PBOT
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Dan Saltzman Commissioner **Leah Treat** Director

April 24, 2017

Dear Stakeholder:

Enclosed for your review is an Transportation System Development Charge Update (TSDC) report prepared for the City of Portland. This report includes a TSDC capital improvement project list as well as the rate study, which is the methodology for determining TSDC fees.

A TSDC is a one-time fee assessed new development to help fund the cost of public improvements to serve a growing population. Under state law, the fees collected may only be used to fund capacity-enhancing projects for future users. With this in mind, the TSDC project list was developed to maximize funding opportunities, such as grants and partnerships, with local, state and federal sources in order to fund as many of these projects as possible.

With Portland expected to grow in the next 10 years, improvements to the transportation system are necessary to provide travel options to accommodate growth while meeting Vision Zero, Climate Action, and City Comprehensive Plan goals; however, the overall cost of living in Portland continues to be a concern. Portlanders should have the best transportation system possible. Based on input from stakeholders, therefore Portland Bureau of Transportation (PBOT) directors support TSDC rates based on funding 50 percent of the eligible TSDC project costs.

Stakeholders along with Bureau leadership and project staff have considered equity issues, rates, and adjustments in the TSDC program, and made the following recommendations:

- Use the recently adopted Transportation System Plan (TSP), other recently adopted plans or studies in the process of adoption create the project list,
- Support for 165 projects recommended for TSDC funding
- Include trip adjustments for those eligible development projects in the Central City or centers & corridors

Since the recommended TSDC rate is less than the maximum allowable amount, not all projects on this list are expected to be funded and constructed during the next 10 years. However, the TSDC revenues will be valuable matching funds for other revenue sources.

Summary of TSDC Project Costs and Recommended Rate	
Total Estimated Project Costs	$609.5 Million (City-only Projects)
Total Estimated TSDC Eligible Project Costs	$494.3 Million (City-only Projects) plus $ 95.0 Million (Matching funds for Regional Projects) $589.3 Million (Total TSDC Eligible Costs)
Recommended TSDC Assessment – See attached fee schedule	$294.7 Million (50% of Total Estimated TSDC Eligible Cost)

A public hearing on the TSDC update has been scheduled for July 26th, at 2 p.m. in Council Chambers, 1221 SW 4th Avenue, Portland, Oregon. The proposal to City Council on July 26th will include adoption of the attached rate study and project list, establishment of TSDC rates, and updates to City Code 17.15, Transportation System Development Charges.

If you have questions or would like a presentation by PBOT staff, please contact Anne Hill at anne.hill@portlandoregon.gov or 503-823-7239.

Thank you,

Leah Treat

Proposed TSDC Rate Schedule Based on 50% of the Eligible Project Cost

Land Use Categories	Land Use Code (4)	Unit of Measure	PM Peak Vehicle Trips/ Unit	Future AVO	Vehicle Mode Share	PM Peak Total Person Trips/Unit (Est)	New Trip %	PM Peak new person trips/ unit	TSDC Rate
Cost per PM Peak Hour Person Trip									$4,174
Residential									
Single Family	210	dwelling	1.0	1.17	0.95	1.23	100%	1.23	$5,141
Single Family (less than 1,000 sf)	50% of 210	dwelling	0.5	1.17	0.95	0.62	100%	0.62	$2,570
Multiple Family	220	dwelling	*	*	*	0.60	100%	0.60	$2,504
Senior Housing/Assisted Living/Nursing Home	251	dwelling/ bed	0.27	1.13	0.95	0.32	100%	0.32	$1,341
Commercial – Services									
Bank	911	sq ft/GFA	12.13	1.13	1.00	13.71	65%	8.91	$37.19
Day Care	520	sq ft/GFA	1.21	1.13	0.95	1.44	100%	1.44	$6.01
Hotel/Motel	310	room	0.6	1.31	0.95	0.82	100%	0.82	$3,426
Service Station / Gasoline Sales (2)	946	VFP	13.86	1.13	0.95	16.49	44%	7.25	$30,278
Movie Theater/Event Hall	444	sq ft/GFA	3.04	1.13	0.95	3.62	85%	3.07	$12.83
Carwash	947	wash stall	5.54	1.13	0.95	6.59	65%	4.28	$17,878
Health Club / Racquet Club	492	sq ft/GFA	3.53	1.13	0.95	4.20	90%	3.78	$15.77
Commercial – Institutional									
School, K-12	(1)	sq ft/GFA	1.09	1.13	0.95	1.30	85%	1.10	$4.60
University / College/ Jr College	50% of 540	sq ft/GFA	1.27	1.13	0.95	1.51	90%	1.36	$5.67
Church	560	sq ft/GFA	0.55	1.13	0.95	0.65	95%	0.62	$2.59
Hospital	610	sq ft/GFA	0.93	1.13	0.95	1.11	85%	0.94	$3.92
Park	411	acre	3.5	1.13	0.95	4.16	85%	3.54	$14,770
Commercial – Restaurant									
Restaurant (Standalone)	931	sq ft/GFA	7.49	1.59	1.00	11.91	56%	6.67	$27.84
Quick Service Restaurant (Drive-Though)	934	sq ft/GFA	32.65	1.29	0.96	43.70	50%	21.85	$91.21
Commercial – Retail									
Shopping/Retail	(1)	sq ft/GLA	3.21	1.20	0.97	3.95	58%	2.29	$9.57
Convenience Market (3)	851	sq ft/GFA	*	*	*	43.90	49%	21.51	$89.79
Free Standing Retail Store/Supermarket	815	sq ft/GFA	4.98	1.32	0.95	6.92	83%	5.74	$23.97
Car Sales - New / Used	841	sq ft/GFA	2.62	1.20	0.95	3.31	80%	2.65	$11.05
Commercial – Office									
Administrative Office	710	sq ft/GFA	*	*	*	1.40	90%	1.26	$5.26
Medical Office / Clinic	720	sq ft/GFA	3.57	1.37	0.95	5.15	75%	3.86	$16.12
Industrial									
Light Industry / Manufacturing	130	sq ft/GFA	0.85	1.37	0.95	1.23	90%	1.10	$4.60
Warehousing / Storage	150	sq ft/GFA	0.32	1.30	0.95	0.44	90%	0.39	$1.64
Self-Storage	151	sq ft/GFA	0.26	1.37	0.95	0.37	95%	0.36	$1.49

* Based on Observed Person Trip Data (Survey sites in Portland, California, and Washington, D.C.)

(1)School, K-12: Average of ITE categories 520 and 530; Shopping/Retail: Blend of ITE Categories 820 and 826

(2) With or Without Minimart (not to exceed 1,500 SF) and/or Carwash (Fuel is Primary Use)

(3) If gasoline sales included on-site, use Service Station/Gasoline Sales SDC rate.

(4) Land Use Code - Reference 'Trip Generation', 9th Edition, Institute of Transportation Engineers, 2012

PBOT
PORTLAND BUREAU OF TRANSPORTATION

Prepared for: CITY OF PORTLAND, OREGON

Transportation System Development Charge Update

APRIL 2017

Prepared by:

FEHR & PEERS

ECONorthwest
ECONOMICS • FINANCE • PLANNING

GALARDI ROTHSTEIN GROUP

jla public involvement
Collaborative planning, decisions & communication

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In compliance with Title VI of the Civil Rights Act and Title II of the Americans with Disabilities Act, it is the policy of the City of Portland that no person shall be excluded from participation in, denied the benefits of or be subjected to discrimination in any City program, service, or activity on the grounds of race, color, national origin, or disability. To help ensure access to City programs, services, and activities, the City of Portland reasonably: provides language translation and interpretation for limited English proficiency individuals; modifies policies and procedures; and, provides auxiliary aids, services and/or alternative formats to persons with disabilities. To request an accommodation, modification, translation, interpretation or language service; to file a complaint; or for additional information or questions on Civil Rights Title VI (race, color, national origin protections) and ADA Title II (protections for people with disabilities) matters (nondiscrimination in public City programs, services, activities) please call 503.823.2036, TTY at 503.823.6868, Oregon Relay Service at 711.

CHAPTER 1 INTRODUCTION

The purpose of this study is to establish an updated methodology, project list and transportation system development charges (TSDCs) for the City of Portland, Oregon. System development charges are one-time fees paid by new development for capital costs of public facilities needed to serve future system users who occupy or use the new development.

Local governments charge TSDCs in order to:

- Obtain revenue to pay for some of the cost of new public facilities.
- Implement a public policy that new development should pay a portion of the cost of facilities that it requires, and that existing development should not pay all of the cost of such facilities.
- Assure that public facilities will be constructed within a reasonable time period in order to achieve and maintain local standards for new development without decreasing the level of service for existing residents and businesses.
- Provide predictability to developers and builders about the type, timing, and amount of payments required by local governments.

The City of Portland's (City's) original TSDC program became effective in 1997 and the program was updated in 2007. In the past 10 years, the City has assessed fees for transportation facilities totaling approximately $75 million. The current program, adopted in 2007, is based on a ten-year list of TSDC-eligible transportation improvements. That list of projects is coming to an end, so the project list and TSDC rates are being updated in 2017.

Central to the 2017 TSDC program are updates to program's project list, underlying data, and how rates are assessed. Many of these updates respond to an insightful TSDC program critique that was conducted by Portland State University in 2015 (see **Appendix A**). Specific features include:

- TSDC project list – the new program draws from the adopted Transportation System Plan (TSP), other recently adopted plans or studies, and plans or studies in the process of adoption.
- Person trip data – while Portland's TSDC program has been always been multimodal, this update is the first time that the program will be derived from actual person trip data. Moving from vehicular trip data to actual person trip data provides a much more complete picture of how Portland's transportation system is used. The new program also shifts to measure PM peak hour travel rather than daily travel to assess impacts when the system is most in demand.
- Streamlined methodology – the previous program featured a very complex process for measuring project eligibility and resulted in a high proportion of projects being ineligible for TSDCs. This new methodology simplifies the way that TSDC fees are calculated, using the value of Portland's existing transportation system as an upper limit for setting TSDC fees, which are then right-sized to the TSDC project list. This new methodology results in a higher proportion of growth-accommodating projects being eligible for TSDC funding.

This report documents the results of that update process.

This rate study presents the methodology and elements needed to determine updated TSDCs for the City of Portland. The rate study includes:

Chapter 1. Introduction

Chapter 2. Legal requirements and issues that affect the calculation of TSDC rates in Oregon

Chapter 3. How the TSDC Project List was developed

Chapter 4. SDC Methodology and schedule of TSDC rates for various types of development

Chapter 5. A summary of the public participation process that was used during the development of TSDCs for the City

Data Sources

The data in this study was provided by the City unless a different source is specifically cited.

Data Rounding

The data in this study were prepared using computer spreadsheet software. In some tables in this study there will be very small variations from the results that would be obtained using a calculator to compute the same data. The reason for these insignificant differences is that the spreadsheet software was allowed to calculate results to more places after the decimal than is reported in the tables of these reports.

CHAPTER 2 LEGAL REQUIREMENTS AND ISSUES AFFECTING SDC CALCULATIONS

Oregon Systems Development Act

In 1989, the State of Oregon adopted the Oregon Systems Development Act (Oregon Revised Statutes 223.297 - 223.314) to "provide a uniform framework for the imposition of system development charges by local governments." The statutes outline the types of charges that are considered to be System Development Charges (SDCs) and impose a variety of requirements on governments that implement SDCs. The Oregon Revised Statutes (ORS) provisions that directly affect the calculation of the SDC rates require local governments to:

1. Adopt a capital improvement program (to designate capital improvement costs that can be funded with SDCs).
2. Set forth a methodology for calculating the SDC (to establish rate-making principles and costs).
3. Calculate the SDC as a "reimbursement" fee, or an "improvement" fee, or a combination of both:
    a. "Reimbursement" fees are based on the value of capital improvements which are already constructed or are under construction provided that "excess" capacity is available to accommodate growth.
    b. "Improvement" fees are designed to obtain the projected costs of capital improvements needed to increase capacity for new development. SDCs may not be used for the construction of administrative office facilities.
4. Limit SDCs to five types of capital improvements: transportation, water, sewer, drainage, and parks and recreation.

Methodological Issues

Base Fee Structure

The updated TSDC methodology developed for the City of Portland is based on an improvement fee only structure, as provided under Oregon law. As such, the TSDCs are designed to obtain the costs of planned capital improvements that expand capacity in the transportation system (across all modes of travel) for future users associated with new

development. Consistent with ORS requirements, an increase in system capacity may be established if a capital improvement:

1. Increases the level of performance or service provided by existing facilities, or
2. Provides new facilities ORS 223.307(2).

In demonstrating that the need for increased capacity is required to serve future users, the methodology establishes the base level of service as the current system facility value per person trip. Existing system facilities were acquired and developed to meet the needs of existing system users; a proportionate level of future investment per person trip is needed to maintain the current level of service. Any additional capacity investments up to this base level of service cost per trip, are therefore needed to equitably recover capacity costs from future system users.[1]

Reductions for Other Revenue Sources

The City's updated TSDC methodology reduces the TSDC-eligible project costs by other revenue sources that have been budgeted for projects included in the TSDC capital improvement plan. Other revenue sources include only the taxes, fees, etc. that are earmarked for or pro-ratable to the same capital improvements that are the basis for the TSDCs.

The City uses General Transportation Revenue (GTR), grants, and funding by partner agencies, such as the Portland Development Commission to pay for a portion of its transportation improvement projects. The City's proposed TSDCs take into account future use of GTR, grants and funding by partner agencies by subtracting commitments for those revenues from the cost of projects in the TSDC project list (see Chapter 3).

These reductions serve to reduce the TSDC fee per person trip since the TSDC projects can be funded from a variety of sources.

Administrative Issues

Credits for Qualified Public Improvements

Consistent with ORS requirements, developers may be eligible to receive "credit" against their individual TSDC for construction of "Qualified Public Improvements" (QPIs). Portland City Code 17.15.060 (A) establishes reasonable conditions affecting these credits. Typically, the contributions for which credits are given must be for the same public facilities for which the SDCs are being imposed.

SDC Exemptions

Portland City Code 17.15.050 includes several partial and full exemptions from payment of the TSDC, including affordable housing.

Timing of Payment of System Development Charges

Portland City Code 17.15.040 authorizes imposition of the TSDC at the time of application for a building permit, and collection of TSDC payments at the time a building permit is issued.

Uses of System Development Charge Revenue

System development charge revenue can be used only for the capital costs of public facilities. SDCs cannot be used for operating or maintenance expenses. The costs of capital facilities that can be paid for by TSDCs are specified in Portland City Code 17.15.100.

1 Establishing the base level of service as the current system value per unit was upheld by the Circuit Court of Multnomah County in its 2016 decision related to Portland's parks SDC methodology (Portland Metro Association of Realtors, et. al. v. City of Portland, May 2016). This decision provided a path for simplifying the methodology used to calculate TSDCs. There is at least one existing TSDC program in the country that has applied a system value per capita methodology - Oakland, California passed their TSDC program in June 2016.

Receipt and Expenditure of System Development Charges

Portland City Code 17.15.100 requires TSDC revenues to be deposited into separate accounts of the City of Portland.

Portland City Code 17.15.090 requires refunding of TSDC payments that are not expended within 10 years from receipt (on the premise that if they cannot be expended in a reasonable time, they were probably not "needed" nor did they contribute to achieving and maintaining an adequate transportation system for new development).

CHAPTER 3 TSDC PROJECT LIST

Oregon's System Development Act requires that SDCs be based on a methodology that demonstrates consideration of an adopted capital improvement plan (CIP). The TSDC project list described in this chapter serves as the CIP required under the Oregon System Development Act. Adoption of this rate study by the City, and adoption of the TSDC ordinance that incorporates this rate study by reference, constitute adoption of this TSDC project list by the City for the purpose of expending TSDC revenues.

Development of the TSDC Project List

The TSDC project list was developed using the Transportation System Plan (TSP), adopted June, 2016. The TSP project selection process began with three major actions:

1. Establish the outcomes.
2. Develop criteria to evaluate the projects.
3. Prioritize the projects.

The City identified the following key outcomes to guide the process:

- Contributing zero deaths and serious injuries.
- Providing access to jobs, housing, and daily needs.
- Ensuring underserved communities.
- Achieving or exceeding our Climate Action Plan transportation targets
- Providing positive health outcomes by increasing physical activity and decreasing transportation-related pollution.
- Providing economic benefits, such as freight mobility and access to jobs, including in industrial areas.
- Deliver cost effective projects and programs.

These outcomes led to the development of the project evaluation criteria used to evaluate more than 300 candidate projects. Based on the evaluation scores, candidate projects were prioritized on the 1-10 year constrained list, the 11-20 year constrained list or the unconstrained list of the TSP.

The 1-10 year constrained list of projects, other recently adopted plans, or studies and plans in the process of adoption, were considered for the TSDC project list. This list of projects was evaluated against several criteria described in the next section to determine TSDC eligibility.

Criteria for Projects to be Eligible for TSDC Funding

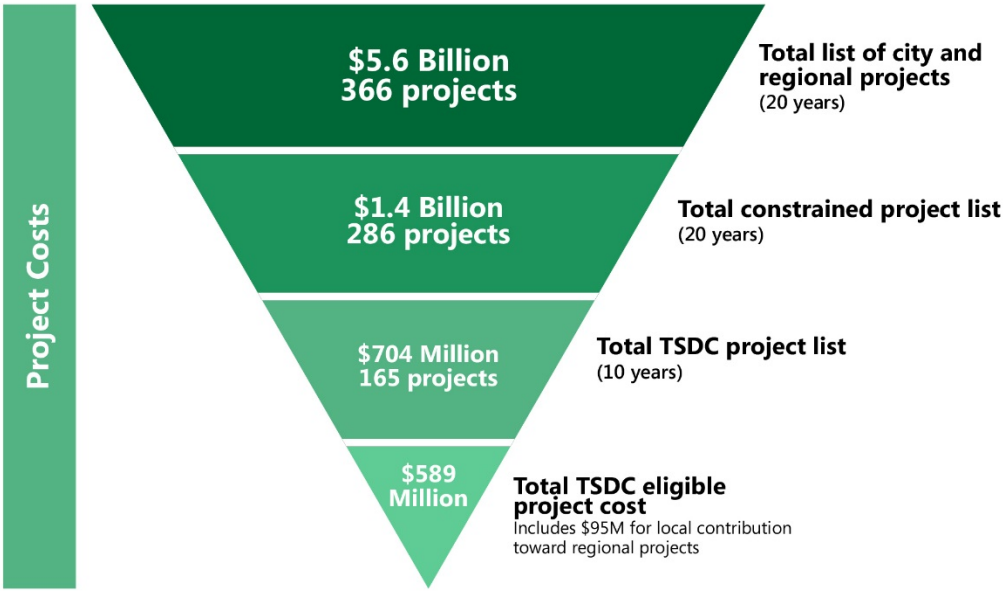
The City's TSDCs are designed to support the principal modes of travel in a multi-modal system. The City used criteria to identify the transportation projects that are eligible for TSDCs. The criteria were developed to ensure "rough proportionality" and to meet the multi-modal transportation needs of the City.

The City examined the projects in the 10-year constrained list, other recently adopted plans or studies, or plans or studies in the process of adoption to identify projects that met all of the following minimum criteria to be considered as TSDC eligible projects:

- Project adds or enhances capacity to the transportation system.
- Project is designed to serve additional population and or employment over the next ten years.
- Project is not a preventive maintenance project

Once the proposed project was screened using the minimum qualification criteria above projects fell into two categories: (1) City-only and (2) Regional. The process described above was used to narrow this list down to 165 TSDC projects. While the capital value of these 165 projects was over $4 Billion, the TSDC list includes 11 regional projects totaling $3.4 Billion. These major projects will be built through a variety of local, regional, state, and Federal funding sources. Acknowledging the importance of the regional projects to Portland city travelers, the TSDC includes only $95 Million for local contributions towards these regional projects. Thus, the overall TSDC list represents $704 Million in project costs. (See **Figure 3-1**).

Figure 3-1: TSDC Project Cost Development



The next step was to determine the portion of the total costs that are 'TSDC Eligible'. Eligible TSDC costs represent the portion of the project that is needed to expand capacity in the system in order to maintain the current level of service as future users are added to the system. A further adjustment to the Eligible TSDC costs was to account the amount of committed City funds and known outside funding. Costs of projects were obtained from a variety of sources, ranging from engineering-based cost buildups to planning-level estimates. For consistency, costs were adjusted to reflect a 2016 base year. The City anticipates that the costs will be refined over time as project designs become finalized.

The regional project contributions ($95 Million), together with the eligible costs of City-only projects ($494 Million), result in a total TSDC-eligible cost of $589 Million. The results of this process is the TSDC Project List itemized in **Table 3-1** and depicted in **Figure 3-2.**

Table 3-1: Summary of Capital Improvement Plan for System Development Charges

Project ID	Category	Project Name	Project Location	Project Description	Total Project Costs	Already Budgeted	TSDC Eligible Cost	TSDC Eligible Percentage	Primary Mode(s)	District Coalition	Capacity Increase or Level of Performance Improvement	Explanation for eligibility reduction
10010	Regional	East Portland Enhanced Transit	East Portland	Improve transit speed, reliability, safety, and access along one or more major transit corridors in East Portland, to be determined through the Enhanced Transit Corridors Plan.	$20,000,000	$0	$10,000,000	50%	Transit	EPNO	Improves transit capacity by improving speed, reliability, efficiency, etc.	PBOT contribution capped for large regional projects.
10010	Regional	Inner Ring Enhanced Transit	Inner Ring Portland	Improve transit speed, reliability, safety, and access along one or more major transit corridors in the Inner Ring of Portland, to be determined through the Enhanced Transit Corridors Plan.	$20,000,000	$0	$10,000,000	50%	Transit	SEUL	Improves transit capacity by improving speed, reliability, efficiency, etc.	PBOT contribution capped for large regional projects.
10014	Other Projects	Errol Heights Neighborhood Street Improvements	Errol Heights Area, SE	Priority local street improvements and pedestrian connections in the Errol Heights area.	$2,000,000	$0	$1,000,000	50%	Multimodal	SEUL	New streets provide local access for vehicles, which improves capacity on nearby collector streets. Project also provides connections for pedestrians and bicyclists.	50% reduction because a portion of project would involve reconstruction of existing streets.
10014	Other Projects	Cully Neighborhood Street Improvements	Cully	Priority local street improvements and pedestrian connections identified in the Cully Commercial Corridor and Local Street Plan.	$2,000,000	$0	$1,000,000	50%	Multimodal	CNN	New streets provide local access for vehicles, which improves capacity on nearby collector streets. Project also provides connections for pedestrians and bicyclists.	50% reduction because a portion of project would involve reconstruction of existing streets.
10014	Other Projects	Division-Midway Neighborhood Street Improvements	Division-Midway	Priority local street improvements and pedestrian connections identified in the Division-Midway Neighborhood Street Plan.	$2,000,000	$0	$1,000,000	50%	Multimodal	EPNO	New streets provide local access for vehicles, which improves capacity on nearby collector streets. Project also provides connections for pedestrians and bicyclists.	50% reduction because a portion of project would involve reconstruction of existing streets.
10014	Other Projects	Tryon-Stephens Neighborhood Street Improvements	Tryon-Stephens	Priority local street improvements and pedestrian connections identified in the Tryon-Stephens Neighborhood Street Plan.	$2,000,000	$0	$1,000,000	50%	Multimodal	SWNI	New streets provide local access for vehicles, which improves capacity on nearby collector streets. Project also provides connections for pedestrians and bicyclists.	50% reduction because a portion of project would involve reconstruction of existing streets.
20002	Other Projects	I-405 Corridor Smart Cities ITS Improvements	14th/16th, NW (Glisan - Burnside); 13th/14th, SW (Burnside - Clay)	Smart Cities ITS improvements at six signals between Clay and Glisan including communications infrastructure; closed circuit TV cameras, variable message signs for remote monitoring and control of traffic flow.	$10,000,000	$0	$10,000,000	100%	Traffic / Freight	CC	ITS improves and manages traffic flow, enabling more capacity and performance per lane on existing roadways.	

Project ID	Category	Project Name	Project Location	Project Description	Total Project Costs	Already Budgeted	TSDC Eligible Cost	TSDC Eligible Percentage	Primary Mode(s)	District Coalition	Capacity Increase or Level of Performance Improvement	Explanation for eligibility reduction
20007	Match Identified	South Portal Intersection Improvements	Bancroft/ Hood/ Macadam/ Lowell, SW	Improve the South Portal to the North Macadam District (intersection of Bancroft, Hood, and Macadam) to address safety and capacity issues. Includes new extension of Lowell St.	$8,138,078	$0	$8,138,078	100%	Traffic / Freight	CC	Creates a new street access to South Waterfront and re-organizes traffic movements at complex intersection to increase capacity.	
20050	Other Projects	Southern Triangle Access Improvements	Southern Triangle (Powell Blvd, UP Railroad, Willamette River)	Improve vehicle access to the Southern Triangle district from eastbound Powell Blvd, and improve vehicle access from CEID to westbound Powell and southbound I-5.	$4,000,000	$0	$4,000,000	100%	Traffic / Freight	CC	Project provides improved vehicle access into and out of the district.	
20057	Other Projects	Willamette Greenway Trail	Willamette Greenway Trail, SW (Marquam Br - Lowell)	Provide two paths in order to separate bicyclists from pedestrians in remaining gaps of South Waterfront's Willamette Greenway trail.	$2,500,000	$0	$2,500,000	100%	Active	CC	Provides new bicycle and pedestrian pathways.	
20070	Match Identified	NW Naito/Front Corridor Improvements	Naito Pkwy, NW (9th - 21st)	Construct multimodal safety and access improvements including sidewalk infill, protected bike lanes, signal improvements, and lane modifications.	$3,608,417	$2,608,417	$1,000,000	28%	Active	CC	Upgraded signals improve vehicle capacity and project provides new ped/bike facilities.	Reduced by amount already budgeted through pending LID.
20102.2	Match Identified	Bond Ave Extension, Phase 2	Bond Ave, SW (Porter - Gibbs)	Extend SW Bond one-way northbound from SW Whitaker to Porter, extend Portland Streetcar service north of the Tram, and convert Moody to one-way southbound operation to form a couplet.	$16,000,000	$4,000,000	$12,000,000	75%	Multimodal	CC	New roadway connection improves capacity for all modes.	Reduced by amount already budgeted from PDC.
20106	Other Projects	I-405 South Portland Crossing Improvements	I-405, SW (Harbor Dr - Broadway)	Improve opportunities for people walking and bicycling to cross I-405 on Harbor Dr, Naito Pkwy, 1st, 4th, 5th, 6th, and Broadway.	$5,000,000	$0	$5,000,000	100%	Active	CC	Fills in ped/bike gaps and improves existing facilities.	
20107	Other Projects	SW 4th Ave Corridor Improvements	4th Ave, SW (Sheridan - Madison)	Improves the street environment on SW 4th Avenue adjacent to Portland State University by adding bicycle facilities, curb bulb-outs, enhanced pedestrian crossings, traffic signals, and green street features. As part of the project, reconfigure 4th Ave from Sheridan to Lincoln to enhance and extend the bike lane over I-405, and modify the signal at Lincoln to improve bicycle access.	$2,500,000	$0	$2,500,000	100%	Multimodal	CC	Adds new bicycle facilities, pedestrian crossings, and traffic signals.	

Project ID	Category	Project Name	Project Location	Project Description	Total Project Costs	Already Budgeted	TSDC Eligible Cost	TSDC Eligible Percentage	Primary Mode(s)	District Coalition	Capacity Increase or Level of Performance Improvement	Explanation for eligibility reduction
20108	Other Projects	SW Broadway Bikeway and Streetscape Improvements	Broadway, SW (Clay - Sherman)	Enhances the existing protected bikeway and sidewalks on SW Broadway adjacent to Portland State University. Includes the construction of a raised bikeway, sidewalk amenities, green street features, ADA improvements, pedestrian islands, curb bulb-outs, and a full signal at Harrison.	$1,500,000	$0	$1,500,000	100%	Multimodal	CC	Improves performance of existing bicycle facility, improves pedestrian crossings, and adds a traffic signal.	
20112	Other Projects	NE Multnomah Protected Bikeway	Multnomah St, NE (Interstate - 16th)	Construct permanent improvements to the NE Multnomah St protected bikeway, including pedestrian islands and transit islands.	$2,000,000	$0	$2,000,000	100%	Multimodal	CC	Improves performance of existing bicycle facility.	
20113	Other Projects	Broadway/ Weidler Corridor Improvements, Phase 1	Broadway/ Weidler, N/NE (Broadway Bridge - 24th)	Enhance existing bike lanes and improve pedestrian/bicycle crossings. Add traffic signals, improve signal timing, improve transit stops, and construct streetscape improvements.	$9,000,000	$0	$9,000,000	100%	Multimodal	CC	Improves performance of existing bicycle facilities on Broadway and Weidler. Improves pedestrian crossings, adds traffic signals, and upgrades signal timing to improve traffic flow.	
20115	Other Projects	Central City Multimodal Improvements, Phase 2	Central City	Construct high-priority bikeways, pedestrian improvements, and transit priority treatments in the Central City.	$20,000,000	$0	$20,000,000	100%	Multimodal	CC	Adds new bicycle facilities, upgrades existing bicycle facilities, improves pedestrian crossings, and improves transit operations.	Reduced by amount already budgeted from FOS and grant funding.
20125	Other Projects	Portland Streetcar Operational Improvements	Central City	Design and construct improvements along NE Grand Avenue and/or other shared Streetcar/Bus corridors to add transit capacity. Construct Lloyd District turnback(s). Capital improvements could include signal pre-emption, additional travel lanes, additional track, tail track, and OCS, creation of transit only lanes, and other capital improvements to reliably move public transit past motor vehicle/freeway on-ramp bottlenecks.	$5,000,000	$0	$5,000,000	100%	Transit	CC	Improves capacity of the streetcar system using priority treatments and addressing bottlenecks. Turnbacks allow service to continue during disruptions.	
20127	Match Identified	Naito Parkway Corridor Improvements	Naito Pkwy, SW/NW (Harrison - Steel Bridge)	Improve roadway and provide separated pedestrian and bicycle facilities along the east side of Naito Parkway. Add or upgrade crossings at Montgomery, Clay, Jefferson, Main, Davis, and Everett. Improve pedestrian and bicycle access across Naito, including detection and signal timing adjustments where appropriate. Signalize the top of the ramp from Naito to Hawthorne Bridge to improve traffic flow.	$10,000,000	$3,480,369	$6,519,631	65%	Multimodal	CC	Signal improves vehicle capacity and project provides new ped/bike facilities and crossings.	Reduced by amount already budgeted through FOS.

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20165	Other Projects	NW Northrup Traffic Signals	Northrup St, NW (11th - 16th)	Construct traffic signals along Northrup at 11th, 12th, 13th, 14th, and 16th to improve traffic flow and transit operations.	$2,000,000	$0	$2,000,000	100%	Transit	CC	Improves streetcar capacity replacing stop signs with traffic signals.	
20181	Other Projects	Inner Hawthorne Multimodal Corridor Improvements	Hawthorne Blvd, SE (Hawthorne Bridge - 12th)	Construct an eastbound protected bikeway with transit islands to improve pedestrian and bicycle safety and comfort as well as transit operational efficiency. Explore feasibility of eastbound bus-only lane as part of project design.	$2,000,000	$0	$2,000,000	100%	Multimodal	CC	Improves performance of existing bikeway, improves pedestrian crossings, and improves transit operations by separating bus and bike movements.	
20185	Other Projects	Gideon Street Pedestrian / Bicycle Bridge	Clinton MAX Station	Construct a pedestrian / bicycle bridge over the railroad and light rail tracks to connect the Clinton MAX Station with the adjacent neighborhood.	$10,000,000	$0	$10,000,000	100%	Active	CC	Provides a new ped/bike connection across railroad tracks.	
20187	Other Projects	Water/Yamhill Traffic Signal	Yamhill / Water, SE	Construct traffic signal at Water/Yamhill to improve safety and capacity at freeway off-ramp.	$1,000,000	$0	$1,000,000	100%	Traffic / Freight	CC	Improves capacity of freeway off-ramp by replacing stop-controlled intersection with a traffic signal.	
20188	Other Projects	Grand/MLK Lloyd District Traffic Signals	Grand/MLK, NE (Lloyd - Broadway)	Construct traffic signals along Grand/MLK couplet in the Lloyd District.	$2,000,000	$0	$2,000,000	100%	Multimodal	CC	Traffic signals provide more pedestrian crossings, provide vehicle access to/from Grand and MLK, and allow improved signal timing along Grand and MLK.	
20189	Other Projects	Streetcar Vehicle Acquisition	Central City N/NE Quadrant	Procure additional streetcar vehicles to increase service capacity and frequency.	$9,000,000	$716,773	$7,200,000	80%	Transit	CC	Additional streetcar vehicles allow greater frequency of operation and more capacity to move people.	20% reduction to account for Portland Streetcar spare ratio.
20193.1	Match Identified	Post Office Blocks Transportation Improvements, Phase 1	NW Johnson St (9th - Station Way); NW Park Ave (Hoyt - Johnson); NW 9th & Everett; NW 9th & Glisan	Extend Johnson and Park Streets through the Post Office Blocks redevelopment site. Add traffic signals at 9th/ Everett and 9th/Glisan.	$16,000,000	$0	$5,000,000	31%	Multimodal	CC	Provides new streets with access for all modes. Traffic signals improve traffic flow and pedestrian crossings.	PBOT contribution capped based on existing agreement with PDC.

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20204	Regional	Rose Quarter Interchange Improvements	Broadway / Weidler / I-5 Interchange	Construct multimodal transportation improvements supporting the ODOT Rose Quarter Interchange Project, including enhancements of surface streets, lids over the freeway, streetcar system improvements, and a new ped/bike bridge over I-5 at Clackamas St, consistent with the adopted Broadway / Weidler Facility Plan. Supports future Green Loop project.	$450,000,000	$0	$10,000,000	2%	Traffic / Freight	CC	Improves traffic flow on I-5 by reducing crashes that cause delay. Improves the performance of bicycle facilities and adds new ped/bike connections across I-5. Improves transit reliability.	PBOT contribution capped for large regional projects.
20205	Match Identified	Central Eastside Access and Circulation Improvements	Central Eastside	Improve access and circulation in the Central Eastside by adding new signals and crossings at Hawthorne & Clay ramp, Salmon & Grand, Salmon & MLK, Washington & Grand, Washington & MLK, Ankeny & MLK, Ankeny & Sandy, 16th & Irving, and modifying signals at Stark & Grand, Clay & Grand, and Mill & MLK. Improve Clay Street from Water to Grand and add multimodal safety improvements.	$5,205,879	$2,805,879	$2,400,000	46%	Traffic / Freight	CC	Traffic signals provide improved pedestrian/bicycle crossings, provide vehicle access to/from major streets, and improves signal timing along Grand and MLK. Project reduces vehicle delay at several congested locations.	Reduced by amount already budgeted in CIP from RFFA funding.
30004	Other Projects	N Columbia Blvd Corridor Safety Improvements	Columbia Blvd, N (Burgard - Argyle)	Improve safety and access by filling high-priority sidewalk gaps, adding pedestrian crossings, and employing safety countermeasures to reduce motor vehicle crash severity.	$3,000,000	$0	$3,000,000	100%	Multimodal	NPNS	Adds pedestrian capacity and addresses vehicle delay caused by crashes.	
30008	Match Identified	Columbia Blvd Smart Cities Corridor ITS Improvements	Columbia Blvd, N/NE (I-205 - Burgard)	Smart Cities corridor ITS Improvements to improve freight operations. Communications infrastructure including closed circuit TV cameras, truck priority detection, variable message signs for remote monitoring and control of traffic flow for six signals.	$5,000,000	$1,057,227	$5,000,000	100%	Traffic / Freight	CNN	ITS improves and manages traffic flow, enabling more capacity and performance per lane on existing roadways.	
30015	Other Projects	Going St Connected/ Automated Vehicle Connection	Going St, N (Swan Island - I-5)	Design and construct a Connected/Automated Vehicle connection between Swan Island and I-5.	$10,000,000	$0	$10,000,000	100%	Traffic / Freight	NPNS	This project will use connected and automated vehicle technology to provide improved capacity for freight and other vehicle traffic on a major transportation corridor.	

