June 5, 2017

Joint Transportation Committee on Preservation and Modernization

cc: Joint Policy Advisory Committee on Transportation, Oregon Transportation Commission, Kate Brown, Dan Saltzman, Ted Wheeler, Chloe Eudaly, Amanda Fritz, Nick Fish, Leah Treat

Dear Joint Transportation Committee on Preservation and Modernization,

BikeLoudPDX is a grassroots active transportation advocacy organization that promotes bicycle and pedestrian improvements in the Portland region. We are writing to call for a regional transportation funding package that is more equitable, sustainable, and conducive to the region's livability.

Although we applaud the transit payroll tax as a first step toward greater transportation equity, spending $1.1 billion dollars on freeway expansion will not reduce congestion (induced demand), is contrary to the state's climate change goals (more critical now that the US is pulling out of the Paris Climate Accord), and will negatively impact the transportation options of marginalized communities. Instead of building additional freeway lanes that are costly to maintain, we urge legislators to focus on building a sustainable and equitable transportation system, and instead direct this $1.1 billion toward expanding and strengthening our public transit and active transportation systems. See Attachment 1 for an example of how the Portland Region can be better utilized to prioritize commercial vehicles and public transport at key interchanges.

We encourage ODOT to remove some interchanges and utilize "intelligent transportation systems" to prioritize buses and commercial vehicles traveling through the I-5 corridor. Merely expanding capacity without dedicating facilities for more desired modes of transportation will not achieve the region's objectives. Instead, we encourage ODOT and TriMet to work with C-Tran to develop a Bus Rapid Transit system along I-5 between Vancouver and Portland and study ways to expand BRT across our entire freeway network.

We oppose all three major highway expansion projects in the Portland area including the expansion of the I-5 corridor through the Rose Quarter. The Rose Quarter is served by multiple high frequency public transportation lines, and is a crucial connection for bicyclists and pedestrians accessing downtown. The previous budget was over $500 million. Now it is $300 million. Where did all savings come from? It's likely that ODOT is underestimating and would be eliminating crucial local connections around the interchange. We support the local multimodal

changes proposed for surface streets in the I-5 Broadway/Weidler Interchange Facility Plan 2012.

In addition to the concerns outlined above, we object to the manner in which these "mega" projects were selected by a committee with little Portland area representation. Portland metro residents, marginalized communities, and local organizations deserve a strong voice in the selection and development of the transportation network running through our neighborhoods.

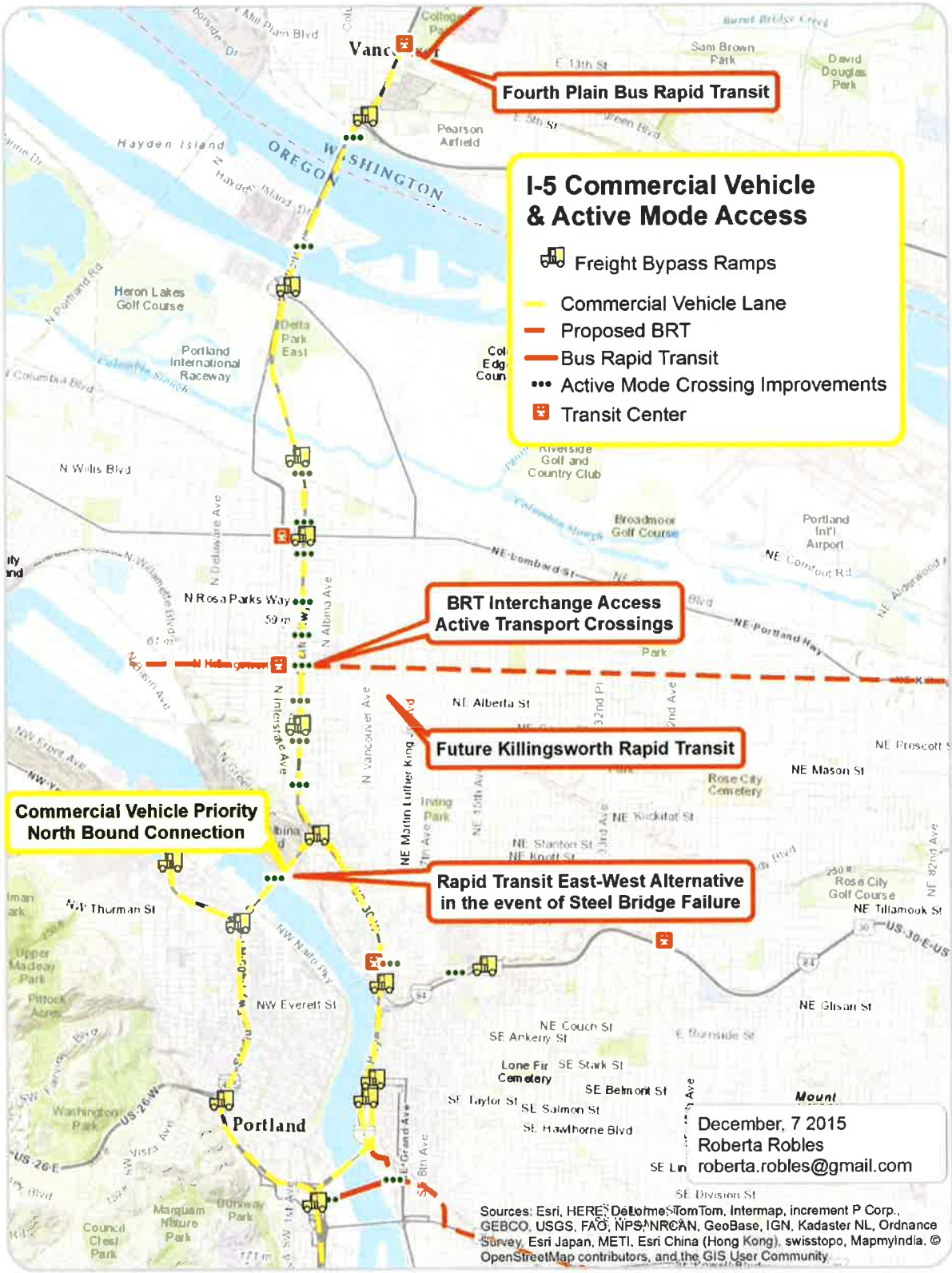
Portland is our home, please drive safely.

