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## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>2</td>
</tr>
<tr>
<td>Background</td>
<td>3</td>
</tr>
<tr>
<td>Public Involvement</td>
<td>3</td>
</tr>
<tr>
<td><strong>Existing Regulatory Conditions</strong></td>
<td>5</td>
</tr>
<tr>
<td>Strategic Policies and Regulations</td>
<td>5</td>
</tr>
<tr>
<td>On-Street Management Policies and Practices</td>
<td>7</td>
</tr>
<tr>
<td>Off-Street Management Policies and Practices</td>
<td>10</td>
</tr>
<tr>
<td><strong>Existing Truck Parking and Loading Conditions</strong></td>
<td>12</td>
</tr>
<tr>
<td>Central Business District</td>
<td>12</td>
</tr>
<tr>
<td>Central Eastside Industrial District</td>
<td>13</td>
</tr>
<tr>
<td><strong>Stakeholder Interviews</strong></td>
<td>17</td>
</tr>
<tr>
<td>Issues with Truck Parking and Loading</td>
<td>17</td>
</tr>
<tr>
<td>Truck Parking and Loading Best Practices</td>
<td>22</td>
</tr>
<tr>
<td><strong>Performance Measures</strong></td>
<td>30</td>
</tr>
<tr>
<td><strong>Solutions Toolbox</strong></td>
<td>36</td>
</tr>
<tr>
<td>Pre-Parking Management Plan Strategies</td>
<td>36</td>
</tr>
<tr>
<td>Post-Parking Management Plan Strategies</td>
<td>41</td>
</tr>
<tr>
<td><strong>Next Steps</strong></td>
<td>48</td>
</tr>
</tbody>
</table>
LIST OF TABLES

Table 1: Performance Measure Definitions .................................................................................................................. 30
LIST OF CHARTS

Chart 1: Hourly TLZ Utilization within the CBD – Monday through Friday ........................................ 12
Chart 2: Hourly TLZ Utilization within the CBD – Saturday and Sunday .............................................. 13
Chart 3: Hourly TLZ Utilization within the CEID – Monday through Friday ........................................ 14
Chart 4: Hourly TLZ Utilization within the CEID – Saturday ................................................................. 14
LIST OF EXHIBITS

Exhibit 1: San Francisco Color Curb Demarcation Parking System .............................................................. 24
Exhibit 2: Performance Measures – Shipper Issues ......................................................................................... 31
Exhibit 3: Performance Measures – Receiver Issues ....................................................................................... 32
Exhibit 4: Performance Measures – City Issues ............................................................................................. 33
Section 1  Introduction
INTRODUCTION

Based on current City and regional land use policies, Portland’s Central City is expected to become even more densely populated and economically diverse over the next 20 years. Among the many ripple effects will be increased demand for products and the “last mile” freight traffic needed to deliver them. In addition to more traffic, there will be additional competition for street space among transit vehicles, trucks, pedestrians, bicyclists, and motor vehicles. One of the many challenges of an increasingly dense area will be accommodating diverse transportation needs including deliveries, shipping, and waste disposal.

Additionally, many buildings in Portland’s Central City and other neighborhoods have footprints that cover most of the lots and are positioned close to or at the property line. This forces many businesses without access to off-street loading facilities to conduct truck loading activities within the public right-of-way, which competes with other transportation functions for limited right-of-way space. The inherent benefits of providing adequate loading and unloading space are a more efficient commercial delivery system and effective use of public right-of-way space for other transportation modes.

The primary purpose of the Portland Truck Parking and Loading Plan (Plan) is to define common truck parking and loading problems and to develop a toolbox of strategies for targeted areas within the City of Portland to increase the efficiency and effectiveness of “last mile” local freight delivery operations. The Plan focused on the Central Business District (CBD) area and the Central Eastside Industrial District (CEID), which recently completed investigations found to have inadequate loading/unloading facilities.

The Plan process used the following comprehensive approach to achieve identified goals:

- Defining the problem - used stakeholder interviews and input from the Project Advisory Committee. Stakeholders included a wide range of local shippers and receivers and identified both needs and opportunities.

- Existing conditions - gathered through a detailed review of current policies and regulations and field data previously collected on pre-selected block faces.

- Additional field data needs - addressed by identifying gaps in previously collected data and using City resources to conduct a seven-day field survey within the CBD and CEID.

- Performance measures - developed from the information base to assess the efficiency and effectiveness of current and future last mile freight delivery operations.

- Truck loading and parking strategy toolbox - used performance measures and information resources in collaboration with key stakeholders to develop tools to possibly apply in the CBD and/or CEID areas. These strategies consider shipping, receiving, enforcement, and multimodal road user perspectives. The Plan drew strategies from local experience and insights and best practices from other major metropolitan areas.
BACKGROUND

In 2009, the Portland City Council adopted the City of Portland and Multnomah County Climate Action Plan, which sets targets for reducing carbon emissions over the next 20 years. Moving goods and people accounts for nearly half of the greenhouse gas emissions in the City of Portland/Multnomah County area, and the City of Portland and Multnomah County Climate Action Plan highlighted the importance of improving freight movement efficiency in the Portland region. In response, in 2012 the Portland Bureau of Transportation (“PBOT”) prepared the Central City Sustainable Freight Strategy to identify freight efficiencies and address the challenges of accommodating safe and efficient goods movement in an increasingly dense central city environment. One of the key findings was the inadequate supply of available on-street loading space in the Central City for trucks to make deliveries and meet customer needs. This results in double parking and increased truck vehicle-miles traveled and more emissions as drivers circulate to find available loading space. Providing adequate on-street loading capacity reduces double parking by delivery vehicles, improves safety by minimizing conflicts with other modes, and allows carriers and shippers to serve local business in an efficient and cost-effective manner. This Plan is a recommended action from the Sustainable Freight Strategy to prepare a comprehensive truck loading and parking plan for the Central City.

PUBLIC INVOLVEMENT

An integrated public involvement process was central to the success of this Plan. The City used this process to allow residents and Portland business owners to provide input into the parking management planning process for on-street truck loading and unloading. The City established a Project Advisory Committee (PAC) consisting of key City planning, operations, policy and enforcement staff; freight experts; and representatives of key stakeholder groups including business and residential representatives, representatives from the trucking and delivery industries, and bicycle, pedestrian, and transit professionals. The PAC provided meaningful input over the course of developing the Plan.

The project team also benefitted from individual and group stakeholder interviews with City staff; shippers and receivers who frequently access and/or are located within the CBD and CEID areas; staff from the City’s Parking Enforcement Department; and staff from other public agencies such as the Oregon Department of Transportation and parking management staff located in other similar major urban areas around the country.
Section 2   Existing Regulatory Conditions
EXISTING REGULATORY CONDITIONS

This section documents Portland’s current public parking management policies and practices including policies and regulations that apply to public parking management and identifies the City Code sections that give the City the authority to regulate the curb zone, and operational policies and current practices for management tools, such as parking time limits, designated spaces, and permits for special users.

STRATEGIC POLICIES AND REGULATIONS

The City’s Comprehensive Plan and the Central City Transportation Management Plan include strategic policies and regulations that guide parking management within the Central City.

Comprehensive Plan

The Comprehensive Plan is a long-range land use and public facility investment plan that guides future growth and physical development within the City. The 2035 Comprehensive Plan, adopted on June 15, 2016, is the most significant update of the Comprehensive Plan since the original plan was adopted in 1980. Subject to state review and acknowledgement, the new plan will take effect on January 1, 2018.

Chapter 9 of the Comprehensive Plan identifies the City’s goals and policies related to transportation. Per the Comprehensive Plan, the policies related to parking management provide guidance to manage parking demand and supply to meet a variety of public objectives, including achieving compact walkable communities, reducing private vehicle ownership and overall vehicle use, enhancing livability, reducing pollution, and expanding economic opportunity. Parking management policies are below.

Policy 9.55 Parking management. Reduce parking demand and manage supply to improve pedestrian, bicycle and transit mode share, neighborhood livability, safety, business district vitality, vehicle miles traveled (VMT) reduction, and air quality. Implement strategies that reduce demand for new parking and private vehicle ownership, and that help maintain optimal parking occupancy and availability.