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30037.1	Match Identified	N/NE Lombard Corridor Improvements, Phase 1	Lombard St, N (Fiske - Interstate)	Design and implement transportation improvements including signal upgrades, lane reconfiguration, enhanced crossings, bikeways, and pedestrian improvements along the corridor. Project will coordinate with ODOT and PDC to identify locations and design treatments.	$13,000,000	$9,876,919	$3,123,081	24%	Multimodal	NPNS	Project includes a series of signal upgrades that will allow improved signal timing and traffic flow using vehicle detection. Project also adds a center turn lane, new bicycle facilities and adds new pedestrian crossings and curb ramps.	Reduced by amount already budgeted by ODOT and PDC.
30038	Other Projects	Marine Dr ITS	Marine Dr, N/NE (Portland Rd - 185th)	Install ITS infrastructure (communication network, enhanced bus detection, truck priority detection, Bluetooth detection, CCTV cameras, and vehicle /pedestrian detectors). These ITS devices allow us to provide more efficient and safe operation of our traffic signal system consistent with our policies of moving people and goods more effectively.	$1,500,000	$0	$1,500,000	100%	Traffic / Freight	NPNS	ITS improves and manages traffic flow, enabling more capacity and performance per lane on existing roadways.	
30050	Other Projects	St Johns Connected Centers Project	St Johns Town Center, N	Enhance pedestrian connectivity and access to transit, improve safety, improve sub-standard streets, add lighting and crossings, and construct bikeway connections within and around St Johns Town Center.	$5,000,000	$0	$5,000,000	100%	Active	NPNS	Project provides new and upgraded pedestrian facilities and crossings.	
30059	Other Projects	N Lombard Main Street Improvements	Lombard St, N (Tyler - Fiske); Jersey / Oberlin, N (Richmond - Woolsey)	Construct main street improvements on Lombard including curb ramps, improved crossings, and pedestrian lighting. Design and implement neighborhood greenways on Jersey and Oberlin parallel to Lombard.	$2,000,000	$0	$2,000,000	100%	Active	NPNS	Improves pedestrian crossings and adds new bicycle facilities.	
30070	Match Identified	St Johns Truck Strategy, Phase 2	Lombard St, N (Bruce - St Louis); Fessenden, N (Columbia Way - St Louis); St Louis, N (Lombard - Fessenden); Columbia Blvd & Portland Rd (intersection)	Address pedestrian safety, bicycle safety and neighborhood livability impacts associated with cut-through truck traffic on N St Louis Ave and N Fessenden St. Construct pedestrian crossing safety and traffic calming improvements, such as curb extensions and median islands, and redesign the Columbia/Portland intersection as outlined in the St Johns Truck Strategy Phase II.	$9,000,000	$4,045,989	$4,954,011	55%	Multimodal	NPNS	Improves pedestrian crossings and improves existing bicycle facilities.	Reduced by already budgeted amount in CIP from GTR and grant funding.
30072	Match Identified	Rivergate ITS	Rivergate District, N	Install ITS infrastructure in the Rivergate Freight District.	$480,000	$0	$480,000	100%	Traffic / Freight	NPNS	ITS improves and manages traffic flow, enabling more capacity and performance per lane on existing roadways.	

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30081	Other Projects	N Argyle Corridor Improvements	Argyle Way, N (Columbia - Denver)	Design and implement pedestrian and bicycle facilities on N Argyle from N Columbia Blvd to N Denver Ave. Construct safety and connectivity improvements at the Columbia, Brandon, and Denver intersections.	$2,250,000	$0	$2,250,000	100%	Active	NPNS	Adds new bicycle facilities and pedestrian crossings.	
30087	Other Projects	N Portland Greenway Trail, Segment 1	Columbia Blvd - Marine Dr, N	Construct the North Slough Bridge to fill the last remaining gap in Segment 1 of the N Portland Greenway Trail.	$2,371,052	$0	$2,371,052	100%	Active	NPNS	Adds a new ped/bike bridge.	
30088	Other Projects	N Portland Greenway Trail, Segment 2	Columbia Blvd - Cathedral Park, N	Build a multi-use trail connecting Chimney Park, Pier Park, Baltimore Woods, Cathedral Park, and St Johns.	$5,105,000	$0	$5,105,000	100%	Active	NPNS	Provides a new ped/bike pathway.	
30101	Match Identified	Suttle Rd Freight Street Improvements	Suttle Rd, N	Improve Suttle Rd to enhance its function for freight access to industrial land. Include a sidewalk to provide pedestrian access to transit.	$9,000,000	$0	$2,250,000	25%	Traffic / Freight	NPNS	Improves a sub-standard street with major drainage issues to Freight District Street standards, providing more width, freight-bearing pavement, improved railroad crossings, and adds new pedestrian facilities including access to transit.	Reduced by 75% because Port and/or property owners are expected to contribute a majority of project funding.
30106	Other Projects	Time Oil Rd Freight Street Improvements	Time Oil Rd, N (Burgard - Rivergate)	Improve Time Oil Rd to enhance its function for freight access to industrial land. Include a sidewalk to provide pedestrian access to transit.	$9,000,000	$0	$2,250,000	25%	Traffic / Freight	NPNS	Improves a sub-standard street with major drainage issues to Freight District Street standards, providing more width, freight-bearing pavement, improved railroad crossings, and adds new pedestrian facilities.	Reduced by 75% because Port and/or property owners are expected to contribute a majority of project funding.
30110	Other Projects	N Willamette Blvd Bikeway	Willamette Blvd, N (Interstate - Richmond)	Add a neighborhood greenway from Interstate to Rosa Parks, enhance existing bikeway from Rosa Parks to Ida, extend bikeway to Richmond, and provide a parallel neighborhood greenway on Princeton through the University Park neighborhood.	$5,500,000	$0	$5,500,000	100%	Active	NPNS	Adds a new bikeway in some segments and improves existing bikeway in other segments.	
30112	Other Projects	Columbia Blvd Pedestrian Overpass Replacement	N Columbia Blvd west of N Midway Ave	Replace the pedestrian overpass near George Middle School with either an at-grade crossing or a higher overpass to enable the use of Columbia Blvd as an over-dimensional freight route.	$3,000,000	$0	$1,500,000	50%	Traffic / Freight	NPNS	Enables use of Columbia Blvd for over-dimensional freight and improves pedestrian crossing.	Reduced by 50% because a portion of the project involves replacing an existing bridge.

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30113	Other Projects	Columbia Blvd Railroad Undercrossing Improvement	N Columbia Blvd at railroad bridge near I-5	Lower the Columbia Blvd undercrossing at the UP Railroad Bridge just west of I-5 to enable the use of Columbia Blvd as an over-dimensional freight route.	$3,000,000	$0	$1,500,000	50%	Traffic / Freight	NPNS	Enables use of Columbia Blvd for over-dimensional freight and adds ped/bike facilities.	Reduced by 50% because a portion of the project involves reconstructing existing roadway.
30114	Other Projects	N Portland Rd over Columbia Slough Bridge Replacement	N Portland Rd at Columbia Slough	Replace the weight-restricted N Portland Rd bridge over the Columbia Slough to enable the use of N Portland Rd as an over-dimensional freight route.	$7,500,000	$0	$3,750,000	50%	Traffic / Freight	NPNS	Enables use of N Portland Rd for over-dimensional freight and adds ped/bike facilities.	Reduced by 50% because a portion of the project involves replacing an existing bridge.
30115	Other Projects	N Interstate Ave Bikeway Improvements	Interstate Ave, N (Russell - Argyle)	Improve safety and comfort of existing bikeway at major intersections and other conflict points. Fill bikeway gap from Willamette Blvd to Dekum St.	$1,000,000	$0	$1,000,000	100%	Active	NPNS	Fills a gap in the bikeway network and improves existing facility.	
40006	Match Identified	Marine Dr & 33rd Intersection Improvements	Marine Dr & 33rd Ave, NE	Signalize intersection to improve freight operations.	$1,000,000	$500,000	$500,000	50%	Traffic / Freight	CNN	Traffic signal provides improved capacity for freight and other traffic accessing the nearby freight district.	Reduced by amount already budgeted through FOS.
40007	Other Projects	NE 42nd/47th Ave Bridge & Corridor Improvements	42nd/47th Ave, NE (Killingsworth - Columbia)	Replace the weight-restricted NE 42nd Ave Bridge (#075) over NE Portland Hwy and the adjacent railway, and add pedestrian and bicycle facilities to the bridge and the roadway from Killingsworth to Columbia. This project will remove the weight restriction, improve vertical clearance for over-dimensional freight, and provide pedestrian and bicycle facilities.	$12,000,000	$0	$6,000,000	50%	Multimodal	CNN	Improves freight capacity by removing weight restriction and eliminating a vertical clearance issue on an over-dimensional route. Project also provides new pedestrian and bicycle facilities both on the bridge and connecting to other facilities on either side.	Reduced by 50% because a portion of the project involves replacing an existing bridge.
40013	Match Identified	82nd Ave Corridor Improvements	82nd Ave, NE/SE, (Killingsworth - Clatsop)	Design and implement multimodal improvements to sidewalks, crossings, transit stops, striping, and signals to enhance ped/bike safety, access to transit, and transit operations. Project will coordinate with ODOT to identify locations and design treatments.	$5,000,000	$704,000	$4,296,000	86%	Multimodal	CNN	Adds new pedestrian facilities and improves existing pedestrian facilities.	
40025	Regional	82nd & Airport Way Grade Separation	82nd / Airport Way, NE	Construct a grade-separated overcrossing to allow for uninterrupted flow along Airport Way and remove at-grade railroad crossing.	$75,000,000	$0	$5,000,000	7%	Traffic / Freight	CNN	Improves motor vehicle capacity by separating conflicting movements. Improves transit operations by removing an at-grade crossing. Improves ped/bike crossings.	PBOT contribution capped for large regional projects.
40027	Other Projects	Alderwood Path	Alderwood St, NE, (Cornfoot - Columbia Blvd)	Construct a multi-use path on the west side of Alderwood to separate pedestrians and bicyclists from motor vehicle traffic.	$2,500,000	$0	$2,500,000	100%	Multimodal	CNN	Provides a new bicycle and pedestrian pathway.	

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40036	Other Projects	Cornfoot Rd Corridor Improvements	Cornfoot Rd, NE (47th - Alderwood)	Construct a multi-use path on the north side of Cornfoot Rd to separate pedestrians and bicyclists from motor vehicle traffic.	$3,708,539	$0	$3,708,539	100%	Active	CNN	Provides a new bicycle and pedestrian pathway.	
40037.1	Other Projects	Cully Blvd Corridor Improvements, Phase 2	Cully Blvd, NE (Prescott - Fremont)	Sidewalk infill, enhanced bikeway, and crossing improvements.	$2,000,000	$0	$2,000,000	100%	Active	CNN	Provides new sidewalks and improves performance of existing bikeway. Adds new pedestrian crossings.	
40037.2	Other Projects	Cully Blvd Corridor Improvements, Phase 3	Cully Blvd, NE (Columbia - Portland Hwy)	Construct pedestrian and bicycle facilities, including new curb and drainage.	$4,000,000	$0	$4,000,000	100%	Active	CNN	Provides new pedestrian and bicycle facilities.	
40051	Other Projects	Killingsworth/ Interstate Connected Centers Project	Killingsworth/ Interstate, Alberta/MLK, and Fremont/ Williams	Construct priority pedestrian and bicycle network improvements within and connecting to the Killingsworth/Interstate Town Center and nearby Neighborhood Centers.	$20,000,000	$0	$20,000,000	100%	Active	NECN	Provides new and improved pedestrian and bicycle connections.	
40053	Other Projects	NE Killingworth Safety Improvements	Killingsworth St, NE (MLK - 33rd)	Design and implement traffic calming and pedestrian crossing improvements.	$500,000	$0	$500,000	100%	Active	NECN	Provides improved pedestrian crossings.	
40058	Other Projects	NE MLK Corridor Improvements	MLK Jr Blvd, NE (Hancock - Lombard)	Multimodal safety, access, and capacity improvements including ITS infrastructure, signal timing upgrades, pedestrian crossings, access management, and transit priority.	$2,000,000	$1,150,000	$850,000	43%	Multimodal	NECN	ITS improves and manages traffic flow, enabling more capacity and performance per lane on existing roadways. Project also improves pedestrian crossings and transit operations.	Reduced by amount already budgeted from FOS and ATS CIP.
40065	Other Projects	NE Prescott Safety Improvements	Prescott St, NE (I-205 - 122nd)	Construct bicycle facilities, sidewalks, and crossing improvements for pedestrian and bicycle safety and to improve access to transit.	$2,000,000	$0	$2,000,000	100%	Active	CNN	Provides new pedestrian and bicycle facilities.	
40068	Other Projects	Sandy Blvd Corridor Improvements, Phase 2	Sandy Blvd, NE (47th - 101st)	Construct multimodal improvements including elements such as transit priority, bicycle facilities, improved pedestrian crossings, streetscape improvements including lighting, and safety improvements.	$6,500,000	$0	$6,500,000	100%	Multimodal	CNN	Multimodal improvements to increase overall person-capacity along the street, including bicycle facilities, improved pedestrian crossings, traffic signals to provide better vehicle access, and transit operational enhancements.	

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40069	Other Projects	Sandy Blvd ITS	Sandy Blvd, NE (82nd - Burnside)	Install ITS infrastructure (communication network, enhanced bus detection, truck priority detection, Bluetooth detection, CCTV cameras, and vehicle /pedestrian detectors). These ITS devices allow us to provide more efficient and safe operation of our traffic signal system consistent with our policies of moving people and goods more effectively.	$2,000,000	$0	$2,000,000	100%	Traffic / Freight	CNN	ITS improves and manages traffic flow, enabling more capacity and performance per lane on existing roadways.	
40071	Other Projects	Mason Neighborhood Greenway	Mason / Prescott, NE (Michigan – I-205)	Design and implement a neighborhood greenway on Mason from Michigan to 81st and separated bike lanes on Prescott from 81st to I-205. Construct sidewalk infill on Prescott from Sandy to 92nd.	$5,000,000	$0	$5,000,000	100%	Active	CNN	Adds new bicycle facilities and pedestrian crossings.	25% reduction to maintain leverage requirement.
40086	Match Identified	NE Halsey Safety and Access to Transit	Halsey St, NE (67th - 92nd)	Construct high-priority safety and access to transit improvements along the Halsey corridor, as identified in the Growing Transit Communities Plan. Elements include bicycle facilities on Halsey/82nd overpass, improvements to existing path under Halsey overpass west of MAX station and neighborhood greenway connection to Tillamook, and a multi-use path along Jonesmore and Halsey from 82nd to 92nd.	$4,980,000	$2,400,000	$2,580,000	52%	Active	CNN	Adds new pedestrian and bicycle facilities. Improves pedestrian crossings.	Reduced by already budgeted amount from RFFA grant funding.
40091	Other Projects	PIC Ped/Bike Network Improvements	Portland International Center, NE	Construct bicycle and pedestrian facilities as shown in the PDX Bicycle and Pedestrian Master Plan.	$2,000,000	$0	$2,000,000	100%	Active	CNN	Provides new and upgraded ped/bike facilities.	25% reduction to maintain leverage requirement.
40093	Other Projects	Airtrans / Cornfoot Intersection Improvements	Airtrans / Cornfoot, NE	Add signals and improve turn lanes at AirTrans Way / Cornfoot Rd.	$650,000	$0	$325,000	50%	Traffic / Freight	CNN	Improves vehicle access and capacity at intersection by adding a signal and improving turn lanes.	PBOT contribution capped for Port projects.
40107	Other Projects	Outer Alberta Neighborhood Greenway	Alberta St, NE (72nd - I-205 Path)	Design and implement a neighborhood greenway, including connection through or around Sacajawea Park.	$2,000,000	$0	$2,000,000	100%	Active	CNN	Adds new bicycle facilities and pedestrian crossings.	
40108	Other Projects	NE Broadway Corridor Improvements, Phase 2	Broadway, NE (24th - 42nd)	Construct traffic signals, enhanced crossings, transit priority treatments, and traffic safety improvements. Provide an enhanced bikeway along the corridor.	$5,000,000	$0	$5,000,000	100%	Multimodal	NECN	Adds crossings, signals, bikeway, and improves transit priority.	

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40112	Other Projects	Columbia & Cully Intersection Improvements	Columbia / Cully, NE	Construct northbound right turn lane on NE Cully and signalize the intersection of NE Cully Blvd & NE Columbia Blvd. Includes right-of-way acquisition needed to provide side-by-side left turn lanes between Cully and Alderwood. Construct pedestrian and bicycle facilities around intersection.	$5,000,000	$0	$5,000,000	100%	Traffic / Freight	CNN	Needed to provide capacity for traffic and freight generated by PDX and surrounding employment area. This project was a condition of approval for the PDX Airport Futures Plan.	
40114.1	Other Projects	Columbia Slough Trail Central Gap	Columbia Slough Trail (Vancouver - 47th)	Construct a multi-use path from N Vancouver Ave to NE 47th Ave.	$2,000,000	$0	$2,000,000	100%	Active	NPNS	Provides a new ped/bike pathway.	
40114.2	Other Projects	Peninsula Canal Trail	Peninsula Canal Trail (Columbia Slough - Marine Dr)	Construct a multi-use path from the Columbia Slough Trail to Marine Dr.	$2,000,000	$0	$2,000,000	100%	Active	NPNS	Provides a new ped/bike pathway.	
40115	Match Identified	60th MAX Station Area Improvements	60th Ave MAX Station Area	Construct priority pedestrian and bicycle access to transit improvements in the 60th Ave MAX Station Area, as identified in the Growing Transit Communities Plan.	$5,000,000	$0	$5,000,000	100%	Active	CNN	Improves performance of existing sidewalk, adds new sidewalk, adds pedestrian crossings, adds a new bikeway, and traffic signal upgrades improve traffic flow and transit operations.	
40116	Match Identified	NE 7th/9th Neighborhood Greenway	7th/9th Ave, NE (Weidler - Holman)	Design and implement a neighborhood greenway along the NE 7th/9th Ave corridor from Weidler to Holman (alignment to be determined during design phase), using traffic calming treatments as needed to meet recommended performance guidelines for neighborhood greenways and adjacent local streets.	$2,000,000	$551,724	$1,448,276	72%	Active	NECN	Provides new bikeway and improved pedestrian crossings.	Reduced by amount already budgeted from FOS funding.
40119	Match Identified	I-205 Undercrossing	I-205/Halsey Undercrossing	Sidewalk infill and bike lanes on 92nd from Tillamook to Halsey. Multi-use path along Halsey frontage road, underneath I-205, and connecting to I-205 Path in Gateway Green.	$3,591,000	$1,683,000	$1,908,000	53%	Active	CNN	Improves ped/bike crossings and access points on existing pathway.	Reduced by amount already budgeted from Enhance funding.
40131	Regional	Streetcar Extension: Broadway-Weidler to Hollywood	Broadway/ Weidler, NE (Grand Ave - Hollywood Town Center)	Extend streetcar along NE Broadway/Weidler corridor to Hollywood Town Center.	$70,000,000	$0	$5,000,000	7%	Transit	NECN	Provides new transit capacity by extending the streetcar line.	PBOT contribution capped for large regional projects.
40133	Other Projects	Cascade Station Trail	Glass Plant Rd, NE (Cascade Station - Alderwood/ 105th)	Construct a multi-use path connecting Cascade Station to Alderwood via Glass Plant Rd, and add eastbound bike lane to Alderwood underneath I-205.	$3,000,000	$0	$3,000,000	100%	Active	CNN	Provides a new ped/bike pathway.	

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50004	Match Identified	NE 102nd Ave Corridor Improvements	102nd Ave, NE (Sandy - Weidler)	Construct sidewalks and improved crossings, install bicycle facilities, and make traffic safety improvements.	$2,000,000	$529,490	$1,470,510	74%	Multimodal	EPNO	Provides new pedestrian facilities, new crossings, and new bicycle facilities.	Reduced by amount already budgeted from FOS funding.
50005	Other Projects	122nd Ave Smart Cities Corridor Improvements	122nd Ave, NE/SE (Airport Way - Powell)	Install ITS infrastructure (communication network, enhanced bus detection, truck priority detection, Bluetooth detection, CCTV cameras, and vehicle /pedestrian detectors). These ITS devices allow us to provide more efficient and safe operation of our traffic signal system consistent with our policies of moving people and goods more effectively.	$6,000,000	$0	$6,000,000	100%	Traffic / Freight	EPNO	ITS improves and manages traffic flow, enabling more capacity and performance per lane on existing roadways.	
50016	Other Projects	Airport Way ITS	Airport Way, NE (I-205 - 158th)	Install ITS infrastructure (communication network, enhanced bus detection, truck priority detection, Bluetooth detection, CCTV cameras, and vehicle /pedestrian detectors). These ITS devices allow us to provide more efficient and safe operation of our traffic signal system consistent with our policies of moving people and goods more effectively.	$1,500,000	$0	$1,500,000	100%	Traffic / Freight	EPNO	ITS improves and manages traffic flow, enabling more capacity and performance per lane on existing roadways.	
50019	Other Projects	Gateway Local Street Improvements, Phase 2	Gateway Regional Center, NE/SE	High priority local street and pedestrian improvements in regional center.	$8,400,000	$0	$4,200,000	50%	Multimodal	EPNO	Provides new and improved multimodal street connections within the Gateway area, increasing overall capacity of street system.	50% reduction because a portion of project would involve reconstruction of existing streets.
50024	Match Identified	Outer Glisan Corridor Improvements, Segment 1	Glisan St, NE (I-205 - 122nd)	Retrofit street with new traffic signals, bicycle facilities, improved pedestrian facilities and crossings, street lighting, and other safety and access improvements.	$2,000,000	$52,500	$2,000,000	100%	Multimodal	EPNO	Traffic signals improve traffic flow and provide improved pedestrian crossings. Adds new bicycle facilities.	
50025	Match Identified	Outer Glisan Corridor Improvements, Segment 2	Glisan St, NE (122nd - City Limits)	Retrofit street with new traffic signals, bicycle facilities, improved pedestrian facilities and crossings, street lighting, and other safety and access improvements.	$2,000,000	$161,600	$2,000,000	100%	Multimodal	EPNO	Adds new bicycle facilities and pedestrian crossings.	
50028	Match Identified	Outer Halsey Ped/Bike Improvements	Halsey St, NE (114th - 162nd)	Construct missing sidewalks, enhance existing bike lanes, add and improve pedestrian/bicycle crossings.	$2,368,000	$909,000	$1,459,000	62%	Active	EPNO	Improves performance of existing bicycle facilities and adds pedestrian crossings.	Reduced by amount already budgeted from General Fund.
50041	Other Projects	Marine Dr Trail Gap	NE Marine Dr (I-205 - 122nd)	Construct a multi-use path along the north side of Marine Dr.	$2,000,000	$0	$2,000,000	100%	Active	EPNO	Provides a new ped/bike pathway.	

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50044	Match Identified	I-84 Path Extension	New trail (I-205 Path - Fremont/ 105th); Fremont St, NE (105th - 122nd); 115th Ave, NE (Fremont Ct - Sandy)	Construct a multi-use path using existing bridge from I-205 Path to NE Fremont St and along the south side of NE Fremont St connecting to I-84 Path at 122nd. Project includes neighborhood greenway connection on Fremont Ct and 115th.	$5,000,000	$0	$5,000,000	100%	Active	EPNO	Provides a new ped/bike pathway and a new bicycle facility.	
50045	Other Projects	Halsey/ Weidler Safety and Access to Transit	101st / Tillamook (Gateway TC - 108th); Sacramento St, NE (108th - 122nd); 117th/114th, NE (Holladay - Klickitat); 111th, NE (Weidler - Morris)	Construct the Halsey/Weidler area active transportation improvements identified in the Growing Transit Communities Plan to provide safe access to schools and transit.	$5,000,000	$0	$5,000,000	100%	Active	EPNO	Adds new ped and bike facilities.	
50046	Other Projects	Knott/Russell Neighborhood Greenway	Knott/Russell/ Brazee/ Sacramento/ Thompson, NE (102nd - 162nd)	Design and implement a neighborhood greenway. Project includes crossing improvements at 102nd, 122nd, and 148th.	$1,000,000	$0	$1,000,000	100%	Active	EPNO	Provides new bicycle facilities and pedestrian crossings.	
50047	Match Identified	HOP Neighborhood Greenway	Holladay/Oregon /Pacific, NE (Gateway TC - East Holladay Park)	Design and implement a neighborhood greenway. Project includes crossing improvements at 102nd and 122nd and improvement of gravel streets at Oregon (110th - 111th) and Holladay (118th - 119th).	$1,864,000	$551,724	$1,312,276	70%	Active	EPNO	Provides new bicycle facilities and pedestrian crossings.	Reduced by amount already budgeted from FOS funding.
50049	Match Identified	122nd Ave Corridor Improvements	122nd Ave, NE/SE (Sandy - Foster)	Design and implement multimodal improvements to sidewalks, crossings, bicycle facilities, transit stops, striping, and signals to enhance ped/bike safety, access to transit, and transit operations.	$3,000,000	$2,206,897	$793,103	26%	Active	EPNO	Multimodal improvements to increase overall person-capacity along the street, including improvements to existing bicycle facilities, improved pedestrian crossings, traffic signals to provide better vehicle access, and transit operational enhancements.	Reduced by amount already budgeted from FOS funding.
50053	Match Identified	NE 148th Ave Sidewalk Infill	148th Ave, NE (Halsey - Glisan)	Construct sidewalk infill on the west side of the street.	$3,000,000	$1,710,345	$1,289,655	43%	Active	EPNO	Provides new pedestrian facilities.	Reduced by amount already budgeted from FOS funding.
50055	Match Identified	NE Marx Street Improvements	Marx St, NE (105th - 112th)	Construct sidewalks and street improvements on Marx St to improve access to jobs and transit.	$4,400,000	$0	$2,200,000	50%	Active	EPNO	Provides new pedestrian facilities.	50% reduction because a portion of project would involve reconstruction of existing streets.

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50056	Other Projects	NE Airport Way Safety and Access to Transit	Airport Way, NE (I-205 - City Limits)	Construct priority pedestrian and bicycle access to transit improvements in the Airport Way corridor, as identified in the Growing Transit Communities Plan.	$3,000,000	$0	$3,000,000	100%	Active	EPNO	Adds new crossings, improves bike facilities, and adds some pedestrian facilities.	
50057	Other Projects	NE 105th/Holman Corridor Improvements	Holman/ 105th, NE (Killingsworth – Airport Way); Killingsworth St, NE (102nd - 105th)	Improve roadway and add pedestrian and bicycle facilities to enhance multimodal safety and access along 105th and Holman. Construct a roadway connection on NE Killingsworth from 102nd to 105th to improve connectivity for all modes.	$10,000,000	$0	$5,000,000	50%	Multimodal	EPNO	Adds new ped and bike facilities. Improves sub-standard street to Freight District Street standards, improving freight capacity and access.	50% reduction because a portion of project would involve reconstruction of existing streets.
50058	Other Projects	Cross-Levee Trail	Cross-Levee Trail (Sandy - Marine Dr)	Construct a multi-use path, with crossing improvements at Sandy, Airport Way, and Marine Dr.	$3,000,000	$0	$3,000,000	100%	Active	EPNO	Provides a new ped/bike pathway.	
50059	Other Projects	NE 158th Ave Corridor Improvements	158th Ave, NE (Sandy - Airport Way)	Widen roadway and fill gaps in center turn lane, bicycle facilities, curbs, and sidewalks to improve safety and access to transit.	$2,000,000	$0	$2,000,000	100%	Multimodal	EPNO	Provides new ped and bike facilities, and center turn lane.	
60014	Match Identified	NW District Connected Centers Project	NW District Town Center	Construct high-priority bikeways, pedestrian improvements, and transit priority treatments in and around the NW District Town Center.	$5,000,000	$0	$5,000,000	100%	Active	NWNW	Provides new and improved ped and bike facilities.	
60023	Other Projects	Yeon/St Helens ITS	Yeon/St Helens, NW (US30)	Install ITS infrastructure (communication network, enhanced bus detection, truck priority detection, Bluetooth detection, CCTV cameras, and vehicle /pedestrian detectors). These ITS devices allow us to provide more efficient and safe operation of our traffic signal system consistent with our policies of moving people and goods more effectively.	$850,000	$0	$850,000	100%	Traffic / Freight	NWNW	ITS improves and manages traffic flow, enabling more capacity and performance per lane on existing roadways.	
60024	Match Identified	Wildwood Trail Bridge	Wildwood Trail & Burnside, W	Construct a pedestrian overcrossing where Burnside intersects the Wildwood Trail.	$2,000,000	$500,000	$1,500,000	75%	Active	NWNW	Provides a new pedestrian connection.	Reduced by already budgeted amount from General Fund.
60027	Match Identified	Con-way Access Improvements	20th Ave, NW/SW (Upshur - Raleigh); NW 23rd & Vaughn	Extend 20th Ave under Hwy 30 and redesign connections to Thurman, including pedestrian and bicycle facilities. Realign the intersection of NW 23rd & Vaughn to improve traffic flow and circulation.	$8,062,310	$7,062,310	$1,000,000	12%	Traffic / Freight	NWNW	Improves capacity for all modes by providing a new street connection and improving a major intersection. This was a condition of approval for the Con-way Master Plan to provide enough capacity to serve the site.	Reduced by already budgeted amount from LID funding.

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60030	Match Identified	NW/SW 20th Ave Neighborhood Greenway	20th Ave, NW/SW (Jefferson - Raleigh)	Design and implement a neighborhood greenway, with traffic calming and improved crossings as needed.	$500,000	$199,724	$300,276	60%	Active	NWNW	Provides new bicycle facilities and pedestrian crossings.	Reduced by amount already budgeted from FOS funding.
60035	Regional	Streetcar Extension: Montgomery Park	NW Lovejoy/ Northrup to Montgomery Park	Extend streetcar from NW Lovejoy/Northrup to Montgomery Park.	$35,000,000	$0	$5,000,000	14%	Transit	NWNW	Provides new transit capacity by extending the streetcar line.	PBOT contribution capped for large regional projects.
70010	Other Projects	Inner E Burnside Ped/Bike Improvements	Burnside St, E (30th - 81st)	Add new and enhance existing bicycle facilities and improve pedestrian crossings to provide safe access to schools and transit.	$5,000,000	$0	$5,000,000	100%	Active	SEUL	Provides new bikeway and improved pedestrian crossings.	
70014	Other Projects	Inner Division Corridor Improvements	Division St, SE (Cesar Chavez - 82nd)	Design and implement multimodal corridor improvements including pedestrian lighting, new and enhanced crossings, new or modified signals, and transit stop upgrades. Add bicycle facilities from 52nd to 60th and enhance existing bicycle facilities from 60th to 82nd.	$2,000,000	$0	$2,000,000	100%	Multimodal	SEUL	Improvements to existing bicycle facilities, new bicycle facilities, and improved pedestrian crossings.	
70015	Regional	SE Division St Transit Improvements, Phase 2	Division St, SE (Central City - City Limits)	Provide capital improvements to support the Division Transit Project.	$150,000,000	$0	$10,000,000	7%	Transit	EPNO	Improves transit capacity by improving speed, reliability, efficiency, etc.	PBOT contribution capped for large regional projects.
70017	Other Projects	Ellis Ped/Bike Improvements	Ellis St, SE (92nd - Foster)	Design and implement pedestrian and bicycle facilities.	$2,500,000	$0	$2,500,000	100%	Active	EPNO	Provides new ped/bike facilities.	
70020	Match Identified	SE Flavel St Sidewalk Infill	Flavel St, SE (82nd - 92nd)	Construct sidewalk infill.	$1,000,000	$347,515	$652,485	65%	Active	EPNO	Provides new pedestrian facilities.	Reduced by amount already budgeted from FOS funding.
70021	Other Projects	Foster Rd Corridor Improvements, Phase 2	Foster Rd, SE (50th - 92nd)	Construct remaining elements from the Foster Rd Transportation and Streetscape Plan, including curb extensions along the corridor and roadway widening at 82nd/Foster in order to extend bike lanes through intersection.	$2,000,000	$0	$2,000,000	100%	Active	SEUL	Improves pedestrian crossings and fills a bike lane gap.	
70029	Other Projects	SE Hawthorne Blvd Corridor Safety Improvements	Hawthorne Blvd, SE (12th - 50th)	Design and implement multimodal safety and access improvements for all modes, including roadway design changes to reduce crash severity.	$2,000,000	$0	$2,000,000	100%	Multimodal	SEUL	Adds new bike facilities, new pedestrian crossings, and addresses vehicle delay due to left turns and crashes.	
70039	Other Projects	Lents Area Connected Centers Project	Lents Town Center	Construct pedestrian and bicycle improvements to build out the active transportation network in and around Lents Town Center and other nearby Neighborhood Centers.	$20,000,000	$0	$20,000,000	100%	Active	EPNO	Provides new and improved pedestrian and bicycle connections.	

