changeover. Recent developments in appointment systems and other industry practices suggest that there may now be other ways to achieve OffPeak's traffic mitigation goal.

PierPass began the consideration of alternative models through a series of industry meetings. Those meetings identified three basic alternative models: a flat fee with an appointment system, a port-wide peel-off system, and a variable or dynamic pricing system. Subsequent meetings and analysis eliminated the variable or dynamic pricing option.

Tioga and WCL were therefore retained to evaluate the flat fee with appointment system model and the port-wide peel-off model on their ability to mitigate truck traffic, encourage efficiency, and achieve the other objectives of the existing OffPeak program and the industry participants.

This effort relied heavily on input from marine terminals operators, licensed motor carriers, beneficial cargo owners, and other involved stakeholders. Our work was made easier by the wide agreement we found on the basic facts, on the effectiveness and feasibility of the two models, and on the desired direction of change.

The study benefitted from data made available from PierPass, from WCMTOA members, and from the Harbor Trucking Association. Stakeholder responses to interviews and surveys were also critical. We are responsible for any errors, however, and stand ready to make any required corrections.

Sincerely,

Daniel Smith  
Principal

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## I. Introduction

### **Background**

PierPass and the OffPeak program have been a success, shifting a substantial portion of Los Angeles and Long Beach container terminal truck activity from the peak day shift and commute hours to the off-peak night shift. About half the truck moves have been shifted to off-peak shifts, and the system is generating funds to offset labor costs. The system has been stable since its introduction in 2005.

*“In Southern California, the PierPASS system has performed better than anyone expected, shifting 40% of all the containers moving through Los Angeles-Long Beach to off-peak hours and causing terminal operators to wonder if 45% can be achieved.”*

*- Peter Tirschwell,  
Journal of Commerce, March 2006*

Since 2005 the Southern California ports and the carriers and customers they serve have undergone a mixture of evolutionary and abrupt change. Cargo volumes grew rapidly, dropped still more rapidly during the recession, recovered, and are now growing more slowly. Competition with East Coast ports gradually escalated as importers broadened their port networks, then spiked with the opening of new Panama Canal locks. The San Pedro Bay ports also faced growing competition from Canadian and Mexican ports in inland North American markets.

Post-recession carrier withdrawal from chassis supply and formation of carrier alliances have markedly increased terminal complexity while large vessels have created cargo surges. The shift from storing containers on chassis to stacking containers in terminal requires additional labor functions and hours. With the need to reposition chassis and to return empty containers at different terminals according to alliance carrier requirements, motor carriers are making additional trips. Terminals have thus been performing more work and handling more truck trips to process the same cargo volumes as before the recession. At the same time, carrier financial distress is holding down terminal revenue.

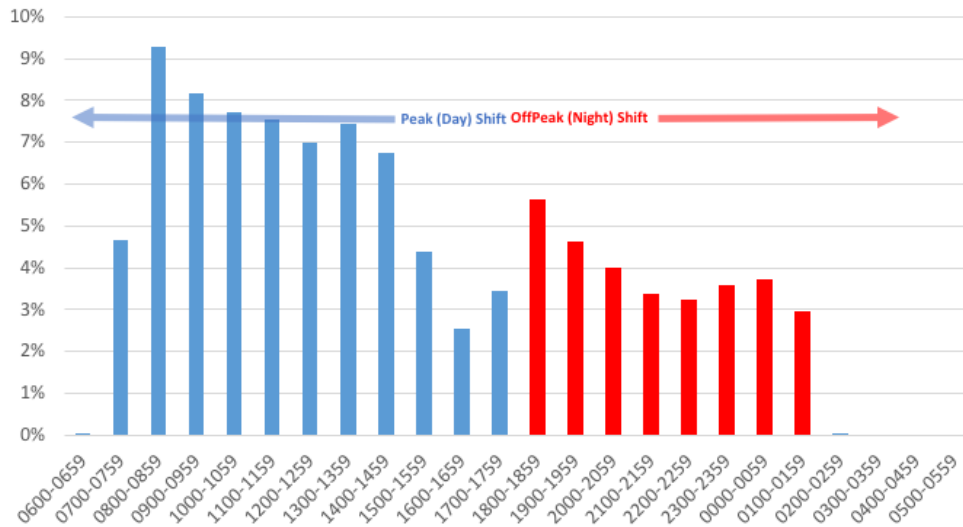
In the meantime, other ports and terminals have pushed ahead with extended gate hours, appointment systems, and fees in different combinations. While these initiatives are far from uniform, or uniformly applicable to San Pedro Bay ports, they have made progress in mitigating truck and terminal congestion

Industry calls for “PierPass 2.0” appear to recognize that PierPass has achieved its basic purpose, but that more could be done with the system. Although few participants have been clear on what “PierPass 2.0” should be, the currency of the term suggests broad recognition that refinements to the basic OffPeak program could help terminals, truckers, and BCOs adapt to changing circumstances.

### **Problem Understanding**

In one important sense, the system is not working as well as it must. Long truck queues are still forming and attracting unfavorable attention from nearby communities, public agencies, and elected officials. Despite the success of OffPeak in shifting truck trips off the day shift, gate arrivals remain uneven. Exhibit 1 below illustrates overall truck arrivals for September 2017. About 69% of the truck arrive at the terminal gates during the day shift, and the remaining 31% on the night shift.

**Exhibit 1: Truck Arrival Pattern - September 2017**



Moreover, adverse public attention tends to be cumulative and indiscriminate – all the terminals will be blamed for all queues past and present, regardless of cause. There is thus a threat of public inquiry into truck queues at a minimum, and public legislation or regulatory action at worst, if the terminal operators do not act to reduce the largest and most visible queues.

With the program now over a decade old, some stakeholders have asked if there are other models that could continue to better manage pick-up and deliveries while continuing to mitigate traffic flows on the Southern California roadways. The query came amidst questions of changing the Truck Mitigation Fee (TMF), as well as changing the impacts that the current model has on trucking queues at the start of the OffPeak shift. WCMTOA member terminals initiated a dialogue with supply chain stakeholders to consider ideas for alternative models to operate and fund extended gates.

At the same time there is an opportunity to improve in-terminal operations by incorporating new ways of doing business into the OffPeak program. Peel-off and dray-off operations have proven their value for terminal operators and customers alike. If applied systematically rather than piecemeal, those programs could better assist terminals in managing an increasingly complex container yard and containing the rising costs.

**Study Objective**

PierPass convened a meeting of stakeholders in October 2016 called the “Extended Gates Workshop.” The objective of the Extended Gates Workshop was to look at the various proposals PierPass and its member terminal operators have received over time for an alternative OffPeak operating model. Three basic options were evaluated:

- Variable and Dynamic Pricing
- Flat Fee with an Appointment System
- Port-Wide Peel-Off Program

The first option, Variable and Dynamic Pricing, lacked stakeholder support and has been dropped from further consideration. A key stakeholder suggested this model to PierPass and asked that it be considered as a means to “flatten” the number of trucks arriving at the terminal gates, hour-by-hour. Based on pricing that fluctuates throughout the day, users would opt to go to the terminals at times that were not as busy if the TMF was reduced. At the Extended Gates Workshop, none of the stakeholders supported a variable pricing model. Participants were concerned about:

- Impacts on other business models, i.e. LMC dispatcher attempts to maximize driver productivity and serve key customers.
- Variation in terminal busy times during the week.
- Disputes over terminal entry and exit times, and responsibility for delays.

The dynamic and variable pricing option was reintroduced at the first post-Extended Gates Workshop meeting. At this meeting, none of the members supported keeping this model as an alternative, so it was removed from further review and discussion.

The immediate objective for this study was to evaluate the Flat Fee with Appointment System (FFAS) and Port-Wide Peel-Off Program (PWPO) in greater detail and depth. WCMTOA members will use the results of the study as they consider refinements or changes to the OffPeak program.

In a broader sense, however, this study needed to do more than give the FFAS and PWPO alternatives a “thumbs up or thumbs down” evaluation. The WCMTOA members needed the best possible understanding of:

- Stakeholder acceptance of the basic FFAS and PWPO concepts and their likely operational response.
- The fit between FFAS and PWPO concepts and emerging Southern California supply chain practices.
- The significance of program features, such as the ability to make appointments more than 2-3 days in advance..
- The ways in which the alternatives will affect truck gate arrivals and transaction mix.
- Alternative impacts on truck congestion and queuing in relation to proposed traffic mitigation requirements and zero emission goals.
- Possibilities for “hybrid” systems that combine the advantages of FFAS and PWPO options.

This report is designed to give the WCMTOA members the maximum insight into these and other issues. There are opportunities for terminal productivity improvements to offset or even exceed the cost of new systems. Measures taken to reduce queuing, if carefully crafted and managed, should create opportunities for terminal efficiencies as well.

- By “flattening” the current uneven pattern of truck arrivals, a queuing solution could give the terminals more consistent and predictable gate arrivals, and reduce the extremes of under-utilization and over-crowding.
- A further step to even out the *types* of transactions (import deliveries, export receipts, empties, bare chassis, and bobtails) would assist MTOs (marine terminal operators) in planning, staging, and managing terminal operations as well.
- PierPass options might also be used to encourage better customer use of information technology (e.g. compliance with appointment system) or other efficiency innovations (e.g. supply chain changes to better accommodate peel-off deliveries)..



## Approach

The study approach was designed to give the WCMTOA members the analytic results and insights needed to move forward.

### Documenting Existing Conditions

The ultimate aim of this study is to help the WCMTOA members shift gate and container yard operating patterns and processes towards greater efficiency while continuing to mitigate traffic between the Peak and OffPeak shifts. To do so, and to gauge the potential for improvement, the team first developed a strong understanding of how the system is working now and the pattern that system is producing.

### Establishing PierPass's Goals and Expectations

The immediate study goal was to evaluate two alternative models for the OffPeak program: a flat fee with appointment system (FFAS), and a port-wide peel-off program (PWPO). An understanding of the goals and objectives for the two models was a critical first step in that evaluation. While it is easy for involved parties to agree on high-level goals such as efficiency, predictability, and safety, more specific objectives often involve tradeoffs and priorities that must be addressed.

The consultant team worked with PierPass management and WCMTOA members to prioritize goals and set expectations for alternative OffPeak models. WCMTOA members' objectives included:

**Mitigating truck traffic and maintaining the desired split of traffic between day and night gates.** The OffPeak program succeeded in shifting a substantial portion of truck traffic and terminal operations to the night shift. A new OffPeak program should preserve the desired split and, if possible, provide additional tools for terminals to fine-tune that split.

**Reducing morning and 6 PM gate queues and congestion.** At present, truck drivers queue up before the gates open in the morning and before the 6 PM peak/offpeak changeover. Drivers also idle in the terminals in late afternoon, after finishing their transactions, waiting to exit after 6 PM. The congestion and loss of productivity for both assets and labor are problems for all concerned.

**Leveling gate and container yard workload.** Trucks arrive at terminal gates in an uneven stream during the day, as illustrated earlier. This variability leads to uneven workloads and productivity for gate and container yard operations. To the extent that FFAS or PWPO options could level truck arrivals and CY activity, MTOs could plan and manage labor and equipment better.

**Facilitating terminal planning and management by making transaction volumes more predictable.** Beyond the variability of truck arrivals, FFAS or PWPO options might lead to better advance knowledge of transaction types (import delivery, export receipt, empty return, etc.) and volumes. MTOs could use this knowledge to plan container yard (CY) storage and retrieval.

**Reducing the need to "dig" for import boxes in container yard stacks.** Ocean carriers' decision to withdrawal from supplying chassis and increased cargo volumes have led MTOs to stack containers more often and higher. This trend has led in turn to an increased need to "dig" – lift and replace other containers – when a specific container is needed from lower in the stack. "Digging" increases terminal costs and truck turn times.

**Maintaining or increasing terminal revenue.** In an era of ocean carrier financial distress, MTOs cannot plan on recovering increased operating costs from escalation of ocean carrier cargo handling fees. The TMF was put in

place to fund the cost of extended gates independent of ocean carrier fees as well as to incentivize night shift truck moves. A new OffPeak system needs to generate at least as much terminal revenue as at present to support extended gates and administrative cost.

**Improving terminal capacity and asset utilization.** With growing cargo volumes and limited footprints, terminals need every means of increasing throughput and capacity. A new OffPeak program should promote throughput and asset utilization.

**Maximizing dual transactions (or enabling truckers to do so).** Many industry participants report reductions in dual transactions due to alliance complexities, empty return problems, chassis issues and appointment system rigidities. Empty moves are exempt from the TMF, and motor carriers report more empties being delivered during the day without a matching loaded move – an observation borne out by the data. Since more dual transactions are in everyone’s interest, a new OffPeak program should promote or enable movement in that direction.

**Maintaining compatibility with alliances, megaship surges, and changing chassis pool practices.** The evolving nature of carrier alliances, the increased use of mega-ships, and the complexities of chassis pools have added to the management burdens of MTOs, license motor carriers (LMCs) , and beneficial cargo owners (BCOs) beneficial cargo owners. It is impossible to predict exactly how these factors will play out in the future. It is therefore important that any new OffPeak program be compatible with existing conditions and flexible enough to accommodate future conditions.

**Assisting terminals and their partners to comply with CARB 2030 emissions goals and port 2017 Clean Air Action Plan goals.** The ambitious CARB and CAAP emissions and greenhouse gas goals will require extensive electrification of terminal and drayage operations; minimization of lifts, trips, and miles; and strong economics to finance costly new equipment. A new OffPeak program should help all parties attain those goals.

**Meeting customer and public expectations of continued operational, economic, and environmental improvement.** The San Pedro Bay ports and the shipping industry they serve operate in a “fishbowl”, with observers continually critical of terminal and drayage performance. There are customer demands for improved operations, lower costs, and reduced emissions from every quarter, and a new OffPeak program should help the industry address those demands.

**Increasing cargo velocity through marine terminals, and accommodating cargo growth.** Current cargo growth has been slower than before the recession, but cargo is still growing. The most recent San Pedro Bay cargo forecast calls for 3-5% growth, and the ports have recently set volume records. MTOs need to increase velocity to avoid congestion.

**Improving turn-times and facilitating operations for BCOs and truckers.** Truck turn times – including both queueing and in-terminal times – are a major focus for LMCs and their BCO clients.

### Assessing “Customer” Responses

Response to OffPeak alternatives will be shaped by a combination of industry practices and trends and individual customer preferences. To develop a complete picture the consultant team analyzed both.

**Relevant Supply Chain Trends.** While exotic technologies, such as robots and drones, capture the headlines, there are supply chain trends of greater significance to this analysis:

- The e-commerce evolution has created a “hyper-competitive” marketplace with increasing numbers of companies using their supply chain strategies as “competitive weapons.”
- Evolution of e-commerce has disrupted the global supply chain world with higher demands for speed-to-market, visibility, reliability, and flexibility.
- Logistics is moving toward a fully digital, connected, and flexible supply chain optimized for e-commerce and last-mile, last-minute delivery.
- The next generation of supply chains will enhance fulfillment capabilities and drive efficiencies through technology, ranging from big data and predictive analytics to artificial intelligence and robotics.
- Fear of the cloud is diminishing as concerns over data security give way to the desire for fast, flexible, high-powered computing. As legacy systems are retired, companies are replacing them with on-demand, cloud-based data solutions and services.
- Growth in multi-channel supply (especially e-commerce) is great news for consumers and even enterprise buyers, but it also continues to add considerable complexity for import and export supply chain managers.
- Transloading operations with their direct support for demand-pull strategies of time-sensitive cargos will continue to increase as percentage of imports.
- Shippers will increase their outsourcing to third-party logistics providers to achieve greater flexibility.
- Constant change in the goods movement industry pressures importers and exporters to become better “listeners” to the “outside” market dynamics.
- Innovations in goods movement stakeholder business models (e.g. Maersk Line expanding into land operations, FedEx purchasing Genco, a reverse logistics provider, etc.) will intensify and increase.
- Rising customer expectations resulting from e-commerce purchases are rippling back through the global supply chains demanding faster, more reliable, cost-effective services.