Policy 9.56 Curb Zone. Recognize that the Curb Zone is a public space, a physical and spatial asset that has value and cost. Evaluate whether, when, and where parking is the highest and best use of this public space in support of broad City policy goals and local land use context. Establish thresholds to utilize parking management and pricing tools in areas with high parking demand to ensure adequate on-street parking supply during peak periods.

Policy 9.57 On-street parking. Manage parking and loading demand, supply, and operations in the public right of way to achieve mode share objectives, and to encourage safety, economic vitality, and livability. Use transportation demand management and pricing of parking in areas with high parking demand.
Policy 9.58  **Off-street parking.** Limit the development of new parking spaces to achieve land use, transportation, and environmental goals, especially in locations with frequent transit service. Regulate off-street parking to achieve mode share objectives, promote compact and walkable urban form, encourage lower rates of car ownership, and promote the vitality of commercial and employment areas. Use transportation demand management and pricing of parking in areas with high parking demand. Strive to provide adequate but not excessive off-street parking where needed, consistent with the preceding practices.

Policy 9.59  **Share space and resources.** Encourage the shared use of parking and vehicles to maximize the efficient use of limited urban space.

Policy 9.60  **Cost and price.** Recognize the high public and private cost of parking by encouraging prices that reflect the cost of providing parking and balance demand and supply. Discourage employee and resident parking subsidies.

Policy 9.61  **Bicycle parking.** Promote the development of new bicycle parking facilities including dedicated bike parking in the public right-of-way. Provide sufficient bicycle parking at high-capacity transit stations to enhance bicycle connection opportunities. Require provision of adequate off-street bicycle parking for new development and redevelopment. Encourage the provision of parking for different types of bicycles. In establishing the standards for long-term bicycle parking, consider the needs of persons with different levels of ability.

Other policies in the Comprehensive plan that impact parking management include:

**Policy 9.15  Repurposing street space.** Encourage repurposing street segments that are not critical for transportation connectivity to other community purposes.

**Policy 9.48  Technology.** Encourage the use of emerging vehicle and parking technology to improve real-time management of the transportation network and to manage and allocate parking supply and demand.

Central City Transportation Management Plan

The Central City Transportation Management Plan (CCTMP) is Portland’s current policy framework for accommodating growth and managing transportation and parking in the Central City. Adopted in 1995, the CCTMP covers Downtown, North Macadam (i.e. South Waterfront), Goose Hollow, Lower Albina, the Central Eastside, and the River, University and Lloyd Districts.

The CCTMP parking section explicitly identifies parking as a demand management tool in the Central City. The Plan says, “the CCTMP’s parking policy concepts are intended to ‘pinch’ the parking supply to encourage the use of alternative modes of travel.” The City should manage short and long term parking to “minimize the demand for parking without negatively impacting development opportunities.” The CCTMP says on-street parking in the Central City should be made available first for short-term parking,
then for carpool vehicles, and last for long term parking (objective 4.1.1.). The City should prioritize on-street loading zone areas as well, to support nearby business activity (objective 4.1.4).

The Central City Parking Policy Update, part of the Central City 2035 Plan, will update the CCTMP and parking policies and management practices in the Central City. The following draft policies address on-street parking generally, and loading zones specifically, in the Central City.

**Policy 3.14 Loading.** Support the delivery of goods in the Central City. Pursue strategies that bring new ways of delivering goods to the Central City in a way that optimizes loading and freight access and makes efficient use of limited urban space.

**Policy 3.DT-2 Parking.** Recognize that parking is an important asset for Downtown to support regional activity and growth, while encouraging alternative modes and controlling traffic, design, and environmental impacts. Continue to limit the growth of parking as redevelopment occurs and better utilize parking resources among existing and future uses.

**Policy 3.CE-3 Parking.** Establish an efficient parking system (in the Central Eastside) to address existing needs and create new parking strategies to share and manage parking across the district to meet the needs of employment and residential growth and major attractors in the district.

**ON-STREET MANAGEMENT POLICIES AND PRACTICES**

Title 16 of the City Code describes the City’s authority to regulate vehicles and traffic, and authorizes City officers and employees to administer and enforce Code provisions. Title 16 defines the tools available to manage public parking and in some cases defines how and when the tools can be used. The City Traffic Engineer has decision-making authority for many of the parking management tools.

Title 16 allows the City Traffic Engineer to regulate parking on any street or highway by time, purpose, or special user. The City may use parking regulations to “manage parking and traffic congestion in areas with special parking needs.” In some areas, the City uses parking meters to reinforce maximum time stays and to use pricing to influence parking patterns. The City also grants permits that convey special rights or exempt permit holders from posted regulations and fees.

Parking Operations uses one of two processes to implement or change on-street parking regulations.

**Small-scale or site-specific parking issues**

City Parking Control considers small-scale or site-specific parking issues that can be resolved with maximum time stays or user restrictions on a case-by-case basis. For each request, Parking Control conducts a site visit, identifies options, and works with stakeholders to identify the most appropriate approach. As much as possible, Parking Control will obtain the adjacent property owner’s agreement to any proposed regulation of on-street parking along the owner’s frontage.
Complex or area-wide parking issues

Complex or area-wide parking issues that require more than one management tool, or may require parking meters, are addressed through a parking management plan. Parking Operations will work with stakeholders to identify parking issues, define goals and objectives, and jointly develop a comprehensive parking management plan. Once a parking management plan is adopted for an area, the City generally manages parking issues according to the plan.

Specific management tools currently used by the City to manage parking in the Central City include:

Regulated Time Stays

Per Section 16.20.260, the City can set time limits for on-street parking stalls. Time limits are in effect Monday to Saturday, 8:00 a.m. to 6:00 p.m., unless otherwise noted on the regulatory signage. The City generally uses time limits to encourage turnover in non-metered spaces, discourage commuter parking and on-street residential vehicle storage, and ensure on-street parking is available for customers, visitors, and other short-term users.

Parking for Special Users

The City is authorized to designate regulation parking zones with one or more stalls that are reserved for specific users. Title 16 defines 11 types of regulation parking zones, including: no parking, no stopping or parking, theater zones, truck loading zones (TLZs), bus zones, TriMet bus zones, taxi zones, disabled person/wheelchair user zones, time zones, carpool zones, and official/reserved zones.

- Section 16.20.220 says the City can establish a regulation parking zone dedicated to the delivery of merchandise by trucks to commercial properties. These TLZs are intended to prevent double parking or other illegal parking to accomplish commercial pickups and drop offs. TLZs may be used for up to 30 minutes by
  - trucks, vans or pickups that display commercial signage as per the Code specifications;
  - passenger vehicles that display commercial signage and have a valid commercial or delivery permit, and;
  - taxis.

Trucks and other vehicles authorized to use TLZs may also use any metered space every day between 8:00 a.m. and 10:30 a.m. for up to 30 minutes without paying the meter fee. Further, the City can use Code section 16.20.530 to designate temporary TLZs and issue permits for use of these temporary spaces.

Parking Control considers requests for installation and removal of TLZs on a case-by-case basis. Parking Control first looks for opportunities to handle the loading traffic off-street or using existing designated on-street spaces. If a new on-street space is needed, support is sought from all property owners with frontage adjacent to the proposed loading zone. Parking Control also accepts requests to remove an existing TLZ, subject to the same property owner outreach.
Parking Permits

The City is also authorized to issue permits that let a vehicle legally park in violation of a specific parking regulation. The permit may apply in a designated parking zone, parking meter, or elsewhere, depending on the specifications of the permit. Title 16 defines 14 types of parking permit, including: construction area permits, maintenance hood permits, temporary truck loading permits, angle loading permits, travel lane parking permits, special use permits, media permits, commercial permits, disabled resident permits, disabled employee permits, delivery permits, nonprofit permits, government permits and carpool permits.

- The City issues commercial vehicle permits, delivery permits, and delivery service permits to assist efficient movement of goods and services in parking meter districts. A vehicle with a valid commercial, delivery or delivery service permit can park without payment:
  - For five minutes at a space with a 15 minute time limit.
  - For 20 minutes at all other metered spaces.

Permit holders in this category are also granted specific types of access to TLZs. Specifically:

- Commercial vehicle permit holders can park for up to 30 minutes in any TLZ.
- Delivery permit holders can park for up to 30 minutes in up to two TLZs specified in the permit document.
- Delivery service permit holders can park for up to 15 minutes in any TLZ.