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70049	Other Projects	Reedway Ped/Bike Overcrossing	Reedway St, SE (23rd - 28th)	Construct a pedestrian/bicycle overcrossing of McLoughlin Blvd, light rail, and railroad tracks.	$5,000,000	$0	$5,000,000	100%	Active	SEUL	Provides a new ped/bike connection across railroad tracks.	
70053	Other Projects	Springwater Gap Trail	Springwater Corridor, SE (Linn - 19th)	Construct trail-with-rail multi-use path between Linn and 19th to fill in the "Springwater Gap."	$2,000,000	$0	$2,000,000	100%	Active	SEUL	Provides a new ped/bike pathway.	
70057	Other Projects	Tacoma St ITS	Tacoma St, SE (Sellwood Bridge - 45th/Johnson Creek)	Communications infrastructure; closed circuit TV cameras, variable message signs for remote monitoring and control of traffic flow for four signals.	$250,000	$0	$250,000	100%	Traffic / Freight	SEUL	ITS improves and manages traffic flow, enabling more capacity and performance per lane on existing roadways.	
70071	Other Projects	Sixties Neighborhood Greenway	60s Aves, NE/SE (Davis - Springwater Trail)	Design and implement a neighborhood greenway.	$1,500,000	$0	$1,500,000	100%	Active	SEUL	Provides new bikeway and improved pedestrian crossings.	
70072	Match Identified	Jade & Montavilla Connected Centers Project	Jade District and Montavilla Neighborhood	Construct multi-modal improvements on key pedestrian and bicycle routes within and connecting to the Jade District and Montavilla Neighborhood Centers.	$7,194,000	$3,200,000	$3,994,000	56%	Active	EPNO	Provides new bicycle facilities, pedestrian facilities, street connections, and pedestrian crossings.	Reduced by already budgeted amount from RFFA grant funding.
70073	Other Projects	SE 34th Ave Neighborhood Greenway	34th Ave, SE (Gladstone - Burnside)	Design and implement a neighborhood greenway.	$500,000	$0	$500,000	100%	Active	SEUL	Provides new bikeway and improved pedestrian crossings.	
70075	Match Identified	Brentwood-Darlington Safe Routes to School	Duke St, SE (52nd - 82nd); Flavel St, SE (52nd - 82nd); Knapp/Ogden St, SE (52nd - 87th)	Sidewalk infill behind existing curb on SE Duke St and SE Flavel St from 52nd Ave to 82nd Ave. Construct a neighborhood greenway on Knapp and Ogden from 52nd to 87th, with traffic calming and crossing improvements.	$5,350,000	$2,200,000	$3,150,000	59%	Active	SEUL	Provides a new bikeway, improved crossings, and new pedestrian facilities.	Reduced by already budgeted amount from RFFA grant funding.
70077	Other Projects	SE 9th/Center Bikeway	9th Ave, SE (Division - Center); Center St, SE (9th - 17th)	Design and implement a neighborhood greenway on 9th Ave and Center St, with separated bicycle facility segments and crossing improvements as needed.	$500,000	$0	$500,000	100%	Active	SEUL	Provides new bikeway and improved pedestrian crossings.	
70081	Other Projects	SE 21st Ave Bikeway	21st Ave, SE (Clinton - Lafayette)	Design and implement bicycle facilities.	$500,000	$0	$500,000	100%	Active	SEUL	Provides new bikeway.	
70084	Other Projects	82nd Ave MAX Station Area Improvements	82nd Ave MAX Station Area	Construct priority pedestrian and bicycle access to transit improvements in the 82nd Ave MAX Station Area, as identified in the Growing Transit Communities Plan.	$3,000,000	$0	$3,000,000	100%	Active	SEUL	Adds new ped/bike facilities and improvements to existing facilities.	

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70085	Other Projects	E Burnside Safety and Access to Transit	E Burnside (81st - 102nd)	Construct priority pedestrian and bicycle access to transit improvements in the E Burnside corridor, as identified in the Growing Transit Communities Plan.	$3,000,000	$0	$3,000,000	100%	Active	SEUL	Adds new ped/bike facilities and improvements to existing facilities.	
80001	Match Identified	SE 112th Ave Ped/Bike Improvements	112th Ave, SE (Market - Powell)	Construct sidewalk infill and add bike lanes.	$2,000,000	$783,307	$1,216,693	61%	Active	EPNO	Adds new ped/bike facilities.	Reduced by amount already budgeted from FOS funding.
80009	Match Identified	Outer Division Corridor Safety Improvements	Division St, SE (82nd - City Limits)	Design and implement multimodal corridor improvements including pedestrian lighting, new and enhanced crossings, new or modified signals, transit stop upgrades, enhanced bicycle facilities, access management, and roadway design changes to improve traffic safety.	$2,000,000	$685,000	$1,315,000	66%	Multimodal	EPNO	Improves existing bicycle facilities, adds new and improves existing crossings, and improves vehicle capacity through access management.	Reduced by amount already budgeted from GTR and FOS funding.
80012	Other Projects	Outer Holgate Ped/Bike Improvements	Holgate Blvd, SE (92nd - 136th)	Construct sidewalks and crossing improvements to facilitate pedestrian travel and access to transit. Enhance existing bicycle facilities and extend bicycle facilities from 130th to 136th.	$3,000,000	$0	$3,000,000	100%	Active	EPNO	Adds new and improves existing ped/bike facilities.	
80014	Other Projects	Division-Midway Connected Centers Project	130th Ave, SE (Stark - Division); 148th Ave, SE (Division - Powell Butte); 129th/130th (Division - Holgate); Boise (116th - 128th); Mill/Main (130th - 162nd); 110s Aves; 130s Ave; 140s Aves	Construct priority pedestrian and bicycle network improvements within and connecting to Division-Midway Town Center and nearby neighborhood centers, including projects identified in the Division-Midway Neighborhood Street Plan and the Growing Transit Communities Plan.	$20,000,000	$0	$20,000,000	100%	Active	EPNO	Adds new pedestrian and bicycle facilities.	
80017	Other Projects	Outer Stark Safety and Access to Transit	Stark, SE (111th - City Limits)	Construct priority pedestrian and bicycle access to transit improvements in the Outer Stark corridor, as identified in the Growing Transit Communities Plan. Elements include improved pedestrian crossings, enhanced bikeways, transit stop improvements, lighting upgrades, and roadway design changes to improve traffic safety.	$4,000,000	$0	$4,000,000	100%	Multimodal	EPNO	Adds new bicycle facilities and pedestrian crossings.	

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80018	Other Projects	Stark/ Washington Multimodal Improvements	Stark/ Washington, SE (92nd - 111th)	Build protected bike lanes, pedestrian crossings, and transit improvements in and around the Stark/Washington couplet in Gateway Regional Center, as identified in the Growing Transit Communities Plan.	$4,000,000	$0	$4,000,000	100%	Multimodal	EPNO	Adds traffic signals to provide improved traffic flow and access. Improves performance of existing bicycle facilities and enhances transit operations.	
80020	Match Identified	4M Neighborhood Greenway, Phase 2	Mill/Main St, SE (130th - City Limits)	Provide a neighborhood greenway on Mill and Main from 130th to City Limits, with bike lanes and sidewalk infill in some locations.	$2,300,000	$551,724	$1,748,276	76%	Active	EPNO	Adds pedestrian and bicycle facilities.	Reduced by amount already budgeted from FOS and grant funding.
80032	Regional	Outer Powell Blvd Corridor Improvements, Segments 1 and 4	Powell Blvd, SE (I-205 - 116th; 162nd - City Limits)	Implement multi-modal safety and capacity improvements including a center turn lane, sidewalks, and enhanced bicycle facilities on Outer Powell Blvd.	$50,000,000	$0	$10,000,000	20%	Multimodal	EPNO	Multimodal improvements to increase overall person-capacity along the street, including improvements to existing bicycle facilities, new pedestrian facilities, improved pedestrian crossings, and a center turn lane to reduce traffic delay.	PBOT contribution capped for large regional projects.
80035	Match Identified	150s Neighborhood Greenway	150s Aves, NE/SE (Glisan - Gladstone); Gladstone Dr, SE (154th - Bush)	Design and implement a neighborhood greenway.	$2,000,000	$1,500,400	$499,600	25%	Active	EPNO	Add bicycle facilities and pedestrian crossings.	Reduced by amount already budgeted from grant funding.
80043	Other Projects	Outer Foster Corridor Safety Improvements	Foster Rd, SE (101st - City Limits)	Improve safety and access by filling high-priority sidewalk gaps, adding pedestrian crossings, enhancing safety of existing bike lanes, and employing safety countermeasures to reduce motor vehicle crash severity.	$3,000,000	$0	$3,000,000	100%	Multimodal	EPNO	Adds new pedestrian facilities and crossings, and improves existing bicycle facilities.	
90002	Other Projects	SW 19th / Capitol Hill Rd Safety Improvements	19th, SW (Barbur - Spring Garden); Capitol Hill Rd, SW (Barbur - Bertha)	Design and implement bicycle and pedestrian facilities to create a safe and convenient crossing of I-5, Multnomah Blvd, and Barbur Blvd. Design and implement enhanced shared roadway bicycle facilities on Capitol Hill Rd from Barbur to Bertha.	$1,000,000	$0	$1,000,000	100%	Active	SWNI	Provides new pedestrian and bicycle facilities.	
90008.2	Other Projects	SW 45th Ave Ped/Bike Improvements, Segment 2	45th Ave, SW (Illinois - Nevada)	Construct a pedestrian walkway and bicycle facilities.	$1,000,000	$0	$1,000,000	100%	Active	SWNI	Provides new pedestrian and bicycle facilities.	
90011	Other Projects	SW Pomona/64th Ped/Bike Improvements	Pomona/63rd/64th, SW (61st - Barbur)	Construct sidewalks and bicycle facilities.	$2,500,000	$0	$2,500,000	100%	Active	SWNI	Provides new pedestrian and bicycle facilities.	

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90014	Other Projects	Barbur Blvd ITS	Barbur Blvd, SW	Install ITS infrastructure (communication network, enhanced bus detection, truck priority detection, Bluetooth detection, CCTV cameras, and vehicle /pedestrian detectors). These ITS devices allow us to provide more efficient and safe operation of our traffic signal system consistent with our policies of moving people and goods more effectively.	$1,500,000	$0	$1,500,000	100%	Traffic / Freight	SWNI	ITS improves and manages traffic flow, enabling more capacity and performance per lane on existing roadways.	
90016	Other Projects	SW Barbur Corridor Improvements	Barbur Blvd, SW (Hamilton - Miles)	Improve safety on SW Barbur by adding enhanced bicycle facilities, including intersection safety improvements at Capitol Highway.	$4,000,000	$0	$4,000,000	100%	Active	SWNI	Adds and improves bicycle facilities.	
90019	Other Projects	Beaverton-Hillsdale Hwy ITS	Beaverton-Hillsdale Hwy, SW	Install ITS infrastructure (communication network, enhanced bus detection, truck priority detection, Bluetooth detection, CCTV cameras, and vehicle /pedestrian detectors). These ITS devices allow us to provide more efficient and safe operation of our traffic signal system consistent with our policies of moving people and goods more effectively.	$500,000	$0	$500,000	100%	Traffic / Freight	SWNI	ITS improves and manages traffic flow, enabling more capacity and performance per lane on existing roadways.	
90020.1	Other Projects	Hillsdale Town Center Pedestrian Connections	Beaverton-Hillsdale Hwy, SW (Dosch - Capitol Hwy)	Construct sidewalk infill on SW Beaverton-Hillsdale Highway between Dosch and 18th Avenue/Hillsdale Town Center and on Dosch from Beaverton Hillsdale Highway to Flower.	$3,128,000	$0	$3,128,000	100%	Active	SWNI	Provides new pedestrian facilities and improves existing bicycle facilities.	
90020.2	Match Identified	Beaverton-Hillsdale Hwy Corridor Improvements	Beaverton-Hillsdale Hwy, SW (30th - 65th)	Enhance existing bikeways, build new sidewalks, improve crossings, and enhance access to transit.	$3,000,000	$0	$3,000,000	100%	Active	SWNI	Provides new pedestrian facilities and improves existing bicycle facilities. Improves crossings.	
90033	Other Projects	SW Garden Home Ped/Bike Improvements, Phase 1	Garden Home Rd, SW (Multnomah - Capitol Hwy)	Construct sidewalks and bicycle facilities from Capitol Hwy to 45th. Widen pavement from 45th to Multnomah Blvd to provide space for bicycle facilities and improve pedestrian safety.	$2,000,000	$0	$2,000,000	100%	Active	SWNI	Adds new ped/bike facilities.	
90034.1	Other Projects	Bridlemile Ped/Bike Improvements, Phase 1	Hamilton St, SW (Scholls Ferry - 53rd; 48th - 45th); Shattuck Rd, SW (B-H Hwy - 53rd)	Construct a pedestrian walkway, bicycle facilities, and crossing improvements on Hamilton and Shattuck. Provide traffic calming on local streets and improve pedestrian pathway from Julia to Shattuck.	$3,000,000	$0	$3,000,000	100%	Active	SWNI	Provides new pedestrian and bicycle facilities.	

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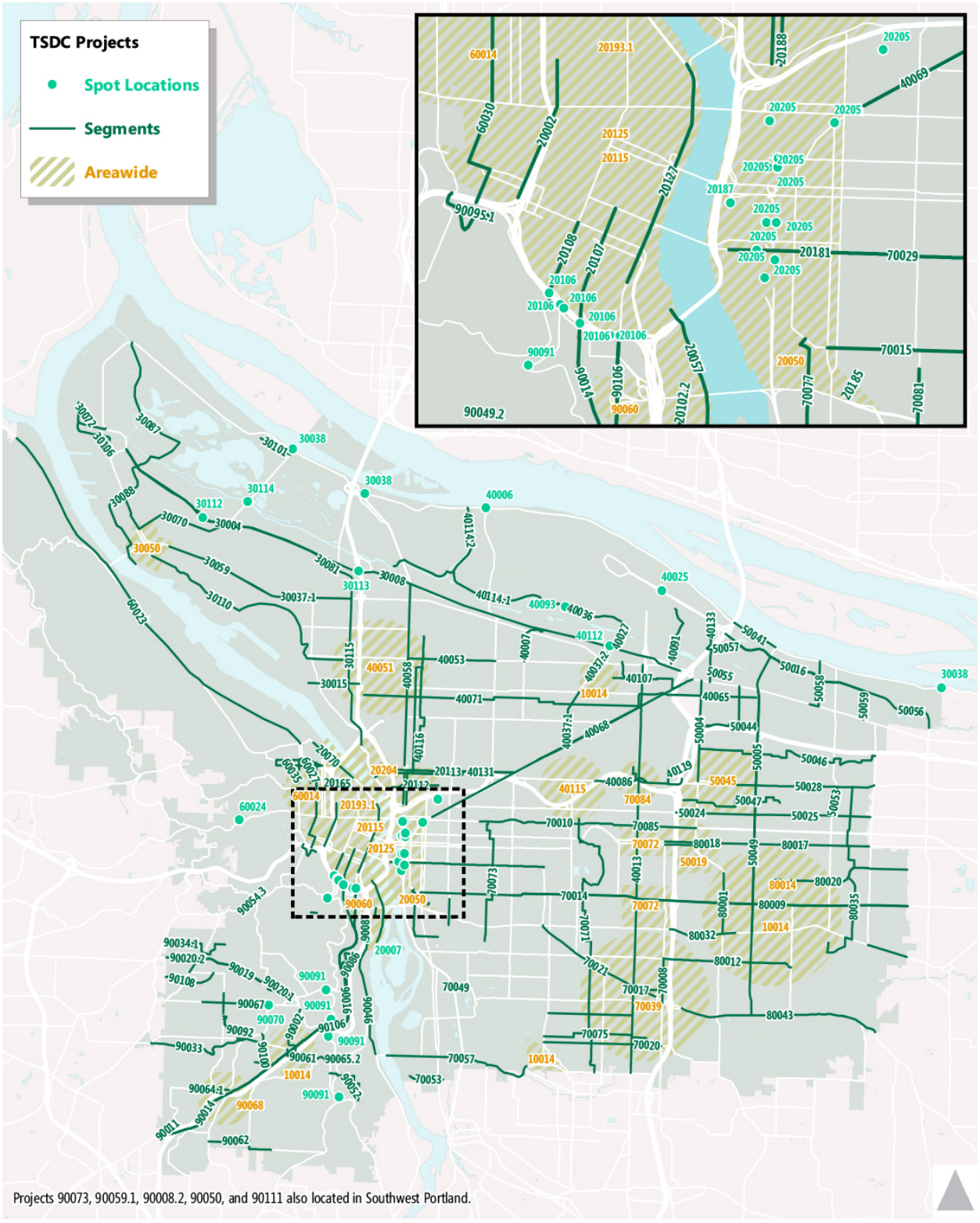
90046	Other Projects	Macadam ITS	Macadam, SW (Bancroft - Sellwood Br)	Install ITS infrastructure (communication network, enhanced bus detection, truck priority detection, Bluetooth detection, CCTV cameras, and vehicle /pedestrian detectors). These ITS devices allow us to provide more efficient and safe operation of our traffic signal system consistent with our policies of moving people and goods more effectively.	$500,000	$0	$500,000	100%	Traffic / Freight	SWNI	ITS improves and manages traffic flow, enabling more capacity and performance per lane on existing roadways.	
90049.2	Other Projects	Marquam Hill Ped/Bike Improvements, Segment 1	Gibbs St, SW (13th - 11th)	Design and implement pedestrian and bicycle facilities.	$1,000,000	$0	$1,000,000	100%	Active	SWNI	Add new ped/bike facilities.	
90050	Other Projects	SW Multnomah Blvd Ped/Bike Improvements, Phase 2	Multnomah Blvd, SW (31st - 40th)	Provide separated pedestrian and bicycle facilities, along with stormwater management facilities.	$1,000,000	$0	$1,000,000	100%	Active	SWNI	Provides new pedestrian facilities and improves existing bicycle facilities.	
90052	Other Projects	SW Palatine Hill / Primrose Bikeway	Palatine Hill Rd, SW (Boones Ferry - Palater); Primrose St, SW (Terwilliger - Boones Ferry)	Design and implement a bikeway from Terwilliger to Palater, including improved crossings at Primrose & Terwilliger and Primrose & Boones Ferry.	$2,000,000	$0	$2,000,000	100%	Active	SWNI	Provides new bikeway and improved pedestrian crossings.	
90054.3	Other Projects	SW Patton / Talbot Ped/Bike Improvements	Patton Rd, SW (Talbot - Hewett); Talbot Rd, SW (Patton - Fairmount)	Construct a pedestrian walkway and bicycle facilities, with improved crossings where needed.	$500,000	$0	$500,000	100%	Active	SWNI	Provides new pedestrian and bicycle facilities.	
90059.1	Other Projects	SW Shattuck Rd Ped/Bike Improvements, Segment 1	Shattuck Rd, SW (B-H Hwy - Cameron)	Construct a pedestrian walkway, climbing bike lane, and crossing improvements.	$1,000,000	$0	$1,000,000	100%	Active	SWNI	Provides new pedestrian and bicycle facilities.	
90060	Regional	South Portland Circulation Improvements	Ross Island Bridgehead, South Portland	Reconstruct Naito Pkwy as an urban arterial with bicycle facilities, sidewalks, left turn pockets, and on-street parking. Includes realignment/regrading at intersecting streets; removal of Barbur tunnel, Ross Island Br ramps, Arthur/Kelly viaduct, and Grover pedestrian bridge. This project will be coordinated with ODOT and with the Southwest Corridor Plan, and will consider impacts to ODOT facilities including Naito Parkway and the Ross Island Bridge.	$69,348,000	$0	$10,000,000	14%	Multimodal	SWNI	Multimodal improvements to increase overall person-capacity through the area, including roadway realignments, new signals, turn pockets, pedestrian and bicycle improvements, and transit improvements.	PBOT contribution capped for large regional projects.

Project ID	Category	Project Name	Project Location	Project Description	Total Project Costs	Already Budgeted	TSDC Eligible Cost	TSDC Eligible Percentage	Primary Mode(s)	District Coalition	Capacity Increase or Level of Performance Improvement	Explanation for eligibility reduction
90061	Other Projects	SW Spring Garden St Ped/Bike Improvements	Spring Garden/22nd, SW (Taylors Ferry - Multnomah)	Design and implement pedestrian and bicycle facilities, including improved crossings at 22nd & Barbur and 22nd & Multnomah.	$2,500,000	$0	$2,500,000	100%	Active	SWNI	Provides new pedestrian and bicycle facilities.	
90062.1	Match Identified	Stephenson / Coronado / Vacuna Ped/Bike Improvements, Segment 1	Vacuna / Coronado / 35th / Stephenson (49th - 27th)	Construct separated pedestrian and bicycle facilities on Stephenson and 35th. Improve roadway and add sidewalks on unpaved segments of Coronado and Vacuna, and implement a neighborhood greenway from 35th to 49th.	$5,000,000	$0	$5,000,000	100%	Active	SWNI	Provides new pedestrian facilities.	
90064.1	Other Projects	Outer Taylors Ferry Safety Improvements, Segment 1	Taylors Ferry, SW (Capitol Hwy - 48th)	Widen shoulder to provide bicycle climbing lane and construct a walkway for pedestrian travel and access to transit.	$2,000,000	$0	$2,000,000	100%	Active	SWNI	Provides new pedestrian and bicycle facilities.	
90065.2	Other Projects	Inner Taylors Ferry Safety Improvements, Segment 2	Taylors Ferry, SW (Terwilliger - Spring Garden)	Widen shoulder to provide bicycle climbing lane and construct a walkway for pedestrian travel and access to transit.	$2,000,000	$0	$2,000,000	100%	Active	SWNI	Provides new pedestrian and bicycle facilities.	
90067	Other Projects	SW Vermont St Ped/Bike Improvements	Vermont St, SW (30th - 52nd)	Construct multi-modal street improvements including bicycle and pedestrian facilities.	$2,000,000	$0	$2,000,000	100%	Active	SWNI	Provides new pedestrian and bicycle facilities.	
90068	Other Projects	West Portland Connected Centers Project	West Portland Town Center	Construct high-priority bikeways, pedestrian improvements, and transit priority treatments in and around West Portland Town Center.	$5,000,000	$0	$5,000,000	100%	Active	SWNI	Provides new and improved pedestrian and bicycle connections.	
90070	Other Projects	Capitol/ Vermont/30th Intersection Improvements	Capitol Hwy, SW (Vermont - 30th)	Realign the Capitol/Vermont/30th intersection and provide sidewalks, bike lanes, and drainage improvements.	$2,000,000	$0	$2,000,000	100%	Active	SWNI	Provides new pedestrian and bicycle facilities.	
90073	Match Identified	SW Dolph Ct Pedestrian Improvements	Dolph Ct, SW (30th - Spring Garden Park)	Construct a walkway for pedestrian travel.	$1,522,553	$1,272,553	$250,000	16%	Active	SWNI	Provides new pedestrian facilities.	Reduced by amount already budgeted through pending LID.
90086	Other Projects	Slavin Rd Ped/Bike Improvements	Slavin Rd, SW (Barbur - Corbett)	Build a pedestrian and bicycle connection on Slavin Road from Barbur to Corbett, and construct an improved pedestrian/bicycle crossing of Barbur at the Capitol Hwy on-ramp.	$2,000,000	$0	$2,000,000	100%	Active	SWNI	Provides new pedestrian and bicycle facilities.	
90087	Other Projects	Hood Ave Pedestrian Improvements	Hood Ave, SW (Lane - Macadam)	Install sidewalk with barrier along east side and pedestrian crossing at Lane Street.	$1,000,000	$0	$1,000,000	100%	Active	SWNI	Provides new pedestrian facilities.	
90091	Other Projects	Terwilliger Bikeway Gaps	Terwilliger, SW	Design and implement bicycle facilities to fill in gaps in the Terwilliger Bikeway.	$1,000,000	$0	$1,000,000	100%	Active	SWNI	Provides new bicycle facilities.	

Project ID	Category	Project Name	Project Location	Project Description	Total Project Costs	Already Budgeted	TSDC Eligible Cost	TSDC Eligible Percentage	Primary Mode(s)	District Coalition	Capacity Increase or Level of Performance Improvement	Explanation for eligibility reduction
90092	Other Projects	Inner Canby Neighborhood Greenway	Canby St, SW (45th - 35th)	Design and implement bicycle facilities, including a multi-use path around Gabriel Park.	$500,000	$0	$500,000	100%	Active	SWNI	Provides new bikeway and improved pedestrian crossings.	
90095.1	Other Projects	Montgomery Bikeway, Phase 1	Montgomery St/Dr, SW (Vista - 16th)	Design and implement bicycle facilities.	$500,000	$0	$500,000	100%	Active	SWNI	Provides new bicycle facilities.	
90100	Other Projects	SW 30th/Hume/31st Ped/Bike Improvements	30th Ave, SW (Dolph - Hume); Hume St, SW (30th - 31st); 31st Ave, SW (Hume - Troy)	Construct a pedestrian walkway and bicycle facilities.	$2,800,000	$0	$2,800,000	100%	Active	SWNI	Provides new pedestrian and bicycle facilities.	
90106	Regional	SW Corridor Access to Transit	SW Corridor	Build high-priority access to transit improvements identified in SW Corridor Plan.	$70,000,000	$0	$10,000,000	14%	Active	SWNI	Provides new and improved pedestrian and bicycle connections.	PBOT contribution capped for large regional projects.
90106	Regional	SW Corridor High Capacity Transit	SW Corridor	Build high-capacity transit line in SW Corridor.	$2,400,000,000	$0	$10,000,000	0%	Transit	SWNI	Provides a new high-capacity transit line.	PBOT contribution capped for large regional projects.
90108	Other Projects	Red Electric Trail, Segment 1	Red Electric Trail, SW (Dover - Cameron)	Construct Segment 1 of the Red Electric Trail from City Limits to Cameron Rd.	$2,000,000	$0	$2,000,000	100%	Active	SWNI	Provides new pedestrian and bicycle facilities.	
90111	Match Identified	Red Electric Trail, Segment 4	Capitol Hwy/Bertha/B-H Hwy	Construct segment 4 of the Red Electric Trail, including ped/bike bridge from B-H Hwy to Capitol Hwy.	$3,900,000	$2,376,285	$1,523,715	39%	Active	SWNI	Provides new pedestrian and bicycle facilities.	Reduced by amount already budgeted from grant funding.
					$4.019 B	**62.4 M**	**589.3 M**					

Figure 3-2: TSDC Projects



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CHAPTER 4 SDC METHODOLOGY AND RATE SCHEDULE

This chapter of the rate study contains the methodology (formulas and variables), and data used to calculate updated TSDCs for the City, based on the project list presented in Chapter 3. The chapter begins with an overview of how the TSDC rates are calculated. The balance of the chapter presents the formulas, variables, data, and rate schedule for the updated TSDCs.

Overview of TSDC Calculations

TSDCs for the City are calculated using the following steps, which are diagrammed in **Figure 4-1**. Further description and rationale for each step is described in subsequent sections of this chapter and in **Appendix B**.

Determine Cost per Trip Based on Existing System

1. Use Portland Bureau of Transportation's (PBOT's) most recent Status and Conditions Report (2015) and GIS database to prepare an inventory of the City's transportation system, including signals, sidewalks, bicycle facilities, medians, plazas, etc.
2. Calculate the replacement value of the current system using unit costs from comparable projects recently constructed in the City.
3. Calculate the number of PM peak hour person trips currently generated by land uses within the City.
4. Calculate a current system value per trip (results of Step 2 divided by results of Step 3), which serves as the current system level of service.

Calculate Cost per Trip Based on TSDC Project List

5. Determine the TSDC project list for the next 10 years.
6. Calculate TSDC-eligible cost of project list.
7. Forecast the 10-year growth in PM peak hour person trips generated by new development within the City.
8. Divide the net TSDC-eligible project list cost by the 10-year growth in person trips to determine the TSDC cost per person trip.

Verify Cost Per Trip Calculation

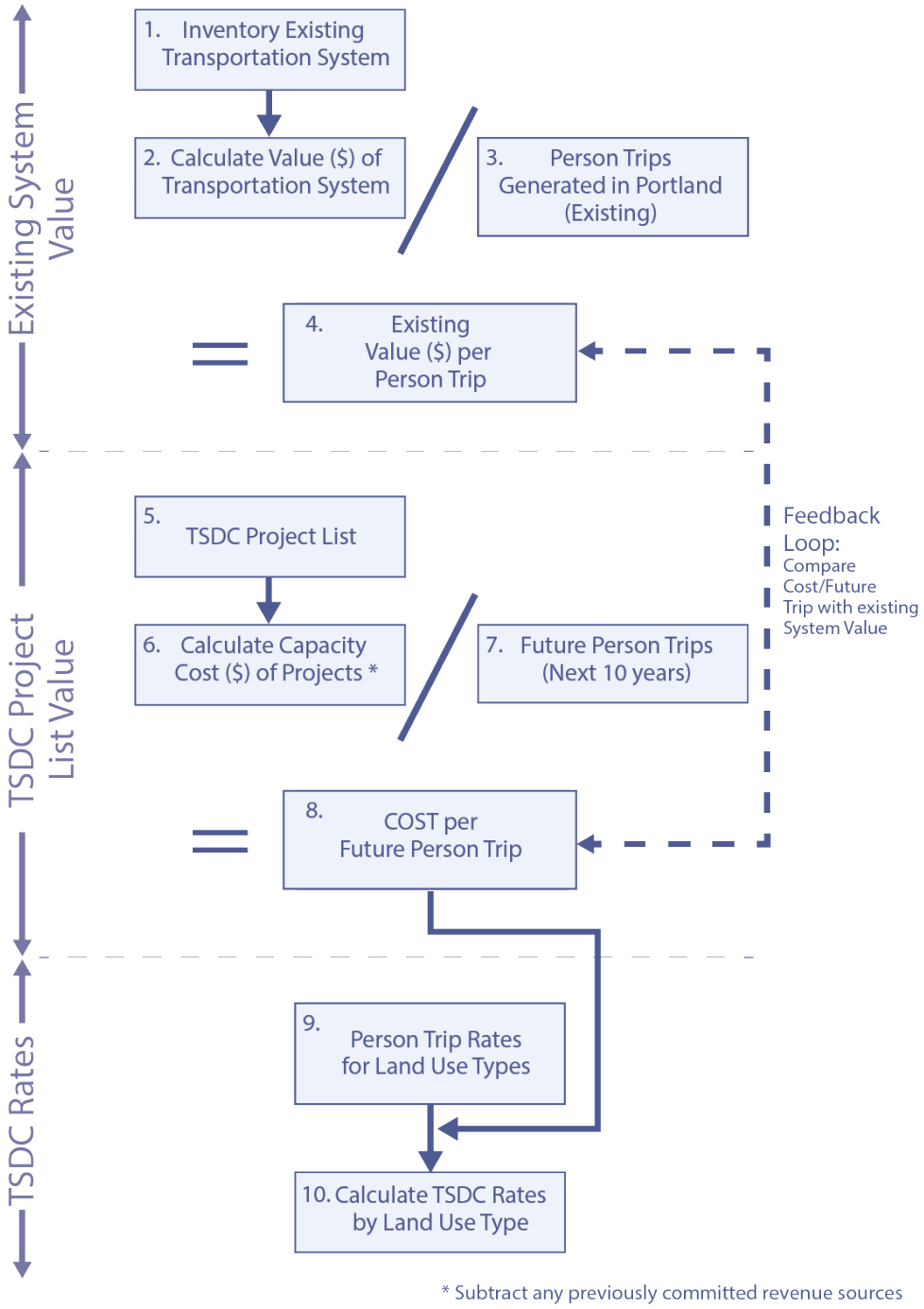
Compare the TSDC project list cost per person trip (Step 8) to the existing system value per person trip (Step 4). If the TSDC cost per person trip is equal to or less than the existing system value per person trip, then the full project list capacity costs may be used to establish the TSDC rate schedule.

Calculate TSDC Rates by Development Type

9. Determine the number of person trips generated by different land use types within the city. Convert this into a person trip rate per unit of development (Examples: housing dwelling units; commercial square footage).
10. Calculate updated TSDC rates by land use type. These are expressed as dollars per unit of development.

The remainder of this chapter describes these steps in greater detail.

Figure 4-1: How TSDC Rates were Developed



Person Trip Calculation

The TSDC program reflects a charge per person trip generated by new development. New person trips on the transportation network are primarily caused by growth in population and employment. **Table 4-1** displays the growth used in the *Adopted 2035 Comprehensive Plan Travel Model* (2016). The City started with the 2012 Metro regional growth forecast for jobs and housing, and then performed a more detailed allocation of growth within the City out to the year 2035. This forecast was adopted by the City Council as the City's official forecast for use in the travel demand model. Since the TSDCs are based on only 10 years, the growth forecasts from the model were scaled down to use as the basis for creating a 10-year forecast of employees and households.

Table 4-1: Growth in Employment and Households

Land Use	2017	2027	10 Year Growth	Growth Percent
Employees	412,300	465,000	52,700	12.8%
Households	285,200	333,400	48,200	16.9%

(Notes: 2017 and 2027 data are estimated from the 2010/2035 model data; the 2010 model is from the 2010/2035 Regional Transportation Plan; the 2035 model is from the City's newly adopted 2035 Comprehensive Plan)

The City's traffic model uses the number of employees and households to predict the number of trips that will be generated on the transportation network. The model is able to generate total person trips. **Table 4-2** shows the expected growth in person trips between 2017 and 2027.

Table 4-2: Growth in Person Trips

Time Period	2017	2027	10 Year Growth	Growth Percent
Peak Two Hours	952,400	1,086,600	134,200	14.1%
Peak Hour	501,260	571,890	70,630	14.1%

(Note: The peak one hour trips were estimated from the two-hour trips using a factor of 0.53, typical of travel conditions in urban areas)

Existing System Value per Trip (Steps 1-4)

The first action is to determine the existing value of the transportation system, and divide it by the existing number of person trips during the PM peak hour. The resulting value serves as the existing system level of service.

The inventory of the existing transportation system was based on PBOT's *Asset Status & Conditions Report*. The 2015 report is a complete inventory of the existing transportation system, including the replacement value and the percent meeting specific condition requirements for each facility. The following facilities were included in the calculation of the transportation system value:

- Pavement
- Sidewalks
- Bicycle Network
- Structures
- Signals
- Streetcars
- Traffic Calming Devices
- Street Lights
- Pavement Markings
- Right-of-Way

In order to be conservative in the estimates, pavement and right-of-way costs were limited to arterial and collector streets, although local streets are an inherently part of the transportation system.[2] The value of the existing transportation system reflects the current level of performance; additional costs to increase the level of performance for certain facility types identified in the Asset Status & Conditions Report (for example, sidewalk ramps related to ADA compliance) were excluded from the replacement value. The value of the existing transportation system was calculated to be $9.8 billion. During the PM peak hour, the City generates approximately 501,260 person trips, as shown in **Table 4-2**. Therefore, the existing system value was calculated to be $19,577 per PM peak hour person trip.

Appendix C shows the details of this calculation.

TSDC Project List Cost per Trip (Steps 5-8)

The future system TSDC cost per trip was calculated on the eligible cost of the TSDC project list ($589 million as summarized in Chapter 3), divided by forecast growth in PM peak hour person trips (70,630 – in Table 4.2) over the next 10 years. The TSDC cost per PM peak hour person trip based on this calculation is $8,347, assuming funding of 100% of the eligible project costs. The projected cost per trip is significantly lower than the current level of service ($19,577 per PM peak hour person trip). Since the projected new capacity cost per trip does not exceed the current level of service ($19,577 per trip), the capacity costs included in the project list may be fully attributable to servicing the needs of future growth.

TSDC Rate Schedule (Steps 9-10)

TSDC rates vary according to the impact on the transportation network caused by each type of development. The impacts are measured in person trips[3].

Person Trip Generation

PM peak hour trip generation rates for each land use type were derived from person trip surveys or derived from Institute of Transportation's (ITE) report *Trip Generation* (9th Edition).

Person Trip Surveys

Person trip surveys are available for selected development types using national and Portland regional data. It is the intent of the city to eventually compile a full dataset of person trip counts to accurately estimate person trip characteristics in Portland. **Appendix D** summarizes the person trip survey data sources available at this time. These are listed as observed data in Table 4-3.

Converted ITE Rates

Where person trip surveys were not available, ITE vehicle trip rates were converted to person trips as follows:

$$\text{Person Trip Rate} = \frac{\text{(ITE Vehicle Trip Rate) X (Average Vehicle Occupancy)}}{\text{(Vehicle Mode Share \%)}}$$

[2] Addition of local streets value would have substantially increased the total existing system value.
[3] Trip rates are expressed as PM peak hour trips entering and leaving a property. Technically they are trip 'ends', although for simplicity they are referred to as trips in this report.