Considering today’s market dynamics, it is vital to marine terminal operating models that their processes enables maximum shipment visibility, flexibility, reliability, and ability to sequence shipments. Market conditions are demanding new, innovative strategies to meet higher levels of customer service.

**Customer contacts.** The responses of terminal “customers” are critical to the ability of the alternative OffPeak models’ ability to attain WCMTOA goals and expectations. There are several significant “customer” groups whose responses would be relevant:

- **Drayage firms and drivers.** Drayage firms and drivers must reconcile BCO requirements with MTO operations, and are directly affected by OffPeak program provisions.
- **Transloaders and 3PLs.** Cargo interests that do not own the cargo (e.g. 3PLs) will respond to OffPeak alternatives based on a mix of their own regarding cost and service and their customers’ (BCOs’) concerns, which may prioritize cost and service differently.
- **BCOs.** Cargo owners may respond differently depending on how they have adjusted to the current OffPeak program.

To solicit their input, the team scheduled in-person and telephone interviews and conducted an on-line survey to:

- Determine MTO, LMC, and BCO attitudes toward the existing system and toward the FFAS and PWPO options.
- Assess the feasibility of FFAS, PWPO, and hybrid concepts.
- Evaluate the expected performance of the alternatives against the criteria set forth above.
- Identify implementation issues and opportunities.

Tioga and WCL prepared their findings to assist WCMTOA in its alternative analysis deliberations.

## II. Existing Conditions

### *Current OffPeak System*

The OffPeak program was put in place in 2005 under the threat of drastic legislative requirements. In retrospect, the consulting team does not see a better option available at the time. Appointment systems and other technologies were under-developed at the time and faced widespread opposition. Most importantly, the OffPeak program worked, and it continues to work. Conditions change, however, and better options may have emerged.

While the TMF is well-established, nobody likes paying a fee. Stakeholders are often critical of the OffPeak program, and stakeholders perceive declining performance at the same time that their standards and their customer requirements are rising.

The current OffPeak program involves a TMF) charged for day shift moves. The 2017 fee is \$72.09 per TEU or \$144.18 per forty-foot container. The TMF is used to help defer the costs of the OffPeak shift (second shift) and the administrative costs of the program. The TMF is charged for loaded containers entering or exiting the terminals before 6 PM. Empty containers, rail intermodal containers, transshipped containers, and domestic moves are exempt from the TMF, as are bare chassis moves. Nine of the 12 terminals have appointment systems, but those systems are not part of the OffPeak program. The appointment systems vary in type and in detail.

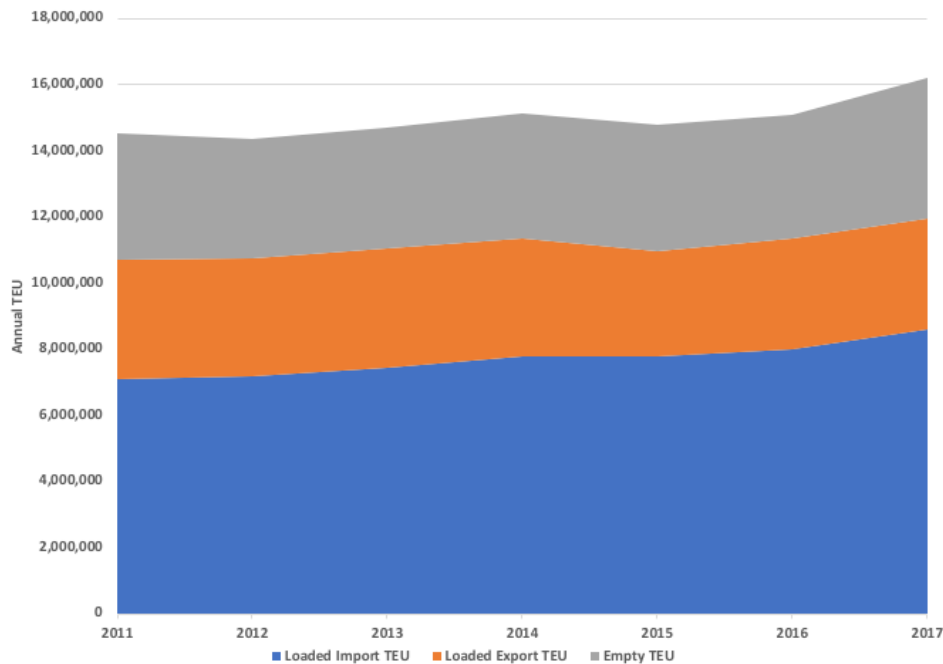
As of 2016, TMF revenue was covering about 81% of the net cost of extended gates, and the consultant team used that level as a benchmark.

BCOs make strenuous efforts to avoid paying the TMF. Many BCOs and truckers have adapted to OffPeak shifts, either by staying open at night or staging OffPeak loads for later delivery.

### *Cargo Volumes and Shares*

Cargo growth has been slower than pre-recession, but it increased in 2017 and is expected to be fairly strong in 2018 (Exhibit 2).

**Exhibit 2: Ports of Los Angeles and Long Beach TEU Volumes 2011-2017**



Imports drive the system, and the best available estimates put intermodal at about 36.5%; local/regional trucking at about 45.8%; and transloading or crossdocking at about 17.7%.

The term “transloading” has been used in many ways in recent years. Transloading refers to cargo that is transferred immediately from marine to domestic equipment without ever going into inventory. There are a number of these types of service providers within about 20 miles of the ports. In contrast, DCs (distribution centers) in the Inland Empire and elsewhere unload marine containers into inventory, then ship domestically some time later.

Two more things are becoming relevant: the problems being caused by alliances and larger ships, and the reality that chassis pools are still not truly neutral.

- Ocean carrier alliances are causing problems, especially with empty returns. LMCs cannot always return empties to the terminal where they were pulled as import loads, and empty return options change frequently.
- Chassis are not yet truly neutral. Despite creation of the “pool of pools”, there remain numerous legacy limitations on matching containers and chassis.

### **Peak/OffPeak Split**

In 2017, non-exempt loaded containers were split about 42% Peak (subject to the TMF) and 58% OffPeak (not subject to the TMF). This estimate is based on detailed data for September 2017, but has been verified by PierPass as applicable to 2017 as a whole. This split means that 42% of the non-exempt loaded containers are exiting the terminal gates before 6 PM and 58% after. Examination of the data suggests that a significant portion of the drivers that exit shortly after 6 PM have finished their transactions well before 6 PM, and have waited in the terminal to exit once they no longer have to pay the TMF. Therefore, more than 42% of the CY activity is

taking place on the day shift. As noted above, about 69% of the trucks actually arrive at the terminal gates during the day shift.

### Truck Arrival Patterns

Exhibit 3 provides the best available picture of the current truck arrival and processing pattern. This version is based on PierPass data and truck arrival data from HTA (Harbor Trucking Association).

**Exhibit 3: Truck Arrival and Exit Pattern**

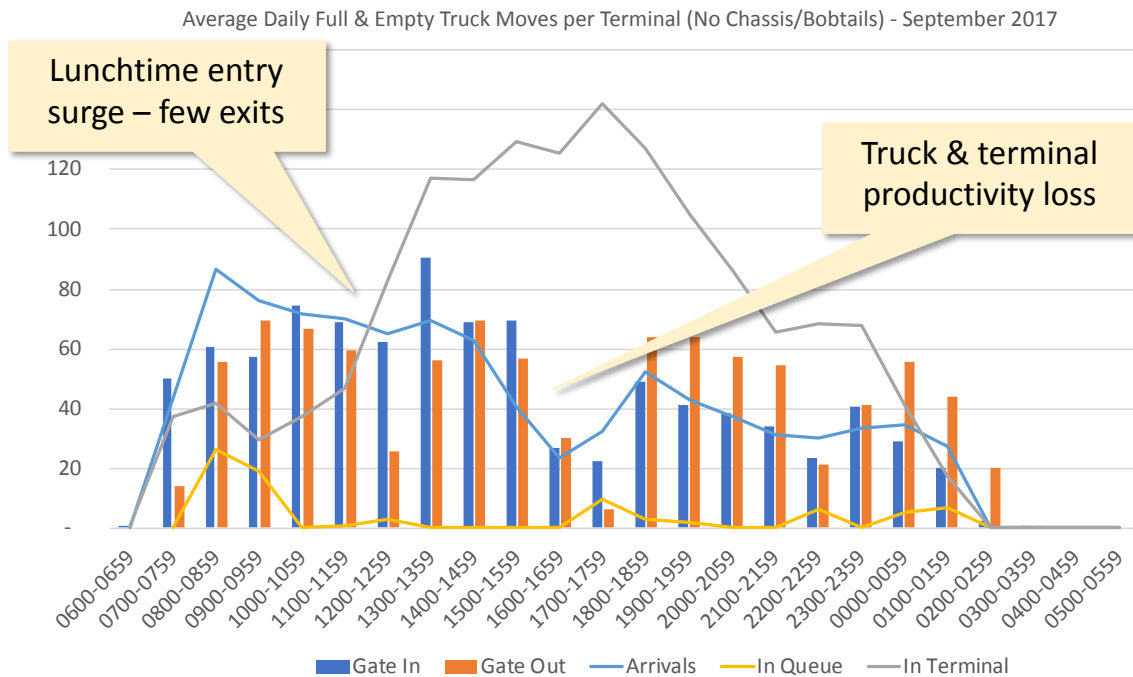


Exhibit 3 displays a familiar pattern. There are heavy arrivals early in the morning, a surge of trucks into the terminal, and a queue that builds up. As trucks begin exiting the queue declines.

Over lunch, it appears that a lot more trucks are entering than exiting, and there is a buildup of trucks in the terminal that persists all afternoon.

At about 3 PM everything stops. Few trucks enter, but the trucks in the terminal do not exit until 6PM. There is a modest queue outside, but in reality the bigger queue is inside. The OffPeak changeover coincides with the ILWU shift change, and there is a significant loss of productivity. Moreover, all this happens during commute hours.

After 6 PM trucks start exiting again and more enter. Some LMCs have a 5:00 PM start time for a second shift of drivers, but in most cases it is drivers that still have hours left from the day shift. There a final influx at night.

The congestion and loss of productivity in the 3 to 6 PM period is a side effect of the OffPeak changeover. Adjustments within the current program framework are unlikely to resolve the problem.

- Basing the peak/offpeak changeover on a 6 PM entry cutoff rather than the exit time would lead to massive queues in the 4 – 6 PM period and extraordinary pressure on the CY in the 6-7 PM period.

- A “tapered” or variable system, with different fees or quotas for different times, would be complex and difficult to administer. A conceptual option for variable fees was considered early in the analysis process and eliminated for lack of support.

Based on complete September 2017 truck entry and transaction data from one terminal, the consultant team developed Exhibit 4 to display the hourly pattern of all truck entry types. As the chart indicates, there is a substantial volume of empty container returns in the afternoon – much more than during the night shift. LMCs and MTOs reported in the interviews that many of these empty returns are single-transaction trips because 1) daytime empty returns are “free” while import pick-ups are subject to the TMF, and 2) LMCs may need to return an empty to avoid demurrage charges before they can obtain a matching import pickup appointment.

**Exhibit 4: Transaction Type by Entry Hour - September 2017**

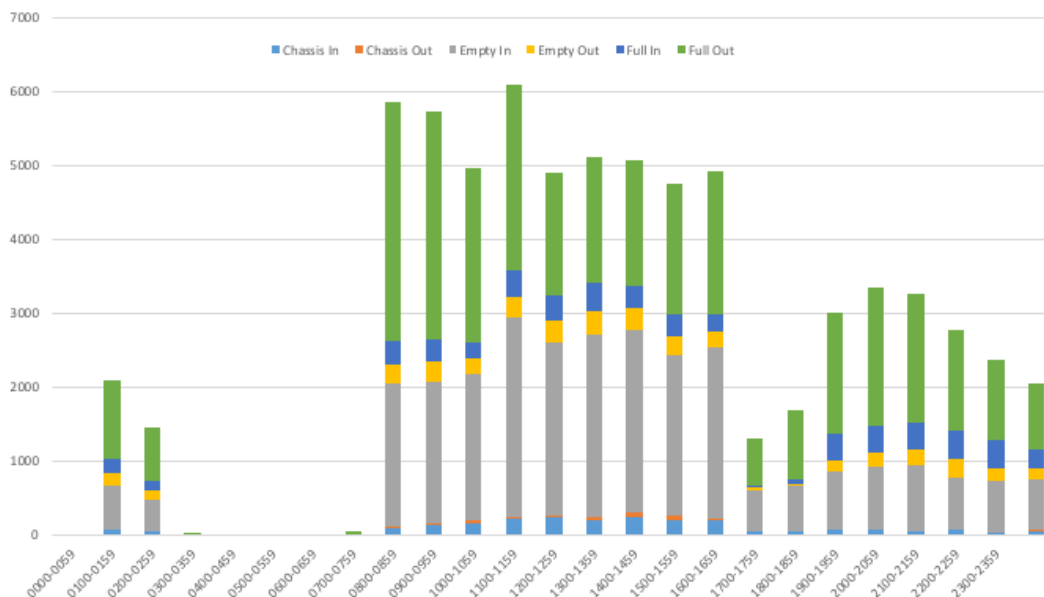


Exhibit 4 is based on gate entry times, while the OffPeak program is based on gate exit times. In light of the 3-6 PM pattern shown in Exhibit 3, it is likely that many of the trucks that arrived for import pick ups (“full out”) in the afternoon actually exited after 6 PM.

The summary of the September 2017 transactions in Exhibit 5 confirms that the OffPeak program has been effective in shifting much of the loaded container transactions to the night shift. However, most chassis and empty container transactions are still handled during the day. At the terminal in question, 71% of all trucks arrived at the gates during the day, although many of these transactions may have been completed later.



**Exhibit 5: Gate Entry Times: Peak vs. OffPeak Transaction Shares - September 2017**

|                | Chassis In | Chassis Out | Empty In | Empty Out | Full In | Full Out | Total         |
|----------------|------------|-------------|----------|-----------|---------|----------|---------------|
| <b>Entries</b> |            |             |          |           |         |          |               |
| Peak           | 1,850      | 318         | 21,484   | 2,434     | 2,836   | 21,494   | <b>50,416</b> |
| OffPeak        | 565        | 5           | 5,631    | 1,425     | 2,423   | 10,370   | <b>20,419</b> |
| <b>Share</b>   |            |             |          |           |         |          |               |
| Peak           | 77%        | 98%         | 79%      | 63%       | 54%     | 67%      | <b>71%</b>    |
| OffPeak        | 23%        | 2%          | 21%      | 37%       | 46%     | 33%      | <b>29%</b>    |

### Customer Practices

Importers and exporters have adjusted to the OffPeak program in a variety of ways.