Sincerely,

Roberta Robles

Roberta Robles
Spokesperson
BikeLoudPDX

Attachment 1: Portland Region I-5 Commercial Vehicle and Active Mode Access


Fourth Plain Bus Rapid Transit
I-5 Commercial Vehicle & Active Mode Access
Freight Bypass Ramps
Commercial Vehicle Lane
Proposed BRT
Bus Rapid Transit
Active Mode Crossing Improvements
Transit Center
BRT Interchange Access Active Transport Crossings
Future Killingsworth Rapid Transit
Commercial Vehicle Priority North Bound Connection
Rapid Transit East-West Alternative in the event of Steel Bridge Failure
OREGON
WASHINGTON
Hayden Island
Heron Lakes Golf Course
Portland International Raceway
Delta Park East
Riverside Golf and Country Club
Broadmoor Golf Course
Portland Int'l Airport
Pearson Airfield
Sam Brown Park
David Douglas Park
N Rosa Parks Way
N Wills Blvd
NE Alberta St
NE Mason St
NE Prescott St
NE Tillamook St
NE Glisan St
NW Everett St
NW Thurman St
NW Naito Pkwy
Rose City Cemetery
Rose City Golf Course
Irving Park
Upper Macleay Park
Pittock Acres
Washington Park
Lone Fir Cemetery
Portland
Marquam Nature Park
Council Crest Park
December, 7 2015
Roberta Robles
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Sources: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, Mapmyindia, © OpenStreetMap contributors, and the GIS User Community

Abstract

Portland's strategic location as a transportation hub can be improved considerably by incorporating new technologies and priority managed commercial vehicles ramps, interchanges and lanes within the existing Portland freeway network. **The basic premise of network analysis is the more connections you have on a network the slower the network moves.** When considering the I-5 Corridor between downtown Portland and Vancouver there are too many interchanges too close together that don't adhere to current design standards and are unsafe. Some of these interchanges are mere blocks from existing MAX transit stations creating private vehicular conflict with pedestrians, cyclists and buses. ODOT should consolidate and remove outdated or inefficient interchanges. Priority at interchange access points be given to moving freight and buses. This will separate and minimizing motor vehicle conflict with active modes.

Introduction

The Columbia River Crossing was defeated. The primary opponents were against expanding interchanges and the lack of funding from Washington. A Max line across the bridge is the most efficient long term solution, but in the face of an unfunded project, it's a significant challenge to come up with a viable solution. A solution that would use the **existing footprint of the current bridge and same number of lanes**. The purpose of this pape is to identify viable solutions that move more people and freight across the CRC, instead of vehicles. This can be done at a fraction of the proposed CRC project and other major highway projects.

This as an interim solution until a funded Max crossing is a real option. In the immediate future it is unlikely that federal dollars will be available for a Max line crossing. We need to consider local, cheaper solutions to addressing traffic congestion without inducing more vehicular traffic. We need to move more people and freight, not vehicles. This plan carves out future urban spaces for protective green corridors and smart technology hub centers, ready for future technology, such as drone commercial delivery.

Using knowledge and experience gained in New Zealand freight and bicycle transportation the author drafted this in response to the heavy environmental costs to those neighborhoods adjacent to I-5.

The I-5 corridor in North Portland is the most polluted corridor: home to the poorest residents and people of color. The failure of implementing a CRC solution affects these communities in so many ways, it's difficult to fully quantify. We have a responsibility to develop affordable solutions to traffic congestion in this corridor. We have a responsibility to include the health of our most vulnerable citizens along the I-5 corridor in support of improving equity issues.