Enforcement

Parking Code Enforcement Officers are empowered under City Code 16.20.650, as special police officers of the City. They have authority to issue citations for parking violations, including violations of disabled zones on property that is open to the public outside of the public right-of-way, or on City of Portland owned or operated property. They do not have the authority to issue citations for moving violations.

Issues with Implementation

- Time limits and loading zones are installed at the request of adjacent property and business owners; however, there is not typically follow-up, which can result in parking controls that do not reflect the needs of surrounding land uses.
- Property and business owners may not know that a request to PBOT can result in changes to time limits, or the addition or removal of loading zones.
- The City does not have a district approach to enacting time limits and loading zone siting decisions.
- Hours of enforcement are not clearly communicated on the current signage installed throughout the City.
Enforcing time limits is labor intensive, requiring multiple trips to observe vehicles to see if they are in violation.

OFF-STREET MANAGEMENT POLICIES AND PRACTICES

Title 33.266.310 of City Code includes the City’s off-street parking requirements. In general, the City determines off-street parking requirements, including off-street loading facilities, based on the size and use of the development as well as the location of the development relative to transit facilities and services. The Code identifies two types off-street loading facilities, including:

- **Standard A:** the loading space must be at least 35 feet long, 10 feet wide, and have a clearance of 13 feet.
- **Standard B:** The loading space must be at least 18 feet long, 9 feet wide, and have a clearance of 10 feet.

Outside the Central City, off-street loading facilities must be designed so that vehicles enter and exit the site in a forward motion. In the Central City, only loading facilities that abut a light rail or streetcar alignment must be designed so that vehicles enter and exit the site in a forward motion.

Issues with Implementation

- Off-street loading spaces also require a driveway. This permanently removes an on-street parking stall, even though the space may only be used occasionally.
- Development Review believes that requiring off-street loading spaces does not provide the flexibility they would ideally have in the design review process.
- Requests for adjustments and modifications to the off-street loading standards are common, and are usually approved.
- The Portland Design Commission has expressed concerns about the impact that off-street loading spaces have on the streetscape and pedestrian/sidewalk environment, particularly in buildings that also provide off-street parking stalls via a separate driveway access point.
Section 3  Existing Truck Parking and Loading Conditions
EXISTING TRUCK PARKING AND LOADING CONDITIONS

The following provides a summary of the observations that occurred within the Central Business District (CBD) and the Central Eastside Industrial District (CEID) for the purpose of documenting existing truck parking and loading conditions.

CENTRAL BUSINESS DISTRICT

The project team oversaw the collection of parking utilization data in the Central Business District (CBD) in October 2015 along SW Alder Street between SW 13th Avenue and SW 1st Avenue as well several adjacent streets in hourly increments, Monday through Saturday from 7:00 a.m. to 7:00 p.m. and on Sunday from 9:00 a.m. to 7:00 p.m. The data includes the total number of truck parking and loading events that occurred within the TLZs throughout the study period.

Staff observed a total of 48 TLZs within the CBD study area. Based on the data, there were a total of 648 events within the TLZs over the seven day study period. It is important to note that this represents a relatively small sample of potential events that could have occurred within the CBD. However, the data highlights some of the unique characteristics of truck parking and loading within the CBD. Charts 1 and 2 illustrate the hourly TLZ utilization rates within the CBD based on the data collected Monday through Friday and Saturday and Sunday.

Chart 1: Hourly TLZ Utilization within the CBD – Monday through Friday

Chart 1 shows that utilization tends to be the highest in the morning with an average peak utilization of 68% at 9:00 a.m. and the lowest in the evening with an average utilization of 23% at 5:00 p.m. This

A total of 1,405 observations were made of the 48 TLZs over the seven day study period. This represents approximately 36% of the potential observations that could have been (1,405 / 3,936 =36%)

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profile generally reflects current parking regulations within the CBD that restrict access to most TLZs between 9:00 a.m. and 6:00 p.m. Further, the data indicates that overall utilization is relatively consistent throughout the week, with an average daily utilization of 50%.

Chart 2: Hourly TLZ Utilization within the CBD – Saturday and Sunday

Chart 2 shows utilization tends to be the highest in the morning with an average peak utilization of 86% at 10:00 a.m. and the lowest in the evening with an average utilization of 17% at 3:00 p.m. The City regulates few TLZs on the weekends, so the profile likely reflects the operating hours of businesses within the CBD. The data indicate that overall utilization is relatively consistent on Saturday and Sunday, with an average daily utilization of 32%.

CENTRAL EASTSIDE INDUSTRIAL DISTRICT

The project team also oversaw the collection of parking utilization data in the Central Eastside Industrial District (CEID) in October 2015. The City collected data along SE Taylor Street, SE Salmon Street, and SE Main Street and several adjacent streets in hourly increments, Monday through Saturday from 7:00 a.m. to 6:00 p.m. The data includes the total number of truck parking and loading events that occurred within the TLZs throughout the study period.

The project team observed a total of 22 TLZs within the CBD study area. There were a total of 192 events within the TLZs over the six day study period. It is important to note that this represents a relatively small sample of potential events within the CBD. However, the data highlights some of the unique characteristics of truck parking and loading within the CEID. Charts 3 and 4 illustrate the hourly TLZ utilization rates within the CEID based on the data collected Monday through Friday and Saturday.
Chart 3: Hourly TLZ Utilization within the CEID – Monday through Friday

Chart 3 shows that utilization within the CEID is relatively flat throughout the day with an average peak utilization of 30% at 10:00 a.m. These data also indicate that overall utilization is relatively consistent throughout the week, with an average daily utilization of 22%.

Chart 4: Hourly TLZ Utilization within the CEID – Saturday

Chart 4 shows utilization tends to be lowest in the morning with a utilization of 10% at 7:00 a.m. and highest in the evening with a peak utilization of 43% at 2:00 and 3:00 p.m. Overall utilization is 31%.

Issues with Data Collection

- A majority of truck parking and loading events take approximately 15-30 minutes, while parking data is typically collected in hourly increments.
- More than one vehicle can occupy a TLZ at a time, which impacts the calculations for the supply and demand for TLZs.
- Several trucks double parked or otherwise parked illegally throughout the CBD and CEID – incorporating the data from these events impacts the calculations for the supply and demand for TLZs.
- Utilization data from parking enforcement limits the potential number of “events” that can be observed throughout the study period.
  - Data gaps occurred due to schedule breaks, walking speeds, etc.
  - Vehicle length/type were recorded as pick-up, van, car with permit, etc.
Section 4  Stakeholder Interviews
STAKEHOLDER INTERVIEWS

The project team conducted interviews with local truck operators (shippers), business owners (receivers), and others in order to develop an understanding of the issues associated with truck parking and loading within the City. The team conducted subsequent interviews with other cities to understand how they address many of the same issues within their cities. The following is a summary of the interviews, including the issues and best practices.

ISSUES WITH TRUCK PARKING AND LOADING

Truck Operators

Truck operators experience firsthand all of the issues associated with truck parking and loading within the Central City. They can offer the most insight into how the system is operating and often, how it can be improved. The truck operators interviewed as part of the Plan include:

- B-line Bikes
- Columbia Distributing
- Franz Bakery
- Pacific Coast Fruit
- Portland Paper & Supply

Interviewees identified several issues:

- Freight operators cannot always find an available TLZ when and where they intend to park their vehicle.
- Available TLZs do not always accommodate the truck’s physical characteristics.
- Unauthorized vehicles are sometimes parked in the TLZ at the time a freight operator intends to park their vehicle.
- Freight operators are sometimes constrained by the nature of the delivery and the need to load/unload on the block face where the delivery is destined.
- The shipper may be constrained by the type/size of good to be delivered, which affects the size of vehicle needed to perform the delivery.
  - In general, the least expensive truck size is used to perform deliveries.
- Making deliveries during the middle of the day is often the most costly option due to congestion.
- Most truck operators make deliveries seven days a week and all hours of the day; however, the delivery day and time is typically dependent on business owner needs.
Most deliveries take 15-30 minutes; however, the occasional delivery will take significantly longer.