- BCOs minimize TMF payments by directing truckers to pull imports and deliver exports during the OffPeak shift, where possible. Large BCOs, with the leverage to get more drayage capacity during the OffPeak shift, appear to be more successful at this strategy than small BCOs with less bargaining power.
- BCOs commonly either provide LMCs with guidelines for the percentage of moves for which the BCO is willing to pay the TMF (e.g. a target of 20%), or specific directions on which high-priority boxes to pick up on the day shift. Other BCOs may only pay the TMF on a move-by-move basis when the LMC cannot get the box during the OffPeak shift.
- Large DCs for major imports (e.g. retail chains, e-tailers, 3PLs) are typically open 24/7 and receive or ship cargo during the off peak hours. Others may not handle cargo at night but provide parking lot access so that LMCs can drop loads and pull empties at night.
- Smaller BCOs may be paying the TMF on a greater fraction of their business than larger BCOs, leading to equity issues. In interviews, some respondents noted that smaller BCOs may not operate 24/7 or receive cargo at night, or have the negotiating leverage to obtain as much night-shift trucking service as they might like.
- Transloaders are reportedly moving a significant share of their import cargo in the day shift, and paying the TMF, to sustain high-velocity cross-docking.

In other cases, LMCs may pull import loads during offpeak hours and hold them for delivery to customers the next day. Many LMCs have their own secure yards, and others reportedly sublease space for this purpose. This use of “second tier” facilities to augment or buffer marine terminals appears to be part of an industry trend that is visible in other ports such as Oakland and New York-New Jersey, but is perhaps most evident in Southern California.

The share of imports pulled during the day shift is reportedly rising due to:

- A reduction in the frequency of dual transactions.
- Lack of night-time appointments for some moves.
- Reluctance of drivers to work nights.
- Slower terminal turn times at night.
- Night terminal closures and less-than-complete terminal service during the night shifts.

### III. PierPass Goals and Objectives

#### Program Goals

From the RFP and stakeholder contacts the consultant team developed the following list of goals and objectives for the system to accomplish, whether it is the current OffPeak system, a refinement, or a replacement.

- Minimize local traffic impacts
- Reduce 3 -6 PM congestion and productivity gap
- Address State/Port clean air goals
- Fund the operation of extended gates
- Function with supply chain
- Maximize dual transactions
- Manage empty returns
- Work with chassis ownership patterns
- Improve terminal operations
- Maintain desirable day/night split
- Reduce outside queue times
- Reduce inside turn times
- Be operationally feasible
- Be fiscally responsible

## IV. Stakeholder Views

### *Approach*

The study scope and the consultant team approach placed primary emphasis on obtaining extensive, structured stakeholder feedback on the current system and the FFAS and PWPO options. The key stakeholder groups were:

- Marine terminal operators (MTOs), the members of WCMTOA
- Beneficial cargo owners (BCOs), the importers and exporters that ship and receive containerized cargo subject to the OffPeak programs.
- Licensed motor carriers (LMCs), the drayage firms (truckers) that move containerized cargo and empty containers between marine terminals and BCO locations.
- Third-party logistics firms (3PLs), Customs house brokers (CHBs), non-vessel-owning common carriers (NVOCCs), and other intermediaries. Since so many of these firms offer multiple services, this category overlaps the LMCs. Transloaders are a particular subset of interest among intermediaries.

The interview/survey supply chain stakeholder target list was developed using the following PierPass' databases:

- Top 50 Drayage Revenue List
- Top 50 Revenue List
- Advisory Committee Members
- Extended Gates Subcommittee Members
- PierPass Program Total Stakeholders List
- WCL Consulting- Global Supply Chain database

Stakeholder targets received an initial invitation via email and/or phone call. In-person interviews were conducted with the stakeholders in Southern California. Phone interviews were conducted with the stakeholders located out-of-state. A Survey Monkey email survey was sent to registered PierPass stakeholders who were not previously interviewed. A total of 43 supply chain stakeholders were interviewed individually, and over 3000 surveyed on-line with 144 responses

Overall, we heard basically the same thing from the MTOs as we did from the BCOs and truckers. That's a rare thing, so savor the moment while it lasts.

### *OffPeak Program – Keep or Change?*

This question was asked in the BCO interviews and the on-line surveys.

- Larger BCOs that successfully avoid the TMF were more likely to say “keep the current program”, but they do want changes to the current program and improvements to terminal performance
- Larger BCO interview respondents (7 of 12) usually answered the question by describing the program or the changes they want, often focusing on flexibility, an improved appointment system, and improved terminal performance
- Other BCO interview respondents said “replace” (5 of 12)
- When asked, 43% of BCOs and 5% of LMCs in the on-line survey said “Replace the OffPeak Program”

On-line comments describe a wide range of changes desired, focusing on appointments and productivity

## ***Current OffPeak Program Strengths and Weaknesses***

### *BCOs*

BCOs contacted and surveyed had a wide range of opinions on the present system, which are summarized below.

#### Strengths

- Spreads volumes over Peak & OffPeak shifts
- Reduced traffic congestion

#### Weaknesses

- Appointment systems can add one day to supply chain
- Issue with terminals “rolling back” operating hours
- Poor drayage utilization 3 to 6 PM
- Poor terminal night shift supervision and labor
- Marine terminals need to better understand BCOs challenges, strategies and requirements
- Appointment systems need enhancements (common business rules, common portal, etc.)

### *LMCs/NVOCCs/Brokers*

LMCs and other parties likewise had a range of opinions, which overlapped those of the BCOs.

#### Strengths

- Reduces community/highway congestion
- Provides option to pull and not pay fee
- Encouraged BCOs to open DCs at night
- Appointment systems working fairly well

#### Weaknesses

- Poor terminal night shift supervision and labor
- Terminals not keeping open when scheduled
- Appointment systems need common business rules
- Pressure on draymen to only pickup at nights
- Trucks parked 3 to 6 pm
- Costs rising with no service improvement
- Containers available but no appointments for three days

## ***MTO Survey and Interviews***

The consultant team conducted a brief survey of WCMTOA members to establish their priorities for an OffPeak alternative and the types of acceptable tradeoffs. The consultant team noted the following key messages:

- **Emphasis on functionality.** The MTOs are focused on the ability of OffPeak options to deliver the desired results, rather than in the form of the solution or institutional factors.
- **Improve terminal operations & turn times.** The central concerns are terminal efficiency and minimizing truck turn times.

- **Manage truck flow.** The OffPeak system was created to manage truck flow, and a new system should still serve that purpose.
- **Other objectives are secondary.** The survey lists many things that a new system might achieve, but they are lower in priority.
- **Willing to accept complexity to achieve results.** Critically, WCMTOA members are willing to consider administratively complex solutions if necessary to achieve their objectives. While administrative complexity is always to be minimized, some degree of complexity is acceptable as a tradeoff for success at the other criteria.

The consultant team interviewed 8 of the 12 WCMTOA MTO members. The interviews revealed broad agreement on central points.

- **Appointment systems have improved terminal ability to plan labor and smooth volumes.** Nine of the 12 Long Beach and Los Angeles marine container terminals have appointment systems in place. Although appointment systems and business rules differ, there is general agreement that appointment systems work as intended, and that they are effective tools for managing truck volumes and CY operations.
- **Terminals are achieving approximately a 50%-50% volume split between shifts.** The OffPeak program has yielded an acceptable spread of truck volume between day and night shifts. The MTOs would prefer to maintain roughly the current split.
- **Truck congestion builds in afternoons from around 3 to 6 PM.** MTOs interviewed identified persistent congestion in the 3–6 PM timeframe as a major issue. The congestion includes trucks both in and outside the terminal, and is driven by the 6 PM peak/offpeak changeover.
- **Drivers park in terminals before the 6 PM shift change.** MTOs are aware that some drivers enter the terminal as early as 3PM, complete their transaction, and then wait in the terminal until after 6PM to exit. Besides congesting the terminal, this practice leads to wasteful idling and emissions, loss of driver and tractor productivity, and inflated average turn times.
- **There are differences of opinions regarding OffPeak shift labor productivity.** As the discussion of BCO and LMC contacts reveals, there are widespread concerns over terminal service and productivity during the night shifts. MTO views of the extent, seriousness, and causes of night shift service shortfalls or delays. While night shift productivity issues are a concern for future implementation of appointment systems, they are not part of the present study scope and the consultant team did not pursue them in depth.
- **Most appointment systems need fine-tuning.** Appointment systems are relatively new to the industry. The MTOs interviewed generally agreed that the systems can and should be improved to better suit Southern California operating conditions and practices.
- **Drivers arriving early create congestion.** Appointment systems generally include a 60- to 90-minute window for truck entry around the actual appointment time. Drivers that arrive and join the gate queue prior to that window congest the gates and delay other drivers. Terminals are now more consistently turning away those drivers, but even the process of turning them around creates congestion.
- **Terminals want to grow share of peel-off import loads;** BCOs/truckers who used peel-off programs have been satisfied. Current peel-off programs are limited in scope and differ between terminals. The concept, however, has been generally successful and well-received by BCOs and LMCs. MTOs would therefore like to increase the scope and volume of peel-off operations to increase terminal efficiency, improve velocity, and reduce truck turn times.

## BCO Interviews and Surveys

The consultant team interviewed 15 BCOs and received Survey Monkey responses from 100 more, as shown in Exhibit 6.

### Exhibit 6: BCOs Surveyed

| 15 In-person/Phone Interviews      | 100 On-line Survey Respondents*     |                                 |  |
|------------------------------------|-------------------------------------|---------------------------------|--|
| <b>Allan Company</b>               | Ace Global Distribution             | Echo International              | <b>New Balance Athletics, Inc.</b>           |
| <b>Anderson Hay</b>                | Acx Intermodal                      | Evenflo Company Inc             | North Pacific Corporation                    |
| <b>Big Lots</b>                    | Aishni Home                         | <b>Family Dollar, Llc</b>       | Omnivare                                     |
| <b>JC Penny</b>                    | America Plastic Trading Inc         | Fbaforward                      | Orleans International                        |
| <b>GAP Stores</b>                  | American Pacific Industries Inc     | Freitas Brothers Farms, Llc     | Pacific Supreme Company                      |
| <b>Lowe's</b>                      | Amocat Trading Llc                  | Furnitures Value International  | Pegasus Fiber Ltd                            |
| <b>Mattel</b>                      | Aspects Furniture International Inc | Group Builders Inc.             | Pfi Enterprises                              |
| <b>Restoration Hardware</b>        | B&B Electronics Ltd.                | Homedics Usa Llc                | Phoenix Pdq                                  |
| <b>Rio Tinto</b>                   | Bailey Farms                        | Imperial Toy Llc                | Poundex Associates Corp.                     |
| <b>Ross Stores</b>                 | Bedrosians                          | Ims Recycling Services          | Prime Edge Enterprises                       |
| <b>Samsung Electronics America</b> | Bluefin Distribution                | Interamerican Motor Corporation | Produce Services Of America (Psa)            |
| <b>Target Stores</b>               | Boardriders                         | J&B Importers. Inc              | Ravago Americas, Llc                         |
| <b>Walmart</b>                     | Bradshaw International Inc.         | JBL Trading Llc DbA Crestmills  | RB Auto and International Exports            |
| <b>National Retail Federation</b>  | Broadleaf                           | Kervan Usa                      | SA Recycling Llc                             |
|                                    | <b>Calcot, Ltd.</b>                 | Kimberlite                      | Samson Marketing                             |
|                                    | Campbell                            | Latitude Wines                  | SGC International                            |
|                                    | Choice Grain Llc                    | Lion Raisins                    | Shla Group Inc                               |
|                                    | Classic Concepts, Inc.              | Long Beach Iron Works Inc       | Sinomax Usa Inc.                             |
|                                    | Cohen Produce Marketing             | Mira Enterprises                | Sky Enterprises                              |
|                                    | <b>Conagra</b>                      | Mortimer & Wallace              | Smith Cooper International                   |
|                                    | Dermalogica, Llc                    | Natural+Organic Imports         | Southern Telecom Inc                         |
|                                    | <b>Dole Food Company</b>            | Naturalstar, Inc.               | Spark Recycling Inc.                         |
|                                    | Downlite International              | Nedia Enterprises Inc           | Stellar Distributing                         |
|                                    |                                     |                                 | Stonewall Trading Co                         |
|                                    |                                     |                                 | Sundragon Import                             |
|                                    |                                     |                                 | Superior Foods International, Llc            |
|                                    |                                     |                                 | Synthetic Resources                          |
|                                    |                                     |                                 | Tashi USA                                    |
|                                    |                                     |                                 | The Apparel Group Ltd                        |
|                                    |                                     |                                 | Three Hands Corp                             |
|                                    |                                     |                                 | Thyssenkrupp Materials Trading North America |
|                                    |                                     |                                 | Timber Products Company                      |
|                                    |                                     |                                 | TMC Power Equipment, Inc.                    |
|                                    |                                     |                                 | <b>Toyota Motor Sales</b>                    |
|                                    |                                     |                                 | <b>Toys R Us</b>                             |
|                                    |                                     |                                 | <b>Tractor Supply Company</b>                |
|                                    |                                     |                                 | Tumac Lumber Co., Inc.                       |
|                                    |                                     |                                 | <b>Tyson Foods, Tyson Fresh Meats</b>        |
|                                    |                                     |                                 | United States Luggage Llc                    |
|                                    |                                     |                                 | Unitex International, Inc                    |
|                                    |                                     |                                 | USA Union International Inc.                 |
|                                    |                                     |                                 | Valcrest International                       |
|                                    |                                     |                                 | VIE Logistics                                |
|                                    |                                     |                                 | Vista Metals Corp                            |
|                                    |                                     |                                 | Vpet Usa                                     |
|                                    |                                     |                                 | <b>Walgreen Co.</b>                          |
|                                    |                                     |                                 | Wonderful Citrus                             |
|                                    |                                     |                                 | Zorro International Corporation              |

\* Not all provided valid names

The results of the BCO interviews and surveys align closely with the MTO perspectives discussed above. BCOs acknowledge the benefits of the OffPeak system in spreading the volume and reducing traffic congestion. Most of the BCO concerns focus on terminal operating hours, flexibility, appointments and terminal performance, not on the OffPeak concept itself.

- A large BCO with lots of leverage that can make the OffPeak program work and avoid the TMF may not want a change. Those large BCOs are either receiving their cargo primarily at night or have developed other cost-effective ways of coping with the peak/offpeak transition.
- Smaller BCOs that do not receive cargo at night or whose volume cannot command sufficient night shift drayage capacity may be paying the TMF more often and may welcome a change.

If there is going to be a change, there is a very strong preference for the FFAS option over PWPO. It was a 100% preference with the people we interviewed, and 70% in the survey. The difference may be due to some misunderstanding of the PWPO option in the Survey Monkey version of the questions. For example, two stated reasons for preferring the PWPO system were:

- “Convenience of getting containers without waiting for appointments.”
- “Will get the high volume customers out of the way”

These comments suggest that the respondents had the current peel-off system in mind rather than the port-wide option.

The interviews and surveys confirmed that many, maybe most, BCOs are paying other charges for pre-pulls, or storage for truckers to pull at night but deliver during the day. Their night time cost is not zero, although it is probably less than the TMF.

The BCOs are calling the shots when it matters to them, which is most of the time. Many provide instructions on what to pull at night and what during the day, and others issue guidelines for the percentage of peak moves they will accept.

The interview results also suggest that higher fees by themselves would not drive a significant volume of cargo away from the San Pedro Bay ports. Import cargo falls into general classes, with different implications for divertability.

- Intermodal IPI cargo that moves by rail is exempt from the OffPeak program and the TMF, and if it continues to be exempt would not be affected by new OffPeak options.
- Regional imports, whether delivered directly or passed through a Southern California DC, are not easily or economically divertible.
- Import cargo handled through Southern California DCs and then re-shipped (“transloaded” at DCs, for example) might be diverted to other import routes.
- Imports transloaded/cross-docked near the ports are the most cost and service sensitive cargoes. The ability to divert cross-docked cargo depends on service availability at other ports, which differs widely.