We can move more people and freight across the river, without inducing additional private vehicles trips. We can do this by reprioritizing our existing road space to give priority bus bypass ramps and priority lanes at key freight bottlenecks.

Recommendation

- The City of Portland add freight and bypass queues to the Transportation System Plan updates.
- Challenge the TSP assumption that better active mode projects benefit the movement of freight by shifting people off the road and into other modes. This assumption has led to induced traffic congestion with no benefit to freight movement.
- Commercial vehicle bypass queues and lanes be considered as a part of the Comprehensive Plan. Specific consideration given to removing freeway interchanges near Max Stations and the Killingsworth/PCC growth center.
- ODOT commence a study on consolidating and removing outdated or inefficient interchanges. Initiate Interchange Area Management Plans to prioritize freight, active modes and transit.
- Portland Metro improve transparency in funding sources to separate freight projects from private vehicle projects.
- ODOT must improve active mode east west crossings over I-5 in support of local walking and cycling plans.
- City of Portland Develop Intermodal Freight and Active Mode Design guidelines.

Introduction to Managed Lanes

"Managed lanes" are defined as any number of lanes set aside within a freeway: comprised of a separate expressway facility where different operational strategies are utilized and actively adjusted as needed for the purpose of achieving pre-defined performance objectives. The operation and utilization of managed lanes, typically situated within expressway rights-of-way, are controlled in order to optimize travel flow and reduce congestion. To move toward uncongested operations, managing a lane typically involves reducing excessive traffic volumes, reducing conflicts between vehicles, reducing the number of incidents, and better managing those incidents that occur.[1]"

FHWA Ramp Management and Control Handbook

"Special use treatments for ramp management focus on providing preferential treatment to a specific class or classes of vehicles and can be applied to either entrance or exit ramps. Special use treatments include exclusive access to ramps for a class of vehicle (e.g., high occupancy vehicle (HOV), emergency, freight, or construction) or special lanes on a ramp for the exclusive use by these vehicle classes". [2]

Chicago Metropolitan Agency for Planning _August 2008

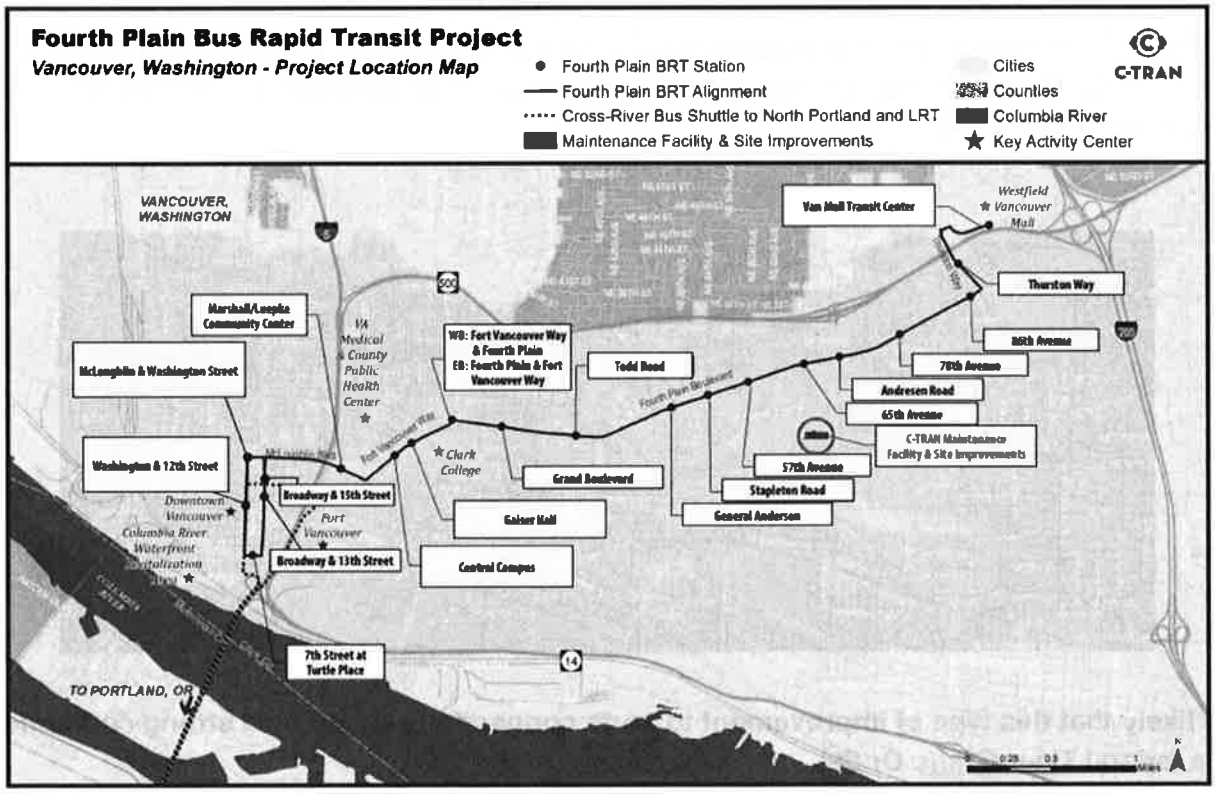
[1] Quote from the Chicago Metropolitan Agency for Planning Managed