Business Owners

Business owners can also offer insight into how the system is operating as they are on the receiving end of deliveries. The business owners interviewed as part of the Plan include:

- B-line Bikes
- Commons Brewery
- Higgins
- Kelly’s Olympian
- Macy’s Nordstrom
- Pacific Coast Fruit Company
- Portland Paper & Supply

Several issues were identified through the interview process with the business owners:

- Deliveries typically need to occur during certain times of the day when staff are on-site and available.
- Deliveries made at night (“Dark Drops”) may not always be feasible.
- The adjacent or nearest TLZs do not always accommodate the truck size needed for a particular type of delivery.
- The receiver may not know the best way to balance curb space between delivery vehicles and patrons.
- The receiver may not know how to request a new TLZ or a change to an existing TLZ.
- If a TLZ is not available, the delivery may not occur and the business owner either has to wait for another day or pick it up.
- Pedestrian and bicyclist safety is a concern in some areas due to delivery staging and the potential for conflicts with truck parking and loading activities.

City

As the administrator of the policies and practices that impact truck parking and loading in the Central City, the City can also offer insight. Several issues were identified through the interview process:

- The City sometimes lacks clarity on how to objectively balance the curb space for all roadway users.
- The City does not always have sufficient information to determine whether the curb space demarcation should be modified to accommodate more or less TLZs.
- Maintaining curb space demarcation is often a challenge as the age of the existing demarcation becomes greater.
- Passenger vehicles often use TLZs as short term parking spots.
- Towing illegally parked vehicles is difficult.
- PBOT’s Traffic and Parking Enforcement departments may not know the areas of the City where TLZs have the highest violation rate.
- Users may not know how to request a TLZ.

Other Organizations

Bicycle, pedestrian, and transit organizations experience truck parking and loading within the Central City from a different perspective. This perspective can offer insight into issues that affect them the most. The other organizations interviewed as part of the Plan include:

- Bicycle Transportation Alliance
- Oregon Walks
- TriMet

The following provides a summary of the issues discussed with these organizations:

- Trucks parked in bike lanes can force cyclists into the adjacent travel lane.
- Trucks parked close to intersections can obstruct sight-lines.
- Some large trucks have difficulty seeing cyclists adjacent to the trailer when turning at intersections.
- Most conflicts between pedestrians, bicyclists, and truck loading occurs on the sidewalk where large deliveries are sometimes staged.
- Some trucks extend into crosswalks and obstruct the pedestrian path with their trailer and/or lift gate.
- In the CEID, some trucks park on the sidewalk.
- In areas where the travel lane and adjacent parking lane is narrow, it can be difficult for a bus to pass a parked truck – this can be a bigger challenge when the truck is double parked.
- Trucks parked or double parked on the transit mall force vehicles into the bus-only lanes.

PBOT Parking Enforcement

Enforcement officers met with the project team to share their day-to-day observations of TLZ use and potential techniques that the City could employ to improve truck loading and unloading activities:
Common Issues and Observations

- TLZs are often not large enough to accommodate larger vehicles. This includes both the width and length. In some cases, at TLZ is long enough however the tail lift will extend beyond the TLZ placing loading and unloading activity outside of the TLZ.
- Many drivers of larger trucks complain that small vehicles legally using a TLZ prevent the larger trucks from using a TLZ.
- Most deliveries are by regular drivers who routinely drive the same routes.
- It is easier for trucks to enter TLZ that are located at the beginning of a block face.
- The “20 foot” long TLZs are not consistent in size.
- There appears to be an increase of larger trucks making deliveries in the CBD.
- Many drivers illegally parked in a TLZ have paid the meter. This indicates that they are not aware they are parked illegally.
- Officers are surprised by the low number of deliveries that they observe prior to 10:30 AM.
- During peak commute hours, TLZs are often used by kiss and rides which prevent trucks form using the TLZ.
- Officers have seen an increase of Uber drivers waiting in TLZs.
- Most delivery drivers appear to be unaware of the ability to use on-street parking stalls as TLZs before 10:30 AM.
- TLZs in front of certain businesses tend to get more illegal use. One example is coffee shops where customers park in a TLZ to run in and grab a drink. The TLZ next to Water Ave Coffee is one such location.
- Drivers typically park on the same block they need to make a delivery on and don’t have the ability to change the order they make deliveries due to how trucks are loaded.
- Many drivers park in bike lanes. The SW Stark Street bike lane is a prime example.
- Trucks parked on side streets sometimes impede sight distance for drivers and pedestrians.
- Towing an illegally parked truck is difficult due to the size and time it takes to have a large enough tow truck arrive on site.
- Since a van or pick up with a decal identifying it as a business is enough to qualify to use a TLZ it seems like some people abuse this for “free” parking.
- Many delivery drivers use TLZs to park while taking a break such as eating lunch.
- Bike rack locations on the sidewalk often obstruct loading activities.
- Many of the overtime citations are issued to smaller service vehicles such as vans used by plumbers, electricians, etc.
There appears to be an increase in “quick stop” type deliveries such as those made by FedEx and UPS. In many cases, these drivers double park and block a travel lane while making a delivery.

Any strategy used may not want to account for UPS style deliveries as these drivers don’t appear to use TLZs even when they are available.

Some businesses leave pallets in the TLZ and use them for temporary storage.

Most TLZs appear to be free starting at 5:30 PM or 6:30 PM but TLZ are in effect from 7:00 AM to 7:00 PM. This time window is not based on loading needs but the hours that meters are in effect.

Sysco sales manager has told one officer that Seattle’s after hour delivery restriction took some adaptation but was positive in the long run.

Trucks sometimes back up into crosswalks creating safety risks for pedestrians.

In the CEID, some business owners have a sense of ownership of TLZ next to their property. They often store vehicles in these or even “allow” customers to park in them.
TRUCK PARKING AND LOADING BEST PRACTICES

The project team selected five cities to identify current best practices for managing TLZs and, for evaluating the applicability of these practices to the Portland CBD and CEID areas. The project team selected these cities based on their reputations for progressive innovation and the likelihood that they face TLZ challenges similar to those in Portland. The five selected cities include:

- Austin, Texas
- Boston, Massachusetts
- San Francisco, California
- Seattle, Washington
- Washington D.C. (District of Columbia)

This section summarizes the interview results with agency staff on local TLZ policies and practices. The results of these collective discussions are organized into the following key topics:

- TLZ Policies
- Design and Demarcation Characteristics
- Usage Characteristics
- Installation and Removal Practices
- Interagency Coordination
- Traveler Information and Data Collection
- Enforcement
- Management Strategies and Techniques
- Public Reactions and Noted Challenges

TLZ Policies

Comprehensive transportation plans often adopt policy objectives describing how a city will take action on an issue. Portland’s recommended Comprehensive Plan describes the City’s approach to managing freight. Seattle Department of Transportation (SDOT) and Washington DC’s District Department of Transportation (DDOT) have adopted different freight management approaches, which have their own inherent advantages and disadvantages.

*Curb Use Priorities in Seattle*

SDOT defines curb use priority throughout Seattle. In business or commercial areas, including blocks with mixed-use buildings containing residential units, the priorities for curb space use are:

- transit use (bus stops and spaces for bus layover),
- passenger and commercial vehicle loading zones,
- short-term customer parking (time limit signs and paid parking typically for 1- or 2-hours);
- parking for shared vehicles, and
- vehicular capacity.

SDOT specifies that loading zones are the second priority behind transit uses, but are a higher priority than passenger vehicle parking. There are no quantitative performance measurements to evaluate the efficiency of this curb space priority system.

**Freight Objectives in Washington DC**

DDOT has a commercial loading zone policy document specifically addressing how the District manages truck parking. In particular, the document outlines the District’s commercial loading zone priorities:

- Encourage off-street freight deliveries
- Mitigate congestion & improve air quality
- Promote commercial loading zone management strategies to support freight efficiencies
- Achieve a balanced approach to the allocation of curbside space

DDOT’s TLZ policy comprehensively integrates the role of TLZs within greater economic, environmental, and practical objectives. These objectives also describe how TLZ policy works with passenger vehicle curb policy. There are no quantitative performance measurements to evaluate the efficiency of these measures to meet economic, environmental, and practical objectives.