Finally, and importantly, BCOs are positive about the conventional peel-off concept, even if they make limited use at present. Existing peel-off operations are either:

- Importer specific, a stack of containers for one BCO, to be handled by one or more LMCs chosen by the BCO, or
- LMG specific, a stack of containers to be handled by one LMC on behalf of one or more BCOs.

When these peel-off operations can be arranged respondents report that they generally work well. BCOs (and MTOs) acknowledge some issues to be addressed (such as uniform availability of lift equipment at peel-off stacks) but favor the concept.

As with WCMTOA members, BCOs contacted revealed wide acceptance of the appointment system concept. Appointments were regarded as a better way to manage truck flow than the existing OffPeak system. The details of appointment systems are still a matter of contention, and many of the BCO interviewees focused more on appointments than on fees.

BCO interviewees and survey respondents were split between those wanting to improve the OffPeak program and those wanting to replace it. Almost all respondents suggested changes, and in some cases the changes were extensive enough to border on replacement.

If the current OffPeak system were replaced, 100% of those interviewed would prefer the FFAS option over the PWPO option. In the on-line survey, 70% preferred the FFAS option to the PWPO option, and 30% preferred PWPO. However, the consultant team believes that much of the apparent preference for PWPO is due to confusion between port-wide peel-off and the conventional existing peel-off options. In the on-line survey, respondents could not ask about the PWPO options nor could the consultant team offer explanations. Comments such as those below suggest that some respondents did not fully understand the PWPO concept:

- “Freight forwarder would deal with that - If they didn't provide the customer service we expect, we would be using a ‘different’ freight forwarder.”
- “Wouldn't be a problem as long as the scheduling is done properly and the trucks arrive when they are scheduled... if they are late the system is no good.”

The existing peak/off-peak shares cited by BCOs vary widely. Some claim to have nearly no day shift moves (despite having paid the TMF on at least some occasions), while others report up to 100 percent.

Many BCOs report incurring costs for pre-pulls, delays, storage, etc. connected with night shift moves. Fees cited range from \$50 to as much as \$250 per move; others understood that night shift costs were built into higher drayage rates.

BCO concerns over a flat-fee system depends on the current peak/off peak split. Importers and exporters that have most successfully configured their operations to minimize day shift moves and TMF payments would likely see increased costs under a flat fee system, and are most concerned. Transloaders and other BCOs that have a larger – perhaps larger than average – share of day shift moves may actually see costs decline, and are less concerned or even advocates of a flat fee.

The BCOs agree with the MTOs on a key point: the value of conventional peel-off programs. Although limited in their use to-date, BCOs see efficiency gains for themselves as well as for LMCs and MTOs when suitable cargo can be handled in peel-off stacks.

- BCOs saw an FFAS option as an extension of existing appointment systems, and saw little or no problems in transitioning.
- BCOs saw a need for advance notice to enable them to budget for additional fees, and to adjust their day/night staffing and drayage practices, where needed.

As will be discussed in more detail in a later section, BCOs interviewed by the consultant team considered the PWPO option to be unworkable and unacceptable. The primary reason was the incompatibility of a “push” system, under which import arrival could not be planned or controlled, with existing supply chain practices.

### ***LMC/NVOCC/3PL/CHB Interviews and Survey***

The consultant team talked to 19 truckers and third-party logistics providers, and obtained on-line survey responses from another 44 (Exhibit 7).



**Exhibit 7: LMCs and Other Parties Surveyed**

**19 In-person/Phone Interviews**

Amazon Trucking  
Carmichael International  
California Cartage  
California Multimodal LLC  
Container Freight/EIT  
Coppersmith Global Logistics  
Damco Logistics  
Expeditors International  
Fast-Link Logistics (Harbor Express)  
Golden State Express  
K & R Transportation  
Knight Port Services  
Performance Team  
Progressive Transportation Services  
Southern Counties Express  
Total Transportation Services, Inc.  
Yusen Logistics (Port Drayage)  
Yusen Logistics (Transload Operations)  
XPO Logistics

**44 Survey Respondents\***

All Harbor Transport  
AM Trucking Solutions, Inc  
American Pacific  
Arrowlink Usa Inc  
ATX Intermodal Llc  
Bee Line Freight Inc  
BYND Inc  
C. H. Powell Company  
Carolina Trucking Inc  
CBSL Transportation  
CDL Logistics, Inc.  
Coachwest  
Damco Distribution/Hudd Transportation  
David S Martinez  
Dependable Highway Express  
Dimax Express Inc.  
Eagle Trucking Express Inc  
Ecko Products Group  
Enlace Strategies Inc.  
EPL Express Inc  
FlexiVan Leasing, Inc.

**\* Not all provided valid names**

Franco Trucking Inc  
Freedom 1  
GOH Express, Inc.  
Golden Freedom Transport, Inc  
Green Fleetsystems,Llc  
JC Express  
Jes Trans, Llc  
K & P Trucking Inc.  
Martin Express Inc.  
Mega Freight  
MRX Logistics  
NGL Logistics,Llc  
Pacific Shipping  
PCI Logistics  
Regal Logistics  
Speedo Transport Inc.  
Total Distribution Service, Inc.  
Trans Harbor Services, Inc.  
Unlimited Transportation Services  
VP Express Logistics Llc  
Western Freight Carrier  
Zamora Trucking

The LMC and 3PL comments are similar, with the LMC's focusing a bit more on operational. The responses from the truckers 3PLs were also similar to those of the BCOs, including a strong preference for the FFAS model over port-wide peel-off.

LMCs and 3PLs noted that the peak share is rising due to nighttime congestion, terminal performance shortfalls, and driver preferences. Demands for greater supply chain precision are also forcing BCOs to ask for more boxes during the day.

LMCs confirmed that they are frequently staging or storing containers to buffer the night and day shifts, and either charging fees for it or building it into their rates.

LMCs also accept the efficiency of peel-off, and would like to do more of it when it works for the cargo in question. Some LMCs are doing up to 20% of their business as peel-off. They are interested in retaining a peel-off option within a flat fee and appointment system option.

In common with MTO and BCO respondents, LMCs and 3PLs recognize and accept the utility of appointment systems as truck flow management tools. Also in common with other stakeholders, LMCs see the need for refinements to the appointment systems now in use.

The LMCs were also vocal in favoring a "single portal". LMCs see the ideal as being a single appointment system covering all terminals. As a nearer-term objective, they want common concepts and business rules among separate systems. While these are currently not OffPeak or PierPass issues, they are issues for the MTOs to address in implementing any appointment-based programs.

LMCs and 3PLs interviewed in person or over the phone were 100% in favor of the FFAS option over the PWPO OPTION. On-line survey respondents were 92% in favor of FFAS over PWPO. As with the BCO survey, the consultant team believes that some of those favoring the PWPO option may have confused it with conventional peel-off.

As with BCOs, LMCs and 3PLs reported a wide range of peak/offpeak splits. They also report that the peak share is rising.

Likewise, LMCs and 3PLs agree with MTOs and BCOs on the usefulness of conventional peel-off options for suitable cargo. LMCs had a strong interest in retaining a peel-off option in a “hybrid” FFAS system.

### ***Transloader Comments***

The consultant team asked particularly about transloaded cargo, meaning cargo that moves directly from marine to domestic equipment. This is the most service-sensitive segment, and if anything is vulnerable to diversion away from Southern California it is this segment. The Port of Oakland is specifically targeting this cargo and putting in new ProLogis and CenterPoint developments to handle it.

Transloaders are hyper-critical. They need exactly the right container at exactly the right time because they have a domestic box waiting for it and a demanding customer on their backs. They could not use a port-wide peel-off system.

Transloaders are also the most critical about the appointment systems, and about what they perceive as terminal performance shortfalls.

Transloading accounts for an estimated 18% of imports. Discretionary transload cargo is in jeopardy if fees rise without visible service improvements. Transloaders are extremely concerned about turn times. They do not like multiple different appointment systems, and claim that appointment system terminals may not (yet) turn trucks noticeably faster. An increased share of transload cargo is pulled during the Peak shift due to night shift congestion.

## V. Flat Fee with Appointment System

### *Overview*

The FFAS option is preferred by BCOs, LMCs, and other stakeholders

- Appointment systems are regarded as better way to manage the truck flow than the current OffPeak system or the PWPO option.
- Concerns over higher FFAS costs are strongest among large BCOs that avoid the TMF. A flat fee levels the playing field for smaller importers and LMCs.
- Stakeholder concerns over night shift terminal productivity and turn times at present and under all options.
- BCOs want better terminal performance in return for what may be higher fees.
- Many stakeholders want a single portal system.

Overall, if WCMTOA is going to make a change, the preference for the FFAS option is clear. Most significantly, stakeholders see appointment systems as a better way to manage truck flows than a port-wide peel-off program. The consultant team believes that in many cases a vote for FFAS is a vote for appointments, regardless of the fee system. Many stakeholders are asking for a single portal to make it all easier to manage.

The concerns about higher total fees come from the stakeholders who have been best at avoiding the TMF. On average, everyone might pay the same, but there will be winners and losers, and the losers will complain. The caveat is that stakeholders want better system performance - value for their dollar. Stakeholders have particular concerns over what they see as poor nighttime performance.

### *Feasibility*

There is no significant issue with the FFAS feasibility.

- Appointment systems are in place at nine of the 12 San Pedro Bay terminals.
- As presently envisioned, the FFAS option would charge a fee on the same non-exempt loaded containers that would subject to the TMF if handled on the day shift. Rail, transshipped, and domestic cargo would remain exempt unless WCMTOA chooses otherwise.
- The same fee would be charged regardless of terminal entry or exit time.
- The flat fee is envisioned as a container-based fee rather than the TEU-based TMF. The fee would therefore be the same for every non-exempt loaded container, regardless of size or type.
- Virtually all BCOs, LMCs, 3PLs, and other stakeholders already have PierPass accounts, because all pay the TMF at least occasionally.

In practice, then, implementing a FFAS option would require only:

- Implementing appointment systems at the remaining three terminals.
- Assessing a simpler flat fee on all non-exempt loaded containers, either the same fee for all containers or a TEU-based fee, instead of a fee on day-shift loaded container moves only.

### ***Impact on Terminals***

The most visible short-term impact on terminals would be elimination of the incentive for truck drivers to queue up or idle in the terminal in the 3-6 PM period. While there would likely still be some queueing and delay associated with the ILWU shift change, that delay should be relatively small. Most terminals already offer “flex gates” to minimize the impact of shift changes.

There is likely to be additional demand for dayshift appointments, as there will no longer be a monetary incentive for night shift moves. However, it is worth noting that under the current system 42% of the loaded moves are exiting before 6 PM, but more than that percentage are being served at the CY before 6 PM.

Empty returns and chassis moves are likely to shift more to the night. These moves are now concentrated on the day shift because, unlike loaded moves, they are “free”. With fees on loads being equal day and night, empty returns are more likely to be matched with import pulls to create dual transactions.

### ***Impact on Queuing, Congestion, and Emissions***

The incentive for queueing in the 3-6 PM period should be reduced. Enforcement of appointment windows gives terminals an effective means of controlling queues, as has proven to be the case at other ports. Appointment window enforcement is most effective when implemented before the driver joins the queue (e.g. at a security kiosk or pedestal).

Removal of the incentive for 3-6 PM queuing and in-terminal idling will reduce congestion, emissions, fuel use, and greenhouse gases. Although outside the scope of this analysis, the impacts could be estimated using detailed GPS data to identify the time spent at rest in queues or in terminals between 3 and 6 PM.

### ***Capital, Operating, Systems, and Labor Cost Implications***

The FFAS option is unlikely to entail any new capital outlays (except as required to implement appointment systems in the remaining three terminals). Systems costs will be associated with the further development of appointment systems and movement toward a single portal concept, independent of the FFAS option per se.

While near-term labor needs and costs are unlikely to change noticeably, the FFAS should allow for greater labor productivity in the 3-6 PM period. At present, there is a lull in CY activity as many trucks sit idling either outside the terminal, waiting to enter, or inside the terminal waiting to exit. As experience with appointment systems grows and truck flows become more predictable, terminals will be able to better match labor and equipment with requirements.

### ***Fit with Terminal Operating Strategies and Systems***

Terminal operating strategies and systems should require only minor adjustments under an FFAS option (except where appointment systems are not yet in place). Most likely, operating strategies and systems will evolve in parallel with appointment systems: as appointment systems add features and refinement, terminal systems and practices will follow suit to take advantage of greater predictability.

## ***Implementation***

With most of the San Pedro Bay terminals having already implemented appointment systems, that part of the FFAS option is clearly implementable. The FFAS model does not require all the terminals to have the same system, or even compatible systems, although that would be the preference of most stakeholders.

A fixed TMF per TEU or container for all terminal entry and exit times should be relatively straightforward to implement within the existing PierPass recordkeeping and billing framework, and would in some respects be simpler than the current 6 PM changeover for the day shift TMF.

## ***Sensitivity to Volume Changes, Carrier Policies, and Supply Chain Trends***

A key aspect of a flat fee is that it would generate revenue in direct proportion to cargo volume. As cargo volume continues to grow BCOs and LMCs would not be able to avoid the fee by shifting more volume to the night shift as they can attempt to do under the current system.

There are few linkages between the current OffPeak system and carrier policies, and there would likewise be minimal connection between an FFAS system and carrier policies. Two areas where there may need to be some alignment include:

- The need for an importer to have an appointment available to pick up an import container before expiration of free time.
- The need for an exporter to have an appointment available to deliver an export container on or after the earliest receiving day and before vessel cutoff.

Those issues, however, are common to all appointment systems whether or not accompanied by a flat fee.

Since a flat fee cannot be avoided (unlike the current TMF), there will likely be some pressure by major importers that have so far largely avoided the TMF to have a flat fee offset by discounted ocean carrier import rates.

Reliance on appointment systems to schedule container flows is generally in alignment with emerging supply chain practices that emphasize predictability and control.

## ***Appointment System Issues***

Stakeholders generally believe that appointment systems usually work well, but some need fine tuning. Many of the issues raised with appointment systems are already familiar. Most stakeholders endorse the concept; they are worried about the details rather than the basic idea of appointments.

One issue is the desire to make more advance appointments so the BCO can be confident of getting the container if they leave it until the 3rd or 4th day. Now, LMCs and BCOs tend to make more appointments for the first or second day instead, and cancel and replace some of those appointments as later appointments open up.

There is also the issue of free time clocks that start before the first available appointment, which may be an issue for the lines as well as for the terminals.

The key point is that appointment systems are works in progress, and will likely stay so for a while to come. Appointment availability to match BCO priorities, vessel cut-offs, free time, etc., is an ongoing issue.

Same day appointments are extremely difficult to arrange under some systems, and cancellation and reset rules vary. A key concern behind the desire for a single portal is the lack of visibility for available appointments. Dispatchers must ordinarily make iterative requests to see which appointment windows are available.

### ***Impact on Customers and Cargo***

As explained earlier, the impact on customers will depend on how they have coped with the existing OffPeak program. Customer with an average balance of day shift and night shift moves may see little difference in their operations or costs. Customers, such as transloaders, with heavier daytime operations may continue to have problems working with appointment systems, but may see lower costs.

### ***Appropriate Metrics***

Under an FFAS option, the key issues to be monitored are:

- Coverage of movements under the appointment systems. Present systems typically require appointments for import loads, or for import and export loads. There is a complex tradeoff between requiring appointments for empties or chassis moves and allowing those moves as counterparts to loaded moves with appointments.
- Compliance and enforcement. To be effective appointment windows must be enforced, but too many missed windows may indicate system flaws.
- Match between appointments and terminal operations patterns. There is a temptation to simply allow the same number of appointments for each operating hour. Yet a better match might be achieved by linking the number of import and export appointment slots to vessel handling hours or other terminal functions.
- Dual transactions. Dual transactions (e.g. load in, empty out or empty in, load out) are in the interests of all participants. The frequency of dual transactions should be monitored and linked to appointment system features.