[2] Quote from Ramp Management and Control Manual http://ops.fhwa.dot.gov/publications/ramp_mgmt_handbook/manual/manual/5_1.htm

I-5 Corridor Between Downtown Portland and Downtown Vancouver

The Columbia River Crossing 2013 project was derailed by the focus on expanding major interchanges and extra land needed with little support from Clark County for an expensive Max line. The CRC Environmental Impact Statement did not include analysis of a commercial vehicle lane option that combined freight and bus priority vehicle lanes[3]. In 2006 the CRC sub group on freight recommended some freight bypass lanes and freight direct access ramps as components of existing projects. Since this time driver technologies and ITS improvements has broadened the range of how freeway networks could be managed within the existing right of way.

Managed commercial vehicle lanes consisting of either a combined or separated freight and bus traffic lanes is a viable option. C-TRAN is opening their first bus rapid transit corridor via the Fourth Plain Rd Bus Rapid Transit. Bus Rapid Transit (BRT) is the public transportation choice of southwest Washington neighbors. We must facilitate through bus connections to downtown Portland as an option that is faster and more convenient than driving a car. Instead of sitting in long lines at freeway interchanges they will get on a bus that's faster.



The next big question for Vancouver's C-TRAN is how to connect their BRT with downtown Portland, as these commuters represent a large portion of traffic on the I-5 corridor during the

[3] Screening of Freight Components Memo, 2006 to the CRC Task Force from the CRC Freight Working Group.

peak periods. Removing outdated interchanges and replacing them with fewer and better designed interchanges for dedicated commercial (FREIGHT + BUS) vehicle on-ramps and thru lanes will provide a viable high speed transit option that saves time, improves travel time reliability, will reduce I-5 congestion and requires no additional lanes.

This concept plan assumes the existing Columbia River Crossing bridge can be earthquake proofed or a low cost replacement bridge with the same number of lanes.

FHWA

The Federal Highway Administration has defined commercial vehicle lanes widely, and is seen as giving wide latitude to local jurisdictions to design systems that support moving freight and people as opposed to single occupancy private vehicles. Federal funding policies favor projects that support last mile connections to ports, recognizing the detrimental effects that urban congestion has on national economic trade. Portland has built a bridge that excludes private vehicles, the Tilikum Bridge, in favor of active modes and public transit. Similarly, we could build or retrofit the Columbia River I-5 Bridge with lanes that prioritize freight, active modes and buses.

In the future these lanes could be converted into driverless vehicle lanes. According to the Center for Urban Transportation Research paper Automated and Autonomous Vehicles in Managed Lanes (2013), the technology and demand for managed lanes for autonomous vehicles is not likely to occur until 2040.

It is likely that this type of improvement to ports connections would be a strong contender for a federal Tiger Grant. Or the

Cap and Meter

An alternative approach, similar to Lion's Gate in Vancouver BC, could be considered as a part of the alternative scenarios.

Interchange Area Management Plans

ODOT has established guidelines for planning the function of interchanges. However none of the interchanges along this corridor have Interchange Area Management Plans consistent with changes in the city's Comprehensive Plan.

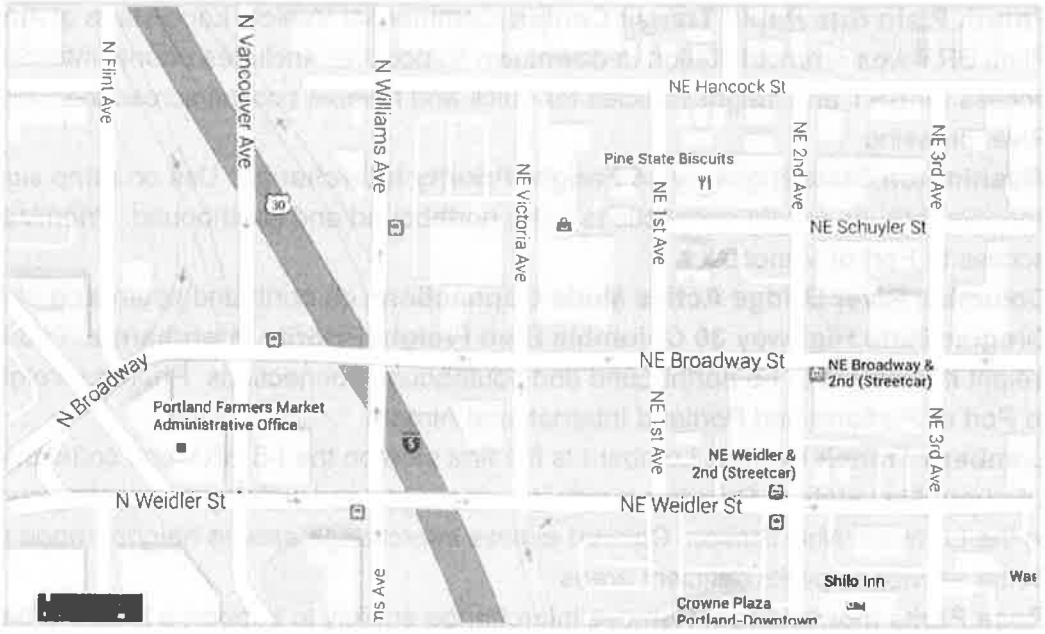
The CRC Crossing interchange expansions were too expensive and controversial given the extra land requirements. With the I-5 Commercial Vehicle Lane, some interchanges will have to be removed. Each remaining interchange would have to be carefully planned and managed to prioritize freight traffic, and other interchanges would be designed to prioritize bus rapid transit and active mode connections to Max stations.