**Design and Demarcation Characteristics**

All roadway users need to be apprised on when and where they may park their vehicle. Most of the interviewed cities communicate this information with signs, markings, and/or curb paint. San Francisco has developed a color coordinated curb system indicating which roadway users may park their vehicle on the curb. Exhibit 1 displays this comprehensive color curb system. Other jurisdictions have begun to introduce simplified parking signs to convey permitted parking times and locations.
Exhibit 1: San Francisco Color Curb Demarcation Parking System

Red Curbs: No Parking
Red zones are “No Parking” zones. Do not park in a red zone at any time, under any circumstances.

White Curbs: Passenger Loading/Unloading
White zones are for passenger loading and unloading during certain hours with a time limit of five minutes. Nearby signs or stencils on the curb identify effective hours.

Green Curbs/Meters: Short-Term Parking
Green curbs are for short-term parking, not exceeding 10 minutes. In metered areas, green meters will have either a 15 or 30 minute time limit.

Yellow Curbs: Commercial Loading/Unloading
Yellow zones are for active freight loading and unloading only by commercial vehicles. Nearby signs or stencils identify effective hours. Vehicles without a commercial license plate parked in a yellow zone are cited and can be towed.

Six-Wheel TLZs are indicated by signs only. When signed for six wheels or more, such trucks can use the zone. Six wheel loading zones can typically be distinguished by their red-capped meters in metered areas.

Blue Curbs: Parking For People with Disabilities
Blue zones are parking spaces for people with a valid disabled parking permit. They are effective 24/7 except for street cleaning, tow-away zone restrictions, or when restricted by a special event or construction permit.
The length of each TLZ varies and determining the most appropriate length for each TLZ seems to be more of an art than a science. The interviewed agencies have generally addressed this issue by modifying TLZ length based on requests and feedback from shippers and receivers on a case-by-case basis. No specific methodology was identified to determine the optimal loading zone length for a TLZ.

With respect to the location of TLZs, there seems to be a preference to locate commercial loading zones on the near or far side of the block; preferably not in the middle of the block. The primary impetus for this is that such locations are easiest for trucks to maneuver when loading/unloading. Some concern was expressed, however, to ensure that trucks parked in such locations do not significantly obstruct intersection sight distance or the visibility of approaching pedestrians and bicyclists.

**TLZ Usage Characteristics**

*Shipper Types*

There are different shipper types, such as UPS, alcoholic beverage deliveries, and catering services. There may be a curb space allocation advantage to distinguish between truck size and delivery frequency to improve freight efficiency. However, of the agencies interviewed, none have taken action to allocate curb space based on delivery type. There are not enough data to determine the impacts of delivery type on more efficient curb space allocation.

*Time of Day*

A majority of TLZ usage occurs between 7:00 a.m. to 7:00 p.m. in the CBD and/or metered zones. Some agencies reserve curb space 24 hours a day and 7 days a week for truck loading, but these parking restrictions are less common. Of the agencies interviewed, commercial vehicles cannot generally use passenger vehicle parking for loading/unloading, but there are exceptions. DDOT allows trucks with annual commercial vehicle permits to park at all passenger vehicle spaces between 10:00 am to 2:00 pm. Portland allows commercial vehicles to park in passenger vehicles spots before 10:30 am. There are no parking utilization data indicating that either policy improves network-wide parking efficiency; however, Portland’s curb space is generally underutilized at times before 10:30 am; therefore, allocating more curb space to shippers at certain times of the day appears to be justified.

**Installation and Removal Practices**

Of the agencies interviewed, most install and/or remove TLZs based on requests from business owners or truck operators. However, DDOT has implemented a curbside loading zone allocation model, which incorporates the District of Columbia’s zoning map and quantifies the number of truck trips generated by land use (residential, commercial, etc.). The model also estimates the truck trips generated from a mixed-use zone. When business owners, truck operators, or other roadway users request a TLZ modification, DDOT staff compares the existing demarcated curb space use against the curb space allocation model to confirm whether a curb space modification is warranted. DDOT uses this model as a tool to objectively decide whether to modify the curbside space based on requests.
Interagency Coordination

Of the agencies interviewed, there appears to be little if any truck policy coordination between the local city agency and other public agencies such as the metropolitan planning organization (MPO), state Department of Transportation (DOT), or transit authority. The lack of coordination reflects the limited authority the MPO or DOT has on truck parking in a city. However, SDOT does report that they will coordinate some aspects of truck parking policy with their in-process freight master plan.

Truck Operator Information

Information for how to park in a city is typically provided to passenger vehicle operators on special permits, metered parking, and how to pay a parking ticket. A handful of agencies provide information regarding where and when truck operators can park throughout the city. For example, SDOT provides a webpage of information regarding commercial loading zones, how to register commercial vehicles, and large truck movement restrictions in the CBD. DDOT provides truck operators an interactive map of commercial loading zones and truck route restrictions. DDOT also produces an online newsletter about the commercial vehicle permitting system. Austin provides a map of where trucks may double park to load/unload freight. Somewhat related to freight, the SFMTA has produced a large vehicle urban driving safety video as part of their Vision Zero program. In general, agencies provide some information to truck operators on where and when to park, but there is no indication on whether this information is utilized or downloaded. Information on where/when to park has been passed on by word of mouth and experience.

Data Collection

The agencies interviewed do not collect TLZ utilization data. Collecting utilization data at TLZs is difficult because trucks have a relatively short time stay as compared with passenger vehicles. Based on interviews with local freight shippers, trucks are parked on average for 15 minutes for each loading/unloading event with an upper limit time stay of 30 minutes. Since parking utilization data are typically collected on an hourly basis (because a data collector will typically patrol an area over an hour time period), knowing the frequency and utilization for a loading zone is difficult. Therefore, collecting data with a shorter frequency (5 minute increments) and more holistically (incorporating double parking events) should yield better results with measuring the performance of TLZs.

Enforcement

The most common complaint of truck operators is when unauthorized vehicles are parked in the commercial loading zone. One tactic to minimize unauthorized vehicles in parking stalls is to better enforce parking regulations. Of the five agencies interviewed, SDOT maintains a TLZ parking enforcement officer focusing on regulating commercial loading zones. In Washington DC, parking enforcement officers typically input descriptive violation details associated with the parking ticket. But, there are no data to suggest that targeted enforcement is applied to TLZs with recurring violations.
Management Strategies and Techniques

Commercial Vehicle Registration

Each state operates a commercial vehicle registration program (regulated by the Department of Motor Vehicles) to issue commercial vehicle plates for the ability to use a commercial loading zone curb space. In Oregon, commercial vehicle registration fees range by weight class. The permit cost for a vehicle weighing less than 8,000 pounds is $55, while over 8,000 pounds is $344. Of the agencies interviewed, DDOT (and Portland) manage local-level commercial vehicle registration programs.

DDOT requires commercial vehicles to obtain a commercial vehicle permit to use the TLZs. Each truck must have an annual permit ($323), a printable day permit ($25), or they may pay by cell ($2/hour) to use commercial vehicle loading zones. When a commercial vehicle owner submits an application for an annual permit, the commercial vehicle must also obtain a US Department of Transportation number. DDOT fines vehicles without a commercial loading zone permit for parking in the TLZs.

Truck Movement Area Restrictions

City agencies may establish “Freight Routes” indicating the preferred roadway network that trucks should use. Some jurisdictions simply encourage trucks to use those designated routes, while others require trucks to drive on those roadways. In Portland, semi-trucks with 53’ trailers may legally drive in the CBD but may not be practically maneuverable due to Portland’s small block size and because semi-truck blind spots are relatively large. Seattle has addressed some of these concerns by restricting 30’ or longer trucks in the CBD by time of day. Seattle’s restrictions have been in place since 2010. DDOT restricts truck movements by street, as shown by their interactive commercial vehicle District map2.

Truck Double Parking

Double parking is not permitted in the City of Portland and many other transportation agencies for several reasons including the impact on vehicular capacity, blocking vehicles from departing their parking spot, safety, etc. But, one such agency has taken a different approach to manage double parking.

Austin Transportation Department (ATD) allows truck double parking on roadways with two or more vehicle lanes in a single direction. However, there are some restrictions on when and where trucks may double park. Generally, double parking prohibitions correspond to roadways carrying a large quantity of vehicles at certain times of the day. For example, double parking is restricted on some roadways entering Austin in the a.m. peak hour and exiting during the p.m. peak hour corresponding to regular commuter traffic flows. In addition to these practical restrictions, other accompanying measures are implemented which make this policy more effective.