The conversion factors were derived as follows:

- Average Vehicle Occupancy (AVO) - Assumed vehicle occupancy at ITE survey sites. Where available, AVO data were taken from the ITE *Trip Generation Handbook* (3rd Edition). Otherwise, a value of 1.13 was assumed based on typical suburban conditions.
- Vehicle Mode Share- Assumed share of travel by persons in vehicles as a percent of total person trips. Where available, mode share data were taken from the ITE *Trip Generation Handbook* (3rd Edition). Otherwise, a value of 0.95 (i.e. 95 % of persons traveling in vehicles) was assumed based on typical suburban conditions.

New Trips versus "Pass-by" Trips

The trip generation rates represent total persons entering and leaving a property. For some land uses (e.g., retail), a substantial amount of people are already passing-by the property and merely interrupt a trip between two other locations. From a system perspective, these pass-by trips do not add transportation impacts. As a result, pass-by trips are subtracted from the total trips generated by each type of land use. The remaining trips are considered "new" to the transportation system and are subject to the TSDC calculation. The pass-by trip percentages were derived primarily from ITE data and from available surveys conducted around the country.

TSDC Rate Schedule

The data described above was used in combination with modal percentages and costs per trip to calculate the TSDC rate schedule, as shown in **Table 4-3.** The following information is presented in each column:

- Land Use Categories: categories of land use used to assess the TSDC
- Land Use Code: Code assigned by ITE.
- Unit of Measure: the unit that generates the number of trips (i.e., residential development. counts trips per dwelling, most commercial establishments count trips per 1,000 square feet).
- PM Peak Vehicle Trips per Unit: the number of PM peak hour trips reported by ITE for one unit of measure.
- PM Peak Person Trips per Unit: the trip rate from observed person trip surveys or the result of multiplying the PM Peak Hour Vehicle Trips per Unit times the estimated average future vehicle occupancy, and dividing the result by the mode share percentage.
- New Trip %: the percent of trips that are new (excludes "pass-by" trips).
- PM Peak New Person Trips per Unit: the result of multiplying the PM Total Person Trips per Unit times the New Trip %. These are the number of trips per unit of development for which a new development is charged the TSDC.
- TSDC Rate: The rate per unit of development based on the cost per trip.

Table 4-3: TSDC Rate Schedule

Land Use Categories	Land Use Code (4)	Unit of Measure	PM Peak Vehicle Trips/ Unit	Future AVO	Vehicle Mode Share	PM Peak Total Person Trips/Unit (Est)	New Trip %	PM Peak new person trips/ unit	TSDC Rate
Cost per PM Peak Hour Person Trip									$8,347
Residential									
Single Family	210	dwelling	1.0	1.17	0.95	1.23	100%	1.23	$10,280
Single Family (less than 1,000 sf)	50% of 210	dwelling	0.5	1.17	0.95	0.62	100%	0.62	$5,140
Multiple Family	220	dwelling	*	*	*	0.60	100%	0.60	$5,008
Senior Housing/Assisted Living/Nursing Home	251	dwelling/ bed	0.27	1.13	0.95	0.32	100%	0.32	$2,681
Commercial – Services									
Bank	911	sq ft/GFA	12.13	1.13	1.00	13.71	65%	8.91	$74.37
Day Care	520	sq ft/GFA	1.21	1.13	0.95	1.44	100%	1.44	$12.01
Hotel/Motel	310	room	0.6	1.31	0.95	0.82	100%	0.82	$6,851
Service Station / Gasoline Sales (2)	946	VFP	13.86	1.13	0.95	16.49	44%	7.25	$60,548
Movie Theater/Event Hall	444	sq ft/GFA	3.04	1.13	0.95	3.62	85%	3.07	$25.66
Carwash	947	wash stall	5.54	1.13	0.95	6.59	65%	4.28	$35,753
Health Club / Racquet Club	492	sq ft/GFA	3.53	1.13	0.95	4.20	90%	3.78	$31.54
Commercial – Institutional									
School, K-12	(1)	sq ft/GFA	1.09	1.13	0.95	1.30	85%	1.10	$9.20
University / College/ Jr College	50% of 540	sq ft/GFA	1.27	1.13	0.95	1.51	90%	1.36	$11.35
Church	560	sq ft/GFA	0.55	1.13	0.95	0.65	95%	0.62	$5.19
Hospital	610	sq ft/GFA	0.93	1.13	0.95	1.11	85%	0.94	$7.85
Park	411	acre	3.5	1.13	0.95	4.16	85%	3.54	$29,537
Commercial – Restaurant									
Restaurant (Standalone)	931	sq ft/GFA	7.49	1.59	1.00	11.91	56%	6.67	$55.67
Quick Service Restaurant (Drive-Though)	934	sq ft/GFA	32.65	1.29	0.96	43.70	50%	21.85	$182.40
Commercial – Retail									
Shopping/Retail	(1)	sq ft/GLA	3.21	1.20	0.97	3.95	58%	2.29	$19.14
Convenience Market (3)	851	sq ft/GFA	*	*	*	43.90	49%	21.51	$179.55
Free Standing Retail Store/Supermarket	815	sq ft/GFA	4.98	1.32	0.95	6.92	83%	5.74	$47.94
Car Sales - New / Used	841	sq ft/GFA	2.62	1.20	0.95	3.31	80%	2.65	$22.10
Commercial – Office									
Administrative Office	710	sq ft/GFA	*	*	*	1.40	90%	1.26	$10.52
Medical Office / Clinic	720	sq ft/GFA	3.57	1.37	0.95	5.15	75%	3.86	$32.23
Industrial									
Light Industry / Manufacturing	130	sq ft/GFA	0.85	1.37	0.95	1.23	90%	1.10	$9.21
Warehousing / Storage	150	sq ft/GFA	0.32	1.30	0.95	0.44	90%	0.39	$3.29
Self-Storage	151	sq ft/GFA	0.26	1.37	0.95	0.37	95%	0.36	$2.97

* Based on Observed Person Trip Data (Survey sites in Portland, California, and Washington, D.C.)

(1)School, K-12: Average of ITE categories 520 and 530; Shopping/Retail: Blend of ITE Categories 820 and 826

(2) With or Without Minimart (not to exceed 1,500 SF) and/or Carwash (Fuel is Primary Use)

(3) If gasoline sales included on-site, use Service Station/Gasoline Sales SDC rate.

(4) Land Use Code - Reference 'Trip Generation', 9th Edition, Institute of Transportation Engineers, 2012

Person Trip Adjustments

In moving to a mode-neutral, person-trip based TSDC program, adjustments were estimated in recognition of how development within the Central City and other designated centers/corridors have less of an impact on the transportation system. This structure is consistent with the City's Comprehensive Plan goals to focus growth in the Central City and other centers, corridors, and transit station areas (Goal 3.C) and shift travel away from drive alone trips to more environmentally sustainable modes (Goal 9.D).

The following sections describe how differences in urban form, transit availability, and mix of uses influence travel behavior. The end of this section outlines the land use types that could be eligible for urban context based adjustments.

Not All Person Trips Have the Same Impact

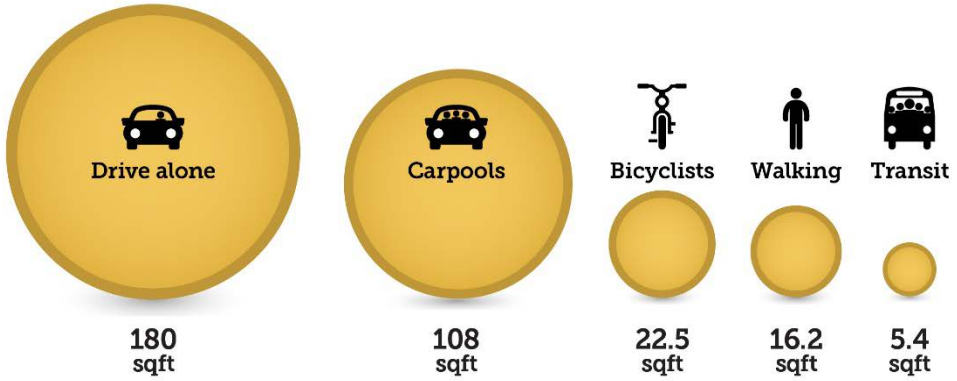
One criticism of mode neutral programs is that person trips do not all have the same impact on the transportation system (e.g., walking trips vs. drive alone trips). There are a variety of ways to measure this differential impact, including trip length and carbon emissions per trip. In a mature, urban environment where roadway expansion is often infeasible, one simple way to assess the differential impact of trips by different modes is through their use of physical space. Different modes have varying footprints on the City's transportation system, which is described below and illustrated in **Figure 4-2**.

Drive Alone trips take up 180 square feet on average, based on a typical passenger vehicle. Compared to a drive alone trip:

- **Carpools** take up 60% less space than driving alone per person trip. This was estimated using the regional travel model estimate that the average carpool carries 2.4 people.
- **Bicyclists** use 87.5% less space per person trip. This estimate was developed using a very conservative assumption that bicycles are roughly a quarter the size of a car and no more than half of cyclists are using arterial travel lanes (the remaining cyclists are using existing exclusive facilities, which include trails, cycle tracks, and bike lanes).
- **Walking** takes 91% less space than drive alone travel. Since most pedestrian travel occurs outside of arterial travel lanes in existing sidewalks, pedestrian usage of arterial travel lanes would be limited to locations where the pedestrian realm extends into the roadway, such as crosswalks and bulb outs.
- **Transit** requires roughly 97% less space per person trip than driving alone. This was based on each full bus requiring 5 square feet of space per passenger[4].

4 The Transit Capacity and Quality of Service Manual identifies a range of 4.5-5.3 sq. ft / passenger as "comfortable"

Figure 4-2: Comparison of Street Capacity Use by Mode



How this ties into the City's TSDC program is that different land uses are assessed TSDCs based on the number of person trips they are expected to generate. To the extent that uses generate different types of person trips (for example, more non-auto trips) in different areas of the city, it may be appropriate to assess different TSDC rates.

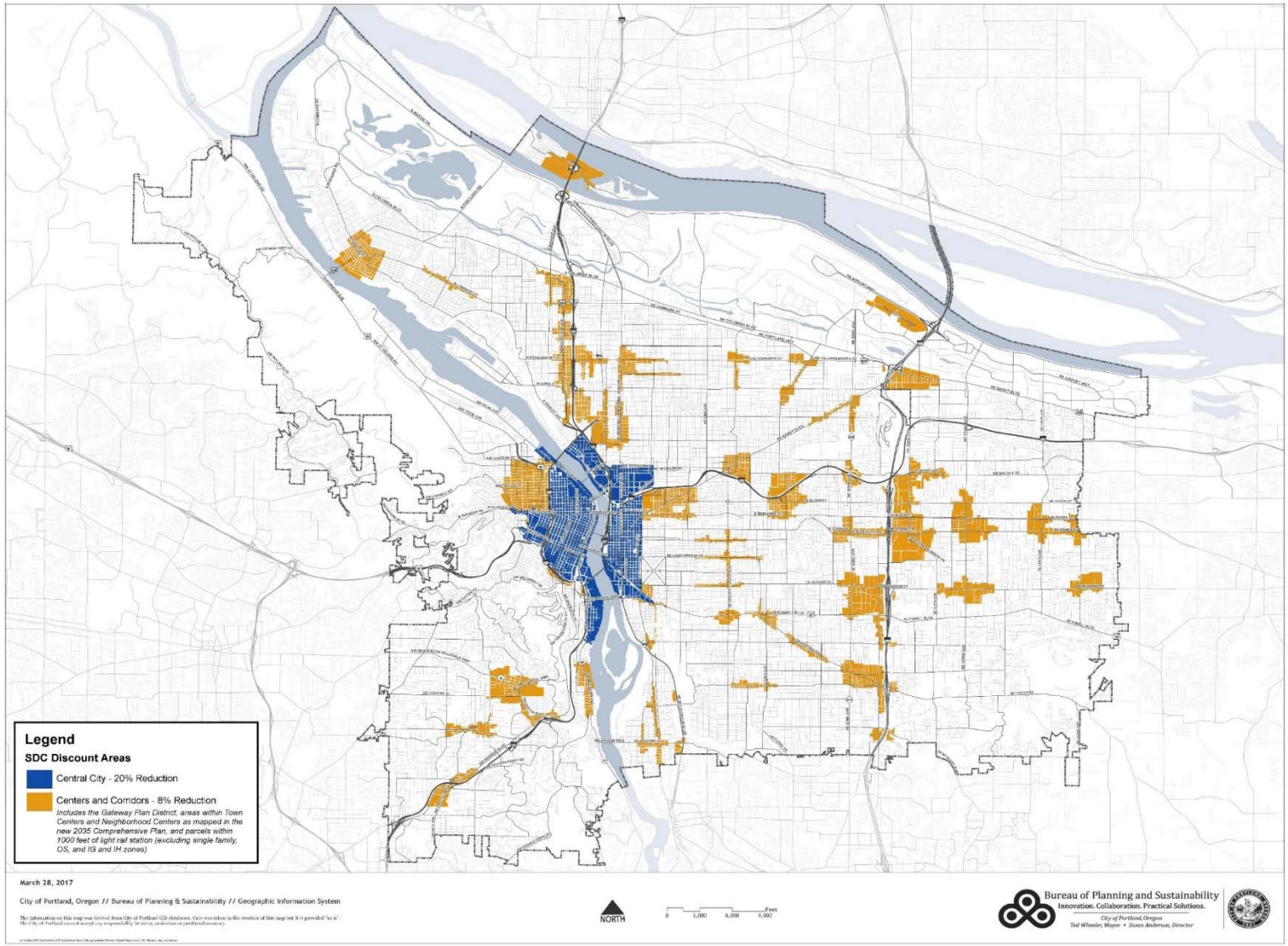
Person Trip Adjustments to Fee Schedule

As a part of the Comprehensive Plan, the City has identified centers and corridors that could have distinct travel profiles, based on their urban form, mix of uses, and transit availability. For the purposes of the TSDC analysis, these areas are simplified into two types of geographies, which are mapped in **Figure 4-3**:

- Central City.
- Other Centers and Corridors – includes the Gateway Plan District, areas within Town Centers and Neighborhood Centers as mapped in the new 2035 Comprehensive Plan, and parcels within 1000 feet of light rail station (excluding single family, OS, and IG and IH zones).

Only certain uses would be eligible for person trip adjustments, as described later in Table 4-5.

Figure 4-3: Geographies for Use in Person Trip Adjustments



Proposed Adjustment Factors

The analysis used data from two sources:

- **Existing Conditions**- Based on the Oregon Household *Activity* Survey (2013) that evaluates all person trip ends starting or ending within these geographies.
- **Future Conditions**- Based on 2035 mode share data from the *Adopted 2035 Comprehensive Plan Travel Model (2016)* with mode choice and travel demand management calibrations.

The mode share data were then used to calculate an average weighted roadway space usage person trip within each area of the City. The relative difference in space usage per trip between an area (such as the Central City) compared to existing conditions in other locations within the city was used to scale the fee schedule. **Table 4-4** shows the potential adjustments.

Table 4-4: Analysis of Fee Adjustments

	SOV	HOV	Bike	Walk	Transit	Total	Avg. Weighted Space Usage / Person Trip in Square Feet	Fee Adjustment
Square Feet Per Person Trip	*180*	*108*	*22.5*	*16.2*	*5.4*	-		
Other Locations								
- **Existing**	44%	30%	4%	8%	13%	100%	114.5	0%
Central City								
- **Existing**	37%	19%	5%	15%	25%	100%	92.0	-20%
- **Future**	23%	26%	9%	23%	19%	100%	76.3	-33%
Centers and Corridors								
- **Existing**	44%	31%	5%	12%	7%	100%	116.1	<1%
- **Future**	36%	33%	11%	9%	12%	100%	105.0	-8%

Source: Fehr & Peers, 2016.
Centers and Corridors (future) mode share data are based on Portland model data for 2035 in the Gateway Center area

Based on these data, it is recommended to use the using the future conditions adjustments for both the Central City and the Centers/Corridors. The following adjustments would apply:

- Central City – 33% reduction
- Centers and Corridors – 8% reduction

The adjustments are meaningful reductions in trip making and reflect the long-range goals of the city to encourage alternative travel modes.

Land Use Eligibility Criteria

The person trip adjustments should be applied to land uses that have the potential to influence the mode shares within the centers – such as multifamily residential, retail, and office. More auto-oriented uses, such as an auto repair shop or a warehouse, likely generate the same number of drive-alone trips, regardless of transit availability or facilities for walking and biking, and thus are not eligible for these adjustments.

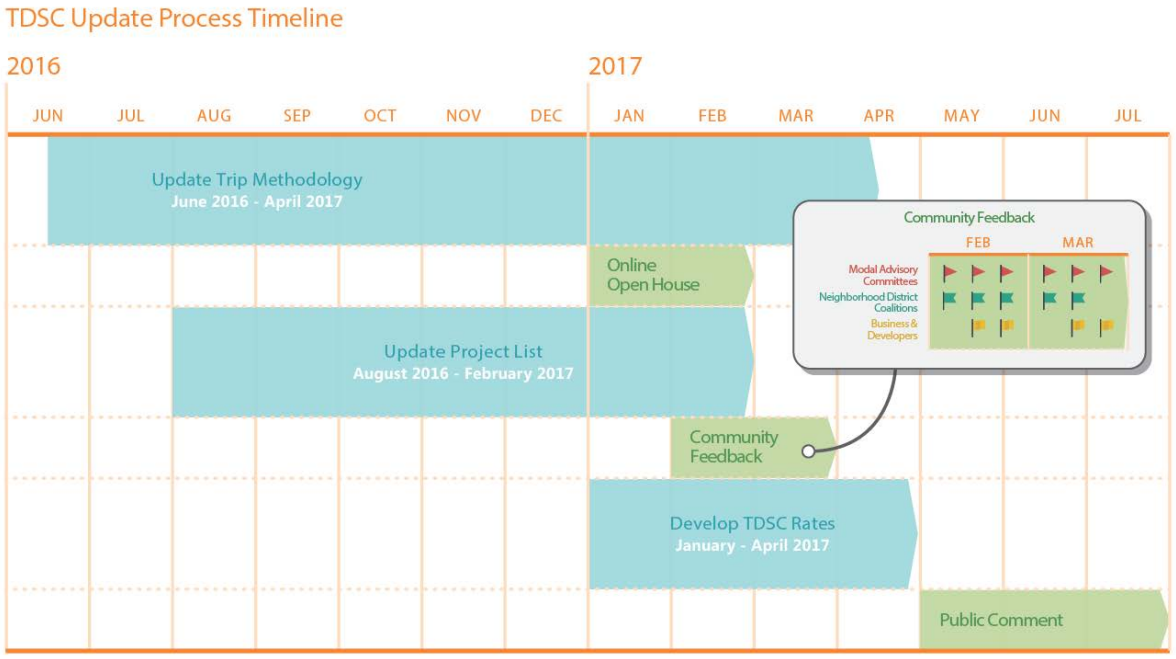
Moreover, the continued viability of more efficient modes is predicated on uses developing in a manner consistent with City land use goals – building to the maximum floor area ratio (FAR), offering a mix of uses, and maintaining higher densities. As such, the following criteria were developed for uses to be eligible for urban context-based adjustments in **Table 4-5**.

Table 4-5: Land Use Eligibility Criteria

Land Use Type	Eligibility for Person Trip Adjustment
Residential	
Single Family	Ineligible
Multiple Family	Eligible if in mixed use site that is built to at least 75% of max FAR
Senior Housing/Congregate Care/Nursing Home	Eligible if in mixed use site that is built to at least 75% of max FAR
Commercial - Services	
Bank	Eligible if in mixed use site that is built to at least 75% of max FAR
Day Care	Eligible if in mixed use site that is built to at least 75% of max FAR
Hotel/Motel	Eligible if in mixed use site that is built to at least 75% of max FAR
Service Station / Gasoline Sales (2)	Ineligible
Carwash	Ineligible
Movie Theater	Eligible if in mixed use site that is built to at least 75% of max FAR
Health Club / Racquet Club	Ineligible
Commercial - Institutional	
School, K-12	Eligible
University / College / Jr. College	Eligible
Church	Eligible
Hospital	Eligible
Park	Eligible
Commercial - Restaurant	
Restaurant	Eligible if in mixed use site that is built to at least 75% of max FAR
Quick Service Restaurant (Drive-Though)	Ineligible
Commercial - Retail	
Shopping/Retail	Eligible if in mixed use site that is built to at least 75% of max FAR
Supermarket	Eligible if in mixed use site that is built to at least 75% of max FAR
Convenience Market (3)	Eligible if in mixed use site that is built to at least 75% of max FAR
Car Sales - New / Used	Ineligible
Commercial - Office	
Administrative Office	Eligible if in mixed use site that is built to at least 75% of max FAR
Medical Office / Clinic	Eligible if in mixed use site that is built to at least 75% of max FAR
Industrial	
Light Industry / Manufacturing	Eligible if in mixed use site that is built to at least 75% of max FAR
Warehousing / Storage	Ineligible
Self-Storage	Ineligible

CHAPTER 5 COMMUNITY ENGAGEMENT SUMMARY

The TSDCs contained in this rate study were developed with involvement by residents and businesses in Portland. The project had **three outreach phases** beginning in June, 2016. Outreach activities were tailored to give various stakeholder groups an opportunity to provide input on the TSDC elements that were of most interest to them. The project team also used a variety of communication tools to keep the public informed throughout the process.

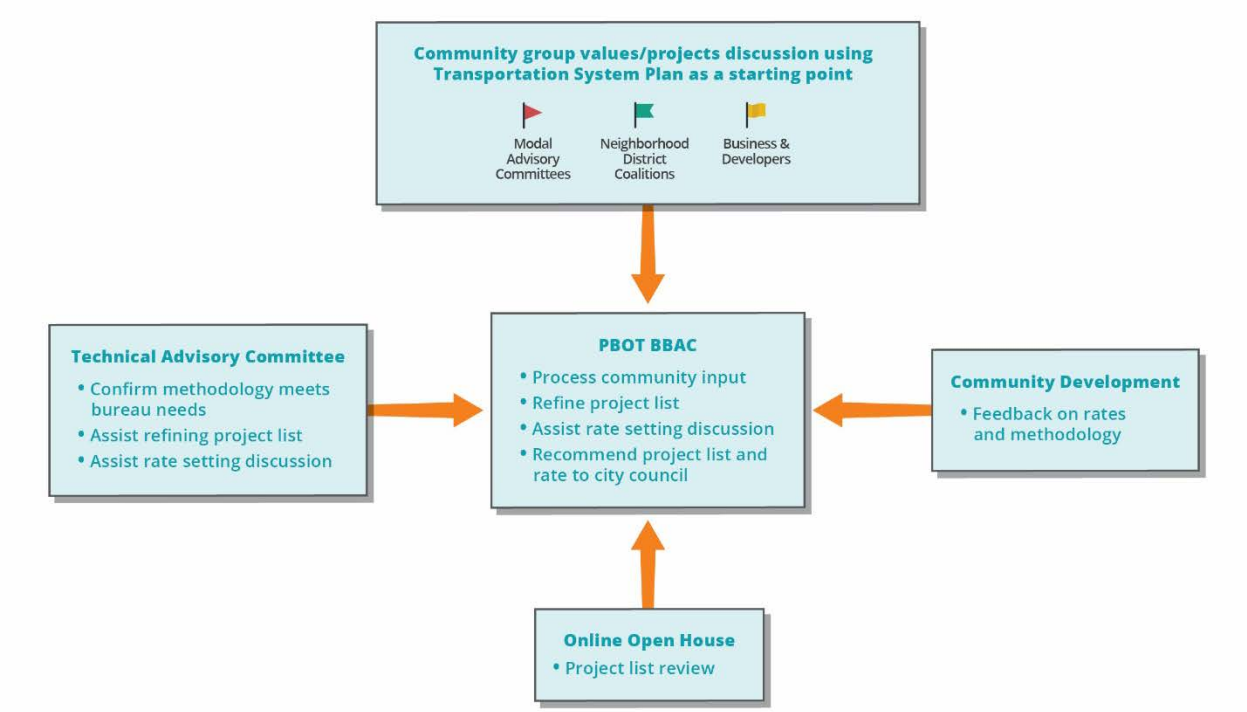


Throughout the project, the team met with the PBOT Bureau and Budget Advisory Committee (BBAC), who discussed the methodology and draft project list, provided input into the public outreach process, and promoted the online open house and engagement with the general public. BBAC members are representative of neighborhood, business, modal, and social justice interests and include:

- Arlene Kimura
- David Sweet
- Elaine O'Keefe
- Heather Bowman
- Heather McCarey
- Kaliska Day
- Kyle Buss
- Laura Becker
- Tony Lamb
- Meesa Long
- Momoko Saunders
- Orlando Lopez Bautista
- Pia Welch
- Ruthanne Bennett
- Ryan Hashagen
- Samuel Gollah
- Thomas Karwaki

Public Input and Decision-making Process

Various stakeholder groups including neighborhood district coalitions, businesses and developers, modal advisory committees and the general public provided input on the draft methodology, TSDC project list, and rates. Additionally, a Technical Advisory Committee assisted in technical considerations for the TSDC update elements. Updates were provided to the BBAC throughout the process. PBOT developed the draft methodology, project list, and rate recommendation based on technical considerations and public input.



Outreach Phases

During the **first phase**, the project team sought input on technical issues related to the **methodology update**. They developed a draft TSDC project list using the Transportation System Plan (TSP). Outreach included two workshops with traffic engineers in July and September 2016 to discuss the person trip methodology. PBOT used this input to develop a draft methodology that was presented to City Council on December 14, 2016.

The purpose of the **second phase** of outreach was to engage the public at-large and stakeholder groups in review of the **TSDC project list** and methodology. This phase included making over two dozen presentations to neighborhood associations, transportation groups, developers and real estate groups, and business organizations (mostly held in February and March 2017). These meetings were primarily aimed at providing general information about the TSDC update process and soliciting input on the draft project list, methodology, and impact of rates. Groups provided follow-up letters and emails with specific project and update recommendations. This phase included development and use of an illustrated overview video that explained TSDCs in an easy-to-understand way.

An online open house was conducted from January-April 2017. It included general information about the TSDC update process, an interactive map and table of the draft TSDC project list, and a series of questions to gather input about the draft project list. Nearly 1,300 members of the public visited the online open

house, and 254 submitted comments. Notices of the online open house were emailed to the project interested parties list, public.gov delivery list, and PBOT list of subscribers. PBOT and partners also posted invitations on Facebook and through the Next Door social media site. Additionally, PBOT ran an advertising campaign using Facebook that reached about 33,600 people, 700 of which clicked the online open house link.

PBOT synthesized all input from the online open house, community briefings and meetings, and other comments related to the draft TSDC project list. After review by planning staff regarding consistency with the TSP, PBOT also added a number of projects suggested during public review. Staff reviewed the final project list to ensure that it:

- Included projects that would accommodate development growth and improve multimodal travel.
- Included a broad range of projects that benefit all geographic areas of the city.
- Reflected community input and addressed key concerns.

The **third phase of outreach** focused on providing information about rate scenario options and discussing aspects related to the **draft TSDC rate**. This phase (April 2017) included a second round of meetings with community stakeholders to discuss the draft TSDC rate. The project team also convened a Rate Setting Workshop with developers, neighborhood, and business interests. The Rate Setting Workshop included discussion on different rate options, adjustments, and the impacts to funding the TSDC project list. Input from this round of outreach was used to help refine PBOT's recommendation on the draft TSDC rate.

Communication Tools

The project team used a variety of **communication tools** to provide information throughout the update process and to announce public involvement opportunities. At the onset of the project a project video was developed to explain TSDCs and the update process in an easy-to-understand way. Throughout the TSDC update process, documents were posted to the project Website held by PBOT https://www.portlandoregon.gov/transportation/71823. Two factsheets were developed, one to provide an overview of the TSDC update process and project list, and a second about the rate scenarios. PowerPoint presentations were tailored to a range of audiences to provide information at meetings and briefings. The team developed large format display boards to help communicate the update process and opportunities for public involvement; these were placed at the Development Services Building and used at a Fix Our Streets Open House. Email blasts, Facebook posts, the Next Door social media site, and the PBOT Website were used to keep the public informed.

Summary of Input Received

Below is a brief overview of comments on the project list and proposed TSDC rates from the various interest groups.

Comments on project list

Various stakeholders provided comments on the project list. Many residents indicated high levels of support for bike/ped and transit projects, and projects in underserved areas of Portland. Business and freight representatives expressed concern that the projects on the list did not do enough to alleviate congestion and supported more auto- and freight-related improvements.

PBOT synthesized all input from the online open house, community briefings and meetings, and other comments related to the draft TSDC project list. Projects that had a high level of support were included in

the final TSDC project list. PBOT also added a number of projects suggested by the public, and in particular a number of projects suggested by the freight community.

Comments on TSDC Rates

Stakeholders made a number of comments on the proposed TSDC rates. They considered tradeoffs between the rates charged to new development and the amount of the project list that could be funded with TSDC revenues. While some people wanted to keep the rates as low as possible, other people suggested funding 100% of the project list with TSDCs. In general, there was support for rates that would fund approximately 50% of the project list. PBOT considered this input in making its rate recommendation to City Council.

A full summary of the Public Outreach process is included in **Appendix E**.

Other Supporting Materials

In support of this rate study, a comparison of TSDCs and SDCs in Portland to those charged in other cities in Oregon was developed. The memorandum summarizing this analysis is included in **Appendix F**.

An economic analysis of how SDCs effect development activity and property values was also conducted. That memorandum is included in **Appendix G**.

PBOT
PORTLAND BUREAU OF TRANSPORTATION

FEHR & PEERS

APPENDICES

A – Portland State University Critique of TSDC Program

B - TSDC Methodology Recommendations

C – Existing System Value Calculations

D – Person Trip Memorandum

E – Community Engagement Report

F – SDC Rates Comparisons

G – TSDC Economic Impacts Memorandum

APPENDIX A – PORTLAND STATE UNIVERSITY CRITIQUE OF TSDC PROGRAM

Maseeh College of Engineering and Computer Science
Department of Civil and Environmental Engineering

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Portland, Oregon 97207-0751 503-725-5950 fax

To: Kyle Chisek, City of Portland
Bill Hoffman, City of Portland
Christine Leon, City of Portland
Rich Eisenhauer, City of Portland

From: Kelly J. Clifton, Portland State University
Kristina M. Currans, Portland State University

Date: October 14th, 2015

Re: Transportation System Development Charges – Critique of the Current Process

INTRODUCTION

We reviewed the current process by which transportation system development charges (TSDC) are developed, shown in Figure 1, and we offer this critique. This critique assumes that the Portland Bureau of Transportation (PBOT) has a desire to better account for all trips including those made by non-automobile modes, and compensate for the deficiencies in current methodologies such as the Institute of Transportation Engineers' (ITE) *Trip Generation Handbook.* Each step in the TSDC process is assessed based upon the soundness of the methodology, available data, simplicity, transparency, and potential bias. For each step, the current process—as described in the *Update of Transportation System Development Charges* (2007)[1] and show in *Figure 1*, a flowchart pulled from the original report (page 16)—is recounted and then issues are identified. Based upon our knowledge of current state-of-the-research and state-of-the-practice with respect to estimation of multimodal trip generation and our conversations with PBOT staff, we have summarized the major themes below.

- ITE's *Trip Generation Handbook* forms the basis for all trip rate information by development type. The flaws in these data have been noted by many researchers and practitioners (for a detailed critique see STEP 8).
- Non-motorized travel tends to be underestimated by travel demand models. The determinants of bike and walk trips, including those made as access or egress to motorized modes, are not adequately reflected in forecasting tools. This flawed process determines the mode shares used

[1] Henderson, Young & Company; Mirai Associates; Parametrix. (2007). Update of Transportation System Development Charges. Portland, Oregon: Prepared for City of Portland. Retrieved from https://www.portlandoregon.gov/transportation/article/313028

throughout this process. Instead, the mode shares could be determined from the transportation goals articulated in the planning documents for Portland.

- This underestimation leads to a higher cost per trip for these modes relative to motorized modes. Costs for non-motorized trips are six times greater than motorized costs.
- Because the non-motorized costs per trip are so much higher than motorized costs, there is no incentive for developers to support travel by these modes in their designs as they go through development review for TSDC.
- There is no accounting for the variations in person trips, mode shares and vehicle occupancies across Portland's contexts or land use types.
- Estimates of project costs subtract system deficiencies, however, there is no consistent treatment of modes in the assessment of deficiencies.
- The process for calculating deficiencies negatively biases the eligibility of non-motorized projects for TSDC funding.
- This process attempts to be multimodal by assessing separate costs per trip by mode for each development type. But in the end, these costs are aggregated into a cost per trip by development size that includes all modes. The desire to be multimodal may not merit the increased complexity in the process particularly since multimodal estimates are flawed and continued to be biased towards motorized modes.

Overall, the current process has a number of issues, many of them stemming from limitations in how we estimate travel behavior (e.g., trips, trip length, mode share, and facility use), particularly related to non-motorized and transit modes. The methodology segments the costs, total regional trips, and development-specific trips by the three modes, but then ignores the big differences in how mode-specific travel is estimated throughout the process.

Because we adopt these ill-suited, or perhaps ill-understood, methods for estimations without addressing their limitations for estimating multimodal trips (regionally and at individual developments), this results in: (a) significantly higher costs for non-motorized trips than there should be; (b) lower costs for motorized trips than there should be; (c) ignoring funding for "deficiency" projects that could help shift growth trips to more accommodating modes, i.e., accommodating growth by solving deficiencies; (d) over/undercharging (depending on the land use and area type) for development in areas not comparable to the suburban origins of ITE's data, and; (e) shifting the cost of automobile travel to land uses that tend to derive more non-motorized or transit trips. Perhaps, if we recognize that the way we estimate mode-specific travel has limitations, we could simplify this process by estimating person trips and then a "burden/cost of new person trips placed on the system" would result.