Priority Interchanges
Priority Interchange Concept Connections starting in the North:

1. **Fourth Plain Bus Rapid Transit Center:** Commercial Vehicle Lane starts at 4th & Mill Plain BRT westernmost station in downtown Vancouver. Includes priority interchange access for BRT and freight vehicles for quick and reliable access across the Columbia River crossing.
2. **Washington State Highway 14 Freight Priority Interchange:** Use on ramp signals to improve through freight connections to I-5 northbound and southbound. Prioritize freight access to Port of Vancouver.
3. **Columbia River Bridge Active Mode Connections** on north and south side of river.
4. **Oregon State Highway 30 Columbia Blvd Freight Priority Interchange.** Prioritize freight movement to I-5 northbound and southbound connections. Prioritize freight access to Port of Portland and Portland International Airport.
5. **Lombard Transit Center:** Lombard is the first stop on the I-5 BRT and connects to the Lombard Max station. Prioritize public transit access and walking and cycling connections to the Lombard Max Station. Convert excess interchange area to neighborhood parks for better service to parks deficient areas.
6. **Rosa Parks Interchange**: Remove interchange entirely to support a livable urban environment with safe bicycle and pedestrian access to the Rosa Parks Max Station. Improve walking and cycling access east across I-5 to local community centers, Peninsula park and schools to the west.
7. **Alberta Street Interchange -** Remove interchange entirely to support a liveable urban environment. Expect economic improvements to Mississippi St and Alberta St.
8. **Killingsworth Transit Center**: Killingsworth neighborhood has been identified as a high growth center in the City of Portland's Comprehensive Update. Improving transit connections and walking and cycling infrastructure will support increased density while improving quality of life. Prioritize local connections on local roads.
9. **Swan Island Industrial Area Connection** - It's estimated that in the next 5-10 years the number of jobs in this area will increase by 1-2,000. There is limited land based connections into and out of the area. Improving freight truck connections via guaranteed green light connection onto the I-5- Commercial Vehicle Lane would improve time sensitive, critical commercial vehicle connections.

a. Matched with a high speed employee transit connections to either the existing max line and or the BRT stop to the east. This would lead to overall improvements in moving people on and off the island and reducing conflict with small private vehicles. Improve cycling connections along rail right of way for low elevation change route to downtown. (What is happening with Swan Island TMA?)

10. **NW Industrial Area Connection** - Similar to the Swan Island connection, NW commercial vehicles would have Fremont bridge priority access to both NB and SB I-5 traffic.
11. **Fremont Bridge Active Mode** - take a Fremont Bridge lane and use for active transit.
12. **Broadway & Rose Quarter Transit Center:** Build a transit center on Broadway or make a better connection to the Moda Center, where there are existing gas stations and car lots. Connections to the Trolley. Prioritize access to I-5 to busses and freight through ramp signals. This will minimize private vehicle conflict with bicyclists.



