2040Freight CAC Existing Conditions Jamboard Q&A: Draft 2

Updated 03.09.21 to include an answer we missed (see p.5 #6)

Project team responses to committee questions submitted by Jamboard at the January 14, 2021 meeting.

Summary: Committee members expressed support for increases in intermodal transportation. They raised concerns about safety issues involving freight employees and Portland residents. Members asked for clarification on freight routes and freight activity. They also posed questions about the movement of people and goods, safety, and economic prosperity.

Questions on Movement of People and Goods:

1. Are home deliveries by UPS/FedEx/Amazon considered "freight"?
   Yes – any movement of goods to a customer is considered freight. However, the smaller delivery vehicles (single axle vans) are not counted as trucks in Metro's model so could not be included in the truck volumes in this analysis.

2. Why are trucks using 82nd instead of the freeway?
   Either because they have deliveries on or near 82nd Avenue, or they see it as a quicker route than alternatives like I-205.

3. How much of a negative impact does commuter traffic have on the movement of freight via truck?
   Heavy commuter traffic – and its associated congestion - is the principal impediment in truck driver's ability to complete deliveries in a reliable travel time and meet schedules.

4. How has COVID-19/remote work impacted peak and off-peak hours? What is projected for future traffic patterns?
   COVID-19 has had an unprecedented impact on traffic flow and speeds, principally due to the large numbers of people working and shopping from home, and the limited number of trips people are making outside their home. It is very challenging to predict what traffic flows and speeds might be like once the pandemic is over, but for the 2040 Portland Freight Plan we are projecting that, over the long-term, the future patterns predicted prior to the pandemic will still be valid. The 2040 Metro regional travel demand forecast model accounts for growth in population, employment, economy, and other traditional factors, including recessions.

5. What is the goal for transit time from major sheds? e.g. anywhere in the city within 15 minutes? How does this impact GHG emissions?
   Transit time is dependent on the location of the origin and destination of each delivery and the agreements between the shippers, carriers and their ultimate "buyer". When traffic conditions and speeds decline to congested levels, vehicles are then spending more time generating emissions, and in some situations, such as Stop-and-Go, generating higher concentrations of emissions. The driver and truck are also spending more time making each delivery, further increasing costs.

6. Are "freight streets" really "streets that prioritize large trucks"? Seems like "freight" and "truck" can't be synonymous as we look into the future.
   Freight streets is a layman's term for streets that carry a large volume of trucks. For the 2040 Portland Freight Plan we are using the terminology in the TSP – i.e., "Regional Truckways" (such as freeways), "Priority Truck Streets" (such as Columbia Blvd, NW Yeon Avenue, and MLK, Jr Blvd in the Central Eastside), " Major Truck Streets" (such as NE Sandy Blvd, SE Powell Blvd), and "Truck Access Streets" (which are all other Portland local streets except those that may have a special prohibition on any truck traffic). We are not going to expect every street that carries trucks to be a freight street. We do want to designate streets that have a large volume and proportion of trucks so they can be treated for freight projects and improvements. The street classifications mean they can accommodate large trucks.

7. Is there a way to designate between freight to consumer versus freight to business? Different solutions will be necessary for each.
   We can only provide very inexact answers to this because nearly all of the information that would indicate one versus the other is either proprietary to each local shipper and/or carrier or is necessarily confidential (as per the USPO). There may not be that much difference in the solutions you develop for business-to-business deliveries versus business-to-consumer or consumer-to-consumer on a general level, because the solutions would be needed where there are problems (congestion, safety, etc.). The last-mile delivery introduces a new set of issues for deliveries including the availability of curb space for loading and unloading, the potential conflicts between trucks and other travelers (drivers, buses, LRT, streetcar, bicycles, walkers), and just maneuvering through a denser built environment. In general, those issues are the same for deliveries to either businesses or consumers, and again would suggest the same types of solutions. The exception is when there are issues with deliveries to residential neighborhoods and the streets have trouble accommodating them. The locations and need for solutions in these areas would most efficiently be derived from public outreach rather than data analysis.

8. Can we discuss more why trucking/freight is so big in Portland?
   Portland has always been a major manufacturing and distribution center in large part because we have two navigable rivers for freight, an international airport, two Class 1 railroads, and several interstate freeways, one of which terminates (and begins) here (i.e., I-

84). With the railroads and the Port, those allow us to import and export goods. Before we had a port we had to drive everything to the Puget Sound. Once those goods arrive by ship, barge or rail, they are distributed by truck. Trucks are really used in combination with marine, air, and rail because those modes don't bring goods to warehouses or right to your door.