Sincerely,

Kelly J. Clifton, PhD
Professor
Email: kclifton@pdx.edu; Phone: 503-725-2871

FLOWCHART

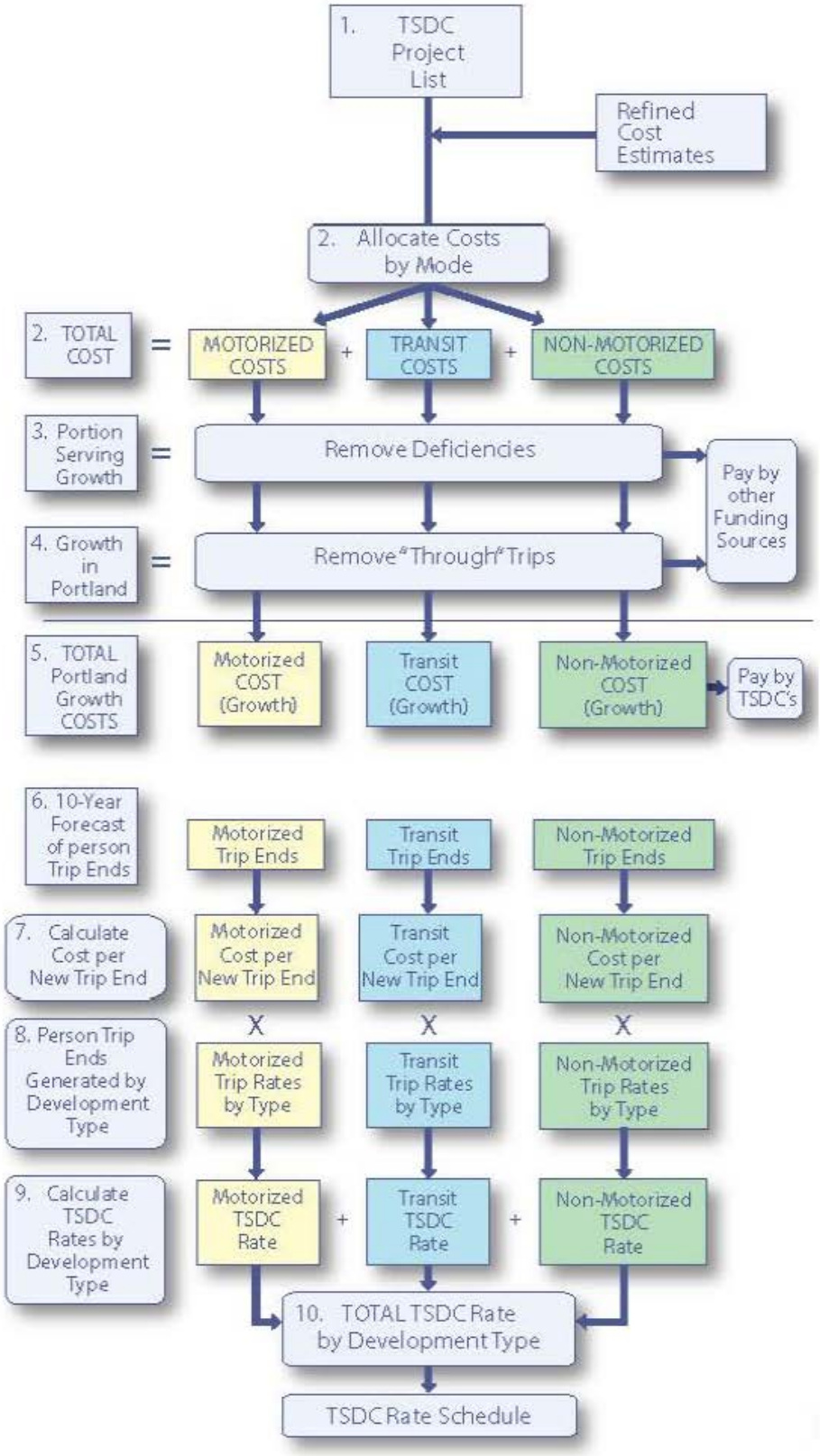
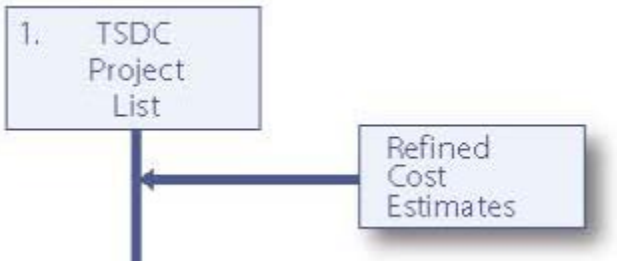


Figure 1 Steps in Developing the 2007-2017 Transportation System Development Charges[1]

TSDC PROJECT LIST

Identify transportation projects that are needed to serve new development.



CURRENT PROCESS

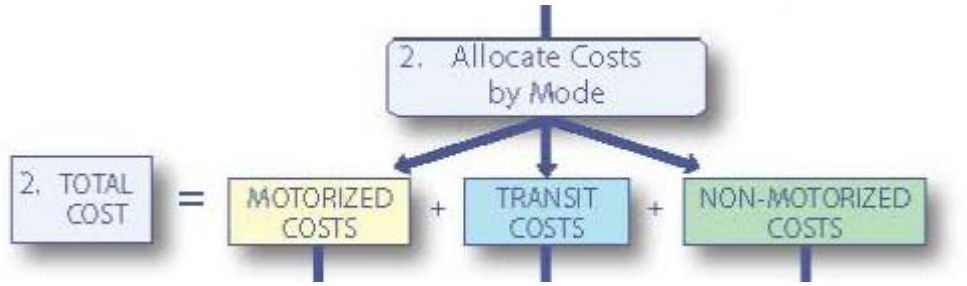
- First cut: minimum requirements:
  1. Project includes a component that adds capacity to the transportation system.
  2. Project is in the Transportation System Plan
  3. Project is on a public street classified above local service, except for City bikeways and city walkways, exclusive of regional traffic and regional transit ways.
  4. Project is designed to serve additional population and/or employment over the next 10 years
  5. Project is not a maintenance project.
  6. Project is not for purchases of equipment or rolling stock, but may be for facilities supporting rolling stock/equipment.
- Second cut: projects with one or more of {1, 2, 3} and preferably one or both of {4, 5}
  1. Support bicycle, pedestrian and/or transit modes (i.e., add capacity, improve access, improve connections, remove bottlenecks, fill in missing links)
  2. Improve movement of freight and goods
  3. Reduce congestion, improve access and/or circulation
  4. Community and business priority
  5. Strong potential leverage

CRITIQUE

- Pros: The projects include non-automobile facilities, and attempt to add capacity and fill the gaps in the current system.
- Cons: Projects focus on adding capacity only. It is not clear how this is assessed in terms of multimodal capacity added. Projects that add capacity through system operations improvements may not be included. It is also uncertain whether the project lists are selected by capacity analysis or arbitrary evaluation.
- Cons: Under the minimum requirements for #4, it is not clear whether this requirement to serve additional population and employment is really meant to mean 'new growth in trips.' In some situations, trips may grow without a change in population or employment.

ALLOCATE COSTS BY MODE

Analyze each project to determine what portion of its cost should be allocated to the modes of travel: motorized, transit, and non-motorized (pedestrian and bicycle).



CURRENT PROCESS

- Project costs are segmented into improvements for one of three modes:
    1. Motorized (automobile, truck, and motorcycle)
    2. Transit (rail and bus)
    3. Non-motorized (pedestrian and bicycle)
- The allocation of costs are divided among "direct" and "common" costs.
    1. **Direct costs** include those facilities directly related to use from the given mode. For transit, a percentage of the roadway costs are allocated based on the ratio of peak hour directional transit passengers to the total person trips (for the given project segment). For non-motorized, these costs include bicycle facilities and sidewalks. Motorized costs include total costs minus transit and non-motorized percentages.
    2. **Common costs** include any costs that effect all or multiple modes (e.g., increases in mobilization or right-of-way).

CRITIQUE

- Pros: The process attempts to track costs by mode, which seems to be a progressive approach.
- Cons: The separation of costs by mode may not necessarily lead to progressive or intended outcomes. It also makes the process more complicated than using a simple cost per person trip measure that encompasses all modes on the system and does not separate out direct and common costs. It is not clear that adding this complexity in this step adds value.
- Cons: It is somewhat surprising the sidewalks are not "common costs" for transit and motorized users. Since both driving and taking transit rely on some form of access/egress modes—particularly walking. However, incorporating the portion of transit/motorized trips that utilize the other mode (not yet done) makes this adjustment.
- Cons: The list of indexed costs comes from a Federal source, without adjustments for costs in Oregon. Request consultant to examine "best practices" to calculate costs tailored to Oregon. (From conversation with Rich Eisenhauer.)

PORTION SERVING GROWTH

Determine the portion of the cost of the project that serves growth and the portion that addresses existing deficiencies. The growth portion becomes the basis of the TSDCs. The deficiency portion is excluded from TSDCs, and must be paid by other sources of revenue.

CURRENT PROCESS

- The portion that serves "growth" includes 100% minus the deficiency.
- **Motorized deficiency** incorporates the existing volumes and capacity, and the future capacity provided by the projects evaluated at the PM peak period.
    1. Deficiency = (existing volume – existing capacity) / (future capacity – existing capacity)
    2. If the existing volume > existing capacity, the access volume is the "deficient" amount.
    3. The remaining future capacity not serving excess demand (motorized deficiency) is the part serving growth.
- **Transit deficiency** incorporates passenger loadings onto busses along the route/run for the project area evaluated at the PM peak period.
    1. Deficiency = 100 – average load factor
    2. Load factor per route/run = passengers / seats
    3. If the load factor is > 1 for the peak hour direction of the project area, there is a deficiency in the service.
- **Non-motorized deficiency** is estimated for both bicycle facilities and pedestrian facilities at a district level. The larger of the two values is used for the non-motorized deficiency for that district. Projects are assessed based on the district deficiency.
    1. Bike deficiency is the percent difference of Bike facilities$_{district}$ to Bike facilities$_{Portland}$
        - Bike facilities$_{district}$ = (Mileage of bicycle facilities / number of households)$_{district}$
        - Bike facilities$_{Portland}$ = (Mileage of bicycle facilities / number of households)$_{Portland}$
        - If there are fewer facilities than the Portland average, there is a deficiency in the district.
    2. Pedestrian deficiency is the percentage of arterials without sidewalks. This is the deficiency.

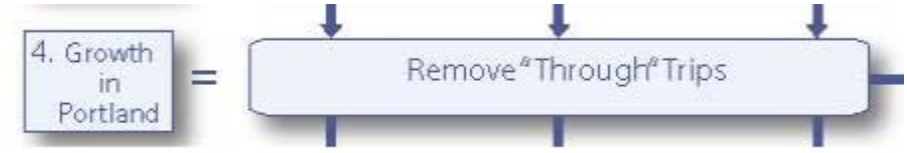
CRITIQUE

- Pros: This process removes system deficiencies from the calculation in order to be legally defensible.
- Cons: Better measures for defining deficiency are needed. There is no parity in how deficiencies or measured across the various modes. Deficiencies in facilities for motorized modes are assessed based on peak-hour volumes measured against existing capacities. Deficiencies for non-motorized costs are based on the extent of network coverage of existing facilities (relative to the regional averages), which results in a greater proportion of existing bicycle and pedestrian facilities being labeled as deficient. This biases the amount of projects in favor of automobiles.

- Cons: In Step 1, projects may be included in the TSDC list based on their ability to add non-automobile capacity (e.g., bike facilities, sidewalks, transit stops). In the way that deficiencies are defined in this step, the bicycle/pedestrian facilities are deficient when there are fewer facilities relative to the regional average. Thus eliminating many projects that add capacity or solve missing links or connections leading to a perverse outcome.
- Cons: The only deficiency being measured is where existing volume > existing capacity. How can volume exceed capacity? It can in theory, but realistically a "capacity" is a limit. Therefore, the current method does not account for any motorized deficiencies in their measurements—which might look more like level-of-service or type of system breakdowns.
- Cons: Deficiencies are measured at the peak hour of automobile and transit, but other estimates throughout this process (trip rates, mode shares, trip lengths) are based on 24 hours. This process does not have temporal parity in the assessment of deficiencies.

GROWTH IN PORTLAND

Identify the portion of the growth travel that begins and/or ends within the City, versus the "through" trips that do not start or stop in Portland. Trips that pass through the City without stopping are excluded from TSDCs and must be paid by other sources of revenue.



CURRENT PROCESS

- The cost of "through" trips (those beginning and ending outside of the city) are absorbed by the City because the city cannot collect development charges to accommodate trips that do not approach destinations/development within the city.
- This process is completed using the city's travel demand model.

CRITIQUE

- No critique specific to this process.

TOTAL PORTLAND GROWTH COSTS

Calculate the amount of the project cost that can be attributable to growth within Portland. This calculation removes the deficiencies (Step 3) and "through" trips (Step 4).

CURRENT PROCESS

- Calculating the cost of each project that attributes to growth uses the values estimated in Steps 2, 3, and 4.
- $ELIGIBLE_{i,m} = PROJECT\ COST_i * \%MODE_{i,m} * GROWTH_{i,m} * \%CITY_{i,m}$
    1. $ELIGIBLE_{i,m}$ = costs for project, i, relevant to mode, m, eligible for TSDC
    2. $GROWTH_{i,m} = 1 - \%\ DEFICIENCY_{i,m}$
    3. $\%CITY_{i,m} = 1 - \%THROUGH_{i,m}$
- 65% of the project costs (Motorized 31%; Non-motorized 24%; Transit 10%) are eligible for TSDC funds.
- Within this process, they also remove the other revenue that has been awarded for the projects being evaluated (fees, taxes, funding by partner agencies, general transportation revenue, grants).

CRITIQUE

- Pros: This step is the only step that attempts to assess some measure of capacity added to the system (by mode) for the projects evaluated.
- Cons: The proportion of a project that is eligible for funds, defined here as growth, is not really a reflection of new demand (either by growth in population or other changes in demand) nor is it a reflection of capacity added to the system. Rather, it is based on an assessment of deficiencies in the system (critiqued in STEP 3). By defining growth as the percent not deficient, areas where the system is already performing well may be eligible for a greater percentage of project funding, adding more capacity. Conversely, in areas with greater deficiencies projects are less eligible for TSDC funding and suggests that growth is not happening on the system in those areas. Also, this issue is further exacerbated by the lack of parity across modes in the way deficiencies are defined in STEP 3 potentially creating modal bias.

10-YEAR FORECAST OF PERSON TRIP ENDS

Estimate the growth in trip ends (over 10 years) that will be generated for each mode of travel.

CURRENT PROCESS

- Here, the "growth" of new trips are estimated for the following 10-year period ($trips_{2017}$ - $trips_{2007}$) $_{mode}$.
- The regional mode share in 2017 is estimated to be 82% motorized, 10% transit, and 8% non-motorized.

CRITIQUE

- Pros: By using a travel demand model developed by Metro, we are using a regionally consistent approach.
- Pros: As the regional travel demand model and associated data become more sophisticated, the ability to offer more refined estimates of all modes may improve over time.
- Cons: Travel demand models have historically grossly underestimated non-motorized trips. They also have a tendency to overestimate vehicle trips.
- Cons: Transit and motorized trips often rely on walking as an access/egress mode to the transit stop or parking location. As such, a portion of the motorized and transit trips should be allocated to the non-motorized trip ends (perhaps through some percent time of the total trip) to redistribute those fractions of trips that also impact non-motorized facilities. This is similar to the critique of common and direct costs in STEP 2.
- Cons: Forecasts of trips for any mode within regional travel demand modeling tend to become less reliable as the forecast horizon is extended. A 5-year window of TSDC review would increase the reliability over the current 10-year window.
- Cons: Under estimation of non-auto trips leads to higher costs per trip for non-auto modes (see next STEP).
- Cons: The use of the forecast mode shares predicted from this regional travel model are at a system-wide level. Forecasts in trip ends and mode shares are not estimated at a more disaggregate geography. In later steps, this average mode share is applied in sub areas that may have a lot of variation from the average. For example, in the CBD and inner neighborhoods, the non-auto mode share may be much higher than in the outer neighborhoods and vice versa. Instead of using the forecast mode shares, the desired mode shares based on planning goals could be used to better direct projects and funding to help achieve those ends.

CALCULATE COST PER NEW TRIP END

Calculate the cost per new trip end (for each mode) by dividing the costs that are eligible for TSDCs (from Steps 1-5, above) by the number of new trip ends (from Step 6).

CURRENT PROCESS

- Simply the amount of project costs occurring within the next 10 years eligible for TSDC (step 5) divided by the estimated growth in trips over the next 10 years (step 6).

CRITIQUE

- Pros: Attempting to segment costs per mode seems progressive.
- Cons: This modal segmentation is lost in the end because costs are aggregated in STEP 10.
- Cons: The issues identified in previous steps lead to a much higher cost for non-auto modes due to deficiencies in the way modes are estimated. Most notable is the difference between the cost per motorized ($302/trip), transit ($376/trip), and non-motorized ($1968/trip). Intuitively, we would not expect walking and biking trips result in much higher cost burdens.

  Moreover, if we account for the amounts of walking done in conjunction with transit and motorized trips—assuming 20% of trip time for motorized and 10% of trip time for transit—the cost per trip starts to level out (motorized $377/trip; transit $418/trip; non-motorized $681/trip). Additionally, if we had better mechanisms to estimate non-automobile travel within travel demand models (correcting for the underestimation of these modes), the costs per trip across all these modes may start to be more equal.

  If we move toward a more multimodal person-based trip generation method (STEP 8), a high cost per trip for non-motorized modes would mean that we are encouraging developments *not* to accommodate pedestrians and cyclists, thus providing a perverse incentive for automobile-oriented development as automobile trips appear less expensive. Furthermore, it would be a detriment for developers who opt to show they are generating fewer vehicle trips, since the logical conclusion is that non-motorized and transit trips are increasing, and they are much more expensive.

PERSON TRIP ENDS GENERATED BY DEVELOPMENT TYPE

Calculate the number of new trip ends that are generated by various types of development. These trip ends are estimated for each modal type using the percentages of usage by each mode.

CURRENT PROCESS

- This process uses ITE's *Trip Generation Handbook* to estimate daily vehicle trip (VT) ends on the property.
- The VT are then converted to person trip ends (PT) using a mode share estimate of 90% representing ITE-type locations (suburban, single use, vehicle-oriented). A vehicle occupancy rate of 1.13 derived from Portland and national sources is also used.
- Pass-by trips are removed, separating the estimates from the "new" trips that bring impacts to the facilities.
- "New" trips are allocated into a regional estimated mode share: 82% motorized, 10% transit, 8% non-motorized.

CRITIQUE

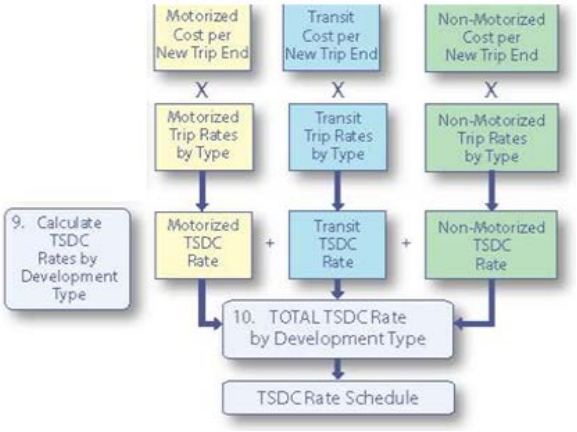
- Cons: The flaws in ITE's *Trip Generation Handbook* are now well documented in the literature. Among these are: the vehicle only data, suburban orientation, the time frames in which data are collected (since the 1960's), the lack of transparency about where data are collected, the inability to adjust for urban environments, the inability to account for multiple modes, the large number of land use categories some of which are arbitrarily defined, emphasis on the peak hour, peak hour of the facility and the generator are defined based on vehicle trips only, small number of data points for some land uses, and assuming the development size is the best and only predictor of trip generation. Further, the reliance on ITE approaches and automobile level-of-service have incented communities to collect data and evaluate impacts based only on vehicle trips, further retarding the advancement of multimodal approaches.
- Cons: Person trip rates for new development are estimated using ITE vehicle trip rates, vehicle occupancies, and a mode share adjustment. This step is problematic based on the issues identified in the previous bullet. By assuming ITE's vehicle trip rates are adjustable to person trip rates via a single assumed mode share and vehicle occupancy rate, we are also assuming that person trip rates in ITE's contexts (suburban, vehicle-oriented, single use, little to no transit, no bike/pedestrian facilities) are the same as very urban areas (like anywhere in the City of Portland). An adjustment for person trip rate variation across contexts should be included, although that is not yet available.
- Pros: However, the TSDC process accounts for higher person trip rates than ITE data reflect by assuming that ITE rates account for a 90% vehicle mode share.
- Cons: Applying a constant mode split predicted from the region model (see previous STEP) to every land use type and location does not reflect known differences in mode shares across different neighborhoods and different land use types (grocery stores versus truck terminals).

Knowing the forecast mode shares likely under-represent non-auto modes and that Portland's desired mode shares are likely different, the use of the fixed, forecast mode shares in this step should be reconsidered. Perhaps the desired mode share as articulated in transportation plans, should be used in this step.

CALCULATE TSDC RATE BY DEVELOPMENT TYPE, and TOTAL TSDC RATE BY DEVELOPMENT TYPE

Calculate the TSDC rate for each type of development and for each mode. The trip rates per development type (step 8) are multiplied times the cost per trip end (step 7) to produce TSDC rates. The TSDC rates are expressed in terms of costs per unit of development (e.g., housing units, square feet).

Combine the TSDC rates for each mode to determine the total TSDC for each type of development. The result is the composite TSDC that can be published as the TSDC rate schedule.



CURRENT PROCESS

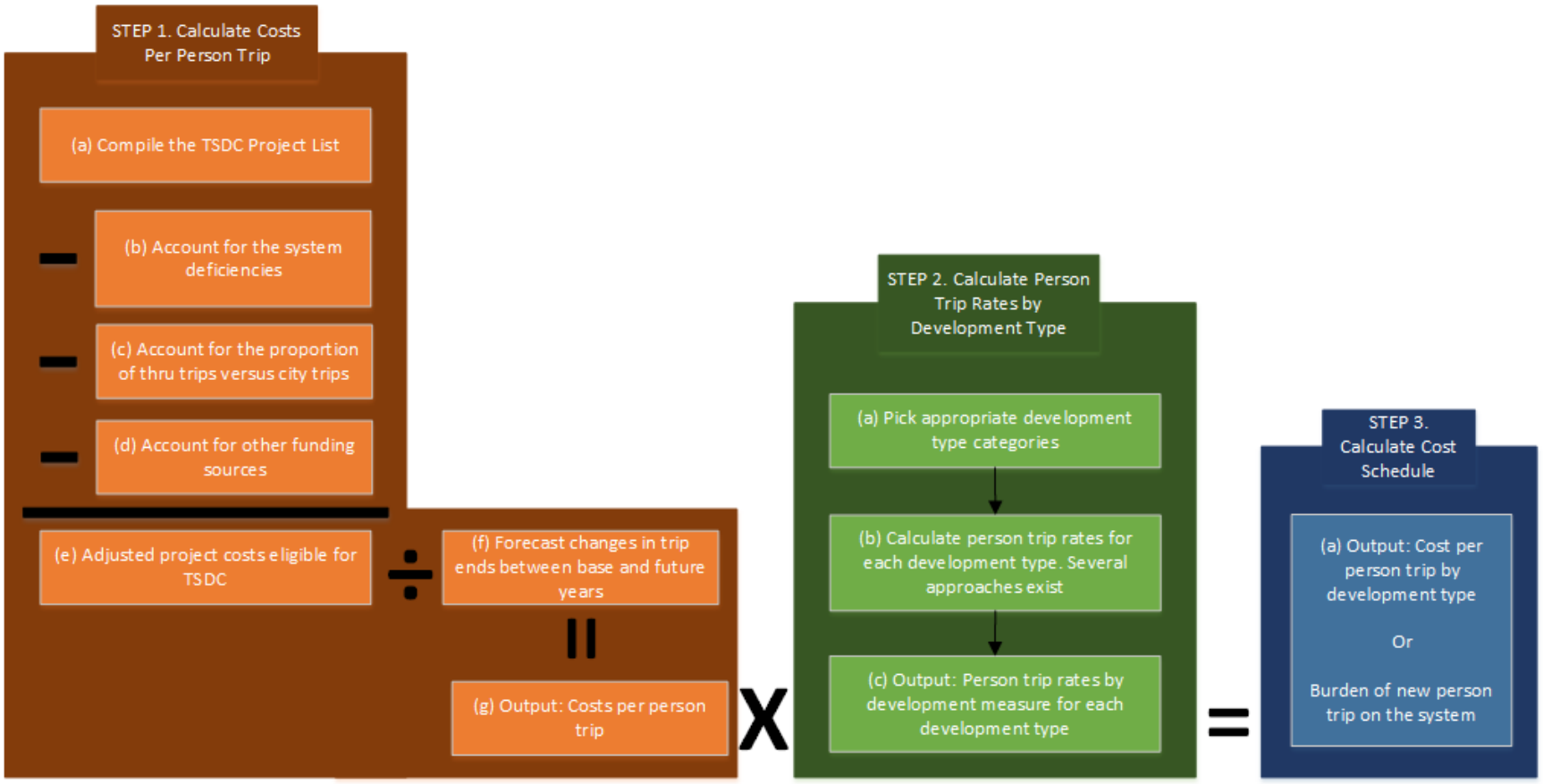
- The cost per trip is multiplied by the trip rate (ITE's adjusted estimate) for each mode and land use type.
- Motorized trips are further adjusted based on the land use types estimated trip length estimated by national data. The trip length for each land use type is then divided by Portland's regional average (4 miles). The result is a multiplier for the length of trips typically observed in the given land use category.
- Seven general land use categories are included in the TSDC rate schedule, totally 36 land use classifications:
    1. **Residential**: Single family; multiple family; senior housing, detached; additional dwelling unit; row house/townhouse/condo; nursing home; congregate care/assisted living
    2. **Commercial – Services**: Bank; day care; library; post office; hotel/motel; service station/gasoline sales; movie theater; carwash; health club; marina
    3. **Commercial – Institutional**: School, K-12; University/college; church; hospital; park
    4. **Commercial – Restaurant**: Restaurant; quick service restaurant (drive through)
    5. **Commercial – Retail**: Misc. retail; shopping center; supermarket; convenience market; free standing discount store; car sales – new/used
    6. **Commercial – Office**: Administrative office; medical office/clinic
    7. **Industrial**: Light industrial/manufacturing; warehousing/storage; self-storage; truck terminal
- The TSDC charges by mode and development type are aggregated into a total TSDC rate by development type.

CRITIQUE

- Pros: There is an adjustment of relative costs for land uses that draw traffic from farther away, thus adjusting for greater impact over the system.
- Pros: There is some elimination of the number of land use categories over ITE's *Handbook* categories in order to simplify the number of land use codes.
- Cons: The method to adjust vehicle fees to incent development that attracts local trips is difficult to apply and perhaps unreliable. The trip length measurement is subject to a great amount of variation and uncertainty.
    1. There are no adjustments for intra-city variations in average trip length.
    2. There are no adjustments for transit or non-motorized average trip lengths.
- Cons: There are still quite a few land use classifications (36), and it is not clear if there is a significant difference in trip rates across these 36 categories.
- Cons: As mentioned in the critique in the previous step, using ITE implies that the "denominator" of the rate (e.g., the size of the development: square feet gross floor area, seats, employees, dwelling units) is the best estimator—or the most important determinant—for trip generation.

EXHIBIT C

FRAMEWORK FOR DEVELOPING TSDC RATE SCHEDULE



APPENDIX B – TSDC METHODOLOGY RECOMMENDATIONS

MEMORANDUM

Date: November 2, 2016 (Updated March 16, 2017)

To: Christine Leon, PBOT

CC: Kyle Chisek, Rich Eisenhauer, PBOT

From: Don Samdahl and Kendra Breiland, Fehr & Peers

Subject: TSDC Methodology Recommendations

SE16-0459

Over the summer of 2016, Fehr & Peers has been working with PBOT staff, as well as the transportation system development charge (TSDC) stakeholder group, to develop a preferred approach to updating Portland's TSDC program. To streamline the program and better align it with the goals in the City's Transportation System Plan, we are recommending that the program be restructured to:

- Define system eligibility based on the current system value per trip
- Charge fees based on total person trip generation

Concurrent with the methodology development, PBOT is working with the community to develop a TSDC project list to align with the City's broader multimodal and environmental goals. PBOT is also reviewing procedures for allowing appropriate discounts and credits to new development.

The remainder of this memorandum describes considerations related to each of these topics, methods, and next steps.

Review of the current approach

In October 2015, Dr. Kelly Clifton and Kristina Currans conducted a review of the current methodology to develop and assess TSDCs. They identified a number of areas for improvement, and this critique has informed the recommendations outlined in this memo. The major themes of their review are below:

- While the program uses person trips as a basis for the TSDC, the person trips are derived from vehicle trip rates found in the Institute of Transportation Engineers (ITE) *Trip Generation Report*. The limitations of this approach have been well documented. Newer person trip data are now available and should be used in any update.

- The program splits out person trips by mode. However, the underlying travel data are not of the same quality. For example, non-motorized travel tends to be underestimated by travel demand models, which are used to determine mode shares in the current TSDC program.

- Project costs are also split out by mode. System deficiencies are then subtracted from these project cost estimates; however, there is no consistent treatment of performance measures by mode in the assessment of deficiencies. As currently applied, the process negatively biases the eligibility of non-motorized projects for TSDC funding. It also further exacerbates inequities in neighborhoods with the least developed infrastructure.

- There is no accounting for the variations in person trips, mode shares and vehicle occupancies across Portland's contexts or land use types.
- The desire to be multimodal may not merit the increased complexity in the current process. Moving to a TSDC based on total person trips would be simpler and better tied to available data.

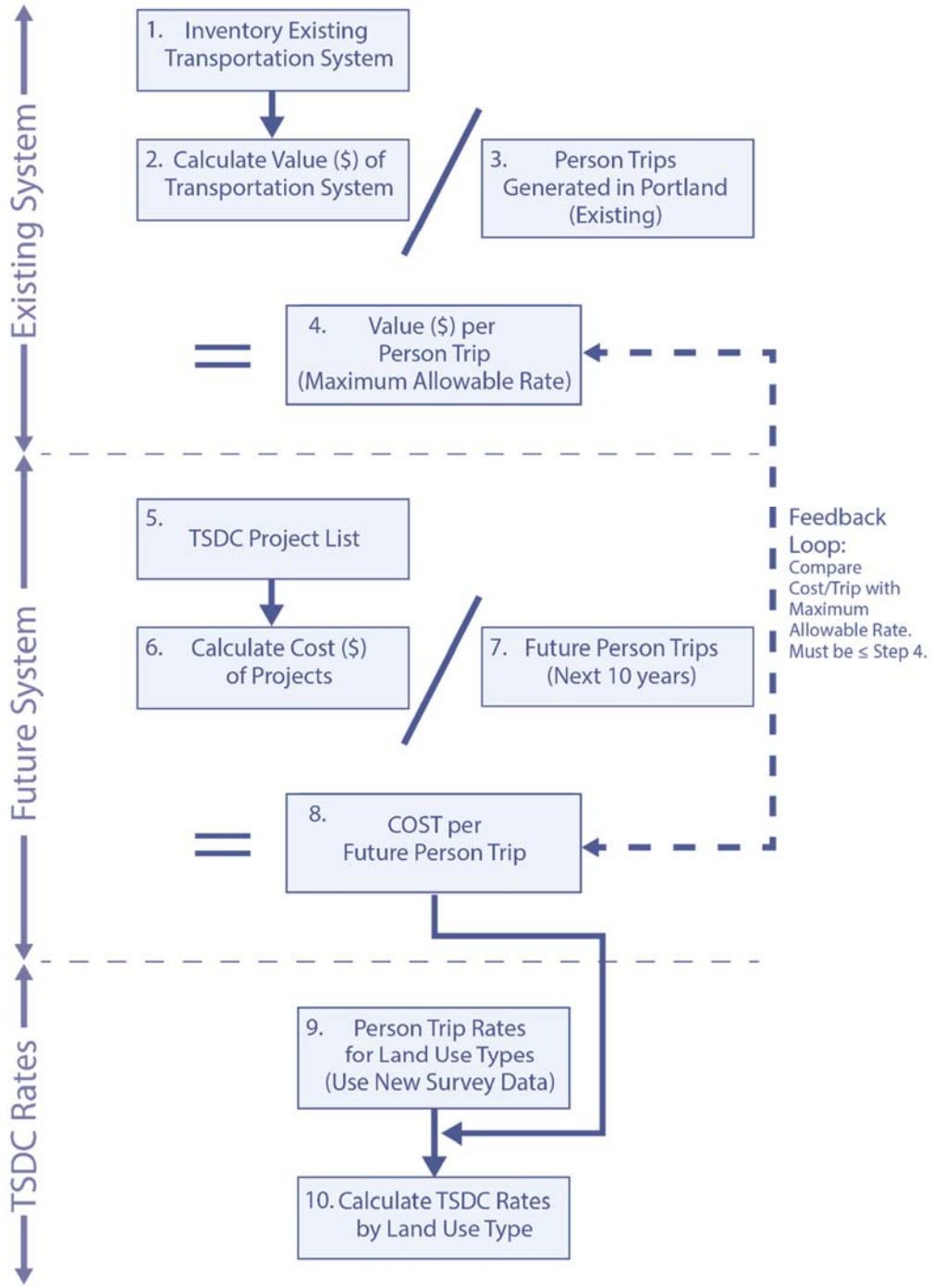
Transition to system value per Person trip

Following the May 2016 Circuit Court of Multnomah County decision that Portland's parks SDC methodology (basing the parks fee on historic level of investment) is valid, it appears that a similar methodology could be applied for TSDCs. This would simplify the way that TSDCs are calculated and aligns well with an updated person trip approach.

There is at least one existing TSDC program in the country that has applied the system value per capita methodology discussed above. Oakland, CA passed their TSDC in June 2016.

How could this be applied in Portland?

The figure on the next page summarizes the recommended approach, with details provided below.


Existing System
1. Inventory Existing Transportation System
2. Calculate Value ($) of Transportation System
3. Person Trips Generated in Portland (Existing)
4. Value ($) per Person Trip (Maximum Allowable Rate)
Future System
5. TSDC Project List
6. Calculate Cost ($) of Projects
7. Future Person Trips (Next 10 years)
8. COST per Future Person Trip
Feedback Loop: Compare Cost/Trip with Maximum Allowable Rate. Must be ≤ Step 4.
TSDC Rates
9. Person Trip Rates for Land Use Types (Use New Survey Data)
10. Calculate TSDC Rates by Land Use Type

Description of TSDC Steps

Determine Maximum Cost Per Trip Based on Existing System:

1 Use the City's Status and Conditions Report and GIS database to prepare an inventory of the city's transportation system, including collector and arterial streets, as well as infrastructure like signals, sidewalks, bicycle facilities, medians, plazas, etc.

2 Calculate the replacement value of the current system using current unit costs from comparable projects recently constructed in the city.

3 Calculate the number of daily person trips generated by land uses within the city. Use the Metro travel demand model or other person trip generation techniques.

4 Calculate a system value per trip calculated based on the above information. This represents the maximum allowable TSDC rate.

Calculate Cost per Trip Based on TSDC Project List

5 Determine the TSDC project list for the next 10 years. (This is currently under development.)

6 Calculate capacity cost of TSDC project list.

Subtract other revenue sources (if any) to be applied to projects on the list to determine the net costs from SDCs.

7 Forecast the 10-year growth in daily person trips generated by new development within the city. Use the Metro travel demand model or other person trip generation techniques.

8 Divide the net TSDC project list cost by the 10-year growth in person trips to determine the TSDC cost per person trip.

KEY ACTION: Compare the TSDC cost per person trip (Step 8) to the system value per person trip (Step 4). If the TSDC cost per person trip is equal to or less than the existing system value, then the TSDC rate can be used. If the TSDC rate exceeds the existing system value, then the existing system value serves as the maximum allowable rate to be charged.

Calculate TSDC Rates

9 Determine the number of person trips generated by different land use types within the city. Convert this into a person trip rate per unit of development (Examples: housing dwelling units; commercial square footage). Use new person trip data available nationally and within the Portland region. For those land uses where person trip data are not currently available, use the ITE *Trip Generation* Handbook to estimate person trips. As new data become available, these rates can be updated.