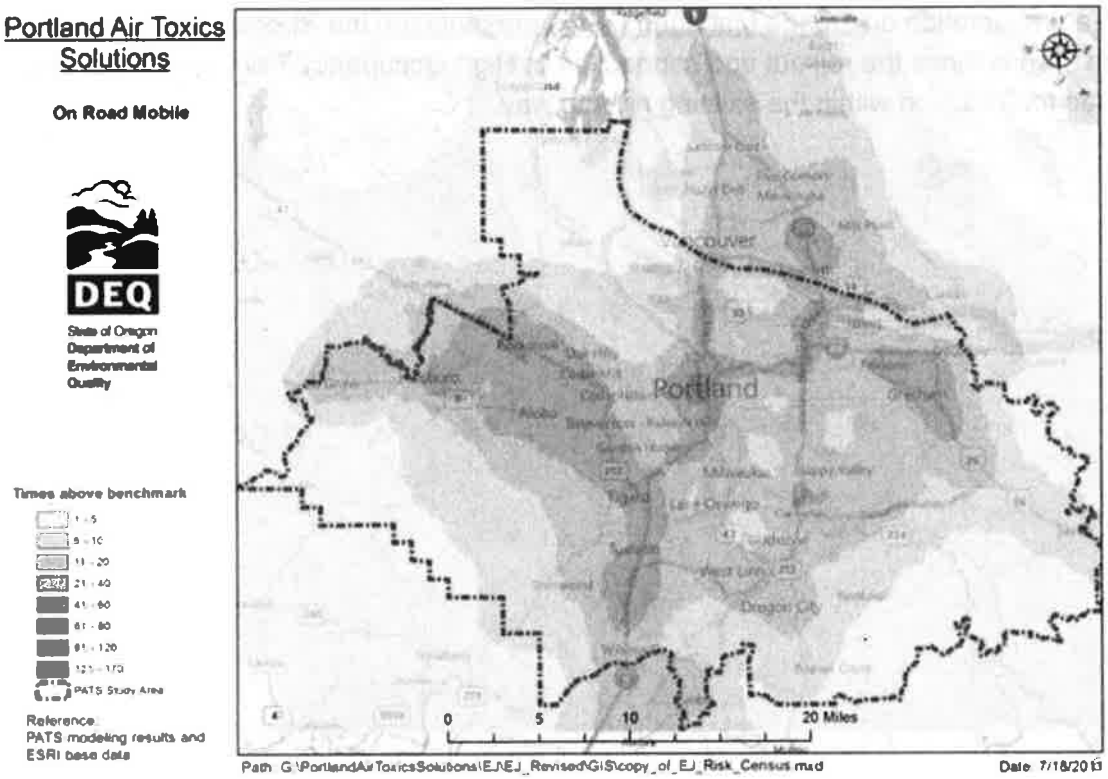
13. **Central Eastside Freight Priority Interchange:** Provide freight priority connections to I-5 Commercial Vehicle Lane and local intersection improvements to prioritize freight movement. Prioritize commuter access to inner industrial jobs.
14. **OMSI Transit Center at Tilikum Crossing:** The last transit connection on the I-5 BRT section. Further work includes: Integrate with OMSI plan (to be released), emphasize employment connections to knowledge zones: Oregon Health Sciences University, Portland State University, Central Eastside Industrial Employment, and transit connections to downtown and southeast.
15. **I-84 at Lloyd Center Interchange** - Prioritize Freight, Transit and Active mode connections and crossings.

Fewer interchanges are cheaper and easier to manage and maintain through traffic speeds. Land reclaimed from old interchanges can be used for drone stations, bus stations, parks in deficit areas and local green corridors.

Equity Issues

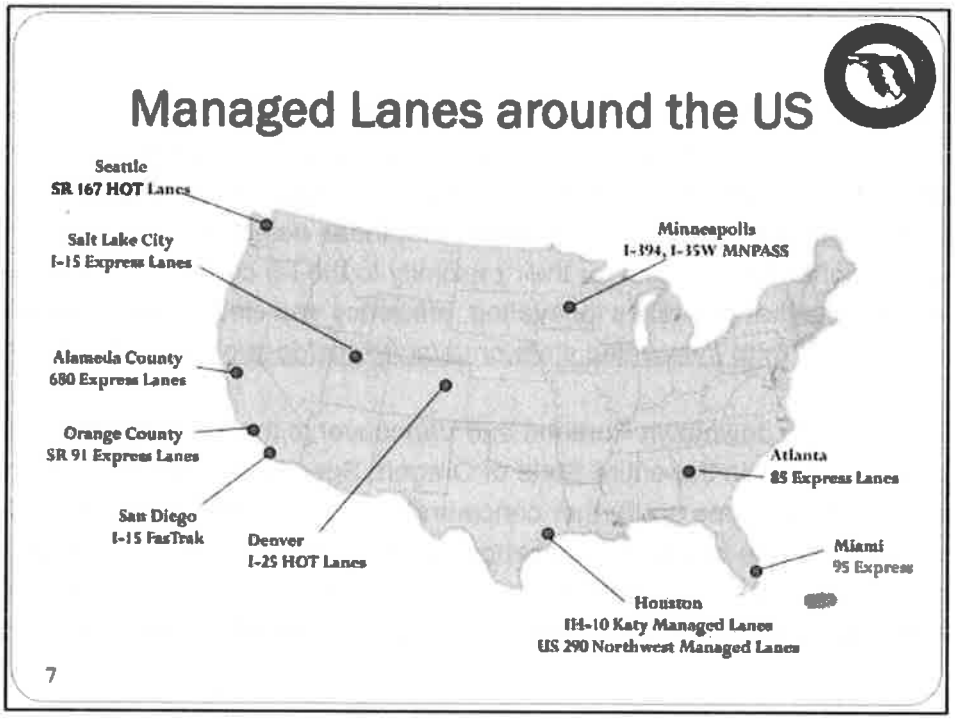
This corridor is also the home to the most diverse neighborhoods in Oregon. These citizens suffer higher rates of asthma and other airborne diseases.The Oregon Department of Environmental Quality has performed meaningful environmental justice analysis. According to Environmental Justice Consideration (2011), there is no question that these neighborhoods and citizens have been shouldering higher health costs for their proximity to the I-5 corridor. Clearly there is a need for innovative solutions that prioritizes innovation, efficiency and cleaner technologies that benefit those near the corridor. (http://www.deq.state.or.us/aq/toxics/docs/pats/7_25_11presentation.pdf)