Questions on Safety:

1. If commercial truck drivers are specially trained why is it good if they are crashing at the same rate as drivers through the city at large?
   The collision data presented is based on the total number of collisions, not on the rates such as the miles travelled. On average, a truck driver drives 80,000 to 100,000 miles/year and in many cases up to 125,000 miles/year. In comparison, the average motorist drives about 13,500 miles/year - or about 85% to 90% less than a truck driver – meaning that there are many more opportunities for a truck driver to be involved in a collision. The fact that for some types of total collisions they're comparable between motorists and truck drivers points to the very high safety record of truck drivers. The standard variable used to measure collision rates is the number of collisions/100 million miles of travel, which could not be completed for the 2040 Portland Freight Plan for each of these locations. However, city-wide, between 2014-2018 the average annual KSI collision per 100 million VMT is 5.23 whereas the average truck involved KSI collision is only 0.211, demonstrating the safety skills of truck drivers.

2. Concerning the truck collision slide, what size trucks are you referring to? All truck types are included in the collision data. However, pickup trucks, vans and light duty vehicles are included in passenger vehicles.

3. Would voluntary time-of-day truck routes along crash-prone corridors help increase safety?
   They likely would. However, the City would need to pilot this to see how much it affects crash rates.

4. How does gross vehicle weight and speed change the typical Vision Zero collision likelihood?
   External conditions – such as street design, density of traffic, pedestrians, and bicyclists have a great influence on the likelihood of collisions. The influence of vehicle weight and speed depends on the characteristics of the roadway.

5. What is the standard or acceptable crash rate of truck drivers?
   While no crashes are acceptable the rate of crashes are heavily influenced by the factors described in the answer above as well as driver behavior. As such, crash probability is determined based on a number of factors including the ones cited in the previous answer.

[1] These statistics are roughly calculated based on available VMT information.

6. Do we know anything about safety measures currently being taken by truck fleets in the city? Can the City require safety measures like side guards or high-visibility cabs?
   In 2019, 148 city vehicles were retrofitted with side guards. City specifications were also updated to require side guards on vehicles over 10,000 GVWR ordered after July 2019. The focus in 2019 was to retrofit vehicles over 10,000 GVWR (gross vehicle weight rating) that were scheduled to be retired after 2022. So, there are vehicles that did not receive side guards but will be replaced in 2022 with new vehicles outfitted with side guards. Certain vehicles with operational limitations (paint stripers, for example) did not receive side guards. There are no City fleet requirements for high-visibility cabs at this time.

Questions on Economic Prosperity:

1. What do we know about the elasticity of demand for freight?
   Demand for freight is typically determined by the numbers and types of industries and residents in an area. Factors that influence the demand for freight in the short term include economic downturns and supply chain disruptions (e.g. COVID, strikes, etc.) Longer term factors could include changes in supply chains and distribution patterns. In general, in the short term, freight demand is not very elastic but would be determined by larger economic and demographic as well as land use.

2. Will UPS / USPS retain their existing hubs or are they likely to move?
   It would not be appropriate to speculate on the specific plans of an individual company without consulting with them. We will be conducting stakeholder interviews and may gain additional insight through those.

3. Is there an opportunity to develop distribution hubs for final mile co-located with major terminal hubs?
   Attempts by governments to establish more localized distribution hubs have generally been unsuccessful without on-going subsidy. Private companies typically set up distribution channels that are most efficient for them and the introduction of additional hand offs increase costs. That said, the increase in e-commerce and just in time deliveries combined with heavy congestion in urban areas would tend to decrease the range of distribution centers. The City could work with private companies to assist them in removing obstacles such as zoning and land use restrictions and otherwise support the private sector in establishment of local distribution hubs.

4. Should Naito Pkwy be used with all the construction?
   Naito from about Clay to Broadway Bridge is not recommended for freight. The Better Naito project changes have encouraged more bicycles and pedestrians, which as you know don't mix well with trucks. Turns onto Naito (in this section) have also been impacted with the new ped/bike facilities along the east side. The delineators have taken a beating and trucks are likely at least partly responsible. The lane reductions have decreased capacity, therefore

it would be expected that delay, especially for trucks, would increase. The speed limit, although granted speeds are regulated by signal progression and congestion, has been reduced to 20 mph for a portion of Naito.

5. Is there a way to distinguish between freight to consumers and freight to businesses?
   Yes, we use origin-destination patterns to freight terminals showing the freight that is going to businesses. With e-commerce growth, we have a good measure showing what is directly going to consumers – which is a very low percentage of the total tonnage in the larger scheme of things. The current Metro model does allow the distinction of delivery vans from light-duty trucks and SUVs. These types of vans are not counted with the larger freight trucks.

6. How will the sale and possible development of the Louis Dreyfus silos impact river/rail freight systems? Be aware of the Albina Vision project and make sure to engage them.
   BST's marine cargo forecast completed last May estimates substantial 20-year growth potential in grain cargo at Portland Harbor, and the recent closure of the Dreyfus terminal reduced Portland's current capacity to accommodate long-term growth in the grain market. BST's base case forecast for grain cargo in Portland is to grow from 3.88 million metric tons (MMT) in 2018 to 6.86 MMT by 2040. The BST forecast is available at this link. Port staff reportedly are holding out longshot hope that the Dreyfus terminal could reopen.