2 http://www.godcgo.com/home/group-travel/truck-and-bus-map.aspx
On roadways where Austin allows double parking, ATD removed some if not all commercial loading zones and replaced them with passenger vehicle parking stalls. While double parking is now allowed on certain roadways and therefore trucks cannot be fined for double parking, fines have increased from $40 to $250 for when trucks double park on restricted roadways. Due to the implementation of double parking policy and accompanying measures in May of 2014, an internal before/after study was performed indicating that vehicle travel times have decreased.

Public Reactions and Noted Challenges

The most common complaints from truck operators are that there are not enough TLZs and that there are unauthorized vehicles parked in the TLZ. These operators were asked specifically if pedestrians or bicyclists conflicted with truck loading/unloading events, but there were no reported issues.

Summary

City agencies have varying levels of TLZ management contingent on their available resources and adopted policies. Overall, there is a general lack of data collection associated with TLZs, which means that implementing further policies relies more on the art rather than the performance of the policy. Nevertheless, the project team summarized the perceived performance of these TLZ policies to explore their viability to incorporate into Portland’s TLZ policy. One of the larger remaining gaps includes the role of technology to better manage TLZs. Of the agencies interviewed, there was little consideration to integrate emerging technologies to better manage TLZs, especially planning for connected vehicles and smart cities initiatives.
Section 5  Performance Measures
PERFORMANCE MEASURES

The issues identified above establish a frame of reference by which the project team developed performance measures that are sensitive to the issues of the shippers, receivers, and the City. Understanding the performance of TLZs requires effective performance measures that can objectively monitor TLZ operations. Parking utilization and parking turnover are widely used and accepted performance measures to evaluate the performance of passenger vehicle parking. However, TLZs are more complex than passenger vehicle parking because of the challenges associated with enforcement, commercial vehicle time stays, and other factors. Therefore, performance measures need to be unique and sensitive to the freight issues and existing regulatory constraints.

The performance measures establish a baseline for evaluating the performance of TLZs today and in the future as the City redefines its policies and objectives and the demand for curb space evolves. Table 1 identifies and describes the performance measures. Exhibits 1-3 illustrate how the performance measures address issues with truck parking and loading.

Table 1: Performance Measure Definitions

<table>
<thead>
<tr>
<th>Performance Measure</th>
<th>Description:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parking Supply*</td>
<td># of TLZs and/or # of parking spaces / # of parking spaces need to serve as a TLZ</td>
</tr>
<tr>
<td>Parking Utilization*</td>
<td>% of parking supply that is occupied</td>
</tr>
<tr>
<td>Average Truck Time Stay*</td>
<td>Average time (min) a truck is parked at a parking space</td>
</tr>
<tr>
<td>Legal Parking Utilization*</td>
<td>% of parking supply that is legally occupied</td>
</tr>
<tr>
<td>Demarcation Clarity</td>
<td>Years of parking demarcation (signing, striping, etc.) / Expected design life</td>
</tr>
<tr>
<td>Planning Time Index</td>
<td>Travel time / Free flow travel time</td>
</tr>
<tr>
<td>Truck Size</td>
<td>Length of truck in Feet (ft.)</td>
</tr>
<tr>
<td>Towing Events</td>
<td># of vehicle towing events per year</td>
</tr>
<tr>
<td>Citation Efficacy</td>
<td>% of citations that are enforced</td>
</tr>
</tbody>
</table>

* Within the parking area and during the analysis time period

Table 1 shows how the City can use Performance Measures to monitor truck parking and loading within the Central City to better understand the impact of changes to City policy and implementation of various truck parking and loading strategies.
### Exhibit 2: Performance Measures – Shipper Issues

<table>
<thead>
<tr>
<th>Shipper Issues</th>
<th>Parking Supply</th>
<th>Parking Utilization</th>
<th>Average Truck Time Stay</th>
<th>Legal Parking Utilization</th>
<th>Demarcation Clarity</th>
<th>Planning Time Index</th>
<th>Truck Size</th>
<th>TLZ Towing Events</th>
<th>Quantity of Citations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cannot find an available loading zone</td>
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<tr>
<td>Loading zone does not meet truck’s physical characteristics</td>
<td>X</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Unauthorized vehicle parked in TLZs</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
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</tr>
<tr>
<td>Need to park on the block face where delivery is destined</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>May be constrained by type/size of good to be delivered impacting the size of the vehicle</td>
<td>X</td>
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<tr>
<td>Will choose the least expensive truck size, on aggregate of shippers</td>
<td>X</td>
<td></td>
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<tr>
<td>Delivering goods during the middle of the day is the most costly due to congestion</td>
<td>X</td>
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</tr>
</tbody>
</table>

Primary: X  Secondary: X
### Exhibit 3: Performance Measures – Receiver Issues

<table>
<thead>
<tr>
<th>Receiver Issues</th>
<th>Parking Supply</th>
<th>Parking Utilization</th>
<th>Average Truck Time Stay</th>
<th>Legal Parking Utilization</th>
<th>Demarcation Clarity</th>
<th>Planning Time Index</th>
<th>Truck Size</th>
<th>TLZ Towing Events</th>
<th>Quantity of Citations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Temporal Issues</strong></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Need deliveries at certain times of the day</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Cannot accept deliveries at certain times of the day</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
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<tr>
<td><strong>Curbside Issues</strong></td>
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<tr>
<td>Angle Loading Parking Permits may be needed due to large deliveries</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>A balance between providing for passenger vehicles and delivery space is needed</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Other Issues</strong></td>
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<tr>
<td>May not know the process to request a TLZ</td>
<td>X</td>
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</tr>
</tbody>
</table>

**Primary**

**Secondary**
Exhibit 4: Performance Measures – City Issues

<table>
<thead>
<tr>
<th>City Issues</th>
<th>Parking Supply</th>
<th>Parking Utilization</th>
<th>Average Truck Time Stay</th>
<th>Legal Parking Utilization</th>
<th>Demarcation Clarity</th>
<th>Planning Time Index</th>
<th>Truck Size</th>
<th>TLZ Towing Events</th>
<th>Quantity of Citations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply Issues</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Does not know whether the curb space should be modified (Demarcating a new TLZ)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>How to objectively balance the curbside for all roadway uses</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Demarcating every parking spot clearly and consistently</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Enforcement Issues</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Short term parked passenger vehicles use TLZs</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
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<tr>
<td>Towing a truck is very difficult</td>
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<tr>
<td>Traffic &amp; Parking enforcement does not know which TLZs have the highest violation rate</td>
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<tr>
<td>Other Issues</td>
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<tr>
<td>Users may not know the process to request a TLZ</td>
<td>X</td>
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</table>

Primary | Secondary
Exhibits 2-4 show each performance measure is connected to the shipper, receiver, and City issues with a primary or secondary icon. A primary icon implies a direct link between an issue and the corresponding performance measure’s ability to monitor and evaluate progress toward addressing the issue. A secondary connection implies that the issue may be monitored by the performance measure, but the relationship between the two is not as strong.

The performance measure matrix also visually indicates which performance measures are more widely applicable relative to other performance measures. For example, parking supply and parking utilization are the primary or secondary performance measures on nearly all of the issues. Legal parking utilization is also the primary and secondary performance measure on several of the issues along with Average truck times stays and planning time index. Focusing upon primary and widely applicable secondary performance measures may allow TLZs to be more effectively monitored at a lower overall data collection cost.
Section 6   Solutions Toolbox
SOLUTIONS TOOLBOX

This section presents the strategies the City could implement to address issues related to truck parking and loading within the Central City. The project team developed these strategies based on the issues described in previous sections. Although they were developed with a specific focus on the CBD and CEID, these strategies can be applied in any part of the City that has significant demand for truck parking and loading.

In April 2016, City Council directed the Bureau of Transportation to develop a Parking Management Plan that includes performance measures and targets as well as a data-driven approach to parking management. The City will develop this plan in 2017. Accordingly, the project team organized the strategies identified below based on whether they could be implemented under existing policies or whether significant changes in the City’s underlying policies or practices would be necessary prior to their deployment. Each strategy includes a basic description of the strategy, an assessment of existing City policies and practices, key considerations for implementation, related strategies and performance measures, and a lead implementation entity.

PRE-PARKING MANAGEMENT PLAN STRATEGIES

The following strategies will likely not require significant changes in the City’s current underlying policies and practices related to parking within the CBD and CEID.