10 Calculate updated TSDC rates by land use type. These are expressed as dollars per unit of development.

Benefits of this approach:

- Addresses limitations of relying on ITE vehicle-only data to develop person trip rates consistent with recommendations for professional practice (Note: the ITE *Trip Generation* Handbook (3rd Edition) recommends using person trip data and the approaches outlined here)
- Applying this approach to the TSDC methodology provides an opportunity to transition to cost per total person trip.
- New person trip data are being collected across the country, and this methodology provides the opportunity to incorporate the newest information and keep up with state-of-the-practice.
- Addresses some of the modal and spatial inequities resulting from the current approach (see critique above).

Next Steps

For the remainder of 2016, the following related next steps are being taken to update the TSDC program:

- **Update TSDC Project List.** City staff is updating the TSDC project list with an extensive public outreach program currently under way. The project team is also revisiting project eligibility criteria. Specifically, staff would like to see projects that increase safety and comfort for walking and biking, such as festival street conversions and plazas in the public right-of-way be included on the TSDC project list.
- **Reviewing Discounts.** As we move towards a revised person-trip based program, it is important to remember that not all person trips have the same impact on the transportation system. Discussions with staff have identified potential ways to recognize this reality within the TSDC fee schedule, including adjustments by location of the city or land use context.
- **Develop person-trip rate schedule**. For each land use type, person trip rates will be developed using available person trip data (local or national studies) or estimated by converting ITE's vehicle trip rates to person trip rates.
- **Alternative Rate Studies.** The project team will update guidance for alternative rate studies so that different and/or unique land uses can be treated fairly within the new TSDC program. Alternative rate studies will allow developers to provide documentation of different person trip rates. Opportunities for alternative rate studies are described in the next section.

Portland TSDC Methodology Workshop

Meeting Notes

July 25, 2016

Purpose:

The purpose of this workshop was to obtain a variety of perspectives on methodologies relating to the update of Portland's Transportation System Development Charges. Input for this workshop comes from city staff, academics, and consultants who perform TSDC analyses.

Attendees:

- PBOT (Christine Leon, Kyle Chisek, Shoshana Cohen, Rich Eisenhauer, Kurt Krueger, Peter Hurley, Jennie Tower, David Nassif, Mark Lear)
- BPS (Eric Engstrom)
- PSU (Kelly Clifton, Kristi Currans)
- Consultant Team (Don Samdahl- Fehr & Peers; Deb Galardi- Galardi Rothstein Group)
- DKS (Ray Delahanty)
- Kittelson (Julia Kuhn)
- MacKenzie (Jennifer Danziger)
- David Evans (Andy Mortenson- sent email comments)

Summary of Discussion

<u>Key topics</u>

- **Project List**
- **Growth Share method**
- **Mode Neutral vs. Split by Mode**
- **Person trips by land use category**
- **Citywide and/or Districts/Corridors?**

Step 1- Project List	• City will use a separate process to develop project list Use a broad definition of the term 'capacity' project. Can TSDC's be used for 'programs' such as freight and TDM? Generally yes as long as such programs are 'capitalized' within the city's CIP. Would like to include safety projects • TSP is focused on non-motorized projects (not many auto only projects)

Step 3: Portion Serving Growth ("Growth Share")	• Growth share method defines percent TSDC eligibility by project. Desire to have as high an eligibility as possible. Higher percent eligible in growth areas means the city can spend more $$ in those growth areas.
	• Fundamental Questions that need to be addressed:
	  ○ How to determine an 'equitable share' of facility costs
	  ○ How to demonstrate the need to increase capacity for future system uses
	• Discussion of growth share models:
	  ○ Model 1 – Equitable share includes both existing and future facilities; capacity need based on pro rata share of person trips
	  ○ Model 2 – Existing facilities assumed to meet existing needs; SDC limited to future improvements only (less existing deficiency costs); capacity evaluated relative to performance criteria (e.g., V/C, LOS, etc.)
	  ○ City is inclined to stay with Model 2 (current approach), but will discuss possibilities for adding reimbursements (allows $$ to be used for any capital projects, including deficiencies).
	• Discussion of deficiencies:
	  ○ Compare any new deficiency method against what was adopted in 2007- use example projects (e.g., I-405 pedestrian bridge is nearly 100% SDC eligible in current method)
	  ○ Interest to develop 'mode neutral' method if possible- removes disparity between modes. If not possible, look to update nonmotorized deficiency method to reduce deficiency percent.
	  ○ Look at alternative performance measures, possibly including safety, mode shares (see work being done on 2016 TSP)

Step 2: Allocate Costs by Mode	• Ideal would be to not split projects by mode given complexities in cost method and desire for simplicity; however would need to find a mode-neutral approach to evaluating deficiencies

Step 4: City Growth Portion- Treat all modes together or separate?	• If develop a mode-neutral deficiency method, then it should be possible to treat all modes together. Difficulty may be to reconcile short trip lengths of nonmotorized trips vs. longer motorized and transit trips.
Step 6: Person Trips- Calculate by mode or total?	• Focus on total person trips • Note that Steps 1-5 could still be split by mode, then combined in Step 6-10. There is no mathematical difference TSDC rates if trips are split by mode or not during Steps 6-10. • Using total person trips can help with conducting alternate rate studies • Determine how this works with development review •
Step 8: **Person Trip Ends by Development Type**- Use new person trip generation data?	• Yes, use new person trip survey data

Need for Geographic variation?	• Should there be variation in trip generation by area of the city (e.g. downtown, transit corridors, and 20-minute neighborhoods)? General support for having ability to adjust trip rates and fees by context area.
	• One possibility: two-tiered
	  ○ Blanket citywide rate based on person trips, PLUS
	  ○ Overlay adjustment based on context areas and/or corridors

Steps 9 & 10: **Land use categories**- appropriate level of detail? **Fee schedule modification**- trip length factor and/or pass-by adjustments?	• <u>Land use categories</u> could be made more general if data supports this. May be tied to person trip data availability in the shorter term. • <u>Trip length</u> data, if retained, should be better matched to multimodal trip making by land use type (i.e. tie to household travel surveys). Current data are old and based on motorized trips only. Seemed to be a general feeling that keeping trip lengths is valuable as an adjustment for certain land use types.
Other Topics • Credits • How best to treat changes in use?	• Look to make credits more flexible • Determine when a previous building went vacant and set up rules

General Comments:

- Ideal Situation- Simplify method to focus on total person trips, but have ability to adjust the resulting rates by land use type and/or geographic context to match city objectives (i.e. use policy levers)
- Avoid 'good trip' vs. 'bad trip' debate- combined person trips helps minimize this concern.
- Focus on what the plan expects to look like, not what is out there now.
- Do annual reports on the TSDC and update the list as needed (not every 10 years!)
- Build data collection into SDC rates
- How does this affect underserved communities?

Next Steps

- Finish methodology research
    - PMT examples- Pasadena, San Francisco
- **Prepare memo**
    1. Summarize pros/cons of approaches tied to city goals
    2. Present recommendations
    3. Show case studies- pick 3 projects from the existing TSDC list to show how they percent eligible and cost allocations would change with the recommended method

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Steve Novick Commissioner **Leah Treat** Director

Transportation System Development Charge Methodology Workshop # 2

Room 315 (3rd Floor) in the Engineering Building (1930 SW 4th Ave, Portland, OR 97201)
Wednesday, September 7, 2016 (1 p.m. to 3 p.m.)

Agenda

1. **Introduction (5 minutes)**
2. **Brief overview of three Methodology Options (20 minutes)**
    a. **Refinements to current system**
    b. **Mode Neutral System**
    c. **System Value Per Trip**
3. **Person Trip Considerations (40 minutes)**
    a. **Focus on what this will mean for users**
4. **Administrative Considerations (40 minutes)**
    a. **Alternative Fee studies**
    b. **Fee Schedule Refinements (discounts)**
    c. **Credits**
5. **Wrap Up/Next Steps in Process (15 minutes)**

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Steve Novick Commissioner **Leah Treat** Director

Transportation System Development Charge
Traffic Engineers - Methodology Workshop # 2

Room 315 (3rd Floor) in the Engineering Building (1930 SW 4th Ave, Portland, OR 97201)
Wednesday, September 7, 2016 (1 p.m. to 3 p.m.)

Notes

Comments from Workshop Participants

1. **Three Methodology Options**
   - Concern about using person trips and *not* separating by mode. SOV trips have more impact than HOV trips on the transportation system. Would want to know the implications of not taking into account the different impacts of trips.
   - Comments on Option 2:
     - How do you implement a mode share or deficiency analysis when the different modes all have such different impacts to the system? (Staff noted that in the Seattle model, the City sets a threshold/goal for how many SOV trips/day they would like to see on roads and works within that framework.)
     - Concern that Option 2 may not be in line with the TSP.
   - Comments on Option 3:
     - Does this methodology option assume TSDC funds would replace all other funding sources? (Staff responded that in order to use option 3, PBOT would want to develop a very defensible rate/result and try to have a rate is similar to the rate today. To be defensible, it should not include deficiencies.)
     - Would prefer that no project be 100% SDC eligible. Projects that are 90% or less eligible will be more defensible.
     - Is there any merit to having a common methodology among the various SDCs that the City administers, for simplicity or defensibility reasons? (Staff responded that there is not much of a reason to standardize methodologies across all SDCs.)
     - Like that Option 3 provides flexibility to set a maximum rate, but then reduce it to be more defensible.

- Concern that because Option 3 makes projects nearly 100% SDC eligible, it doesn't benefit from leveraging other funding sources. If projects are a smaller percentage eligible, then it encourages use of other funding sources to supplement the project. (Staff reminded the group that Option 3 can include a calculation that gets to 100% eligibility, but then make a political decision to only fund some smaller percentage of each project using SDC funds. Mayor Hales did this in the last TSDC process.)

2. Person Trip Considerations

- Comments and concerns about applicability of existing data:
  - Question about what existing data would be available and applicable to Portland by the 2017 timeframe for this TSDC update process. (Staff responded that some data is available now and other less applicable data could be used as an interim tool until we have better data.)
  - Question about what we do with our current large set of vehicle trip data.
  - Concern about transferability of some data, for example, the New York data may not be applicable to Portland.
  - Is the OHAS data that was recently developed usable and applicable to Portland? (Staff responded that yes, it is robust enough to plug into the ITE formula.)
- Comments about the ITE person trip calculation:
  - Concern that the ITE person trip calculation presented in the PowerPoint may be simple but not defensible. (Staff noted that ITE recommends this formula, which gives it credibility.)
  - Concern that the ITE person trip calculation may be *too* simple. It may work well in small towns but perhaps not in Portland. Other members generally agreed that they do want a simple calculation.
- Comments about additional considerations for developing the person trip calculation:
  - Prefer a methodology that is consistent along land uses, and allow alternate rate studies. This provides a good interim solution until we have more data.
  - The calculation should consider trip lengths, too. However, a short trip length may not necessarily mean a lower impact. For example, a short trip in downtown in a high congestion area could have a high impact, whereas a long trip on a rarely used East Portland road could have little impact.
- Comments and questions about impact and alternative rate studies:
  - Question about whether applying this formula would really change the TSDC much. Seems like it would have big implication for impact studies, but perhaps not on the TSDC.
  - What is the relationship between impact studies and the TSDC?
  - Question about how an alternative rate study would differ if it uses the person trip model rather than vehicle trips.
- Are ITE Adjustment Factors available by land use type? (Staff responded yes.)

- Suggestion that perhaps we do not need the calculation to be very precise. We know the data isn't perfect, so we can't expect a wholly accurate person trip calculation. The purpose of the TSDC program is to raise money from developers to accommodate growth. The calculation need not be perfect; it just needs to be defensible. Having some standardized formula plus using some local and national data seems defensible.

3. Administrative Considerations

- Comments on Fee Schedule Refinements (discounts):
    - The suggested geography/neighborhood approach lines up well with TSP goals.
    - There is a political issue of who would get TOD discount/adjustments.
    - The neighborhood approach recognizes that each business benefits from the mode share of other businesses (i.e., a business that by itself does not generate many vehicle trips may benefit from the business next door that does bring in vehicle traffic and customers).
    - Suggestion to differentiate by pattern areas in the Comprehensive Plan.
    - An alternative suggestion is to differentiate by land use types, which would create a 3-tier system (centers, corridors, and other). One concern is that this could discourage development on corridors that are currently auto-oriented but which are trying to move to more non-auto oriented.
    - Suggestion to include a trip length adjustment. A centers/corridors approach could be a proxy for trip length.
    - General concern about discounts is that it could be perceived that discounted businesses are being subsidized by others that pay the full TSDC fee.
    - Need to connect discounts with what is actually happening in the geographic area (ex: businesses in the Lloyd District area may receive a discount because the area has high bike/ped use, yet there is a $13 million Lloyd District bike/ped bridge on the project list. The businesses in the area should pay towards that project.)
- Comments on Credits:
    - Question about how to link to level of service or whether it improves capacity.
    - Concern that if developers can get a 1:1 credit for wholly building small projects, then the City will not receive needed revenue to fund mega projects.
    - Staff posed the question whether a credit should be given to a developer that completes a project beyond its frontage. One response was that if the project is in the TSP, then yes.
    - Some jurisdictions give credit to developers that build a project if it meets certain requirements (not a TSDC project list approach like in Portland). However, these projects need to be on the TSP list. (Staff noted that Methodology Option 3 could be not tied to the TSDC project list.)
    - Politically, developers would react negatively to disallowing credits.

- Credits are the only way to really benefit the developer because the developer is given the option to build projects in in its vicinity that its customers will use.
- Suggestion to have a cap on the amount of the credit. The “good” projects would get more credit.
- Suggestion to allow credits for affordable housing projects and TDM projects.
- Question about how liberally PBOT has distributed credits in the past.

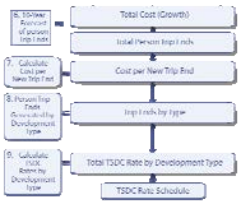
Transportation System Development Charge Update Methodology Workshop #2

Portland Bureau of Transportation

September 7, 2016

Common Element: Use Total Person Trips (Not by Mode)

- Separation by Mode Not Required
- Simplifies Analysis
- Results in Similar Rate Schedule



Existing TSDC Program

- Splits Costs by Modes
- Analyzes Each Mode Separately
- Combines Results at the End into the Rate Schedule

Option 1: Refine Current System

- Retain Overall Structure of Program
- Simplify Method to Split Costs by Mode
- Revise Deficiency Methods to Create More Equity Among Modes

Methodology Options

1. Refine Current System
2. Create a Mode-Neutral System
3. Create a 'System Value per Trip' System

Option 2: Mode Neutral System

Start with Total Project Costs
- No splitting by mode

Remove Costs Not Related to Future Users
- Tie to city's TSP goals

Calculate Total Growth Costs

Option 3: System Value per Trip

- Similar Structure to New Parks SDC Methodology
- Assumes existing transportation system serves existing users
- Maximum SDC based on value of existing system divided by number of existing users
- City sets actual SDC rate based on project list and growth estimates

Adjustments

DIRECT | ADJUSTED | ASSUMPTION

PT: Person Trips
VT: Vehicle Trips
VehOcc: Vehicle Occupancy
Mode: Mode share

Start with the Base Case (Suburban, vehicle oriented)

$PT_{ITE} = (VT_{ITE} * VehOcc_{ITE}) / Mode_{ITE,AUTO}$

Adjust for Urban Contexts (any modes)

$VT_{URBAN} = (PT_{ITE} * Mode_{URBAN,AUTO}) / VehOcc_{URBAN}$

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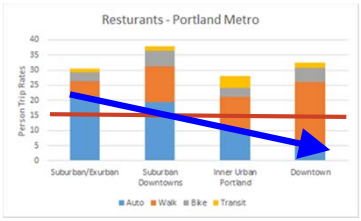
Implications of Options on TSDC Eligibility

Refer to attached table of example projects

Example - Restaurants in Portland

Examining average person trip rates by mode across Portland

PT_{ITE} (estimated) = ~15.8
Given: $VehOcc_{ITE}$ = 1.52
Assumed: $Mode_{ITE,AUTO}$= 95%



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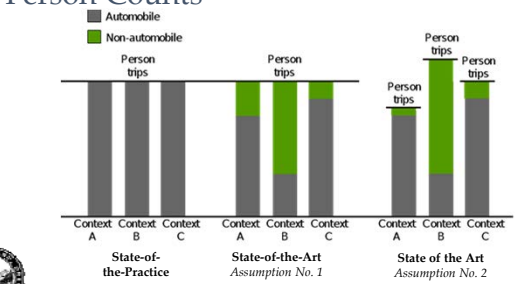
Person Counts



9

New Site-Level Data

- ITE's 3rd edition *Handbook*
  - Person trips, mode shares, and vehicle occupancy
  - Crude categorical definition of built environment
  - Including previous studies:
    - Portland State University 2012 study
    - Smart Growth Trip Generation Study, Phase I: University of California--Davis 2013 study
    - Western District ITE - student data collections

12

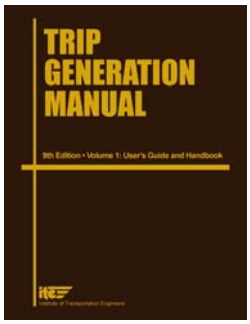
New Site-Level Data!

- ITE's 4th edition *Handbook* early 2017 - see (*Bochner et al. 2016*)
  - Incorporate an estimated ~500 urban data points
  - Reconsidering level of transparency and provisions of urban location and context
  - Annual updates for data
  - Upcoming call for data

13

State-of-the-Practice

- Off-the-shelf reference for Transportation & Land Use Planning
- Manual includes methodological approach & vehicle trip rate data
- By land use type
- Data/methods historically focus on vehicle trips only (this is changing)
- Heavily biased toward suburban, automobile-oriented locations
- No information about urban or social context of sites



16

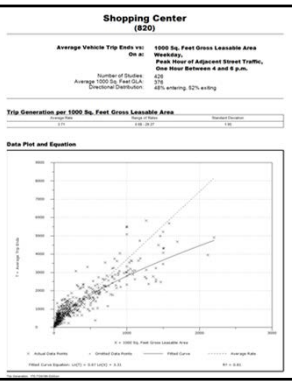
On-going Data Collections

- Affordable Housing
  - 20 locations in California (PSU/Caltrans)
  - 60 locations in LA (vehicle only, City of LA)
- Smart Growth Trip Generation, Phase II
  - 17 Office, 13 housing, 2 "other" locations in California (TTI/Caltrans)
- TODs
  - 10 TODs across the US (UUtah/NITC)
- New York DOT
  - 160 sites: residential, office, local retail, hotel, medical offices, supermarkets, restaurants
- San Francisco Planning Dept.
  - 25 restaurants and market-rate housing
  - Vehicle trips and parking
- Arlington Mobility Lab
  - Various land uses
  - Vehicle and/or person trips
- Washington, D.C. DOT
  - 50+ market-rate housing and lodging

14

State-of-the-Practice

- Historic Data
  - 550 sites
  - ~5,000 data points
  - 172 land uses
- Average rates or regressions
- Vehicle trip counts
- Based on:
  - Square footage
  - Employees
  - Seats
  - Dwelling units



Innovations in Data & Methods

- Bellevue
- Bellingham
- San Francisco
- New York City
- Washington, D.C.
- California

15

Things are changing

Sam Beebe / Flickr: https://www.flickr.com/photos/sbeebe/5817452248/

Your old road is rapidly aging.
Please get out of the new one If you can't lend your hand, For the times they are a-changin'.
Bob Dylan

- Communities want more out of their transportation system
- Want to plan for all modes
- Developing new performance measures
- Collecting new data
- Realizing some of the limitations of historic practice
- New research

18

Grounded in Behavi

C. Buchelli: https://www.flickr.com/photos/elaxolotl/867767071

- People generate trips (not land uses)
- People make trips (not cars)
- Travel behavior is the study of how people make decisions about activities, transportation and choices that frame transport options
- Based (largely) upon economics and psychology
- 30 years + of research on the built environment & travel outcomes
- None of this is considered in current methodologies for evaluating the impacts of new development on transportation

19

Consider All Modes

Current methods were developed around the automobile…

…contributing to the marginalization of other modes

TIA methods & data need to consider all modes:

- Multimodal planning
- Evaluation of performance goals
- Control for non-automobile modes in estimation
- Financing infrastructure
- Future innovations

20

Methods are Inadequate

- Only estimate vehicle trips
- Adjustments to ITE methods are band aid
- Rely on too many assumptions
- Limited set of independent variables
- Not consistent with theory

21

Methods are Inadequate (con't)

- Inability to link to goals & plans
- Focus on peak hour
- Cannot compute new performance measures
- Data gaps limit advancement of new methods

22

Data gaps

- People
- All modes
- Person trips
- Pricing
- All urban environments
- More land use types
- Date & location info

23

Data gaps (con't)

- Changes over the day, week, season
- Vehicle occupancy
- No access
- Trip length distribution
- Travel time
- Site & immediate environment

24

Issues

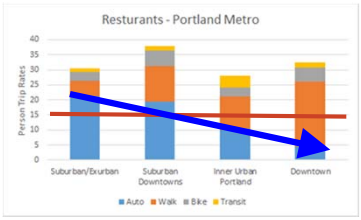
- Most sites located in suburban, vehicle-oriented places
- Little/no consideration of context, TOD, mixed use
- Peak hour, vehicle trip focus
- Majority of data represents "stand alone" locations
- Impacts beyond immediate site
- Site level information (e.g., parking, orientation)

25

Example - Restaurants in Portland

Examining average person trip rates by mode across Portland

PT_{ITE} (estimated) = ~15.8
Given: $VehOcc_{ITE}$ = 1.52
Assumed: $Mode_{ITE,AUTO}$= 95%



28

Person Counts

- A better starting point for establishing trip generation rates
- Understanding the overall demand for activities
- Ex: assigning _____ to person trips is secondary
  - Mode share
  - Trip length
  - Space of user

Protocols:

- ITE *Trip Generation Handbook*, 3rd (and soon to be 4th) edition
- Reflects manual counts and intercept surveys only

26

New Site-Level Data!

- ITE's 3rd edition *Handbook*
  - Person trips, mode shares, and vehicle occupancy
  - Crude categorical definition of built environment
  - Including previous studies:
    - Portland State University 2012 study
    - Smart Growth Trip Generation Study, Phase I: University of California--Davis 2013 study
    - Western District ITE - student data collections

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Adjustments

DIRECT | ADJUSTED | ASSUMPTION

PT: Person Trips
VT: Vehicle Trips
VehOcc: Vehicle Occupancy
Mode: Mode share

Start with the Base Case (Suburban, vehicle oriented)

$PT_{ITE} = (VT_{ITE} * VehOcc_{ITE}) / Mode_{ITE,AUTO}$

Adjust for Urban Contexts (any modes)

$VT_{URBAN} = (PT_{ITE} * Mode_{URBAN,AUTO}) / VehOcc_{URBAN}$

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New Site-Level Data!

- ITE's 4th edition *Handbook* early 2017 - see (*Bochner et al. 2016*)
  - Incorporate an estimated ~500 urban data points
  - Reconsidering level of transparency and provisions of urban location and context
  - Annual updates for data
  - Upcoming call for data

30

On-going Data Collections

- Affordable Housing
  - 20 locations in California (PSU/Caltrans)
  - 60 locations in LA (vehicle only, City of LA)
- Smart Growth Trip Generation, Phase II
  - 17 Office, 13 housing, 2 "other" locations in California (TTI/Caltrans)
- TODs
  - 10 TODs across the US (UUtah/NITC)
- New York DOT
  - 160 sites: residential, office, local retail, hotel, medical offices, supermarkets, restaurants
- San Francisco Planning Dept.
  - 25 restaurants and market-rate housing
  - Vehicle trips and parking
- Arlington Mobility Lab
  - Various land uses
  - Vehicle and/or person trips
- Washington, D.C. DOT
  - 50+ market-rate housing and lodging

31

Fee Schedule Adjustments?

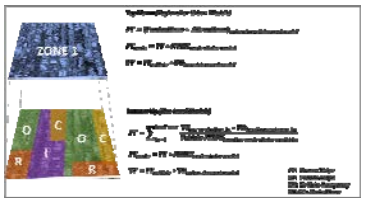
Person trip based fee seems fairer

But, do all person trips have the same impact on the system?

Yes- Because most of the TSDC projects are multimodal.

No- Inherently, non-motorized and transit person trips use less of the available capacity

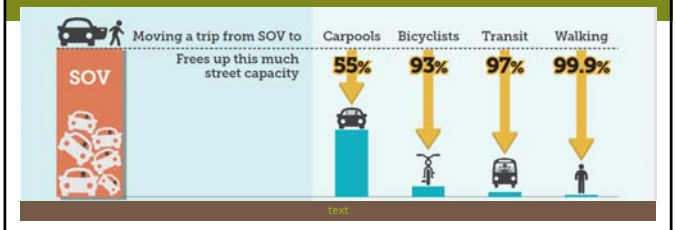
Tool development



- Make use of multiple tools, some of which already exist
- Sensitive to a variety of policies:
  - Built environment
  - Demand management
  - Pricing
  - Transportation investments
- Considers socio-economics of people and place
- Straightforward & easy to use (but not simple)

32

Comparison of Street Capacity Use by Mode



Administrative Considerations

- How will the changes affect alternative fee studies?
- Will there be refinements (discounts) to the fee schedule? (see slides below)
- Will credit procedures be modified?

Example

One way to approach this differential impact is to translate trips into passenger car equivalents (PCEs).

This was done in Seattle by area of the city:

- Urban Center
- Hub Urban Village
- All other areas

	SOV	HOV	Transit	Walk	Bike	Total	Avg. Weighted PCE / Person Trip
PCE Factor	*100 %*	*45%*	*3%*	*0.1%*	*7%*	-	
Seattle (Not in UC/HUV)	39%	33%	11%	14%	4%	100%	0.543
HUV	36%	30%	15%	16%	4%	100%	0.503
Urban Center	27%	27%	31%	22%	4%	100%	0.354

Questions for Portland

Do we want to further differentiate person trips?

Would we consider a downtown district vs. everywhere else?
OR
Handle on a case-by-case basis?

If so, are PCEs an appropriate method or are there others to consider?

Should non-spatial variables (design characteristics, transit accessibility, parking restrictions) be considered to reduce fees?

Administrative Considerations

- How will the changes affect alternative fee studies?
- Will there be refinements (discounts) to the fee schedule? (see slides below)
- Will credit procedures be modified?

Presentation to Portland City Council
December 14, 2016

Person Trip Analysis

December 14, 2016

WE KEEP PORTLAND MOVING.

PBOT

Agenda

- Why Person Trips?
- Changing the Practice
- Our Approach
- Next Steps



Assessing Transportation Impacts

- Historically, interested in traffic impacts on adjacent facilities
- Only consider vehicle trips
- Performance measures are level of service (volume to capacity measure, delay) for facility or intersection
- Focus on peak hour

Caliper Corporation; accessed September 2016
http://www.caliper.com/transmodeler/transmodeler-se-analysis-software.htm

Things are changing

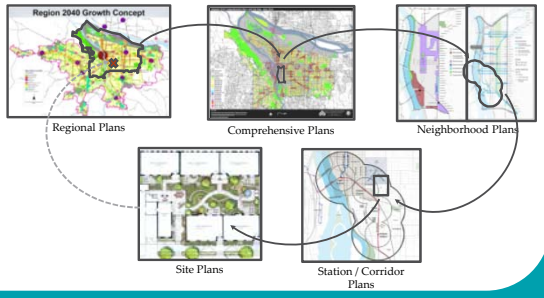
Sam Beebe / Flickr: https://www.flickr.com/photos/sbeebe/5817452248/

Your old road is rapidly aging. Please get out of the new one If you can't lend your hand, For the times they are a-changin'.

Bob Dylan

- Communities want more out of their transportation system
- Want to plan for all modes
- Developing new performance measures
- Collecting new data
- Realizing some of the limitations of historic practice
- New research

Consistency Across Scales



Putting People First

C. Buchelli: https://www.flickr.com/photos/elaxolotl/867767071

- People generate trips (not land uses)
- People make trips (not cars)
- 30 years + of research on the built environment & travel outcomes
- None of this is considered in current methodologies

Consider All Modes

Current methods were developed around the automobile…
…contributing to the marginalization of other modes.

Methods & data need to consider all modes:
- Multimodal planning
- Evaluation of performance goals
- Financing infrastructure
- Future innovations

7

How to Change Practice?

Shift from "vehicle trips" to "person trips"

- A better starting point for establishing multimodal demand
- Collect new data or adjust existing data
- Distribute person trips across modes based upon current & planned conditions
- Develop new planning tools
- Link to plans and methods at other scales

8

Current Efforts

Many cities/states/universities advancing state of the practice
- San Francisco; NYC; DC
- Caltrans Smart Growth Infill I & II; Affordable Housing Study (PSU)
- NITC funded research (PSU, Utah)

ITE's new recommendation in 3rd edition of the *Trip Generation Handbook*

9

Opportunities for Portland

- Transform the ways impacts of new development are assessed
- Better consideration of differential impacts of various modes
- Link site development to plans/tools at other scales
- Plan for what we want; not reproduce past trends

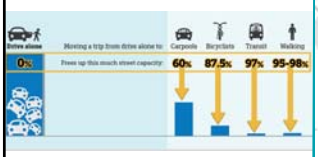
10

Rolling Best Practices into TSDCs

- ✓ Include new person trip survey data where available
- ✓ Adjust existing vehicle trip data for land uses with no person trip data
- ✓ Develop person trip data collection program for Portland
- ✓ Update the trip rates as new data become available

Not all Person Trips Have the Same Impact

Not all Person Trips Have the Same Impact



Next Steps for TSDC Update

- Conducting Outreach (eg, Online Open House)
- Prepare new TSDC eligible project list
- Implement new Person Trip Data
- Calculate new TSDC rates for various land uses
- Adopt TSDC update in mid-2017

Person Trip Analysis

QUESTIONS?

Transportation System Development Charge

Meeting with Traffic Engineers

Wednesday, April 5, 2017

Overview

PBOT provided a presentation that explained the methodology used to calculate new rates, a number of rate scenario options, and discounts and adjustments to these rates. Participants then discussed and provided their input and recommendations on how to set the new rate.

Discussion

- Will the city still keep the **Overlay Districts** or modify the rates in those districts? This may influence where development occurs.
- Support for some gradations of the **Residential** rates tied to size. However, since the identified size reductions are not directly tied to actual survey data, how would those rates also be used as part of traffic impact fee studies?
- Concerned about rate increases for **Supermarkets**. The group discussed the differences in size, type, and location of supermarkets within the city. The new person trip data for New Seasons may not match other types of stores. Generally supported the concept of applying the general retail/shopping rate to supermarkets in mixed-use settings.
- Supported retaining **credits** for eligible projects.
- Supported streamlining process for **tenant improvements** to remove reanalysis of many retail changes in use.
- Will there be changes in **traffic study requirements?** How would emphasis of **TDM requirements** and actions affect the traffic analyses and the TSDC rates? Perhaps traffic studies would only focus on safety and immediate site access impacts.

APPENDIX C – EXISTING SYSTEM VALUE CALCULATIONS

MEMORANDUM

Date: February 6, 2017

To: Christine Leon, PBOT

CC: Kyle Chisek, Rich Eisenhauer, PBOT

From: Sarah Keenan, Carmen Kwan, and Don Samdahl, Fehr & Peers

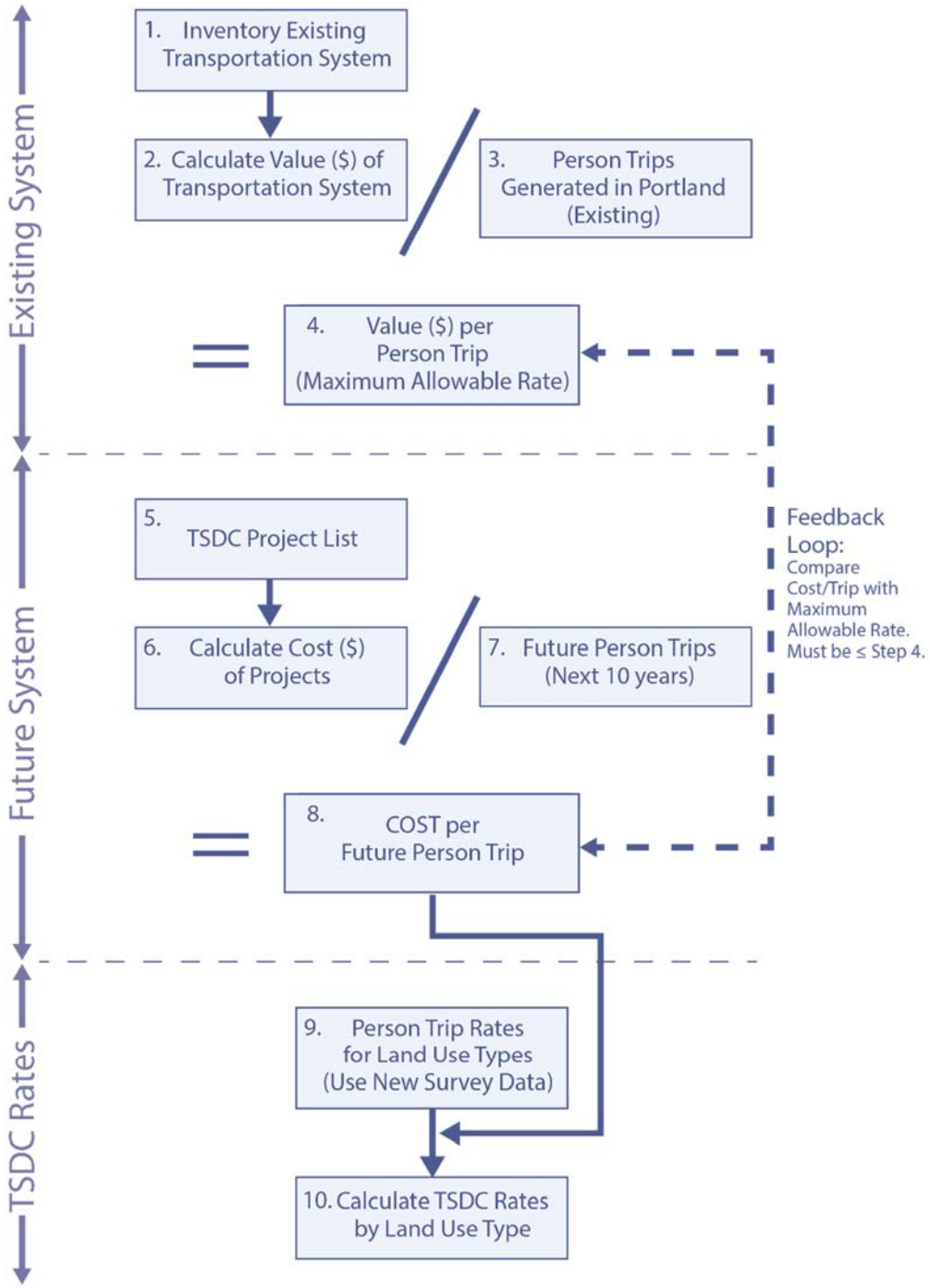
Subject: TSDC Cost Per Trip Calculation Summary

SE16-0459

Over the past six months, the Fehr & Peers team has been working with PBOT staff to explore a new methodology for calculating TSDC rates. The methodology is described in a memo to PBOT staff (see ***TSDC Methodology Recommendations, November 2, 2016***). This memorandum provides specific details on two key calculations:

- **The maximum allowable TSDC rate**, which is calculated by summing the existing value of the entire transportation system, and dividing it by the existing number of person trips per PM peak hour.
- **The recommended TSDC rate**, which is based on the total value of the TSDC project list, divided by forecast growth in PM peak hour person trips over the next 10 years.