### ***Single Portal Concept***

While development of a “single portal” as desired by BCOs and LMCs may not be part of the OffPeak program or a potential function of PierPass , it could be part of a WCMTOA commitment to stakeholders in connections with FFAS implementation.

A “Single Portal” means different things to different people. For example:

- “Single gateway” – access all systems through single website, but systems still individual
- “Common business definitions” – concepts such as “window” mean the same, although rules may differ
- “Common business rules” – e.g. all windows are 1 hour, all reset rules the same
- “Common platform” – all systems are variations of one basic system, rules differ
- “Common look and feel” – system sites work the same although rules differ
- “Multi-function portal” – get appointments, hours, empty return, ship schedules, etc. all in one place
- “Port-wide visibility” – see containers, status, existing appointments, and appointment availability across terminals

There are no functioning “single portals” at North American ports, although at least three efforts are in progress:

- The GE “Port Optimizer” pilot, originally sponsored by the Port of Los Angeles and now including the Port of Long Beach.
- The Advent/eModal website enhancement recently announced by the Port of Oakland.
- The Port Authority of New York and New Jersey TIPS pilot.

WCMTOA members will be participating in some of these efforts and can monitor others to inform future policy and strategy in this area.

## VI. Port-Wide Peel Off

### Overview

A port-wide peel-off (PWPO) system would streamline terminal operations and reduce truck turn times. The PWPO concept, however, is generally unacceptable to BCOs and LMCs and was opposed by 100% of the stakeholders interviewed. Bluntly, the PWPO concept is viewed by stakeholders as a strategy to make marine terminal operations easier at a substantial cost to all other parties. BCOs and LMCs regard a PWPO system as unworkable.

### Feasibility

**Terminal feasibility.** Based on experience to-date, MTOs regard a PWPO option as a feasible and potentially attractive improvement in terminal operations.

Drivers seeking import loads would receive the first container off the selected delivery zone stack, eliminating the need to “dig” for containers and materially reducing turn time. Some terminals anticipate dramatic increases in throughput under a PWPO system.

Terminal feasibility would depend in part on the share of containers that were handled in the peel-off stacks as opposed to those that must still be handled in the “random access” system. The greater the proportion actually handled in peel-off fashion, the greater the benefits.

**Customer feasibility.** Unfortunately, customers interviewed and responding to the online survey almost uniformly regard a PWPO system as unfeasible. Most fundamentally, the PWPO concept would be a “push” system in which importers could not predict when their cargo would be delivered, by whom, or in what order. Customers would only receive delivery information once a driver had received the container – which could be less than an hour lead time for a port-area transloader, or a full day for a DC in Phoenix. Those circumstances are basically incompatible with current supply chain practices that rely heavily on a planned and sequenced flow of goods.

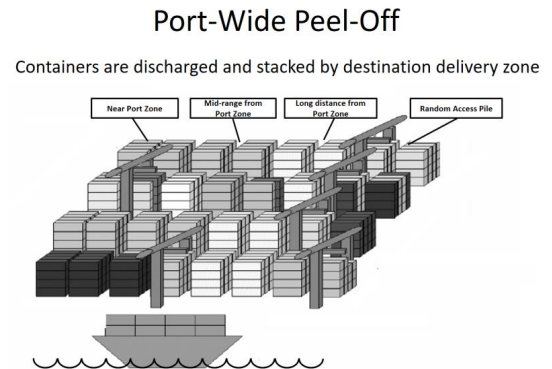
As explained in more detail below, a PWPO system would also require a drayage rate-setting mechanism. The main conceptual options would be:

- A public rate-setting authority, which lacks precedent in the freight industry and may violate the Interstate Commerce and Motor Carrier Acts.
- An industry group with anti-trust immunity and collective rate-making authority (akin to WCMTA), which would be difficult to establish and widely opposed by BCOs.

The rate-setting aspect of a PWPO option may therefore encounter formidable feasibility barriers.

The “delivery zone” concept may face feasibility issues.

- In discussion of the PWPO concept the examples of delivery zones usually include the port area and the Inland Empire. However, the actual range of drayage delivery from the Ports of Los Angeles and Long





Beach covers the western states – California, Oregon, Nevada, Utah, and Arizona – and northern Mexico.

- Under the new ELD regulations, drivers without ELDs cannot deliver a container more than 100 air miles or 140 road miles from their operating base. A non-ELD driver based in the San Fernando Valley could not deliver to San Diego, while a non-ELD driver based in Orange County could.
- Many import containers do not have a delivery address when they arrive, with the actual address provided only to the selected drayage firm.

A “delivery zone” stacking system may thus encounter complexity and feasibility barriers.

### ***Impact on Terminals***

As noted above, the impact on terminals would depend on the share of import, export, and empty containers that were actually handled in peel-off fashion.

In a sense, exports and empties can already be handled in “peel-off” fashion.

- Terminals commonly group and stack export containers by line, voyage, and/or size, with the next container received going on top of the stack.
- Empties are commonly stacked by line and size or type, and handled last in/first out.

A PWPO system may thus result in only minor changes to the handling of exports and empties.

A third feasibility issue is chassis compatibility. Despite a general trend toward interchangeability and establishment of the Pool of Pools, there are still multiple, hard-to-manage limitations on using some chassis with some containers.

- Some ocean carriers restrict chassis use to named pools.
- Some import-carrier contracts require the use of specified chassis pools.
- Some carrier containers cannot be mounted on LMC-owned chassis.

These legacy limitations mean that a truck driver waiting in a peel-off stack line with a chassis may not be able to accept the box he is offered. While it may be possible to minimize or manage this issue, it has the potential to disrupt peel-off operations.

### ***Impact on Queuing, Congestion, and Emissions***

**Queueing.** The PWPO concept, by itself, has no mechanism to manage queueing outside the gate. In all likelihood, the PWPO system would have to be supplemented by an appointment, quota, or scheduling system for this purpose.

**Congestion.** The PWPO option would eliminate the incentive for drivers to queue outside the terminal or idle inside the terminal in the 3–6 PM period, and should eliminate congestion from that source.

Impacts on congestion within the terminal would depend on how well terminals manage the flow of trucks to and from peel-off stacks (imports, exports, empties), chassis pools, and random access stacks.

The PWPO option by itself would also have no mechanism to mitigate truck volume or congestion outside the terminal (e.g. in commute hours).

**Emissions.** A PWPO option will likely have a mixed impact on emissions.

- Terminal emissions should be reduced due to greater efficiency and productivity of lift equipment.
- In-terminal truck emissions will be reduced to the extent that aggregate or average turn times are reduced. As noted above, trucks served at peel-off stacks should have somewhat shorter turn times.
- The PWPO option itself would not reduce queueing emissions, and would have to be supplemented with other measures for this purpose.
- Regional truck emissions and greenhouse gases would likely rise, perhaps significantly, due to extra trips for empty retrieval. Total regional vehicle miles traveled would rise as well, and may lead to localized congestion.

**Turn time impacts.** The PWPO option would substantially reduce the portion of truck turn time attributable to import delivery in the CY. The complete truck turn time cycle for imports includes:

- Queueing outside the gate.
- Gate entry.
- Export or empty drop off (for dual transactions).
- Chassis pool time (if needed).
- Import container delivery
- Chassis flip time (if needed)
- Outgate time.

The PWPO would reduce what should be the largest time segment – import container delivery – for trucks using the peel-off stacks. Other turn time segments may or may not be affected.

### ***Capital, Operating, Systems, and Labor Cost Implications***

To the extent that a PWPO option permits improved lift equipment and labor productivity, terminal capital and operating costs should be lower in the long run.

The “random access” position of the activity would essentially be a smaller version of what already exists.

Terminals would need to augment existing information systems to:

- Obtain delivery address information in advance of vessel arrival.
- Identify the delivery zone for each peel-off import box and arrange the CY accordingly.

### ***Fit with Terminal Operating Strategies and Systems***

Most terminals already offer conventional peel-off service to some extent, and would be able to expand that offering in stages as PWPO was implemented. Issues to be addressed for in-terminal implementation would include:

- Defining “delivery zones” and setting up delivery zone stacks.
- Creating/modifying in-gate information systems to accommodate a mix of PWPO and random-access transactions.
- Defining and configuring truck routes to and from destination stacks to minimize in-terminal congestion.

- Managing the flow of containers between vessels and destination stacks. (For example, it would be inadvisable to stack a later vessel’s import boxes on top of an earlier vessel’s boxes for the same delivery zone.)
- Proactively managing dwell time of PWPO boxes.

### *Impact on Customers and Cargo*

**Push vs. pull.** The most fundamental objection to the PWPO concept is the incompatibility of a “push” system with BCO supply chains and DC operations.

- BCOs schedule the flow of imports from origin to final destination to balance the cost of inventory against the downside of stockouts. Uncertainty of delivery under a push system would require increased inventory, with attendant costs.
- A push system is incompatible with the delivery appointment system used to manage flows at import DCs, and would reduce DC and drayage driver productivity.
- A push system is incompatible with high-velocity cross-docking/transloading operations, and would likely lead to loss of transload cargo from LA/LB. About 18% of current import cargo could be affected.

The majority of imports would be adversely affected by a push system. Handling a small portion of imports through random access would not resolve the issue.

LMCs now stage a significant portion of import containers as a buffer between MTO and BCO, partially to reconcile OffPeak pulls with daytime DC deliveries. A PWPO system would not enable LMCs to plan which boxes were pulled when, and would likely increase the need for off-terminal staging, with attendant costs.

While existing peel-off operations are different in many ways from the PWPO concept, their limited success to date implies limited suitability of import cargo for peel-off treatment.

**Security and Liability.** The contractual relationship between two known parties – BCO and LMC – is central to cargo security and incident liability.

- A system in which the LMC and driver are unknown in advance, and perhaps unknown to the BCO, is incompatible with CTPAT provisions. Introduction of an unknown and unplanned party into the cargo chain of custody is a fundamental breach of good cargo security practice.
- RFID (Wherenet) tags identify the tractors being used, and the owner, but not necessarily the driver. Terminal security requires driver identification (via the Transportation Worker Identification Credential—the “TWIC” card). Yet neither system, nor vetting by the MTO or an outside agency, are acceptable substitutes.
- BCO liability insurance typically does not cover truckers on the premises without a business relationship with the BCO.
- BCOs have varying DC access, security, and operational practices known to core carrier LMCs and drivers that would be unknown to random drivers under a PWPO system.

**Empty Container and Chassis Returns.** As proposed, the PWPO concept lacks an efficient mechanism for returns or reuse of empties and chassis, and could lead to a large increase in drayage cost, VMT, and emissions. Southern California import deliveries are predominantly “drop and pick”, where the driver drops the import box on chassis at a DC door or in the lot, and pulls a previously delivered empty on chassis for return to the port (or, sometimes, for reuse by an export customer).

Import containers are interchanged from the ocean carrier to the import LMC, not to the BCO, and remain on the LMC's account until either 1) returned, or 2) interchanged to another LMC with explicit ocean carrier permission. Periodic efforts to facilitate street interchange between LMCs have failed.

Under a PWPO as envisioned, LMCs would have to make separate, non-revenue trips to retrieve empties. At best, this requirement would turn out-and-back trips into triangular trips, significantly increasing drayage costs, VMT, GHGs, and emissions.

Pool chassis are likewise interchanged to LMCs and remain on the LMC account until returned. Both MTOs and LMCs benefit from reuse of pool chassis for multiple container moves. By disrupting drop and pick operations, a PWPO system could reduce opportunities to reuse chassis, and reduce chassis fleet velocity.

LMC-owned chassis are not ordinarily interchanged between LMCs, and could not be routinely picked up at a DC by another motor carrier.

**BCO-LMC Relationship.** Most BCOs or 3PLs use 2–3 “core carrier” LMCs for the great majority of their imports. The relationship typically includes:

- Negotiated rates, delay fees, pre-pull fees, etc.
- LMC capacity commitments for peak BCO demands.
- LMC driver services to reposition units in the DC yard.
- Priority handling for “hot” boxes.
- Joint management of inbound import flows.
- Targets for Peak/OffPeak split.
- Overnight staging, where required.

The relationship can become more complex when the core carrier also handles rail intermodal moves or, in the case of Knight, for example, transload highway moves.

BCOs and LMCs see disruption of this relationship as a serious downside of the PWPO concept.

- BCOs could no longer make volume commitments or obtain volume discounts.
- With no ongoing relationship, BCOs would have no leverage over service quality or reliability (“no neck to choke”).
- LMCs could not assign drivers or equipment to major accounts.
- Ancillary services would be unavailable or difficult to arrange.

**Truck arrival and queuing.** The PWPO as envisioned does not have a mechanism for managing or leveling truck arrivals or queuing at the marine terminal, and may lead to uneven service to BCO locations. While the PWPO concept includes a limit on the number of trucks allowed in the terminal at a given time, that provision does not prevent large queues and long waiting times. To level demand, MTOs would likely need an appointment or quota system in conjunction with the PWPO.

LMC dispatchers commonly offer drivers a mix of shorter and longer trips to meet the drivers' income needs while respecting HOS limits. There is often increased demand for shorter trips toward the end of the drivers' working day to “fill in” the available HOS with revenue work. MTOs may find most drivers unwilling to undertake unspecified longer moves late in the day, making it difficult for those customers to receive their import cargo.

**Hours of Service Issues.** As envisioned, a PWPO could likely lead to instances in which a driver receives a load that he cannot legally deliver the same day. A driver needs to clear the marine terminal, drive to the customer,

deliver the load (and perhaps retrieve an empty), and return to either the LMC's yard or his home (wherever the truck is parked off duty) within his hours of service. The wide range of distances and times for LALB import deliveries makes the total time involved highly uncertain.

In the early evening, when most "day" drivers are finishing their HOS, every driver could have different hours remaining and a different domicile to reach.

An "Inland Empire" round trip could vary between Chino (about 3 hr. RT from Long Beach) to Redlands (about 4.5 hr. RT). "Day" drivers that have started at 6 AM would likely not be willing to take such trips after about 1 PM, and there would be heavy demand for "short" trips near the Port.

The HOS problem will be exacerbated by the requirement for Electronic Logging Devices (ELDs). ELDs prevent the driver from "logging off" while the tractor is queuing or idling in the terminal, eliminating a source of flexibility. ELDs are required for drivers covering more than 100 air miles or 140 road miles between the drivers' "base" (often his home) and the customer. Drivers with ELDs will be unable to "fudge" their HOS to the extent they do now, and drivers without ELDs will be restricted to the shortest trips to and from the Port.

**Drayage Rates and Costs.** Viability of a PWPO will depend on development of a drayage rate-setting mechanism (akin to standard taxi fares). While this is "not an MTO problem", it would be a major, and perhaps insuperable barrier to PWPO implementation. Taxi rates are typically regulated by the cities where taxis operate. For example, in Los Angeles, taxi rates are set by the City of Los Angeles DOT Bureau of Franchise and Taxicab Regulation.

Since the Motor Carrier Act of 1980, there has been no U.S., State, or local regulation of trucking rates. (At Vancouver, drayage rates are governed by The BC Container Trucking Commissioner, who also issues Container Trucking Services licenses.)

Creation of a public Southern California drayage rate-setting authority would likely be a long, difficult process subject to legal challenge, if possible at all.

The alternative would be development of a drayage industry rate-setting body, with anti-trust immunity. As experience with WCMTOA shows, this too can be a difficult process subject to legal challenge.