1. Develop a TLZ Review Process

A TLZ review process will provide the City with a systematic approach toward reviewing developer requests for exemptions to off-street loading requirements as well as other requests for new on-street loading zones or removing existing loading zones.

Applicable Existing Policies and Practices: The City currently reviews TLZs on a case-by-case basis through the development review process or upon receiving a request from an adjacent property owner/manager. However, there is currently no formal process for either scheduling or conducting these reviews.

Development Review considers the need for new off-street TLZs as part of new development proposals it receives. Strategy #4 discusses this process further. If a developer is proposing a new on-street TLZ to meet off-street loading requirements, Development Review turns the request over to Parking Control. Development Review does not separately evaluate the need for new on-street truck loadings zones as part of any new development proposal, redevelopment proposal, or change of use.
Parking Control considers all requests it receives to install or remove TLZs on a case-by-case basis. Before agreeing to install a new TLZ, Parking Control first looks for opportunities to handle the loading/unloading activities off-street or by using existing designated on-street spaces. If Parking Control determines that the requested new on-street loading/unloading space is appropriate, then they seek support from all property owners with frontage adjacent to the proposed loading zone before making an approval decision. Parking Control also accepts requests to remove existing TLZs, subject to the same property owner outreach.

**Application Contexts:** Development Review and Parking Control currently apply these strategies throughout the City based on requests and development activities that come under City review.

**Key Application Considerations:**

- The City could consider formalizing the process for reviewing and approving requests for exceptions to off-street loading requirements as well as other requests for new on-street loading zones or removal of existing loading zones.
- The City could consider the following information with each request:
  - The type of use (i.e. residential, retail/commercial, or industrial).
  - The potential activity level (i.e. the number of residential units that turnover on a monthly basis in a residential area or the shipping/receiving business model associated with adjacent retail, office, and industrial enterprises).
  - The days of the week and the hours of the day that experience the highest activity levels, as well as the typical duration of loading/unloading events.
  - The amount of curb space that will be reallocated by requiring an off-street loading space.
  - The location of the nearest on-street loading zone with respect to the development.
  - The days, hours, times, and time limits of the nearest on-street loading zone.
  - The size (linear length) of the nearest loading zone.
- The City could also consider including a review of the nearest on-street TLZs with all new developments, redevelopments, and changes of use.
  - The Bureau of Development Service (BDS) is currently the city entity that determines what type of review is required for all new development proposals. In some cases, no review is required so, under current operating procedures, an existing loading zone could conceivably remain in place even after the nearby or adjacent land uses it originally supported have left.

**Related/complementary strategies:**

- Re-evaluate off-street loading space requirements.

**Relevant Performance Metrics:**

- Parking supply – this strategy could increase the supply of on-street TLZs and/or changes to the regulations of existing on-street TLZs to accommodate a wider range of uses.
- Parking utilization – this strategy could increase the utilization of on-street TLZs if fewer off-street TLZs were be provided.
- Average truck time stay – this strategy could result in an increase in average truck time stays if they are utilized by a wider range of uses, including residential.
- Citations – this strategy could increase citations as more trucks are parking on-street for longer periods of time.

**Lead implementation entity:** PBOT Parking Operations Division

2. Enhance TLZ Enforcement

TLZ enforcement is a critical part of managing the parking system. This strategy includes opportunities to enhance the City’s existing TLZ enforcement policies and practices and identifies new policies and practices needed to enforce other strategies included in the toolbox.

**Applicable Existing Policies and Practices:** TLZ violations typically fall into one of two categories: 1) unauthorized vehicles parked in the TLZ and/or 2) authorized vehicles parked in the TLZ beyond the maximum time that is allowable (30 minutes). The City currently and purposefully varies the frequency and intensity of enforcement practices in order to avoid developing predictable patterns.

**Application Contexts:** Enforcement activities are appropriate in all areas where TLZs are used.

**Key Application Considerations:**

- The City could have enforcement officers that focus only on TLZs.
- Enforcement officers could focus in select areas for sustained periods of time to increase regulation compliance.
- If/when the City eliminates free truck parking, enforcement officers would need to ensure compliance with the payment requirements – see the parking management toolkit for potential enforcement policies and practices related to paid parking.
- If/when the City establishes commercial loading zones, thereby restricting non-commercial vehicles and/or non-loading and unloading activities, enforcement officers would need to ensure compliance with revised commercial loading zone policies.
- If/when the City implements any of the other strategies identified in the toolbox, they may need to consider other changes to enforcement policies and practices.

**Related/complementary strategies:**

- Eliminate free truck parking
- Establish commercial loading zones
- Other strategies that may require changes to existing enforcement policies and practices

**Relevant Performance Metrics:**

- Parking Utilization
- Average Truck Time Stay
- Legal Parking Utilization
- Towing Events
- Quantity of Citations

**Lead implementation entity:** PBOT Parking Enforcement Division

3. Eliminate Free Truck Parking

Pricing strategies are among the most effective and equitable techniques for managing the supply of a scarce resource, such as parking. Price adjustments will invariably affect demand, and so application of this strategy can distribute parking demand across a wider geographic area and across alternative delivery/shipping modes and methods.

**Applicable Existing Policies and Practices:** The City currently allows commercial vehicles or vehicles with a valid commercial parking permit to park within TLZs for up to 30 minutes for free. The City also allows commercial vehicles to park in metered spaces every day between 8:00 a.m. and 10:30 a.m. for up to 30 minutes for free. This tool would use priced commercial vehicle parking as a means for increasing turnover and encouraging a more uniform distribution of parking demand across available parking supply.

**Application Contexts:** This strategy is appropriate to consider where truck loading/unloading zones exist.

**Key Application Considerations:**

- The City could consider charging for TLZs only during peak time periods (i.e. 8:00 a.m. to 7:00 p.m.) similar to regular parking stalls.
- The City could consider a payment structure that charges more for larger trucks that take up the equivalent of more than one parking stall.
- The City could consider replacing time limits on TLZs with a time-based graduated fee structure.
- If deployed, the City should consider how to communicate this change to local business owners/operators (i.e. public information campaign, public outreach)
- The City could incorporate payment technology that does not require significant capital investment or physical asset deployment (e.g., reserve/pay by phone)

**Related/complementary strategies:**

- Enhance TLZ Enforcement
- Establish Commercial Loading Zones

**Relevant Performance Metrics:** this strategy could impact the following performance measures:

- Parking Utilization
- Average Time Stays

**Lead implementation entity:** PBOT Parking Operations Division

4. Re-evaluate Off-street Loading Space Requirements

Off-street loading spaces are dedicated bays located on private property intended to serve the freight needs of individual developments. Off-street loading spaces are accessed via a driveway curb cut, which removes that curb space from public use, and are limited, in terms of their availability, to tenants of the building in which they are located.

**Applicable Existing Policies and Practices:**

Section 33.266.310 of the Portland Zoning Code identifies the minimum number of off-street loading spaces required for new development. The requirements are based on the type of use (i.e. residential, retail/commercial) and range from 0-2 spaces based on the intensity of use. Off-street loading spaces have to meet one of two dimensional standards. Generally, larger developments must have larger loading spaces. Adjustments to these standards are allowed, and throughout 2015-2016, PBOT Development Review has processed approximately 30 requests to eliminate the off-street loading space requirements. Most of these requests have been within the Central City, where the presence of driveways, curb cuts, and loading bays are often in conflict with the Central City Fundamental Design Guidelines that the Portland Design Commission implements. When developers make this request they are required to evaluate the development’s loading demand and propose an alternative loading strategy that meets the purpose of the requirement. This typically involves identifying nearby on-street TLZs that can adequately serve the needs of the proposed development.

**Application Contexts:** This strategy is appropriate to consider along with a broader evaluation of off-street parking requirements.

**Key Application Considerations:**
The City could consider different thresholds and dimensional standards for different parts of the City. The Central City Plan District, in particular, has different minimum and maximum parking requirements than other parts of the City, but the loading space requirements are the same.

The City could consider whether the smaller dimensional standard, Standard B, is adequate to serve the needs of a modern mixed-use development.

The City could consider eliminating off-street loading requirements and ask developers that want off-street loading to show that their loading needs cannot be met on-street.