The I-5 corridor between downtown Portland and Vancouver is the most heavily polluted and most densely populated corridor in the entire State of Oregon. Specific consideration needs to be made to ensure that the corridor does not further concentrate environmental pollutants. Limit access to the commercial vehicle lane to clean Diesel engines and or other green technologies that ensure targeted reductions in emissions is part of the overall objective for success. Prioritize moving vehicles that are fully loaded freight containers or buses that provide clean and fast services.

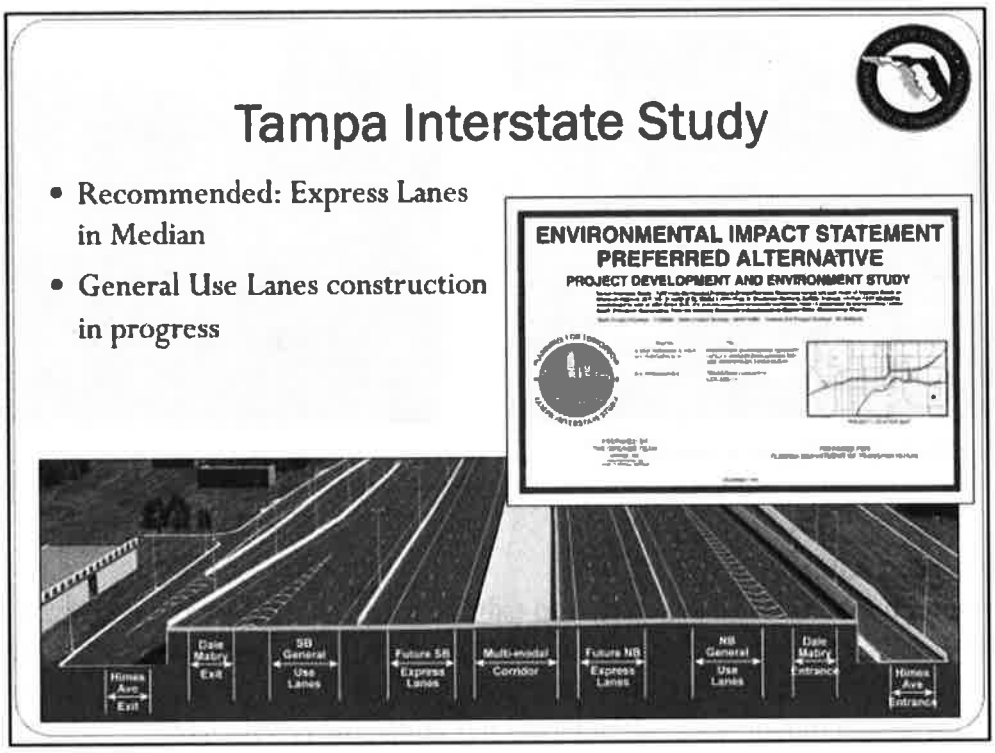


Successful Managed Lanes

There are many examples of managed lanes across the USA and Internationally.



From a presentation on Florida Managed Lanes presentation the Statewide Managed Lanes Action Plan outlines the roll out and connection of High Occupancy Toll Lanes most of which are planned for inclusion within the existing right of way.



In Australia and New Zealand, where the author has experience, the Auckland Northern Busway is a shining example of a BRT alongside a freeway that connects the northern suburbs across a harbor to the downtown core. This is a similar geographic water constraint as the Columbia River with similar land use transport patterns.