The rate-setting situation would be complicated because the PWPO rate quotation process would only apply to peel-off import pickups. Different rate structures could apply to random-access pickups, empty returns, export delivery, etc.

Public or collective/anti-trust rate setting would likely result in higher rates due to the elimination of competition for import pickups and the higher cost of empty returns under a PWPO system.

## **Implementation**

Implementation of a PWPO system within the terminals could be fairly straight forward.

- Some of the change could be incremental as flows shift from predominantly "random access" as at present to predominantly peel-off.
- Export and empty handling may be minimally affected.
- Terminals would need earlier and more complete inland destination information.
- Gate procedures would need to be adjusted.

The PWPO concept may not be well-suited to automated terminals such as LBCT, where each container run has spaces for 4–6 trucks at the end of the stack. The “first box off the stack” concept is not as clearly applicable to such configurations.

Implementation of a PWPO concept among customers and truckers face formidable obstacles, as explained above. Most critically, a PWPO system would be opposed by BCOs and LMCs, and would probably be subject to legal challenge.

### ***Sensitivity to Volume Changes, Carrier Policies, and Supply Chain Trends***

A key factor in the success of a PWPO program would be the relative proportions of containers handled under peel-off and random-access systems. The share of peel-off moves would be expected to grow as the practice became more accepted and BCOs and LMCs adjusted. There would likely be an irreducible minimum of cargo that required random access, but there is no reliable way to estimate that percentage.

Relevant carrier policies to be examined include:

- Negotiated agreements with customers regarding free time, chassis use, and LMC choice.
- Availability and timing of specific delivery address information for import loads.

The PWPO concept runs counter to existing supply chain trends:

- Major retail chains and other importers are seeking greater supply chain visibility and increased precision, while PWPO would reduce both.
- BCOs are now more likely to develop working relationship with a small number of core carriers, while PWPO would disrupt that relationship.

### ***Appropriate Metrics***

The critical issues to be measured and monitored under a PWPO system would include:

- The percentage of cargo handled as peel-off versus random access.
- The number and utility of destination zone stacks for import delivery.
- The frequency of chassis/box mismatches.
- Overall truck turn times, including queueing
- Percentage of dual transactions.

## VII. Hybrid Alternatives

### *Overview*

The inclusion of Hybrid alternatives is driven by:

- The need for a truck traffic mechanism in the PWPO alternative.
- The desire of both terminals and customers to retain a conventional peel-off option under any future program, notably the FFAS alternative.

The consultant team therefore defined two hybrid alternatives:

- Port-wide Peel-off with Appointment System (“PWPOAS”).
- Flat Fee with Appointment System – Peel-off Option (“FFASPO”).

### *Feasibility*

The feasibility of the hybrids builds on the feasibility of the PWPO and FFAS alternatives.

Feasibility of adding an appointment, reservation, or quota system to a PWPO alternative would depend on the feasibility of a system that could accommodate a mix of peel-off and random-access moves. For instance:

- The appointment windows for peel-off moves could be tighter.
- The terminal should be able to offer more peel-off appointments per hour since turn times should be quicker, but may be limited by the gate processing speed and the need for dual transactions.
- It may be that the terminal would need parallel appointment or reservation systems for peel-off and random access transactions.

Feasibility of maintaining and growing conventional peel-off options under an FFAS alternative should not be an issue. Many terminals already have peel-off options, so the issue is how they can be accommodated and encouraged. Terminals might wish to explore customer incentives for peel-off operations or allowing additional appointments per hour for peel-off moves.

### *Impact on Terminals*

Terminal impact for the hybrids should be favorable compared to the PWPO and FFAS alternatives alone.

- Adding an appointment/reservation system to the PWPO alternative would improve traffic flow and reduce congestion outside the terminal gates.
- Retaining and promoting a conventional peel-off option would improve terminal performance and truck turn times under an FFAS alternative.

### *Impact on Queuing, Congestion, and Emissions*

Adding traffic management features to the PWPO alternative should improve congestion and emissions at the Port, although there would still be issues with empty returns.

### ***Capital, Operating, Systems, and Labor Cost Implications***

A PWPOAS alternative would, as noted above, require an appointment/reservation system to handle the mix of port-wide peel-off and random-access business. There would also be some incremental operating costs for the system.

To the extent that conventional peel-off business grew under a FFASPO option, there may be a related need to integrate that peel-off business into terminal operating and appointment systems.

### ***Fit with Terminal Operating Strategies and Systems***

The difference between the PWPO and PWPOAS alternatives is external traffic management, which may have indirect impact on internal terminal operations and strategies.

The FFASPO hybrid improves the fit between the FFAS approach and terminal strategies by retaining and growing the peel-off options MTOs favor.

### ***Impact on Customers and Cargo***

Both hybrid alternatives would benefit customers and cargo flows more than the basic PWPO and FFAS approaches. The traffic management of the PWPOAS approach might be a small improvement from the BCO perspective, but more significant to LMCs. The FFASPO hybrid would benefit those customers, and that cargo, that can take advantage of a peel-off option.

### ***Implementation***

Both the PWPOAS and FFASPO hybrid strategies could be implemented incrementally:

A traffic management system would be needed as terminal and operations shifted from the present system to PWPO.

Existing conventional peel-off programs would remain during transition from the existing system to FFAS, with the possibilities of new peel-off incentives.

### ***Sensitivity to Volume Changes, Carrier Policies, and Supply Chain Trends***

Neither of the hybrid alternatives should be much more or less sensitive to volumes, carrier policies, or supply chain trends than the basic FFAS and PWPO approaches.

### ***Appropriate Metrics***

The PWPOAS approach would presumably entail appointment system and truck traffic flow metrics and KPIs, such as truck queueing and turn times.

An FFASPO hybrid would logically lead terminals to track and measure peel-off performance: percentage of peel-off moves, peel-off turn times, etc.



## VIII. Economics

### Approach

The consultant team developed preliminary numbers to look at the relationship between fee systems and revenue (Exhibit 8). In 2016, there were 2,693,303 TEU subject to the TMF, an estimated 1,455,839 loaded containers (at 1.85 TEU per container).

*Exhibit 8: 2016 PierPass Economics*

| Input Factors   | 2016                  |
|---|-----------------------|
| <b>PierPASS Revenue</b>                                   | <b>\$ 191,910,033</b> |
| PierPass Op Expense                                       | \$ 10,556,804         |
| Net Revenue Available                                     | \$ 181,353,229        |
| Dist'n to MTOs  | \$ 182,657,857        |
| MTO OffPeak Program Costs                                 | \$ 292,712,846        |
| Admin Costs   | \$ 9,599,375          |
| Day Shift Savings   | \$ 77,594,993         |
| <b>Net OffPeak Program Costs</b>                          | <b>\$ 224,717,228</b> |
| Cost Recovery %   | 81%                   |
| TEU subject to TMF  | 2,693,303             |
| <b>PierPass Revenue per TEU</b>                           | <b>\$ 71.25</b>       |
| <b>OffPeak Cost per TEU</b>                               | <b>\$ 83.44</b>       |
| 2016 TMF Charge per TEU                                   | \$ 70.47              |
| TEU/Container   | 1.85                  |
| <b>Est. Loaded Containers subject to TMF (Non-Exempt)</b> | <b>1,455,839</b>      |
| <b>PierPass Revenue per Container</b>                     | <b>\$ 131.82</b>      |
| <b>OffPeak Cost per Container</b>                         | <b>\$ 154.36</b>      |

*Sources: PierPass Reports, Tioga analysis of PierPass data*

September 2017 PierPass data (Exhibit 9) show that about 86% of the loaded containers handled were non-exempt (and would pay the TMF if handled during the peak shift), and 14% were exempt because they were being drayed to or from the rail intermodal terminals, because they held domestic cargo, or for some other reason.

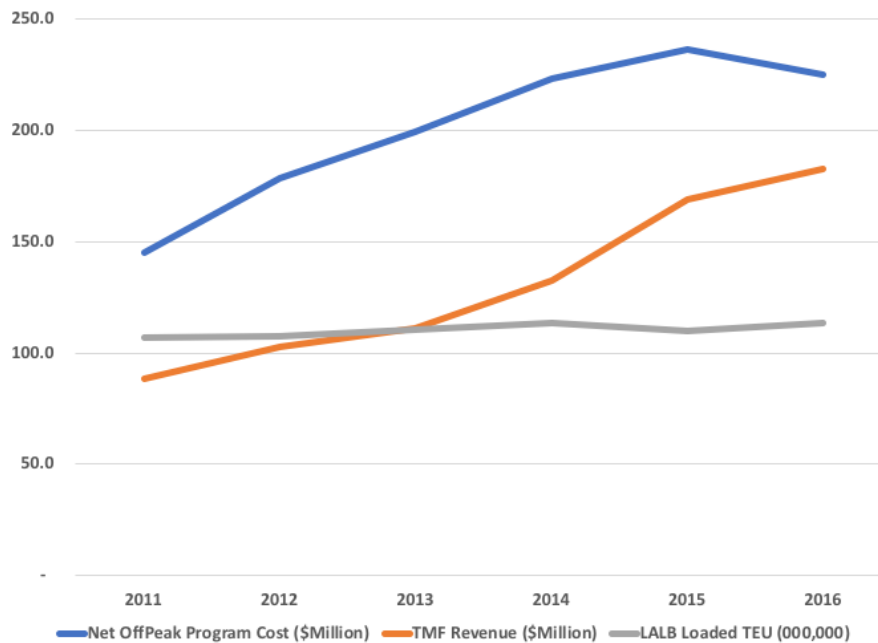
Of the loaded non-exempt containers, 42% exited the terminals on the peak (day) shift and 58% on the off-peak (night) shift. Subsequent analysis by PierPass verified that this 42/58 split was typical of 2017 as a whole.

**Exhibit 9: September 2017 Container Shares**

| Category        | Containers     | Share       |
|-----------------|----------------|-------------|
| Non-Exempt      | 327,760        | 86%         |
| Paid TMF        | 137,114        | 42%         |
| Did not pay TMF | 190,646        | 58%         |
| Rail Exempt     | 32,515         | 9%          |
| Other Exempt    | 19,966         | 5%          |
| <b>Total</b>    | <b>380,241</b> | <b>100%</b> |

In 2016, TMF revenue covered about 81% of the net program costs for extended gates and overhead. As Exhibit 10 shows, the net cost of the OffPeak program has been rising faster than loaded TEU volume in recent years. TMF revenue has also been rising faster than cargo volume. This rise may reflect the growing tendency to pick up import loads during peak hours, as reported in the stakeholder interviews.

**Exhibit 10: Program Cost, TMF, and Cargo Growth History**



The consultant team estimated that about 7.3 million non-exempt TEU or 3.9 million non-exempt containers would move through the ports in 2017, and be potentially subject to the OffPeak program (Exhibit 11)

**Exhibit 11: Estimated 2017 Volumes**

| Category                | 2017 Est.        |                  |                   |                     |
|-------------------------|------------------|------------------|-------------------|---------------------|
|                         | Loaded IB TEU    | Loaded OB TEU    | Total Loaded TEU  | Loaded Containers** |
| Total Truck Drayage     | 5,857,471        | 2,616,037        | 8,473,508         | 4,580,275           |
| <b>Non-exempt Truck</b> | <b>5,049,021</b> | <b>2,254,971</b> | <b>7,303,992</b>  | <b>3,948,104</b>    |
| Est. Rail Exempt        | 500,881          | 100,042          | 600,923           | 324,823             |
| Est. Other Exempt       | 307,569          | 261,024          | 568,593           | 307,348             |
| On-dock Rail            | 2,129,853        | 731,964          | 2,861,816         | 1,546,928           |
| <b>Total</b>            | <b>7,987,324</b> | <b>3,348,001</b> | <b>11,335,325</b> | <b>6,127,203</b>    |

Source: Import Distribution Summary - Leachman Analysis/Tioga Analysis

\* Transloading done within 24 hours.

\*\* 1.85 TEU/container

The team estimated fee levels required to generate equivalent revenues under the FFAS and PWPO systems.

**Flat Fee System**

The team assumed that the same non-exempt loaded containers would be subject to the new fees, so the same volumes would apply. The table below provides estimates of the flat fees required on a container basis, and on a TEU basis, to generate the same revenue as in 2016.

**Exhibit 12: Estimates of Revenue-Neutral Flat Fees**

| Input Factors                                       | 2016            |
|---|-----------------|
| PierPASS Revenue                                    | \$ 191,910,033  |
| Net OffPeak Program Costs                           | \$ 224,717,228  |
| <b>Container-based Flat Fee</b>                     |                 |
| Est. Total Loaded Non-Exempt Containers             | 3,480,067       |
| <b>Flat Fee equivalent of 2016 PierPass Revenue</b> | <b>\$ 55.15</b> |
| Flat fee for net cost recovery                      | \$ 64.57        |
| <b>TEU-based Flat Fee</b>                           |                 |
| Est. Non-Exempt Loaded TEU                          | 6,438,124       |
| Est. Loaded 20-foot TEU                             | 965,719         |
| Est. Loaded 40-foot TEU                             | 5,472,406       |
| <b>TEU Fee equivalent of 2016 PierPass Revenue</b>  | <b>\$ 29.81</b> |
| TEU fee for net cost recovery                       | \$ 34.90        |

Sources: PierPass Reports, Tioga analysis of PierPass data

A flat fee of about \$55 assessed against all non-exempt, loaded containers would therefore generate the same 2016 revenue as the TMF assessed on peak containers only. If assessed on a TEU basis, the equivalent fee would be \$29.81 per TEU - \$29.81 for a twenty-foot container, and \$59.62 for a forty-foot container.

The fee should be expected to be higher once the 2017 costs are made available, though they were not at time of this publication. As Exhibit 10 shows, program costs and TMF revenue have been growing faster than cargo volume. With a flat fee, TMF revenue will grow in sync with loaded TEU volume.

## **PWPO System**

Fee setting for the PWPO option would be complex, because it depends on the split between peel-off and random access, and on the premium charged for random access (RA). The examples below each yield the same 2016 revenue. As peel-off accounts for more of the volume, it carries more of the revenue burden and the PWPO rate has to rise. The examples do not include the potential terminal cost savings, as there is as yet no estimate for those savings.

PWPO equivalent revenue examples:

- At 80% PWPO and \$100 extra for RA, fees could be \$35 PWPO/ \$135 RA
- At 60% PWPO and \$100 extra for RA, fees could be \$15 PWPO/ \$115 RA
- At 40% PWPO and \$50 extra for RA, fees could be \$25 PWPO/\$75 RA
- At 20% PWPO and \$30 extra for RA, fees could be \$31 PWPO/\$61 RA

The last example is the equivalent of a \$61 flat fee per container with a \$30 discount for PWPO containers. These figures are close to the TEU-based flat fee option shown in Exhibit 12, and suggest that a hybrid flat fee/peel-off system might yield similar economics.

## IX. Findings

### *Off Peak: Keep, Change, or Replace?*

The first question to be answered is whether WCMTOA should keep the OffPeak system, fine-tune the OffPeak system, or replace it. The answer is not simple.

Virtually all stakeholders want change of some kind.

- Large BCOs that been successful in avoiding the TMF tend to favor keeping the current system, but fine-tuning it and improving terminal performance.
- Smaller BCOs that have trouble pulling everything at night tend to want a new system.
- Larger BCO interview respondents (7 of 12) typically answered the question by describing the system or the changes they want, often focusing on flexibility, an improved appointment system, and improved terminal performance
- Other BCO interview respondents (5 of 12) said the system should be replaced.
- 43% of BCOs and 55% of LMCs/etc. in on-line survey said they favored replacing the system.
- On-line comments describe a range of changes desired, focusing on appointments and productivity.