**Related/complementary strategies:**

- Develop a TLZ review process

**Relevant Performance Metrics:**

- Parking Supply – this strategy could increase the supply of on-street TLZs and/or changes to the regulations of existing on-street TLZs to accommodate a wider range of uses.
- Parking Utilization – this strategy could increase the utilization of on-street TLZs if fewer off-street TLZs were be provided.
- This strategy could impact all other performance measures as more trucks could be required to use the on-street TLZs.

**Lead implementation entity:** PBOT Planning Division, PBOT Development Review Division, Bureau of Planning and Sustainability

**POST-PARKING MANAGEMENT PLAN STRATEGIES**

The following strategies would likely require significant changes in the City’s underlying policies and/or practices related to parking and loading in order to be deployed. The City should further evaluate and consider implementing these strategies as part of the Parking Management Plan in 2017.

5. Establish Commercial Loading Zones

A commercial loading zone is a zone that is dedicated exclusively to commercial vehicle use. In this respect, a commercial vehicle is defined as a vehicle that is (a) classified as a truck, van, or pickup by the Oregon Department of Motor Vehicles; or (b) displaying its commercial nature through external signage, logos, and/or art, which includes high-frequency user such as USPS, UPS, and FedEx. Commercial loading zones are larger than regular parking stalls and may take up an entire block face. They are also signed and striped as commercial loading zones so that their distinction is apparent.
Applicable Existing Policies and Practices: The City currently allows commercial vehicles to park within TLZs. However, the City also allows passenger vehicles with a delivery vehicle or delivery service vehicle permit to park within TLZs. The City does not distinguish between loading zones for commercial and delivery vehicles.

Application Contexts: This strategy is appropriate where on-street parking is regulated and there is a need to provide space for commercial vehicles.

Key Application Considerations:

- The City could establish commercial loading zones at locations where designated commercial vehicles have demonstrated the need.
- The commercial loading zones may be larger than regular parking stalls to accommodate loading and unloading.
- The commercial loading zones may be signed and striped to distinguish them from regular parking stalls.
- The City could eliminate the current permit program that allows non-commercial vehicles to parking in TLZs.
- The City could consider a pricing strategy in conjunction with commercial zones.
- This strategy would require changes to City code to define commercial loading zones and establish related administrative rules.

Related/complementary strategies:

- Enhance TLZ enforcement

Relevant Performance Metrics: this strategy could impact the following performance measures:

- Parking Supply – this strategy could reduce the number of TLZs needed to serve loading and unloading activity, as all commercial vehicles not actively loading and unloading and/or all delivery vehicles or delivery service vehicles would be required to use regular parking stalls.
- Parking utilization – this strategy could impact the utilization of TLZs as they would be limited in terms of their use to commercial vehicles that are actively loading and unloading.
- Average Truck Time Stays – this strategy could impact average truck time stays in commercial loading zones as they would be limited in terms of their use to commercial vehicles that are activity loading and unloading.

Lead implementation entity: PBOT Parking Operations Division

6. Establish Truck Loading Streets

A truck loading street is a street that prioritizes truck loading/unloading activities over other activities.
Applicable Existing Policies and Practices: The City currently has freight route classifications and related policies for all City streets. The classifications include regional truckways, priority truck streets, major truck streets, freight district streets, truck access streets, and local service truck streets. The classifications include policies that relate to the land use, function, connection, and design of the streets. All classifications, with the exception of regional truckways, include policies that emphasize truck access to adjacent land uses. A new freight classification that addresses this issue has been proposed for Stage 3 of the Transportation System Plan update in 2017.

Application Contexts: This strategy is appropriate where there is demand for truck loading/unloading activity.

Key Application Considerations:

- This strategy may be most applicable to commercial corridors where truck loading/unloading activities can be prioritized, facilitated and concentrated.
- The City’s policies related to street function do not preclude this strategy.
- The City could consider the implications of this strategy on other travel modes.

Related/complementary strategies:

- Enhance TLZ enforcement

Relevant Performance Metrics: this strategy could impact the following performance measures:

- Parking supply
- Parking utilization
- Average truck time stays

Lead implementation entity: PBOT Planning Division

7. Establish peripheral distribution centers

A peripheral distribution center is a place where large trucks can off-load goods to smaller trucks, vans, pick-ups, and even cargo bicycles for subsequent delivery into areas where the supply of larger and accessible loading spaces is constrained.

Applicable Existing Policies and Practices: Some private businesses currently have distribution centers outside the CBD that they use to redistribute goods from large trucks to smaller vehicles. The City does not have actively manage
Application Contexts: This strategy is appropriate within the area surrounding the CBD or any area not able to accommodate large commercial vehicles.

Key Application Considerations:

- This strategy would allow larger trucks to distribute goods via smaller trucks for the “last mile” delivery
- This strategy may be appropriate to serve the CBD and/or the CEID
- This strategy may be a private-oriented strategy – one that the City supports or enables but does not implement; some private companies already do this today (e.g., Franz Bread)
- This strategy could help move the City toward restricting vehicles of a certain size from entering the CBD during certain times of the day.

Related/complementary strategies:

- There are no related/complementary strategies.

Relevant Performance Metrics:

- Parking utilization
- Average Time Stays
- Truck Size

Lead implementation entity: PBOT Planning Division

8. Establish Drop-box Areas

A drop box is a secure storage area located within a building outside of the public right-of-way. Drop boxes are used for early morning and late night deliveries or shipments when it is inconvenient or impossible for both the shipper and the receiver to be present at the same time. Drop boxes can range in size from something as small as a mailbox to something as large as an entire room or building floor.

Applicable Existing Policies and Practices: Several drop boxes already exist and are located throughout the CBD and CEID to support public institutions and private business.
**Application Contexts:** This strategy could be considered where the convenience and increased delivery hour flexibility that is associated with a secure on-site storage space will improve the efficiency and cost-effectiveness of freight delivery activities.

**Key Application Considerations:**

- Drop boxes could be deployed and strategically located by private business owners/operators for early morning or late night deliveries.
- The size of the drop boxes could vary based on the need of adjacent land uses.
- The City could allow developers to provide drop boxes as an alternative to off-street loading spaces.
- The drop boxes could be situated to serve multiple land uses.

**Related/complementary strategies:**

- Re-evaluate off-street loading space requirements

**Relevant Performance Metrics:** this strategy could impact the following performance measures:

- Parking Utilization – this strategy could reduce utilization in TLZs during peak time periods as it would allow shippers to make early morning and/or late night deliveries.

**Lead implementing entity:** PBOT Planning Division, Bureau of Planning and Sustainability

9. Develop a Cargo Bike Policy

Electric-assisted cargo bikes are an emerging option for small-scale deliveries in urban areas. They can accommodate loads of up to 500 pounds; however, they are limited to about 10-12 mph.

**Applicable Existing Policies and Practices:**
There are currently no existing policies that are specific to cargo bikes. They are subject to the same regulations as any other bicycle.

**Application Contexts:** This strategy could be considered citywide as the proliferation of these vehicles has not been anticipated in any existing plan; however, several policies in the Comprehensive Plan and Climate Action Plan would encourage their use.

**Key Application Considerations:**

- The City could consider how cargo bikes fit into the overall bikeway network, and whether existing design standards are adequate to accommodate them.
\[\text{Related/complementary strategies:}\]

- Establish commercial loading zones – Any new policies or practices related to commercial loading zones could incorporate cargo bike deliveries.
- Establish truck loading streets – Any new policies or practices related to truck loading streets could incorporate cargo bike deliveries.
- Establish peripheral distribution centers - peripheral distribution centers could use cargo bikes to deliver goods.

\[\text{Relevant Performance Metrics:}\]

- Parking Utilization – if cargo bikes are allowed to parking in TLZs, their presence could impact parking utilization.
- Other specific performance metrics may need to be developed to evaluate the effectiveness of this strategy.

**Lead implementing entity:** PBOT Planning Division
Section 7  Next Steps
NEXT STEPS

Based on the results of this Plan and input from the project team, the following are possible next steps:

- Allow the information summarized in this Plan to inform development of Portland’s upcoming Parking Management Plan.

- Pursue implementation of the solutions identified in the solutions toolbox with further input from City staff as well as other stakeholders.

- Monitor and measure on-street truck parking and loading conditions within the Central City and adjust policies and strategies as necessary.