The figure on the next page summarizes the proposed approach, with details provided below. Note that the two main calculations described in this memo are the maximum allowable TSDC rate (step 4) and recommended TSDC rate (step 8).


Existing System
1. Inventory Existing Transportation System
2. Calculate Value ($) of Transportation System
3. Person Trips Generated in Portland (Existing)
4. Value ($) per Person Trip (Maximum Allowable Rate)
Future System
5. TSDC Project List
6. Calculate Cost ($) of Projects
7. Future Person Trips (Next 10 years)
8. COST per Future Person Trip
Feedback Loop: Compare Cost/Trip with Maximum Allowable Rate. Must be ≤ Step 4.
TSDC Rates
9. Person Trip Rates for Land Use Types (Use New Survey Data)
10. Calculate TSDC Rates by Land Use Type

Maximum Allowable TSDC Rate

This maximum allowable rate is calculated by summing the existing value of the entire transportation system, and dividing it by the existing number of person trips per PM peak hour. The resulting rate will be the maximum allowable TSDC rate per PM peak hour person trip, as shown in Steps 1-4 in the figure above.

The inventory of the existing transportation system was based on the Portland Bureau of Transportation's Asset Status & Conditions Report. The 2015 report is a complete inventory of the existing transportation system, including the replacement value and the percent meeting specific condition requirements for each facility. The following facilities were included in the calculation of the transportation system value:

- Pavement
- Sidewalks
- Bicycle Network
- Structures
- Signals
- Streetcars
- Traffic Calming Devices
- Street Lights
- Pavement Markings
- Right-of-Way

The value of the existing transportation system was calculated by subtracting the existing deficiency value (total unmet need from the Asset Status & Conditions Report) from the replacement value. The value of the existing transportation system was calculated to be $9.8 billion.

The City of Portland travel demand model provided the basis for the exiting year PM peak hour person trips. The travel demand model provides 2010 and 2035 PM peak two hour person trip data. Linear distribution was used to estimate 2017 PM peak two hour person trips. Assuming close to constant distribution between two hours, a factor of 1/1.9 was used to convert two hour person trips to peak hour person trips. During the PM peak hour, the City of Portland generates approximately 501,263 person trips.

Therefore, the maximum allowable TSDC rate was calculated to be $19,577 per PM peak hour person trip.

Existing Value System

Facility	Quantity	Measurement	Replacement Value	Less Enhanced Level of Performance Costs	Net Value for TSDC
Pavement					
Street Improvements- Arterial/Collector	1,869	lane mile	$ 3,219,235,668		$ 3,219,235,668
Total	1,869		**$ 3,219,235,668**	**$ -**	**$ 3,219,235,668**
Sidewalk System					
Sidewalks	8,946,538	square yards	$ 1,087,004,367		$ 1,087,004,367
Curbs	3,275	centerline miles	$ 518,760,000		$ 518,760,000
Corners	37,987	number	$ 171,701,240	$ 90,939,710.00	$ 80,761,530
Total			**$ 1,777,465,607**	**$ 90,939,710**	**$ 1,686,525,897**
Bicycle Network					
Bikeways	345	centerline miles			*Cost included with roadways
Structures					
Bridges	157	number	$ 600,710,857	$ 231,426,084.00	$ 369,284,773
Retaining Walls	564	number	$ 100,179,467		$ 100,179,467
Stairways	190	number	$ 4,759,553		$ 4,759,553
Guardrails	23	centerline miles	$ 5,464,800		$ 5,464,800

Elevator	1	number	$ 500,000		$ 500,000
Total			**$ 711,614,677**	**$ 231,426,084**	**$ 480,188,593**
Signals					
Signals	3,728	number	$ 289,989,548	$ 138,633,923	$ 151,355,625
Total			**$ 289,989,548**	**$ 138,633,923**	**$ 151,355,625**
Streetcar					
Streetcar	17	number	$ 66,010,470		$ 66,010,470
Tracks	15	centerline miles	$ 66,409,200		$ 66,409,200
Total			**$ 132,419,670**	**$ -**	**$ 132,419,670**
Traffic Calming Devices	1,714	number	3,873,400		3,873,400
Total			**$ 3,873,400**	**$ -**	**$ 3,873,400**
Street Lights					
Street Lights	55,864	number	202,583,969	41,998,438	$ 160,585,531
Total			**$ 202,583,969**	**$ 41,998,438**	**$ 160,585,531**
Street Signs					
Street Signs	235,830	number	20,225,200		$ 20,225,200
Total			**$ 20,225,200**	**$ -**	**$ 20,225,200**
Pavement Markings					
Pavement Markings	various	lane miles, number	$ 10,564,115		$ 10,564,115

Total			**$ 10,564,115**	**$ -**	**$ 10,564,115**
Total Infrastructure			**$ 6,367,971,854**	**$ 502,998,155**	**$ 5,864,973,699**
				8%	
Total Right-of-Way	1,869	centerline miles	**$3,948,389,701.90**		$ 3,948,389,702
	arterials/collectors only				
TOTAL SYSTEM VALUE			**$ 10,316,361,556**	**502,998,155**	**$ 9,813,363,401**
			Existing PM peak hour Person Trip End		501,263
			Cost/PM peak hour Person Trip End		$ 19,577

Source: Asset Status and Conditions Report (2015)

APPENDIX D - PERSON TRIP MEMORANDUM

FEHR PEERS

MEMORANDUM

Date: February 22, 2017

To: Rich Eisenhauer, Anne Hill- PBOT
Cc: Kelly Clifton, Kristi Currans, PSU

From: Donald Samdahl, Carmen Kwan, Fehr & Peers

Subject: Person Trip Generation Survey Summary

SE16-0459

This memo summarizes the person trip generation surveys compiled from various available sources to assist with the City of Portland's TSDC update.

Data Collection

Portland's TSDC will be updated to reflect a charge per person trip generated by a new development. To assist with this update, Fehr & Peers and PSU compiled data for PM peak hour person trips generated and mode shares (when available) for various land use types was. Data sources include the following:

- Caltrans Project P359, *Trip Generation Rates for Transportation Impact Analyses of Smart Growth Land Use Projects* (Texas A&M Transportation Institute, September 2016)
- District of Columbia Department of Transportation ,*MXD+ Model Development Report* (DDOT and Fehr & Peers, September 2016)
- City and County of San Francisco *TDM Framework for Growth: Summary of Survey Results (Fehr & Peers, May 2015)*
- Portland State University, *Contextual Influence on Trip Generation Main study* (Portland State University, 2012)
- Western District ITE, *Trip Generation Data Compilation*(Various universities and years including: MSU, 2009; UCLA 2015; PSU, 2009-2010; UC Berkeley, 2012-2013)

Person Trip Surveys Relevancy to Existing TSDC Rates

The land use categories in the existing TSDC fee schedule are shown in **Table 1**. We also identify if person trip generation data s are available for the TSDC land use categories and provide relevant comments in the far right column. As can be seen in Table 1, person trip data are available for at least one land use type within each major category, except for the Industrial category. Note that many of the residential sites surveyed were multi-family developments that included some amount of retail on site.

TABLE 1. EXISTING TSDC LAND USE TYPES AND RELEVANT PERSON TRIP GENERATION SURVEYS COLLECTED

Type of Development	Unit of Measure	Current TSDC Rate Per Unit	Available Person Trip Survey Info?	Comments
Residential				
Single Family (1 to 3 units)	dwelling	$2,814.00		
Multiple Family (4 or more units)	dwelling	$2,024.00	X	Several sites were multi-use buildings
Senior Housing	dwelling	$973.00		
Accessory Dwelling Unit	dwelling	Exempt		
Rowhouse/Townhouse/Condo	dwelling	$1,769.00	X	Several sites were multi-use buildings
Nursing Home	bed	$688.00		
Congregate Care/Asst Living	dwelling	$508.00		
Commercial – Services				
Bank	sq ft/GFA	$24.49		
Day Care	sq ft/GFA	$3.00		
Library	sq ft/GFA	$9.09		
Post Office	sq ft/GFA	$17.49		
Hotel/Motel	room	$2,597.00	X	Limited sites surveyed. Sites also had retail uses on site.
Service Station/Gasoline Sales	VFP	$13,177.00		
Movie Theater	screen	$31,569.00		
Carwash	wash stall	$14,819.00		
Health Club	sq ft/GFA	$8.24		
Marina	berth	$740.00		
Commercial - Institutional				
School, K-12	sq ft/GFA	$2.75	X	Did not capture mode share
University/College	student	$421.00		
Junior/Community College	student	$303.00		

Type of Development	Unit of Measure	Current TSDC Rate Per Unit	Available Person Trip Survey Info?	Comments
Church	sq ft/GFA	$2.63		
Hospital	sq ft/GFA	$4.07		
Park	acre	$581.00		
Commercial – Restaurant				
Restaurant	sq ft/GFA	$19.64	X	Majority of sites surveyed were high-turnover (sit-down) restaurants
Quick Service Restaurant (Drive-through)	sq ft/GFA	$45.43		
Commercial - Retail				
Miscellaneous Retail	sq ft/GLA	$4.78		
Shopping Center	sq ft/GLA	$5.99	X	Only 1 site surveyed
Supermarket	sq ft/GFA	$14.32	X	
Convenience Market	sq ft/GFA	$51.08	X	
Free Standing Discount Store	sq ft/GFA	$9.35		
Car Sales New/Used	sq ft/GFA	$8.91		
Commercial - Office				
Administrative Office	sq ft/GFA	$3.64	X	Several sites included retail or other services on site.
Medical Office/Clinic	sq ft/GFA	$9.57		
Industrial				
Light Industrial/Manufacturing	sq ft/GFA	$2.25		
Warehousing/Storage	sq ft/GFA	$1.18		
Self-Storage	sq ft/GFA	$0.87		
Truck Terminal	acre	$30,035.00		

Source: Fee schedule: City of Portland; Person Trip Surveys: Fehr & Peers, Portland State University, 2017.

A total of 261 surveys were compiled for this project. A summary of the number of relevant surveys for each land use category, along with the survey sources, are summarized in **Table 2**.

TABLE 2. PERSON TRIP GENERATION SURVEY SUMMARY

Land Use Type	Total Survey Sites	Survey Source				
		Caltrans Smart Growth	DDOT MXD Model Development	SF TDM Framework	Portland Trip Generation Main Study	Western District ITE
Residential	111	X	X	X		X
Office	27	X	X	X		X
Retail	59	X		X	X	X
Services	58	X			X	
Hotel	3		X			
Other	3					X
Total	261					

Source: Fehr & Peers, Portland State University (2017).

Additional Resources

Additional person trip generation surveys will be released by the Institute of Transportation Engineers (ITE) later this year. The Institute expects about 200 study sites, comprising probably five or six land use types. Many of these data will overlap with the data we assembled but will also include the following:

New York City- Approximately 50 person trip surveys were collected in New York in 2016 for the following land uses:

- Restaurant (fast food and quality)
- Medical Office
- Supermarket

Arlington County (VA) - Survey data submitted to ITE. Details are unavailable at this time.

This information could be used to update the TSDC at a later date when data becomes available.

Person Trip Generation for Missing Land Use Categories

Person trips will have to be estimated for all land use types where we do not have actual person trip counts. Person trips per unit can be estimated by multiplying vehicle trips per unit by average

vehicle occupancy, divided by the motorized mode share. This method is consistent with the calculations currently used by the city in the TSDC fee schedule.

For the TSDC update, we will have better data to use in factoring the vehicle trips to person trips. Two newer data sources are available:

1. Actual person trip survey results- We can use the available person trip survey data (see Tables 1 and 2) to calculate actual person/vehicle trip conversion factors that can be applied to other land uses within a category.
2. New vehicle occupancy and mode share data- The *ITE Trip Generation Handbook, 3rd Edition* has the most up-to-date information with respect to vehicle occupancy and mode share data (see specifically Tables C.2 and C.3 in Appendix C)

   For the PM peak period, the following land uses in the ITE handbook have updated vehicle occupancy and mode share data:

   - Apartments
   - Motels
   - Offices
   - Shopping centers
   - Bowling alleys
   - Banks
   - Quality restaurants
   - High turn restaurants
   - Drive-thru restaurant

These land use types were selected so the data would be transferrable to similar land uses. Table C.3 also provides vehicle occupancy rates for several other land use types, such as airports, industrial uses, etc.

APPENDIX E – COMMUNITY ENGAGEMENT REPORT

PBOT

PORTLAND BUREAU OF TRANSPORTATION

TRANSPORTATION SYSTEM DEVELOP CHARGES UPDATE PROCESS

Community Engagement Report and Appendices

April 2017

Prepared for:

Portland Bureau of Transportation

Prepared by:

JLA Public Involvement, Inc.
1110 SE Alder Street, Suite 301
Portland, OR 97214

jla public involvement

PBOT TSDC Update Process

Community Engagement Overview

A. Project and Public Involvement Overview

The City of Portland Bureau of Transportation began an update process for Portland's TSDCs in 2016. The process includes updating the methodology used to calculate TSDCs, rates that developers pay, and the list of projects eligible for TSDC-funded investments.

As part of the project, PBOT developed an outreach strategy to engage members of the public and key stakeholders in the update process. Outreach activities included:

- **Meetings with the PBOT Bureau and Budget Advisory Committee** to provide project information and updates, and to solicit feedback.
- **Three workshops with traffic engineers** and PBOT technical staff to provide input on the TSDC methodology update and rate options.
- **Online open house** to solicit input on the draft TSDC project list.
- **Rate setting workshop** for developers, neighborhood interests, and the business community to provide input on the draft TSDC rate.
- **Presentations and briefings to nearly two dozen community groups**, mode-specific advisory committees, developers and industry interests, and neighborhood district coalitions and associations.

- Meetings with a **Technical Advisory Committee** to provide technical assistance on the project list, methodology, and rate setting.
- Development of **outreach and notification materials**, including fact sheets, email blasts, web content, project video, social media posts and advertising, and display boards in the permitting office lobby.

This report provides a brief overview of outreach activities and comments received. Appendices are included that provide more detailed summaries of outreach activities and communications materials.

B. Who Participated and Level of Engagement

PBOT Bureau and Budget Advisory Committee

Throughout the project, the team met with the PBOT Bureau and Budget Advisory Committee (BBAC), who discussed the methodology and draft project list, provided input into the public outreach process, and promoted the online open house and engagement with the general public. BBAC members are representative of neighborhood, business, modal, and social justice interests and include:

- Arlene Kimura
- David Sweet
- Elaine O'Keefe
- Heather Bowman
- Heather McCarey
- Kaliska Day
- Kyle Buss
- Laura Becker
- Tony Lamb
- Meesa Long
- Momoko Saunders
- Orlando Lopez Bautista
- Pia Welch
- Ruthanne Bennett
- Ryan Hashagen
- Samuel Gollah
- Thomas Karwaki

Workshops with Traffic Engineers

PBOT engaged local traffic engineers in four meetings to provide input on the TSDC methodology and proposed rate. The meetings included:

- Methodology Workshop #1 with Traffic Engineers, July 25, 2016
- Methodology Workshop #2 with Traffic Engineers, September 7, 2016
- Rates Workshop with Traffic Engineers, April 5, 2017

Online Open House

PBOT encouraged community members to provide input on the TSDC project list through an online open house that was available from January 20, 2017 through April 4, 2017. Approximately 1,292 members of the public visited the online open house, and 254 submitted comments. Additionally,

PBOT ran an advertising campaign using Facebook that reached about 33,600 people, 700 of which clicked the online open house link.

Outreach conducted to engage the public in the online open house included:

- Email blasts to the interested parties list, PBOT Transportation mailing list, and Gov.delivery list.
- Project video that was streamed on a large screen at the Development Services Center.
- Facebook posts using the PBOT Facebook page and partner sharing
- Informational boards displayed at the Development Services Building
- Information and display boards at the Fix Our Streets Open House
- Announcements at informational briefings with community and neighborhood organizations, modal committees, and developer and real estate interests
- Announcements on Next Door
- Facebook advertising: PBOT developed two Facebook ads that ran on social media for a two week period (February 7-21, 2016). One ad included a static image of the project, and another included the project video. Both ads directed viewers to the online open house.

Rate Setting Workshop

PBOT engaged developers, builders, neighborhood interests, and members of the business community in a workshop to provide input on the new TSDC rate. PBOT provided a presentation that explained the methodology used to calculate new rates, a number of rate scenario options, and discounts and adjustments to these rates. Participants then discussed and provided their input and recommendations on how to set the new rate. The meeting was held on Tuesday, April 4, 2017. 12 developers, BBAC members, and business community members attended.

Community Meetings and Briefings

PBOT staff attended **23 community group meetings** to provide a briefing about the TSDC update process and solicit input on the TSDC project list. The stakeholder groups included neighborhood associations, transportation work groups, developers and real estate groups, and business organizations. PBOT met with the following groups:

Organization Name	Date
Streetcar Advisory Committee	10/2016
Hollywood Neighborhood Association	1/26/2017
Pearl District Neighborhood Transportation Committee	2/7/2017
East Portland Neighborhood Office - Land Use & Transportation Committee	2/8/2017
Neighbors West- Northwest Board	2/8/2017
Southwest Neighbors Inc.	2/15/2017
Bureau and Budget Advisory Committee (BBAC)	2/16/2017
Development Review Advisory Committee (DRAC)	2/16/2017

Trade Association for Building Owners and Managers (BOMA)	2/17/2017
Portland Business Alliance (PBA) Transportation and Central City Committees	2/21/2017
Pedestrian Advisory Committee (PAC)	2/21/2017
Institute of Transportation Engineers	2/27/2017
Portland Metro Association of Realtors (PMAR)	2/28/2017
Home Builders Association (HBA)	3/7/2017
Portland Freight Committee (PFC) Workgroup	3/8/2017
Columbia Corridor Association	3/17/2017
Commercial Real Estate Development Association (NAIOP)	3/17/2017
Central Eastside Industrial Council – Parking and Advisory Committee (CEIC)	3/22/2017
Central Eastside Interstate Coalition	3/22/2017
Go Lloyd	4/6/2017
Portland Business Alliance	4/11/2017
Bicycling Advisory Committee	4/2017
SE Uplift Neighborhood Coalition	4/17/2017

Technical Advisory Committee

PBOT and project staff met with a Technical Advisory Committee throughout the project. The TAC used the City of Portland's Transportation System Plan (TSP) project list as a basis to develop the draft TSDC project list. After public review and comment on the draft TSDC project list, the TAC helped refine the TSDC project list to ensure it was consistent with the TSP, supportive of public comment, and supportive of project goals. The TAC also provided additional technical assistance on the methodology and rate schedule.

C. What We Heard

Below is a brief overview of comments on the project list and proposed TSDC rates from the various interest groups. More detailed summaries follow in the appendices to this report.

Comments on project list

- **Online Open House participants** indicated high levels of support for bike/ped and transit projects, and projects in underserved areas of Portland. There was relatively strong support for projects that have a funding match. There was mixed support for prioritizing projects that benefit vehicle traffic/freight.
- **Neighborhood coalition groups** asked questions and made comments about projects that were related to their coalition or neighborhood area, and some noted the need for projects on specific streets and areas to offset the impacts of new and increased development. Some expressed a need for equity in the project list and in the outreach process. There was interest in understanding how TSDC dollars have been allocated across geographies. Generally, there was support for many active transportation projects from these groups.

- **Developer, real estate and business groups** were more interested in the rates and how the rates are calculated, and had fewer comments on the project list. There was some concern that the projects on the list did not do enough to alleviate congestion, and support for more auto-related improvements.
- **Freight representatives** provided a list of priority projects to improve freight movement.

Comments on proposed TSDC rate

- **Developer, real estate and business groups** noted the importance of synchronizing TSDC rates with the City's overarching goals and policies. They support credits, discounts, or other lower-rate structures to incentivize the types of development that meet city goals and policies (such as supermarkets to reduce food deserts, brownfields development, central-city industrial development, and small residential development).

  They also cautioned against looking at the TSDC fee in isolation, noting that a high TSDC rate, coupled with all other development costs in Portland, could stifle development. They were especially supportive of a greater TSDC discount to build in the Central City area, as well as credits for building offsite improvements and facilities that support bike-ped travel.

D. What PBOT did with input

Project List Input

PBOT synthesized all input from the online open house, community briefings and meetings, and other comments related to the draft TSDC project list. After review by planning staff regarding consistency with the TSP, PBOT also added a number of projects suggested during public review. Staff reviewed the final project list to ensure that it:

- Included projects that would accommodate development growth and improve multimodal travel.
- Included a broad range of projects that benefit all geographic areas of the city.
- Reflected community input and addressed key concerns.

TSDC Methodology and Rate Input

Developers, the business community, and traffic engineers made a number of comments on the proposed rate and methodology used to come up with the rate. PBOT considered this input in making its rate recommendation to City Council.

List of Appendices

1. **PBOT Bureau and Budget Advisory Committee Meetings**: meeting summaries

2. **Online Open House Summary**

3. **Rate Setting Workshop**: agenda, summary and PowerPoint presentation

4. **Community Briefings and Meetings and Comment Log**: summary of community briefings, log of comments, comments submitted via email and letters, and select PowerPoint presentations

5. **Outreach and Notification Materials:** Facebook ad, fact sheets, display boards and email blasts

Appendix 1:

PBOT Bureau Advisory and Budget Committee Meetings

PBOT
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Dan Saltzman Commissioner **Leah Treat** Director

2016-2017 BUREAU AND BUDGET ADVISORY COMMITTEE (BBAC)

MEETING SUMMARY
Thursday, February 16. 2017 | 4:00 - 6:00 pm
Portland Bureau of Transportation, Hawthorne Room

BBAC Members in Attendance

Arlene Kimura
David Sweet
Elaine O'Keefe
Heather Bowman
Heather McCarey
Kaliska Day
Meesa Long
Tony Lamb
Kyle Buss
Momoko Saunders
Pia Welch
Ruthanne Bennett
Ryan Hashagen
Samuel Gollah
Thomas Karwaki

Meeting Chair: Leah Treat
Staff Facilitators: Irene Schwoeffermann, Zan Gibbs
BBAC Members Absent: Laura Becker, Orlando Lopez Bautista

Overview

After completing the annual budget letter, the committee will now focus on the priority list it developed in the fall and will be looking to PBOT staff for any necessary information. Public Involvement Coordinator, Irene Schwoeffermann facilitated the discussion of the Transportation System Development Charge and how the committee could best be involved in this process.

Meeting Agenda

I. Opening
    A. Director's Update
    B. Agenda + Materials Review
II. Work Groups
    A. Racial Equity Action Plan
    B. Spring Work
    C. Assignments
III. Get Portland Moving 2017 Pilot
IV. Legislative Update
V. Overview of Capital Improvement Program
VI. Transportation System Development Charge 2017 Update
    A. Overview
    B. Methodology
    C. Project List
    D. Rate
    E. Outreach Plans + Feedback on Online Open House
VII. Closing
    A. Public Comment
    B. Announcements
VIII. Adjourn

Meeting Details

Opening

Director Treat welcomed the committee and the multiple staff present into the space and followed with a brief update.

A. Director's Update

A tremendous thank you was given to the committee for the completion of the annual budget letter. On March 23, the items proposed in the letter will go before City Council. Portland Progress version 2 has been completed and will be printed on March 1. The After Action Report from this year's inclement weather was finalized on February 16. Salt will continue to be used during instances of snow and ice and a request for additional general funds for inclement weather response will be made in the coming future. Weather permitting and the issues of potholes will be addressed across the city. A "patch-a-thon" will begin on Thursday February 23 that will aim to fill as many potholes across the city as possible.

B. Agenda + Materials Review

Public Involvement Coordinator, Irene Schwoeffermann gave the committee an overview of the various materials made available.

Work Groups

A. Racial Equity Action Plan

Equity and Inclusion Manager Zan Gibbs discussed the completion of the Bureau's five year equity plan and the role the BBAC plays in seeing these plans become a reality.

B. & C. Spring Work & Assignments

A reminder of the list of priorities that were determined in the fall as well as a discussion of how to best work with staff on these issues. May and June meetings will be a time for reports to be made from this work.

Keep Portland Moving 2017 Pilot

Although this program is not new to the Bureau, it will continue to improve safety, congestion and mobility throughout Central Portland and the Cully neighborhood. A media event will take place next month for promotion in addition to a website set to be launched later this year. One committee member asked about the availability of this information for those without access to the internet. This program will seek work closely with Google Maps and give smartphone users access to alerts when construction, congestion and other issues arise.

Legislative Update

New Transportation revenues and how plans and budgets are coordinated was the center of this discussion headed by Mark Lear. Grants have been received in the amount of $20 million with safety and equity being top priorities. From February 1-July 10 legislation will be in session and have transportation as a high priority, with issues like sustainable transportation funding, vision zero, automated vehicles and the youth pass as centers of focus. One committee member asked about how the committee could help in the legislative process.

Overview of Capital Improvement Program

Consideration for the future of Portland was central to this conversation headed by Art Pearce. A diagram was introduced to explain the development of capital improvement projects lists. A full listing of the current 5-year Capital Improvement Program project list is available in the PBOT FY 2017-18 budget request.

Transportation System Development Charge 2017 Update

A. Overview

The goal of this charge is to assess development and develop capital projects.

B. Methodology

This portion consisted of a discussion how much it costs to transport someone.

C. Project List

The transportation system development process focuses on ten year increments. A question was asked regarding the efficiency of the process of choosing projects and that affordable housing is something to always consider.

D. & E. Rate & Outreach Plans and Feedback on Online Open House

The rate of trips that developments generate in relation to what a developer pays was the center of this conversation as well as the need for improvements to be made for how this information is presented.

Closing

A. Public Comment

SW Portland community member thanked the PBOT staff for making all materials available promptly before and after meetings and suggested allotting more time for explanation of the Transportation System Development Charge and its methodology.

B. Announcements

None at this time

Adjourn

5:59pm

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Thursday, March 16. 2017 | 4:00 - 6:00 pm
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Ryan Hashagen
Samuel Gollah
Thomas Karwaki
Laura Becker
Orlando Lopez Bautista

Meeting Chair: Leah Treat
Staff Facilitators: Irene Schwoeffermann, Zan Gibbs
BBAC Members Absent: None

Overview

Director Treat opened this meeting by thanking those in attendance for their commitment.

Meeting Agenda

I. Opening
   A. Director's Update
   B. Agenda + Materials Review
II. Transportation System Development Charge 2017 Update: Upcoming Input

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Opportunities

III. Local Transportation Infrastructure Charge (LTIC) Update

IV. Neighborhood Streets Program: Overview + Timeline

V. Racial Equity Toolkit Program Review

VI. Closing

A. Public Comment

B. Announcements

VII. Adjourn

Meeting Details

I. Opening

A. Director's Update

The patch-a-thon, an effort to repair as many potholes across the city as possible, to date 1400 potholes have been filled. 47 landslides have taken place to date with the bureau's contingency fund. With warmer weather on the horizon, Biketown usage is expected to increase with Kaiser Permanente as a confirmed secondary sponsor. The community cycling center has also joined in partnership with Biketown and an adaptive cycling project is currently under works. Vision Zero program implementation is on the rise with two new safety cameras recently installed in outer East Portland. Get Portland Moving was launched last week with seventy projects to be implemented in both the central city and cully neighborhood in the coming months. After the New York Times report, the regulation of ridesharing services will be further investigated. Committee members asked about the response system and its betterment and to consider reporting to the City of Portland instead of a specific company (Uber for example). One committee member asked about the bureau's funding strategies. It was asked that the bureau provide the committee with greater access to information and measures that are

discussed at the state level.

B. Agenda + Materials Review

Irene Schwoeffermann, Public Involvement Coordinator gave a quick review of the materials made available to the committee in addition to a run through of the meeting's agenda.

II. Transportation System Development Charge 2017 Update: Upcoming Input Opportunities

In April, the charge will be completed and will need review, members of the committee were asked to serve on the reviewing committee. Various committee members expressed a willingness to serve on this committee with more details to follow. In regards to the charge, one committee member asked why the rate that developers are charge in Portland is so minimal when compared to other cities. Member of PBOT staff answered in stating that the rate was established a decade ago by city council and has not changed for affordability purposes.

III. Local Transportation Infrastructure Charge (LTIC) Update

The committee was given information on the charge and the projects that is overseen, like Out of the Mud for example. It was explained that this charge only applies to single-dwelling zones and is assessed by both quantity and and complaint. One committee member asked how the bureau spends the funds that are brought in by the charge and how costly it will be to fully implement. PBOT staff explained that this system will help expedite development and that exemptions to the charge are present with new additions recently administered. Staff overseeing the charge are considering a cap for affordable housing goals and are considering expanding this charge to collector streets. No plans will be finalized for this

initiative until plans for the neighborhood streets program are solidified. The committee had various questions in relation to this topic. One committee member asked what happens if a dwelling changes from single family to multiple and what the methodology is for figuring out what is considered affordable. It was also asked where in the city will most LTIC projects be taking place and what falls under the exemption category.

IV. Neighborhood Streets Program: Overview + Timeline

PBOT staff explained the process for project selection and explained that access to opportunity, communities of color and income are some of the factors that are considered. The Neighborhood Streets Program outreach team has reached 35,000 Portlanders via social media and roughly 3,500 participated the survey administered and received the feedback that 1 in 6 said the city is responsible for fixing streets and that such projects should be paid for from an already existing budget. Stormwater and lighting were identified as top priorities. The committee asked how do they get PBOT staff to engage in meeting with the community. One committee member asked about the Better Housing through Better Design initiative the State is conducting in relation to the work PBOT is doing.

V. Racial Equity Toolkit Program Review

Zan Gibbs, Equity and Inclusion Manager gave a brief description of the toolkit as it will allow staff members to audit the equity of all work the bureau conducts based on race. Questions were asked regarding inter bureau work on the toolkit and how to apply mistakes that the bureau has made in regards to equity going forward. One committee member asked how much weight does the city place on items or projects that receive a bad score once audited using the toolkit.

During this time the committee split into three groups to exercise utilization of the

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toolkit in regards to the leaf day program.

VI. Closing

A. Public Comment

None

B. Announcements

None

VII. Adjourn

6:06pm

Appendix 2:

Online Open House Summary

PBOT TSDC Update Process

Online Open House Summary

Purpose

The purpose for the Online Open House was to collect stakeholder feedback on the current TSDC project list and on potential new projects. Additionally, participants were asked what type of projects they want to prioritize (bike, pedestrian, transit, vehicle, etc.) and describe what factors should be considered when prioritizing projects.

Notification

PBOT invited the public to participate in the online open house using:

- **Email blast** to the interested parties list.
- **Facebook posts** using the PBOT Facebook page and partner sharing
- **Informational boards** displayed at the Development Services Building
- Information and display boards at the **Fix Our Streets Open House**
- Facebook advertising
- Announcements at **informational briefings** with community and neighborhood organizations, modal committees, and developer and real estate interests
- Announcements on **Next Door**
- **Facebook advertising**: PBOT developed two Facebook ads that ran on social media for a two week period (February 7-21, 2016). One ad included a static image of the project, and another included the project video. Both ads directed viewers to the online open house.

Participation

Approximately 1,292 people visited the online open house between January 20, 2017 and March 23, 2017. 254 people submitted comments through the online open house.

Additionally, over 33,600 people viewed the Facebook ad that provided information about the PBOT TSDC Update, and 709 of these people clicked the online open house link. More men than women were reached through the Facebook campaign, as shown in the graphic below. The Facebook ad which featured the TSDC Update video received much more attention than the image-only Facebook ad.

Format

The Online Open House contained four "stations." The first station provided background information on TSDCs and presented the project video. The second station included information about the TSDC update process and methodology. The third station included and interactive project map and table of all projects on the draft TSDC project list, and asked questions about the projects. The final station included next steps for the project and additional demographic questions.

Lessons Learned

- **Online open house is not the best outreach tool for this process.** Many people submitted comments through the online open house, but it was likely not the best outreach tool for this process. The TSDC program is very complex and requires an in-depth explanation before people can truly participate and provide informed input. It was also difficult for members of the public to review a list and map of over a hundred projects on the draft TSDC list; their comments on the list were necessarily limited to the small set of project types and projects in geographies that they know well.

- **Neighborhood association and coalition members were engaged and interested in the process.** They extended the online open house invitation to their members, and many people indicated that they heard about the outreach opportunity through their neighborhood groups and through the NextDoor site.

- **The Facebook advertising campaign was a good investment.** According to analytics data provided by Facebook, nearly 34,000 people were reached via the $500 worth of ads. Of these, 709 clicked on the online open house link.

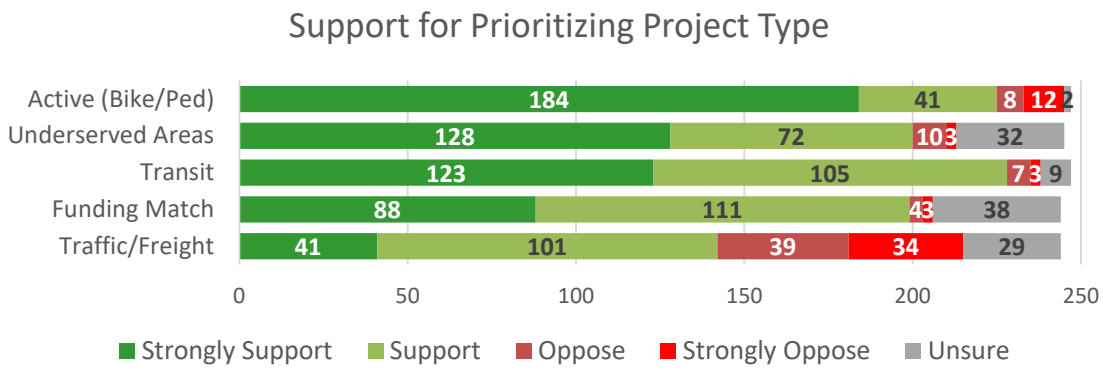
- **Different audiences have different interests in the TSDC process**. Neighborhood groups and general members of the public had strong interest in the project list and project types, and little interest in the actual TSDC rate. Developers, business groups, and real estate representatives were very interested (and concerned) about the rate and its calculation, and

relatively uninterested in the project list. In the future, it will be important to tailor messaging and feedback questions to the different interest groups.

Summary of Comments

1) How much would you support the city prioritizing the following types of projects on the TSDC project list?

People strongly support prioritizing active transportation projects, projects in underserved areas, and transit projects. There is good support for projects with a funding match. There is a mix of support and opposition for projects that benefit vehicle traffic/freight. *(247 total responses)*



2) I think the city should prioritize the following specific projects from the draft project list…

Participants were directed to an interactive project map illustrating all projects on the draft TSDC project list. They were asked to select up to three specific projects that they felt should be prioritized. Highest support was given for the following projects:

Project number and Name	Number of supporters
90034.1 - Bridlemile Ped/Bike Improvements, Phase 1	39
90059.1 - SW Shattuck Rd Ped/Bike Improvements, Segment 1	26
30050 – St. Johns Pedestrian Improvements	24
20127 - Better Naito Walkway / Bikeway	21
10010 - East Portland Enhanced Transit	19
90020 - Beaverton-Hillsdale Hwy Corridor Improvements	18
20115 - Central City Multimodal Improvements, Phase 2	18
40013 - 82nd Ave Corridor Improvements	16
30070 – St. Johns Truck Strategy, Phase 2	14
40116 - NE 7th/9th Neighborhood Greenway	14
20057 – Willamette Greenway Trail	14

3) Keeping in mind that all of the potential TSDC projects are part of the Transportation System Plan, do you have any feedback or comments on the listed projects?