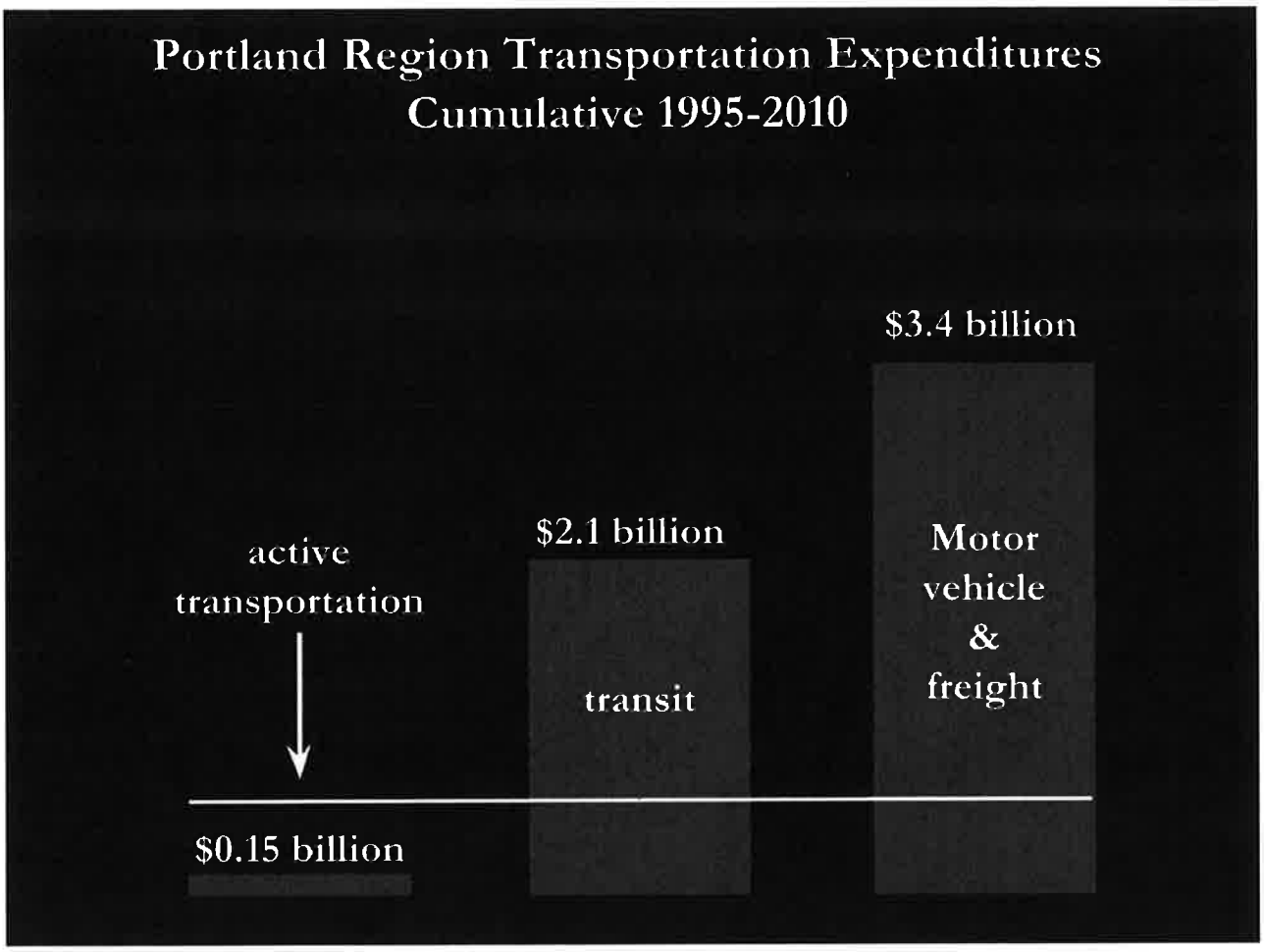
In New Zealand the Northern Busway was functioning at full capacity shortly after opening. Double decker busses are now being deployed to increase capacity. One lesson learned, assuming that people will drive forever is not a correct assumption. If given a viable transit option that is faster than driving a car, a lot more people will ride a bus then originally planned. People are willing to give up cars if they are given the option to take up to an hour off their daily commute times on a decent bus.

SH1 Northern Busway, Auckland [18]

M2 Motorway, Australia

Regional Funding Buckets

It is recommended that more work be done to extract funding for freight projects from funding for projects that include private vehicles. Metro administers regional transport funding. Metro should explore options for creating a new bucket for freight projects. This would enable better prioritization for freight movements without inducing additional private traffic.



The Portland TSP assumes that by improving access to active modes and transit that excess capacity would apply to freight movements. Clearly this is not happening. Instead extra capacity is occupied by induced private vehicle traffic and growth. Additional work is needed to align funding sources with projects that move more freight and people, not vehicles.

Conclusion

The I-5 corridor between downtown Portland and Vancouver is congested with unsafe interchanges too close together. Removing some of the bottlenecks in support of a Commercial Vehicle Lanes and Bypass interchanges is an efficient cost effective option. Prioritizing the movement of freight and buses is a more efficient and reliable use of the existing road space. A high speed bus corridor would also support and connect to the Fourth Plain BRT and minimize commuter times across the Columbia river and improve local neighborhoods.

Recommendation

- The City of Portland add Priority Commercial Vehicle Access to the I-5 corridor.

- Challenge the TSP assumption that better active mode projects benefit the movement of freight by shifting people off the road and into other modes. This assumption has led to induced traffic congestion with no benefit to freight movement.
- As a part of the Comprehensive Plan update, specific consideration given to removing unsafe interchanges or those that do not support the Comprehensive Plan Updates.
- ODOT should commence a study on consolidating and removing outdated or inefficient interchanges. Consideration be given to prioritizing freight and bus priority ramps and lanes. Initiate Interchange Management Area Plans along this corridor to improve air quality. This is an environmental and social justice issue that needs to be addressed.
- Metro - Research methods for transparency in funding sources to identify freight specific projects as separate to private vehicle project funding. Modify funding sources to incentivise moving freight and people, not vehicles.