   ECONorthwest completed a land-demand forecast last month for marine industry on Portland Harbor (available at the link above), which drew on the BST forecast for marine terminal demand. ECONorthwest identified market need for an additional grain terminal of 40-60 acres in Portland by 2040, because forecast cargo growth exceeds Portland's current terminal capacity.

   The ECONorthwest study also identifies economic opportunity costs of not meeting the cargo forecast. Some examples:
   - The differential between the low and high land need scenarios for marine industry could cost access to 725-910 upward-mobility jobs for BIPOC workers. Harbor jobs incrementally reduce the region's wide racial income disparities.
   - State and regional traded-sector firms (including Oregon farmers) rely on efficient and cost-competitive options for supply chain inputs and delivery of their products to customers. Portland's freight districts are Oregon's primary gateway for international trade.

7. Has the city looked at utilizing rail corridors to displace heavy intra-city movements? How about River movements?
   Use of rail and barge for freight are typically used for large shipments of bulk cargo, such as fuels, grains, wood products, minerals, etc., - except for containers which are moved by rail and occasionally by barge. So, they are only economical at longer distance (a traditional rule of thumb had been 500 miles or more). This is because most freight movements start

and/or end by truck and there is a cost associated with transferring between modes and transportation providers (in labor, equipment, and time). There are exceptions, of course. For example, if a manufacturing facility had direct service, this would change the equation. However, direct rail spurs have been reduced and many class I rail lines only pick up large number of rail cars and, of course, industrial properties with direct water access are limited and becoming more so. That is why most attempts to introduce rail or marine for short hauls have failed. On the other hand, extreme roadway congestion and/or access to a particularly efficient rail or barge service could change the costs and benefits and shorten the distance for which use of rail and barge make sense. However, for such a move to make sense on a intracity basis, direct rail or marine access would most likely be required in the immediate future.

Who + How to engage:

- The city needs more Commercial Parking (loading zones) in the downtown, particularly in the SW.
- Reach out to bike-based couriers/freight services for last mile delivery.
- We need to understand whether BN and UP will increase their intermodal service
- If we can get one or hopefully more steamships to call on our port we can reduce a lot of truck traffic via I5 and I205.
- Intel / semiconductor industry air freights a great $ value low tonnage to Asia through PDX. This link is critical to a very high value sector. We should understand the needs of this segment.
- Public transportation with set routes could play a role with intra-city distribution (MAX, Frog Ferry).
- Can Oregon and Washington cooperate in creating inland "ports" along the existing rail corridors to move heavy import/export cargo off major highways? Short haul intermodal (>500km)
- Has PBOT worked with ODOT/WSDOT and Vancouver or other Metro cities to define regional sheds? There are major freight flows across the Columbia.
- People living outside, especially along freight corridors
- I'd really like to get people with experience in places (Europe, probably) where they require much higher safety standards for trucks. How do the regulations work, why do they work, how can we do that here?
- Both UP and BNSF (have it as their goal) will be increasing their inter modal as well as their unit train business. They will both be trying to minimize their car-load business.
- Engage industries of high export that are also associated with high carbon emissions and harmful land practices (cereal grains and fertilizer) to support a just transition. Freight solutions should consider people in these sectors that also need to make changes to reduce emissions in the same timeframe as Freight.

Stood out as important:

- The Port of Portland doesn't currently handle much "breakbulk shipments. Rather, this business is shipped from Asia and lands in LA or Tacoma then is shipped to Portland via over the road trucking.
- We're not going to be able to reach Vision Zero if we don't put safety front and center in this plan and all the others. Speed needs to be on the table, and so does everything else. We can't accept deaths as a tradeoff for vehicle movement.
- Shed maps -- Not all routes are equally important. Swan Island outbound over I5 I 84 is crucial as is Pier 6 to Interstate Bridge North.
- Sellwood Bridge is not a freight route
- 38% of truck-involved collisions are turning-related, higher than for all collisions. Though, lower bike/ped involved collisions.
- Marine Drive between I-5 and Troutdale is used as a freight route regardless what the City of Portland has said.
- After seeing the shed maps, I'm curious about freight patterns between Portland and Vancouver/SW Washington.
- Two rivers, one through the gorge, two major rail lines, two interstate freeways is a major reason why freight is so big in Portland. Access through the gorge and through the mountains to the east/from the east.
- Higher KSI in truck-involved collisions BUT lower bicyclist/pedestrian
- A ton of our exports are related to potentially harmful food and agriculture practices (cereal grains and fertilizer). --> Teaches us to look at Freight's intersectionality with other environmental impact areas