The issue of replacing or changing the OffPeak system is partly semantic, and partly a matter of degree. By all indications, if a new system is chosen it will still be called “OffPeak”, and any fee imposed would likely still be called a “Traffic Mitigation Fee”.

The OffPeak system was put in place to mitigate the traffic congestion and terminal queues common before 2005. The mechanism chosen was a financial incentive: the TMF, which led LMCs and BCOs to shift roughly half the truck traffic to the night shift. Although truck queues and traffic congestion did not disappear completely, they were greatly diminished.

Many of the “changes” desired by stakeholders – notably faster truck turn times, and improved terminal performance on the night shift, and a solution to chassis supply problems – are not OffPeak issues at all. These and similar problems might most usefully be regarded as outstanding issues for Los Angeles and Long beach terminal operators, ocean carriers, and chassis pool operators that have not been addressed, and will not be addressed, within the OffPeak system. These problems co-exist with the OffPeak system but require some other solution.

The reported problems with night shift terminal performance, however, may be reducing OffPeak’s effectiveness. Stakeholders report a rising share of moves being made during peak (day shift) hours, which they attribute in part to night shift terminal performance shortfalls.

The one issue clearly related to the present OffPeak system is the 3 to 6 PM slowdown and productivity loss. Most participants, notably the WCMTOA member MTOs, see this slowdown as a major problem. It is not clear that there is an incremental solution available within the existing OffPeak framework:

Changing the 6 PM peak/offpeak changeover to another time would move the problem, not solve it. The problem may not coincide with the ILWU shift changes or freeway commute hours, but the basic problems still exist.

- Changing the basis of timing from truck exit to truck entrance would move the problem from inside the terminal to outside, and create a 6 PM traffic jam at the gates.

- A tapering TMF or a variable/dynamic pricing scheme have been suggested, but rejected by stakeholders in the Extended Gates Working Group meetings.

It may therefore be impossible to resolve this problem without changing the day/night shift change cutoff, which is the basic traffic management tool in OffPeak. If such a change were made, the difference between “changing” and “replacing” OffPeak would be moot.

### Summary Evaluation of Alternatives

Exhibit 13 below brings back the criteria and objectives laid down in Section III and assigns values for the FFAS and PWPO alternatives, and for the PWPOAS and FFASPO hybrids.

- Either option could clean up the 3-6 PM slowdown.
- Progress against clean air goals under PWPO would depend on whether reductions in the terminal outweighed the increase from more miles travelled to retrieve empties.
- Dual transactions could go either way under PWPO, since there might always be an import box available for a driver who brought in an empty or an export load, but it might not be one he could take.
- Net improvements in terminal operations would depend on how much was peel-off and how much was random access.

**Exhibit 13: Summary Evaluation Table**

| Objective  | FFAS | PWPO  | PWPOAS* | FFAS/PO** Hybrid |
|--|------|-------|---------|------------------|
| Minimize local traffic impacts                                       | ++   | 0     | ++      | ++               |
| Reduce 3-6 PM congestion, in-terminal parking, and productivity loss | ++   | ++    | ++      | ++               |
| Address State/Port clean air goals                                   | +    | ++/-  | ++/-    | ++               |
| Fund the operation of extended gates                                 | ++   | +(?)  | +(?)    | ++               |
| Function with supply chain   | +    | --    | --      | +                |
| Maximize dual transactions   | +    | ++(?) | ++(?)   | +                |
| Manage empty returns   | +    | -     | -       | +                |
| Work with chassis ownership patterns                                 | 0    | -     | -       | 0                |
| Improve terminal operations  | +    | ++/-  | ++/-    | ++               |
| Maintain desirable day/night split                                   | ++   | 0     | ++      | ++               |
| Reduce outside queue times   | ++   | 0     | ++      | ++               |
| Reduce inside turn times   | +    | ++/-  | ++/-    | ++               |
| Be operationally feasible  | ++   | --    | --      | ++               |
| Be fiscally responsible  | ++   | ++/-  | ++/-    | ++               |

\* Port-Wide Peel-Off with Appointment System

\*\* Flat Fee with Appointment System/Conventional Peel-Off

- The FFAS option would have the strongest effect on traffic flow through use of appointments.
- The ability of the FFAS system to fund extended gates will depend on the level of fees and the ratio of exempt and non-exempt cargo, but should be somewhat better than the current OffPeak program. The ability of a PWPO system to fund extended gates is more problematic depending as it does on the ratio of peel-off and random access traffic and the fees applied to each.
- The FFAS option would function well with the supply chain, although it would lead some large BCOs to shift their day/night receiving split. The PWPO option would not function well with existing or expected supply chain practices.

- The FFAS system may have indirect impacts on empty return practices. At present, BCOs and LMCs tend to return more empties during the day because those moves are “free”. With the same fee structure day and night under FFAS, some empty returns would probably move to the night shift. Empty returns would be difficult to manage under a PWPO system.
- An FFAS option is unlikely to influence chassis ownership or vice versa. Chassis ownership issues could become a barrier to smooth operation of a PWPO system.
- The FFAS option promises improvements in terminal operations due to 1) elimination of the 3–6 PM activity lull; and 2) the opportunities to level and manage work flow via appointment systems. The terminal operations benefits of a PWPO system would depend on the balance between more efficient peel-off moves and possibly less-efficient random-access moves.
- Appointment systems are almost uniformly regarded by stakeholders as a better way to manage the day/night truck move split than the 6 PM peak/offpeak cutoff. The PWPO option by itself would not affect the day/night split.

## Findings

The consultant team’s findings are straight forward:

1. **Appointment systems are a more effective way to manage truck flow and terminal workload.** Everything points to the use of appointment systems to manage the truck flow. MTOs are using them now, and are committed to using them in the future. Appointment systems are pivotal to the favored FFAS option, and they are needed for both hybrid options.
2. **The Peak/OffPeak fee system could be replaced with a flat day/night container fee to function better with appointment systems and eliminate the shift change problem.** The flat fee is probably a better system than the current OffPeak program to manage the use of night gates, level the flow, and fund the program. Either the FFAS system or the FFASPO hybrid will eliminate the 3–6 PM gap, and it will work better with the appointment systems. Together, appointment systems and a flat fee are more flexible and adaptable tools than the system we put in place back in 2005.
3. **Terminals could offer/encourage a conventional peel-off option.** There is every reason to offer, develop, and encourage peel-off operations. A reduced fee or some other incentive might be appropriate.
4. **Stakeholders want improvement to appointment systems.** It is clear that MTOs will need to improve and fine-tune the appointment systems, but it is also clear that there is more scope to adjust those systems than to tinker with the OffPeak program. There are also reasonable ways to progress toward a single portal and satisfy some of the stakeholder demands.
5. **Stakeholders want terminals to address night shift productivity issues.** Stakeholders are pushing for better productivity at night, and regardless of where individual MTOs stand on the issue it will come to the forefront with any change in the system.

## Appendix A: Appointment Systems and Fees at Other Ports

### *Port of Oakland*

The three major container terminals at Oakland – OICT/SSA, TraPac, and Everport – all use eModal appointment systems. (The Matson terminal does not have an appointment system.) By mid-2017, all three were requiring appointments for decked import boxes. OICT/SSA shuttles some wheeled containers to the off-terminal Shippers Transport yard and does not require appointments for those containers. Everport has not always required appointments for all import wheeled loads.

The OICT/SSA terminal charges a \$30 fee for all import and export loads, and uses the fee to support (but not fully fund) extended gate hours. The financial information is shared with the Port of Oakland, and the Port effectively verifies to the port community that the funds are being used as claimed.

The fee and the OICT/SSA appointment system were implemented in response to serious performance and congestion issues compounded by a large traffic increase after the Ports America terminal closed in January 2016. The fee was fairly well received by stakeholders because it was perceived as a necessary step, and many customers were paying much larger sums for delay fees. Most critically, between the extended gates, the appointment system, and other measures, OICT corrected the congestion problem.

### *Port of Vancouver*

The three major Port of Vancouver container terminals have had appointment systems for several years, partly due to a major truckers' strike that led to government intervention. The basic system is laid out in the January 2015 Terminal Gate Compliance Initiative (version 3.0):

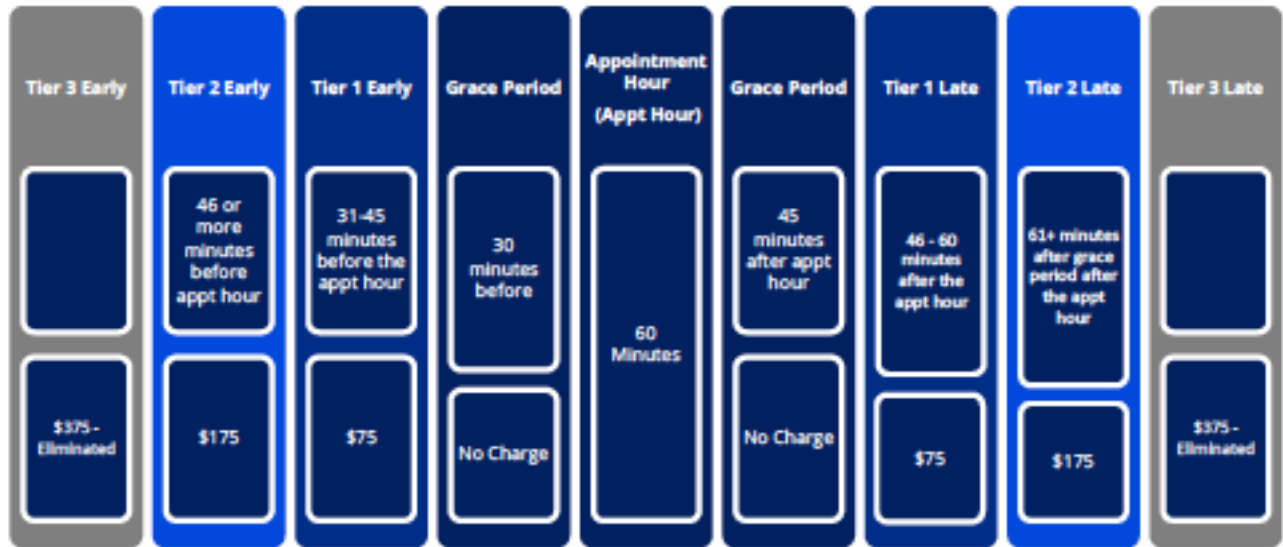
- Terminal transactions would all require appointments (note that Vancouver terminals store most empties off-site, so there are few empty container moves and truckers own the chassis so there are no empty chassis pulls or returns).
- There was a CDN 50 fee for each appointment booked.
- The CDN 50 fee would be refunded for each transaction completed during extended gate hours.
- Terminals would issue “vouchers” when they were unable to complete the transaction.

Although details have changed, this basic system is still in place.

In 2017 Global Terminals Canada (Deltaport and Vanterm terminal) introduced Flex-Appointment Service to accommodate transactions outside the normal appointment window and grace period, at an extra fee. As Exhibit 14 shows, the options include “Tier 1” (31-45 minutes before, or 46-60 minutes after the appointment window) at CDN 75, or “Tier 2” (more than 46 minutes before or 60 minutes after the window) for CDN 175. An earlier “Tier 3” option at CDN 375 was eliminated.



**Exhibit 14: GCT Canada Flex-Appointment Service Options**



### **Port of New Orleans**

New Orleans’ Napoleon Ave. container terminal is divided between two operators, New Orleans Terminal, which is jointly owned by Ceres and Container Marine Terminals, and Ports America. The operators use separate lanes in a single gate complex, and operate separate appointment systems linked with their terminal operating systems — Navis N4 for Ports America and Tideworks for Ceres.

Motor carriers submit truck, container, and booking information through an online portal linked to one of the terminals’ operating systems. The terminal’s system checks the information against booking data provided by ocean carriers. If the information matches, the trucking dispatcher schedules an appointment and receives confirmation.

Trucks using the port are assigned unique numbers and radio frequency identification tags that are placed on the front dashboard. As drivers approach the terminal on a dedicated roadway, they pass transponder readers that verify truck and container numbers and booking and appointment data.

If everything is in order, the driver receives a text message to proceed to the gate. If not, the driver stops at a “problem resolution” station outside the terminal gates and calls his dispatcher.

When the driver reaches the gate, container and chassis information is scanned by optical character recognition cameras and confirmed by International Longshoremen’s Association workers. If there’s no problem, the transaction takes seconds. If something is amiss, the driver can be shunted aside for an ILA clerk to troubleshoot the problem and print a new ticket for the driver.

Most problems are dealt with outside the gate. An estimated 70 percent of NOT’s inbound gate transactions and 65 percent of outbound moves are processed automatically. Most exceptions are reportedly for issue such as faded chassis and container numbers that the optical character recognition cameras cannot read properly, or radio frequency identification tags that cannot be read because they are buried underneath papers on a truck dashboard.

The New Orleans Terminal typically allows 110 appointments per hour, a volume the terminal can reportedly handle efficiently, although the number can be adjusted on the fly. Port America has a similar number of hourly slots and also can adjust them as needed. Each operator averages about 850 gate moves a day.

Drivers that miss an appointment can stand by for the next available slot. In practice, drivers usually can take a slot that becomes available when another driver cancels or fails to show up. Truckers can make appointments the previous day, or even while a driver is enroute to the terminal.

The port's truck gates are open 7 AM to 5 PM. Appointments are in highest demand when gates open, about 11 AM when drivers often return for a second load, and around 3 PM.

### ***Port of Mobile***

The APM terminal at the Port of Mobile has a reservation system, but the appointments are for a full day rather than a specific time slot. Motor carriers may submit arrival notices days or even weeks in advance, or as late as immediately before arriving at the gate.

The reservations are linked to APMT's Navis N4 terminal operating system, which advises yard equipment operators that a container is due for pickup and should not be buried inside a container stack. The main objective of the reservations, however, is to speed trucks through the terminal's automated gate system. If the license tag, chassis, container numbers, and other information match the appointment, information, the trucker is issued a yard ticket and allowed into the terminal.

### ***Port of NYNJ***

#### **GCT Bayonne Appointment System**

GCT Bayonne introduced its Truck Management System ("appointment system") on January 15, 2017 following an extensive period of development, testing, and outreach with the drayage community. Jointly funded and developed by Sustainable Terminal Services, Inc., a consortium of the port's six marine terminal operators, the system fulfills a pivotal Tier One Recommendation of the Port of New York and New Jersey's Port Performance Task Force. It aims to meter truck arrival rates while keeping resources for all stakeholders operating at maximum levels, decreasing truck turn times, and adding a level of consistency for each trip. GCT Bayonne was the first of the Port of New York and New Jersey's marine terminals to implement the Truck Management

The GCT Bayonne system covers all types of transactions (import, export, empty, reefer), and each driver's appointment is specific to the transaction(s) he/she would like to make. The system is based on the yard density and capacity in each location rather than simply metering trucks through the gate. This feature is designed to bring about efficiencies both inside and outside the gate.

Reservation windows run for a full hour with a half hour grace period on either end. Since truck traffic will be metered into the terminal, the system is expected to accommodate single moves in 45 minutes and a double move within one hour. Reservations can be cancelled at any time, but modifications can only be made during the reservations window, which is currently Monday thru Friday 6 AM – 6 PM.

Drivers' reservations will be activated when they arrive at GCT Bayonne via a read of their truck's RFID tag. If the truck does not have a valid reservation or the license plate/RFID association is invalid, the trucks will be directed out at the security checkpoint.

Since its introduction in January 2017, the TMS has improved truck turn times by 41 percent, down to under an hour, allowing approximately 300 transactions per hour. Not only does the TMS smooth traffic over peak hours, but it also has improved GCT Bayonne’s non-appointment times significantly. To date, more than 50 percent of all daily gate transactions are now completed under the reservation system.

Drayage operators speak positively of the system after the terminal expanded the time period in which appointments are required for a truck to enter the terminal by an hour in early October 2017, the third such increase due to demand for appointments. Reservations are now needed between 6 AM and 12 PM, and trucks without appointments can now enter between noon and 4 PM.

Truckers, who since the first suggestion of an appointment system expressed concern that there were too many factors beyond their control — such as congestion — to allow them to fulfill appointments, said the system has brought fluidity and predictability.

Effective November 6, 2017 GCT Bayonne requires reservations between 6 AM – 1 PM. No trucks will be allowed to enter the terminal before 1:00 PM. without a reservation.

### **PNCT FLEX Program**

Port Newark Container Terminal (PNCT), has recently introduced a truck slot reservation program. The new “FLEX Services” program allows terminal clients who pay \$95.50 per container to be serviced first when PNCT opens at 6 AM. The program is available to all truckers on a voluntary basis and provides for only 50 slots each gate day. Further on, PNCT intends to implement an additional option for truckers to reserve an opportunity to pick up or deliver a reefer container after PNCT’s reefer cutoff time of 4:30 PM for \$80.00.

By introducing “FLEX Services” PNCT aims to help its customers “handle unpredictable or changing requirements of their customers as well as save money and/or time”, as the terminal operator informs on its website. Trucking companies can make payments and secure a slot through a mobile phone or a computer. The system, which was introduced in February 2018, is the first of its kind at the NY/NJ port, where PNCT is one of the four main container terminals.

### **NYNJ Fee Proposal**

The Port Authority of New York and New Jersey cargo facility charge amounts to \$5.73 on 20-foot containers, and \$11.46 on 40-foot containers. When the port authority enacted the charge, the agency eliminated two existing fees: a \$57.50 per-lift assessment on containers handled at the port’s ExpressRail ramps, and a volume-based Sea-Link truck registration fee of \$2,500 to \$10,500 per quarter. The charge is collected by the Port Authority from the terminal operators and is intended to be a pass through to the lines. If a terminal operator refuses to collect the fee, it becomes liable for the amount.

The purpose of the charge is to fund infrastructure improvements. It has been used to partially fund road, rail, and security projects. For example, in 2016 the Port Authority committed \$56 million, drawn from monies collected through the Cargo Facility Charge, to the construction of ExpressRail Port Jersey.

Opposition to the fee has come on three fronts:

- Legislative. In 2014, New Jersey Governor Chris Christie signed a bill S2747/A4170 into law to eliminate the fee. To be effective, both states would have to approve a law to repeal the fee. The New York State legislature has not followed NJ.

- Federal Maritime Commission. Federal Maritime Commission dismissed a formal challenge to the fee but gave OCEMA immune authority to discuss the fee with the Port Authority in mid-2017.
- Lawsuit. Maher Terminals filed a law suit against the Port Authority claiming that the cargo facility charge is a “duty” on cargo levied without the consent of Congress as required by the constitution. (One aspect of a broader lawsuit.) Maher lost the case initially, and filed an appeal in Oct 2015.

## Port of Virginia

The Port of Virginia began requiring reservations for drays out of Norfolk International Terminals (NIT) on March 1, 2018 from 5 AM to 7 AM and 7 AM to 9 AM on the weekends. Generally, these are periods in which traffic is light, so there may not be much improvement in turn time according to the trucking community.

So far draymen have reportedly been able to seamlessly move in and out of NIT in the early morning. A Virginia Port Authority representative noted that they were using about 60 percent of the available appointment slots.

The new PRO-PASS Trucker Reservation System (TRS) replaces a very loose appointment system VIG has had for several years.

One trucking executive reported that, on average, truckers took 45 minutes to move through the terminal. In early March. In February, the average in the same terminal was 75 minutes, although the monthly number has been below 60 minutes several times in the past.

The Virginia TRS roll-out represents the culmination of more than two years of discussions between the port’s innovation and operations teams, local motor carriers and software development firms aimed at creating a system to help better manage the flow of trucks to and from cargo terminals.

The appointment system will expand to VIG and PMT in the summer of 2018 after fixing any software glitches and ensuring the trucking community is familiar with how to use the website.

Last summer, the port opened a brand new, 26-lane, \$42 million truck entryway called the North Gate complex. The complex allows for motor carriers to enter and exit the terminal in a “seamless” manner, according to the port. And because the gate’s technology package was developed with the PRO-PASS TRS in mind, the hardware and technology infrastructure for the system is already in place.

## Appendix B: Stakeholder Outreach

### *Approach*

Outreach to the marine terminal operators, beneficial cargo owners, licensed motor carriers, and other industry participants was a critical part of the study. The consultant team:

- Developed written discussion guides for MTOS, BCOs, and LMCs/3PLs suitable for in-person or phone interviews.
- Scheduled and completed as many in-person interviews as possible, and completed others by phone.
- Developed and disseminated a Survey Monkey version of the same questions to get the widest possible participation.

### *MTO Discussion Guide*

#### **PierPass OffPeak 2017 Program Alternatives Survey**

#### **MTO Interview Discussion Points**

##### **Current OffPeak/TMF system**

1. What are the strong and weak points of the current system?
2. What are the impacts on
  - Truck lines/queues?
  - Truck turn times?
  - Gate workload?
  - CY workload?
3. What is your current Peak/OffPeak split of truck entries & exits?
4. What would be your preferred split?
5. What is your current Peak/OffPeak split of CY workload (in terms of lifts, transactions, or labor hours)?
6. How does Peak/OffPeak labor productivity or trucker service compare? (We know truckers complain, but what is the reality?)

##### **Appointment Systems**

7. Explanation/documentation of your existing appointment system.
  - System/software used
  - Appointment windows
  - Coverage of transaction types
  - Availability for Peak/OffPeak
  - Handling of non-appointment arrivals
  - Handling of dual transactions
8. What are the strong and weak points of your current system?
9. How good is usage and compliance by truckers (e.g. % no-shows)?
10. Are truckers/BCOs able to get the appointments they need (e.g. all night slots or all day slots)?
11. How effective is the appointment system in:
  - Spreading terminal workload
  - Reducing queues/lines
  - Reducing turn times?

- Helping you plan and manage?
12. How would you use the appointment system to achieve your preferred split of truck arrivals between shifts?
  13. What has been the overall response of truckers, BCOs, and others?
  14. What have you heard about experience with appointment systems from sister terminals?
  15. What appointment system issues do you see as outstanding or needing work?
  16. What are your plans for appointment system changes or expansion?
  17. Do you see a common port portal as essential for a successful FFAS program?

### **Peel-off**

18. Explanation/documentation of your existing peel-off system.
  - How peel-off piles are set up
  - Current minimums/maximimums
  - Terms to the customer or trucker
19. How do you handle incoming transactions (empties, export loads, chassis return) for peel-off import deliveries?
20. What has been the overall response of truckers, BCOs, and others?
21. How would you describe peel-off usage ? (volume, percentage of total, or?)
22. Who are the major users to date?
23. What do you see as the costs and benefits to the terminal operation?
24. How do you market/promote your peel-off program?
25. How satisfied are you with the peel-off program to date?
26. Do you have future plans for your peel-off program?
27. How would you use an expanded peel-off program to achieve your preferred split of truck arrivals between shifts?
28. What barriers do you see to expansion of peel-off operations?
29. What do you see as an attainable peel-off percentage as we currently do business?
30. What do you see as an attainable peel-off percentage under a PWPO?

### **Other Issues**

31. What should we know that we haven't asked about?
32. Which customers or truckers should we make sure to contact?
33. What are we missing?

## ***BCO Discussion Guide***

### **PierPass OffPeak Program Alternatives Survey**

#### **Stakeholder Interview Discussion Points Version of 1/25/18**

#### **Purpose**

The goal of this survey is to assist PierPass in evaluating possible options for the current OffPeak program.

#### **Concepts**

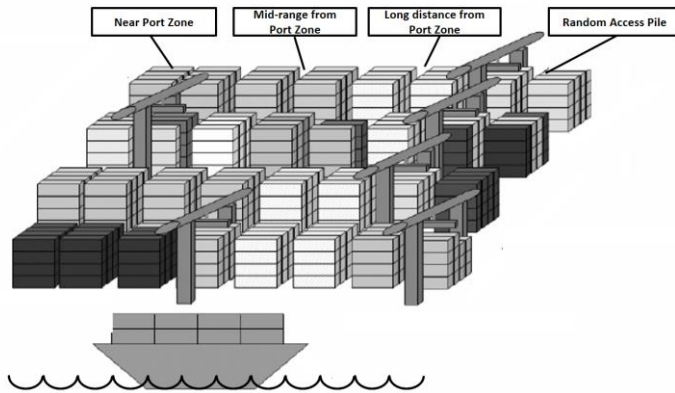
**Flat Fee with an Appointment System (FFAS)** - In this option, traffic would be spread between the Peak and OffPeak periods through appointments. The Traffic Mitigation Fee (TMF) would no longer be needed to serve as

an incentive to use OffPeak rather than Peak shifts, and instead a flat fee for non-exempt containers would be charged during both shifts. Cargo owners would claim containers and pay fees as under the present system.

**Port-Wide Peel-Off Program** - Under a port-wide peel-off system (PWPO), most import containers would normally be handled in peel-off stacks. The port-wide system would differ from current peel-off operations. PWPO would essentially be a **push** system, with claimed cargo being delivered within a reasonable timeframe after vessel discharge. Authorized truckers would enter the terminal, pick up the next container in a stack, and get instructions on where to deliver it. There could be different stacks for different drayage distance ranges (e.g. local vs. Inland Empire). The receiver/ cargo owner would be notified of the truck and driver information, as well as informing the recipient that the truck left the terminal. There would likely be a fee for each loaded container move lower than the current TMF, but the amount has not been estimated. Those who do not participate in the PWPO would have their container go into a random stack to retrieve via the current method, and would incur additional fees above the peel-off fee for the additional services provided.

## Port-Wide Peel-Off

Containers are discharged and stacked by destination delivery zone



### Questions

1. How much of your current business is Peak (with the TMF) versus OffPeak?
2. How do you decide which moves to make when?
3. What do you see as the strengths and weaknesses of the current system?
4. Should the current system be replaced?
5. How do you (or your truckers or your drivers) manage the Peak to OffPeak transition at 6 o'clock?
6. Do you incur other costs associated with drayage, such as pre-pull charges, stop charges, or wait time, in using OffPeak hours? How common are those costs?
7. Of the two basic concepts, Flat Fee with Appointment System and Port-Wide Peel Off Program, which would you prefer and why?
8. How would these options compare to the current OffPeak/TMF system?
9. What has been your experience with appointment systems to date?
10. What do you see as the strengths of a flat fee and appointment system?
11. What aspects of a flat fee and appointment system would cause you the greatest concern?
12. How would a flat fee for all non-exempt container moves affect your operations (as opposed to the current TMF for day moves only)?
13. What do you see as a reasonable transition time from the current system to a flat-fee and appointment system?
14. What do you see as the strengths of a port-wide peel-off system?
15. What aspects of a port-wide peel-off system would cause you the greatest concern?
16. You would not know in advance what trucking company or driver would deliver your container in a PWPO system. What effect would this have on your operations?
17. What kinds of cargo that you handle might or might not fit into a PWPO "push" system?

18. About what percentage of your current cargo could be handled in a PWPO “push” system with minimal disruption to your own operations?
19. Thinking ahead, what percentage of your cargo might eventually be handled in a PWPO “push” system as your own operations adapt?
20. The current daytime TMF is \$144.18 for a forty-foot container. What kind of a reduction would be a reasonable trade-off for accepting a PWPO “push” system?
21. What do you see as a reasonable transition time from the current system to a port-wide peel-off system?
22. What other issues do you see as relevant?

## LMC Discussion Guide

### PierPass OffPeak 2017 Program Alternatives Survey

#### Stakeholder Interview Discussion Points

##### Purpose

The goal of this survey is to assist PierPass in evaluating possible options for the current OffPeak program.

##### Option No. 1: Flat Fee with an Appointment System (FFAS)

In this option, Traffic would be spread between the Peak and OffPeak periods through appointments. The Traffic Mitigation Fee (TMF) would no longer need to serve as an incentive to use OffPeak rather than Peak shifts, and instead a flat fee for non-exempt containers would be charged during both shifts.

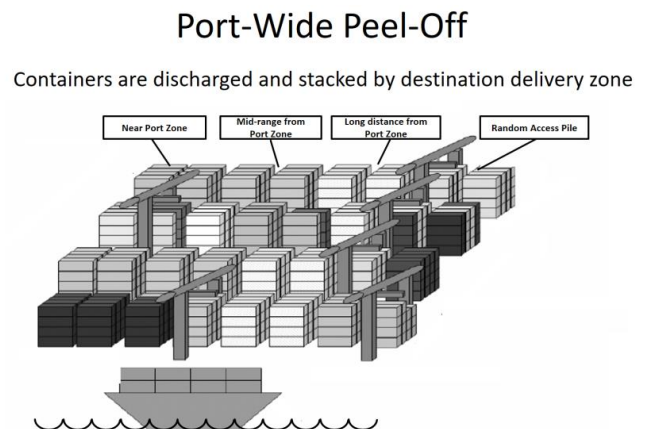
##### Option No. 2: Port-Wide Peel-Off Program

Under a port-wide peel-off system (PWPO), most import containers would normally be handled in peel-off stacks. Containers being discharged from vessels are placed in stacks in the terminal based on their delivery destinations. There could be different stacks for different drayage distance ranges (e.g. local vs. Inland Empire).

Authorized truckers would enter the terminal, pick up the next container in a stack, and get instructions about where to deliver it. A notification would be sent to the receiver advising cargo owner of the truck and driver information, as well as informing the recipient that the truck left the terminal. A TMF would be used to offset the second shift cost. Those who do not participate in the PWPO would have their container go into a random stack to retrieve via the current method and would incur additional fees above the TMF for the additional services provided.

##### Questions

1. How much of your current business is Peak (with the TMF) versus OffPeak?
2. How do you decide which moves to make when?
3. What do you see as the strengths and weaknesses of the current system?
4. How do you (or your truckers or your drivers) manage the Peak to OffPeak transition at 6 o’clock?





5. Of the two basic concepts, Flat Fee with Appointment System and Port-Wide Peel Off Program, which would you prefer and why?
6. What about a combination system offering both appointments and peel-off operations with a flat fee?
7. How would these options compare to the current OffPeak/TMF system?
8. What has been your experience with appointment systems to date?
9. What do you see as the strengths of a flat fee and appointment system?
10. What aspects of a flat fee and appointment system would cause you the greatest concern?
11. How would a flat fee for all non-exempt container moves affect your operations (as opposed to the current TMF for day moves only)?
12. What do you see as a reasonable transition time from the current system to a flat-fee and appointment system?
13. What has been your experience with peel-off operations to date?
14. What do you see as the strengths of a port-wide peel-off system?
15. What aspects of a port-wide peel-off system would cause you the greatest concern?
16. What do you see as a reasonable transition time from the current system to a port-wide peel-off system?
17. What other issues do you see as relevant?

### ***On-Line Survey***

WCL developed shorter versions of the BCO and LMC questionnaires for an on-line Survey Monkey option. These questions were less detailed versions of those above.

Requests to complete the Survey Monkey questionnaires were emailed to large BCO and LMC customer lists provided by PierPass. Responses were eventually received from 100 BCOs and 44 LMCs and third parties.