87 participants said they had suggested changes, and 123 said the proposed list makes sense as is.

Participants made the following comments on the proposed TSDC project list, summarized and organized by topic. Numbers in parenthesis indicate how many people made that comment. *(104 comments total)*

- **Suggested project additions or changes to projects on the list**
    - Add improvements at Woodlawn triangle including crosswalks and traffic calming (3)
        - And along Dekum, from MLK to 18th (1)
        - Cross walk safety on Dekum between 6th & Durham (1)
    - Public transportation to Cully (2)
    - Sullivan's Gulch trail from the outside in (to connect east Portland first)
    - Include additional segments of the Sullivan's Gulch Trail
    - Downtown bike improvements
    - More extensive streetcar expansion on own right of way
    - Reduce commuter congestion on Hwy 26 and Hwy 217
    - Red Electric Trail
    - Safety improvements on I-205 Multi-use path where it crosses NE Glisan
    - SW Scholls Ferry Road needs a protected path and stormwater upgrade from Washington county to Skyline and West Burnside
    - Sound walls on I-205
    - SE Ellis between 82nd and 92nd
    - MAX orange line station at Harold St
    - Gateway Regional Center investments
    - Inner SE: Bike, freight, transit access, and/or safety facilities on Belmont/Morrison
    - Inner SE: safer pedestrian crossings and bikeways on SE 11th/12th, SE 20th/21st
    - Inner SE: Ped, bike, and motorist crossings on SE 7th/9th/10th/Sandy
    - Inner east side Hawthorne protected bikeways, bike signalization, or similar safety improvements, plus ped crossings and freight movement
    - Add road diet and protected bike lanes on Ceasar Chavez Blvd
    - New lighting for roadway improvements in St. Johns: use street lamp style that is present on the St. Johns Bridge
    - Improve the new bike system on N Williams (confusing to cyclists and motorists)
    - I wanted to select 90031.1 and 90034.2 also. They would not let me select them.
    - Improvements in east Portland including the safety/multimodal projects on outer Division, 148th, 102nd, and the 150s, 100s, and HOP Greenways
    - Outer SE Division
    - I-5 exits and entrances near Barbur Blvd

- Barbur Blvd improvements, to reduce cut-through traffic in surrounding neighborhoods
- 148th in Argay neighborhood near Siskiyou Ct (to support new apartments and improve safety)
- Connect the bike facilities on Skidmore between Michigan and 7th and take advantage of the existing signals to make a critical and safe bike connection between bike routes on Interstate and Concord, Vancouver/Williams, and the Going bike route. This would be better than doing the Mason Street Greenway.
- Higher throughput on Foster
- New interstate at the southern end of town (like an I84)
- Improvements on SE 112th include from Brookside to Mt. Scott Blvd
- Continue the SW Hamilton improvements between SW Shattuck and SW Dosch
- Consider a signal at SW Patton and SW Humphrey
- Broadway-Weidler corridor improvements Phase 2
- Bike/ped bridge over I-84 at 132nd
- Improve North-South bikeways east of the river (on 21st, 28th, 34th)
- Fix bridges used by mass transit for earthquake resiliency, especially the Steel Bridge which also has the best pedestrian/bike river crossing next to Tilikum Crossing.
- 70013, 70014, 80009 - SE Division St Bikeway Improvements needs to be amended to include pedestrian improvements as well, and become a more holistic safety/Vision Zero project
- High speed rail
- SW Garden Home Road, which has experienced a lot of infill in the last 10 years without much improvements
- West Portland Crossroads sidewalks and bike lanes
- Outer Barbur active transportation improvements (needed more than Inner Barbur)
- Sidewalks associated with 90008.2 should extend last SW 45th to at least SW 39th if not all the way to SW Dosch
- Add Project # 90034.2 Bridlemile Ped/Bike Improvements, Phase 2 (4 comments)
    - This project is a critical connection for providing a Safe Route to School and neighborhood walkability
- Add Project #90031.1- SW Dosch Rd Interim Safety Improvements - Construct an enhanced shoulder to improve safety for all modes (2 comments)
- Add Project #90031.2: Bike and Pedestrian paths on Dosch (from Hamilton to B-H Highway) SW Dosch Rd Ped/Bike Improvements, Segment 1
- Add Project #90063: Bike and Pedestrian paths on Sunset (from Dosch the rest of the way to where the sidewalk ends) Sunset Blvd Ped/Bike Improvements
- Project 60024 - Wildwood Trail Bridge: A well-marked crosswalk and flashing light would be sufficient to provide access and safety. A $2 million bridge is not needed here, and a less costly improvement could meet the safety goal.
- Cap or partial cap for I-405.

- **Concerns/opposition to particular projects**
    - Southern Triangle Access Improvements: driving this route seems to have no issue.
    - SE 21st Ave Bikeway: needs no improvement
    - SE 34th Ave Neighborhood Greenway: there are no issues with this route
    - Rose Quarter/I-5 interchange project serves region/state and should be paid for by statewide funding sources, rather than local system charges.
    - Projects 20007, 30008, 20002, 30015, 30038, 40058, 40069, 50005, 50016, 60023, 90014, 90019, 90046, add up to over $48 million dollars in investments that will do very little to address our Vision Zero goals. These projects should all be deferred indefinitely, until our citywide bicycle and pedestrian network is built out. ITS does very little to deliver real benefits to the most vulnerable users of our system. (2 comments)
    - Investment in ITS is misguided. Other emerging technologies will render the system obsolete.
    - Almost all of the bike greenways are on side streets that already have low traffic counts. At most they need symbols/signage and maybe a few 'larger intersection' crossings. There is no need to waste money on these and impede normal neighborhood traffic and land use. (i.e. 70071, 40225, 70073, 80035).
    - Bike paths on 112th seems unsafe with the heavy volume of vehicles.
    - $10 million for a heavier duty bridge over NE 42nd/47th Avenue that connects 42nd Avenue to Columbia Blvd seems excessive and likely just leads to more heavy traffic on NE 42nd Avenue.
    - There are duplications that should be removed, i.e., traffic lights for 9th and Glisan and 9th and Everett

- **Support for general project types**
    - Prioritize projects that would reduce vehicle congestion/improve vehicle flow (8)
        - We are likely to have more traffic in the coming years, and it is unrealistic to expect people moving into new developments to not have cars/not drive.
    - Prioritize sidewalks (5)
        - Especially in East Portland (1)
    - Prioritize projects in underserved East Portland (4)
    - Consider maintenance issues, too.
    - School and pedestrian access in high traffic or school walk routes
    - Vehicle-only thoroughfares, and bike/ped-only thoroughfares, to improve safety for all
    - Remove motor vehicle focused projects to make room for more active transportation projects (2)
    - Prioritize projects in rapidly-growing NW Portland
    - Prioritize bike/ped routes in Southwest Portland
    - Prioritize *protected* bike lanes/routes

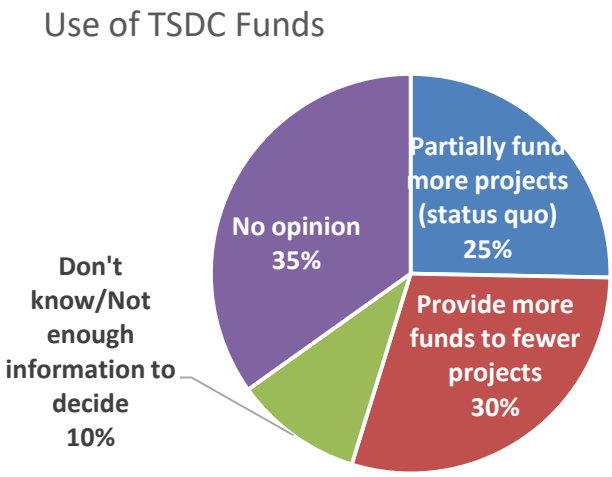
- Larger volume transit projects should be a high priority
- Projects that reduce SOV
- Prioritize more smaller projects, than fewer large projects
- Prioritize bike/ped safety and efficiency improvements (2 comments)
- Forget greenways. Focus on improving mass transit connections and frequency, and on adding sidewalks and safe crossings.
- Focus on high-volume transit and improving volume of streets for traffic, freight and improved infrastructure.
- Focus on projects that move freight more efficiently.

- **Support for specific projects already on the list**
  - Project 30050 "St. John's Pedestrian Improvements" should be prioritized. The Cathedral Park Neighborhood has been up zoned and is experiencing rapid development, yet has many unpaved streets and lacks sidewalks and crosswalks. (6 comments)
    - Also need to increase parking in the area to offset the negative impact of residential development on local businesses. (2 comments)
    - Slow down traffic on Willamette Blvd between Richmond and Burlington for pedestrian safety.

- **General and Other Comments**
  - It is difficult for an everyday citizen to comb through and comment on this long list of projects. Most people will vote for the projects closest to their home or place of work because they lack any context for evaluating the need at unfamiliar locations. (5)
  - Several projects seem redundant or unnecessary. Prefer to see more investment in East and North Portland than the other relatively well serviced corridors.
  - Larger transit and other regional projects should come from other sources.
  - Fund active transportation through TSDCs, not expensive transit projects like Streetcar and MAX
  - The priority of SDC's should be to mitigate damage to existing neighborhoods/facilities from cut-through traffic that stems from large new developments.
  - Developers who pay to build infrastructure serving their developments or pay the fee-in-lieu of payment should be exempt from further SDC charges during the building permit phase.
  - Apply TSDCs in the neighborhoods where they are paid. (2 comments)
  - Add resiliency goals to all projects - earthquake, snowstorm/ice.
  - Design all projects with adequate spaces for trees.
  - Do NOT use the dangerous door zone bike lanes like the ones on SE 122nd and SE Division
  - Should get input from beyond the neighborhood associations

4) Do you think TSDCs should continue to be available to partially fund a larger number of projects, or should they be available to more significantly fund fewer projects?

There was not overwhelming support for either method of funding projects. Many participants said they did not have an opinion on this question, and a significant number said they did not have enough information to decide. *(241 responses)*



5) Do you have any other comments on how the city should prioritize potential projects?

Participants made the following comments on how to prioritize the proposed TSDC project list, summarized and organized by topic. Numbers in parenthesis indicate how many people made that comment. *(126 comments total)*

Wordle showing the most common words used in response to Question #5.

- **Prioritize projects based on type of mode.** (143)
  - Projects that support active transit infrastructure and safety over vehicles. (32)
    - Bike/ped safety should come first. (15)
    - Prioritize projects that include safe routes to school. (9)
    - Prioritize projects that help achieve Vision Zero. (8)
    - Prioritize connectivity of sidewalks. (9)
    - These types of projects are also in line with climate change goals. (6)
    - Prioritizing active transportation is the most equitable solution for serving all Portlanders. Not everyone can afford to have a car. (2)

    - Prioritize projects that make the largest impact on vehicle and freight traffic. (8)
        - Traffic projects should be prioritized since they provide funding for TSDCs. (4)

- **Prioritize projects based on locations that are underserved or are expected to increase in population.** (38)
    - Prioritize areas that are underserved. (27) Specific locations that were referred to as underserved include:
        - Outer East Portland (13)
            - Specifically, build up bike/ped infrastructure. (6)
            - Areas east of 82nd (2)
            - Areas east of I-205 (2)
        - North Portland (4)
        - Downtown/ West Portland (3)
    - Prioritize St. John's/North Portland (8)
        - With new business development and housing development, need to revitalize this area. (4)
        - Cut-through traffic between N Ivanhoe and N Burlington, and N Alta and N Richmond makes this area unsafe for pedestrians. (3)
        - Support for Project 30050 "St. Johns Pedestrian Improvements" (2)
    - Prioritize West Portland (5)
        - Specifically, SW Hills. Underfunded in pedestrian and bike facilities throughout. (4)
        - Northwest Portland has the lowest biking and transit use rates out of close-in neighborhoods.

- **Prioritize projects based on ability to fund and complete projects.** (9)
    - Prioritize based on ROI – return on investment. Greatest social benefit for the least cost. (3)
    - Prioritize projects based on matching funding or provide full funding. (3)
    - Look for more ways to finance transportation projects (3)
        - Leverage other potential funding sources (2)
        - Fee for bikes, pedestrians, and vehicles for any new path or bridge

- **Support for specific projects.** (5)
    - Prioritize project 90020 "Hillsdale Town Center Pedestrian Connections." (3)
    - Prioritize project 30050 "St. Johns Pedestrian Improvements." (2)

- **Change how to calculate TSDC fees.** (4)
    - All modes should contribute to TSDC funding. (3)
    - Support for changing the measurement of TSDCs from vehicle trips to person trips.

- **General Comments on the Online Open House** (3)
    - Need more information on the criteria for prioritizing. Should climate change goals, connected healthy neighborhood strategy, and affordable housing be a factor? (2)
    - Instead of prioritizing top 3, let participants choose projects that fit into a certain budget.

Demographic Information of Online Open House Participants

A total of 242 participants provided demographic information feedback on the Online Open House. Below is a description of the demographics of the participants.

1) Do you live in Portland?

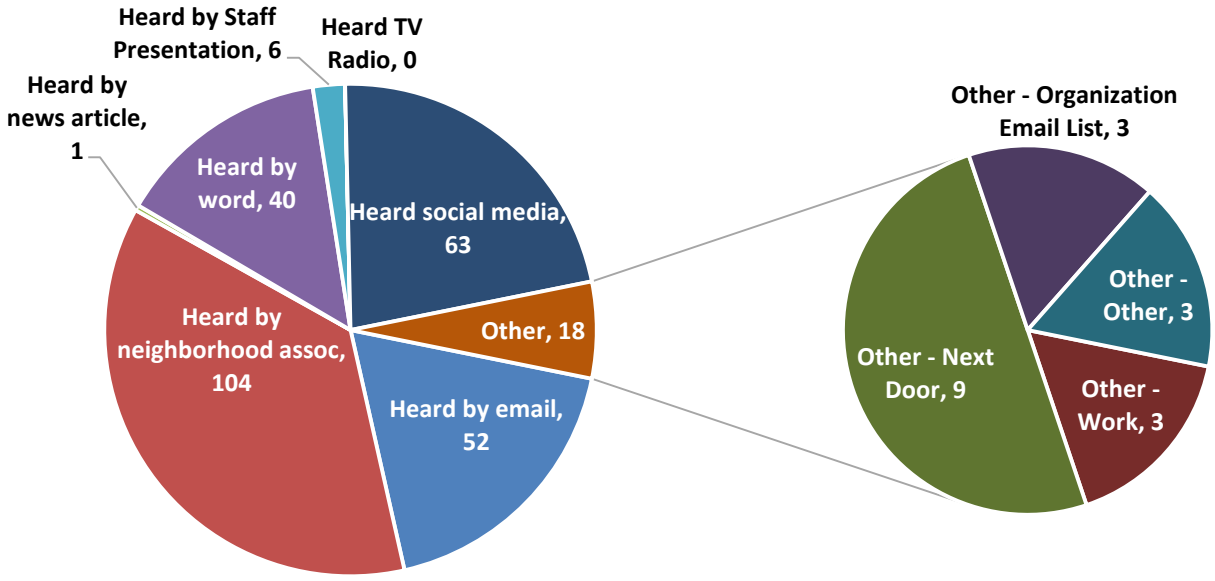
95% of the participants said they live in Portland. *(252 responded)*

2) Do you work or go to school in Portland?

75% of participants said they work or go to school in Portland. *(252 responded)*

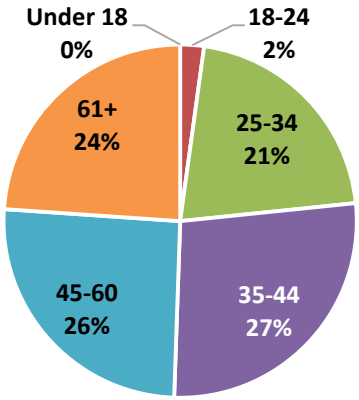
3) How did you hear about the Online Open House? (Check all that apply)

37% of participants heard about the Online Open House via their neighborhood association, 23% via social media, 19% via email, and 14% by word of mouth. Of those who said "other," several said they heard about the event through Next Door. *(250 responded)*



4) What is your age?

The online open house received fair representation among all age groups, as shown in the chart below. Ages 35-44 was the most represented group, out of those who responded. *(184 responded)*

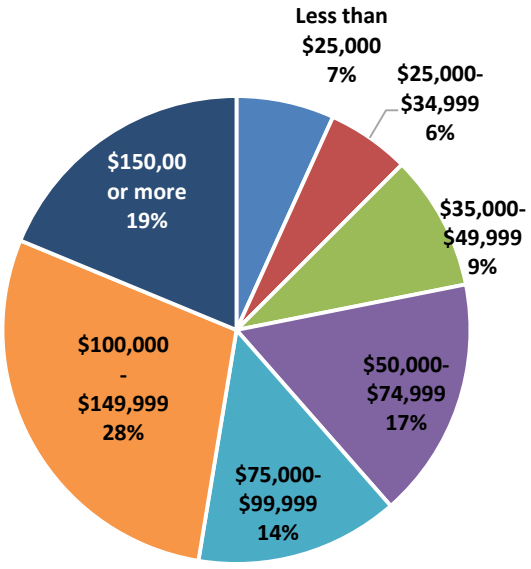


5) What is your gender?

Of those that responded, 49% identified as female, 47% identified as male, and 4% preferred not to specify. *(205 responded)*

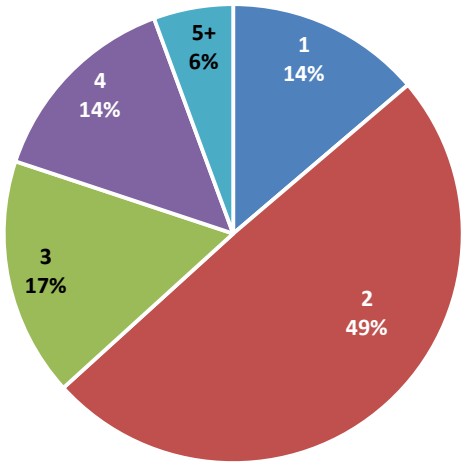
6) What is your total household income?

Out of the participants who responded to this question, almost half make $100,000 or more. *(192 responded)*



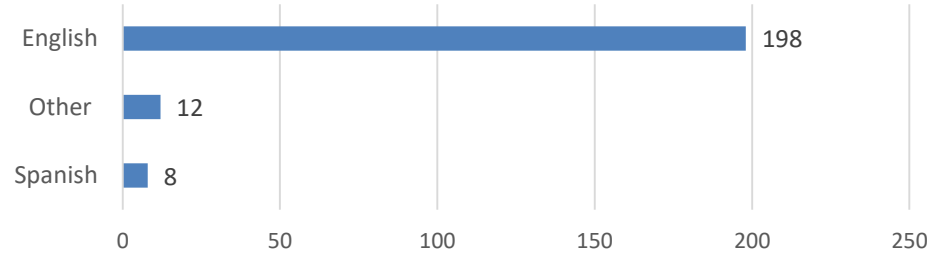
7) How many people live in your household?

86% of responders have at least 2 people in their household. *(196 responded)*



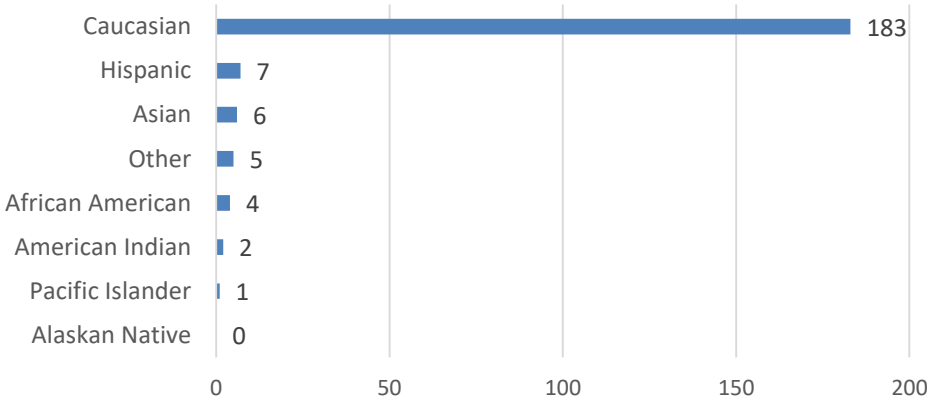
8) What languages do you speak at home?

All participants indicated that they speak English at home. Of these, 8 also identified as Spanish-speakers and 12 said they speak another language. The "other" languages mentioned include: French (2), Dutch (2), German, Thai, Romanian, Hebrew, Latvian, Urdu, Chinese, Turkish, and Mandarin. *(198 responded)*



9) What is your race/ethnicity?

Most of the participants identified as Caucasian. Of those that selected "Other," 5 other races/ethnicities were mentioned: Italian, Euro-American, Middle Eastern and Filipina. *(196 responded)*



Demographic Information of Facebook Advertising

Facebook advertising was used to promote the online open house. Facebook ads ran on social media for a two week period.

More men than women engaged with the ad: 60% of those that clicked the ad were men, and 53% of those who saw the ad were men. The ad had its greatest reach with men aged 25-44.

Appendix 3:

Rate Setting Workshop

PBOT
PORTLAND BUREAU OF TRANSPORTATION

TRANSPORTATION SYSTEM DEVELOP CHARGES UPDATE PROCESS

TSDC Rate Setting Workshop/Roundtable

Tuesday, April 4, 2017
2:00 p.m. – 4:00 p.m.
1900 SW 4th Ave, Room 2500 B, Portland, OR 97201

Purpose of Meeting

- Review and provide input on TSDC rate scenario options and potential rate discounts, and understand the methodology PBOT is using to set the rates.

Agenda Items

2:00pm	**Welcome and Agenda Review**	Christine Leon and Anne Hill, PBOT Sylvia Ciborowski, JLA Public Involvement
2:10pm	**Rate Options Presentation** A look at how the TSDC rates were developed and the resulting rate per person trip. We'll also look at potential rate adjustments and other elements of the TSDC program.	Don Samdahl and Kendra Breiland, Fehr & Peers Deb Galardi, Galardi Rothstein Group Rich Eisenhauer, PBOT
2:45pm	**Discussion and Worksheet** Fill out worksheets to see how the new rate applies to your development type. Discuss the draft rate and other TSDC elements in small groups.	Sylvia Ciborowski, JLA Public Involvement Project Team
3:15pm	**Discussion: TSDC Rate Recommendation** Large group discussion about rate options feedback and what portion of the project list should be funded using TSDC revenues.	Sylvia Ciborowski, JLA Public Involvement
3:50pm	**Next Steps and Closing**	Christine Leon and Anne Hill, PBOT

Transportation System Development Charges Update

April 4, 2017 Rate Setting Workshop

PBOT

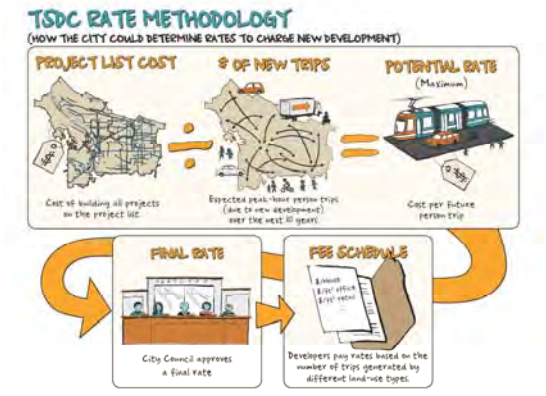
FEHR & PEERS

Meeting Purpose

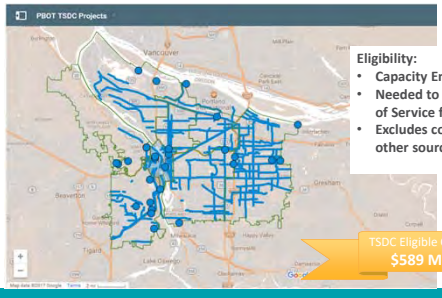
- To provide input to PBOT on TSDC rate scenario options, potential rate discounts, and understand the method PBOT is using to set the rates.
- To understand the tradeoffs between TSDC rates that developments pay and the funding of future transportation projects.

Agenda

- Rate Options Presentation
- Small Group Discussion and TSDC Rate Worksheet
- Large Group Discussion on TSDC Rate Feedback



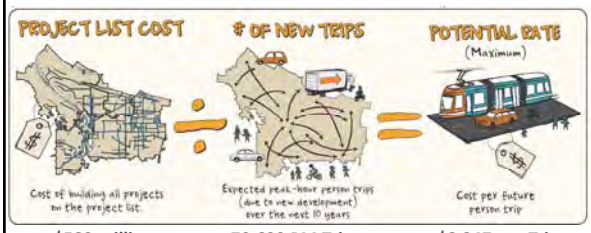
2017-27 Draft Transportation SDC Project List



Eligibility:
- Capacity Enhancing
- Needed to Maintain Level of Service for Growth
- Excludes costs funded by other sources

TSDC Eligible Cost
$589 M

If Project List were Funded at 100%.....



$589 million	70,600 PM Trips	$8,347 per Trip

Cost per Person Trip

- Each development type has a TSDC rate based on how many person trips it generates. Starts with a cost/person trip

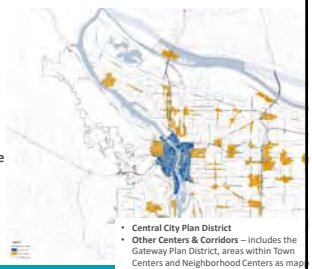
Project List Funded $ (in millions)	% funded	TSDC Cost/Trip
$589	100%	$8,347
$442	75%	$6,260
$295	50%	$4,147
$206	35%	$2,913

Current Cost/Person Trip

Not all Person Trips Have the Same Impact

Person Trip Adjustments

- ✓ **Central City= 20% reduction in fee**
- ✓ **Other Centers & Corridors = 8% reduction in fee**
- ✓ **Development must meet specific criteria:**
  - ❑ **Multi-family that offers max units or within .75 of max FAR**
  - ❑ **Non-auto oriented commercial services/retail/office in mixed-use site and within .75 of max FAR**
  - ❑ **Light industrial in mixed-use site and within .75 of max FAR**
  - ❑ **Other types of land uses are eligible**



- **Central City Plan District**
- **Other Centers & Corridors** – includes the Gateway Plan District, areas within Town Centers and Neighborhood Centers as mapped in the new 2035 Comprehensive Plan, and parcels within 1000 feet of light rail station (excluding single family, OS, and IG and IH zones)

Changes in Use

Eliminated 15 use categories

- ✓ Simplified Procedures for Retail Uses
- ✓ Single retail/shopping TSDC rate applies within shopping areas
- ✓ Most changes in retail use would not result in different TSDC rates

Alternative Rate Studies

- Data collection is now easier, since no need to collect modal share information
- Option for applicants to conduct independent person trip rate counts

What is the Fee Schedule?

Land Use Categories	Land Use Code (4)	Unit of Measure	Current Rate	New Method (35% of Max Cost Per Trip)	New Method (50% of Max Cost Per Trip)	New Method (75% of Max Cost Per Trip)	New Method (Max Cost Per Trip)
Cost per PM Peak Hour Person Trip			$ 2,913	$ 2,913	$ 4,147	$ 6,250	$ 8,347
Residential							
Single Family (2,200 or more sf)	210	dwelling	$2,814.00	$3,587.59	$ 5,106.93	$ 7,698.97	$10,279.99
Single Family (1,200-2,199 sf)	210 less 20%	dwelling	$2,814.00	$2,870.07	$ 4,085.54	$ 6,159.17	$8,223.99
Single Family (Less than 1,200 sf)	220	dwelling	$2,814.00	$1,747.80	$ 2,487.99	$ 3,750.78	$5,008.20
Multiple Family	220	dwelling	$2,024.00	$1,747.80	$ 2,487.99	$ 3,750.78	$5,008.20

- Used updated person trip data
- Changed to PM peak hour
- Eliminated/Consolidated 15 land use categories
- Split single family residential by size
- Created single shopping/retail rate

Small Group Discussions & Worksheet

- ✓ How do the rates affect my development? (see worksheet)
- ✓ What would you recommend?
- ✓ Do you have any comments on the proposed adjustments, changes-in-use policy, or alternative rate study procedures?

Large Group Discussion

- ✓ What feedback do you have on the TSDC rates?
- ✓ What should PBOT be considering as it makes a recommendation on rates and what percentage of the TSDC project list to fund using TSDC revenues?
- ✓ What recommendation would you make?

QUESTIONS?

- Online at: www.portlandoregon.gov/transportation/71823
- Contact Anne Hill at: 503-823-7239 or anne.hill@portlandoregon.gov

TSDC Rate Setting Workshop/Roundtable – Meeting Summary

Tuesday, April 4, 2017
2:00 p.m. – 4:00 p.m.
1900 SW 4th Ave, Room 2500 B, Portland, OR 97201

Participants

- Sam Gollah, PBOT BBAC
- Carol Gossett, OMSI/Central Eastside Industrial District
- Paul Grove, Home Builders Association
- Michael Harrison, OHSU
- Lauren Jones, Capstone Partners/NAIOP
- Thomas Karwaki, PBOT BBAC
- Christopher Kopca, DRAC/Downtown Development Group LLC
- Tara Mather, OHSU/Development Review Advisory Committee
- Robert Pile, Portland Business Alliance/TMT Development
- Tom Sjostrom, BOMA
- David Sweet, PBOT BBAC
- Kristina Thomsen, ZGF Architects

Staff and Consultant Team

- Christine Leon, PBOT
- Anne Hill, PBOT
- Rich Eisenhauler, PBOT
- Dave Nassif, PBOT
- Don Samdahl, Fehr & Peers
- Kendra Breiland, Fehr & Peers
- Deb Galardi, Galardi Rothstein Group
- Sylvia Ciborowski, JLA Public Involvement

Purpose of Meeting

PBOT invited developers, builders, neighborhood groups, and other community members to a meeting to review and provide input on Transportation System Development Charge (TSDC) rate scenario options and potential rate discounts, and to understand the methodology PBOT is using to set the rates. The meeting was an opportunity to provide input to help PBOT develop a TSDC rate recommendation to City Council.

Meeting and Comments Summary

Welcome and Agenda Review

Christine Leon, PBOT, welcomed members and explained the purpose of the meeting. She noted the importance of hearing from developers as PBOT makes its recommendation to City Council about setting a new TSDC rate.

Sylvia Ciborowski, JLA Public Involvement, reviewed the agenda.

Rate Options Presentation

Anne Hill, PBOT, along with members of the consultant team made a presentation about the TSDC update process. The presentation included:

- New methodology being used to determine the rate to charge new development.
- Draft TSDC project list and how that project list is funded using TSDCs.
- Potential rate per person trip.
- Person trip adjustments.
- Change-in-use calculations.
- Alternative rate studies.
- Introduction to the fee schedule.

Small Group Discussion and Rate Worksheet

Members split up into two small groups to discuss the draft rate and other TSDC elements, and filled out worksheets to calculate how the new rate would apply to their development type. PBOT and consultant staff facilitated the discussions and answered questions about the proposed rates. Comments and questions from the small group discussions included:

Group #1 Comments

- Developers may not be able to afford building to maximum FAR in all areas of the city.
- Consider a **higher discount for developments that attract mostly pedestrian traffic** (for example, a Green Zebra store). A walking trip is substantially less of an impact on the transportation system than other modes.
- **20% discount is too low for the Central City area**. Suggest doubling it to 40% discount. A higher discount will incentivize more grocery stores in central city.
- Demand will drop off if rate is too high, and development won't happen.
- Suggest a **separate category for major retail** (such as big box stores). They tend to generate a lot of vehicle traffic.
- Suggest changing rate design to **square footage basis** rather than per residential unit. This would help meet the Comp Plan goal of having more small homes and higher density. [Note: there is a 20% reduction for the smaller home category, based on trip survey data showing that small homes produce less traffic.]

- **ADUs should not be exempt**. They do have an impact on transportation system, especially since they don't require parking, so use street for parking.
- City is working on its inclusionary zoning formula. **Inclusionary zoning will likely bring more fees to developers**. This added cost will bring even MORE fees to developers in the future. Look at all fees holistically to see the impact on developers.
- **Portland SDC is low** compared to other jurisdictions in the region. A rate of 35% would not be appropriate.
    - On the other hand, other jurisdictions are using SDC revenues to build new roads and connections (i.e., Tigard, Tualatin, etc.) because they have the land. In Portland, transportation projects are smaller and more about infill and bike lanes/sidewalks, which are less expensive.
- In general, **it is very expensive to build in Portland Central City**. There are so many other factors besides TSDCs that add to cost, such as the expense of parking structures, design overlays, etc. Any rate over 35% would make it very expensive to build.
    - OHSU calculated that if the new rate was set at 35%, they would still pay 55% more in TSDCs under the new system.
- Questions and Clarifications:
    - Will you continue to have overlay zones? [Answer: Yes]
    - The Person Trip Adjustment Chart should read: "Eligible if offers max number of units ~~and/or within~~ above .75 of max FAR."

Group #2 Comments

- Question about how the **land use categories** are decided, and why they are different from the Parks SDC categories.
- The rates should follow **future land use policies** and incentivize development that meets those policies.
- Supermarket rates would add between $600,000 and $2 million to a project cost. Keep the supermarket rates the same or lower in "**food desert**" areas. [Staff noted the possibility for individual rate studies for each project.]
- There should be a **differentiation between different kinds of sites**. The project cost is different if a developer is building in an empty field versus redeveloping a site. The condition of the site should also be taken into account.
- Question about the TSDC fee for **parking garages**. [Staff noted that parking garages are not assessed a TSDC fee.]
- Discussion about industrial developments and **high cube warehouses**.
- **Avoid double payment in overlay areas** such as in the Innovation Quadrant. Question about whether overlays will change under the new TSDC methodology.
- Support continuing to provide **credits for doing offsite improvements** in right of way adjacent to site (i.e., sidewalks improvements/install).
- Discussion about **multi-family residential fees**: one size fee versus different categories.
    - Distinction between PBOT fees versus parks fees

    - Gradiated by square footage of units
- Discussion about the **impact of housing inventory** as a whole versus number of units in a property.

Large Group Discussion: TSDC Rate Recommendation

Participants made comments and suggestions about the key considerations PBOT should take into account as it makes a TSDC rate recommendation to Council. Their comments included:

- **The fee schedule is not elastic**. It is not just about how high/low you set the rate: it is about how much prospect there is for new development. Too high a rate will stifle development. The rate should not be higher than 50%, or will stifle development.
- Suggest a **credit or discount for brownfields development**. They are very expensive to develop, and a discount/credit would help incentivize and meet City goals to redevelop these sensitive environmental areas.
    - Because of UGB restrictions, developers will be forced to develop in inner sites that normally are not attractive to build on, such as brownfields. Need to incentivize this kind of development.
- Need a way to **incentivize industrial development within Portland**. There are no more easy sites to build on. There is a shortage of industrial land within Portland. Perhaps also consider a credit for wetlands mitigation projects in conjunction with industrial development.
- The **supermarket rate is very high**. Suggest finding a way to incentivize grocery store developments, to meet City goal of building a grocery store in neighborhood.
- Suggest a separate category for high cube developments.
- The current **process to receive credits takes too long**. Suggest streamlining the process and providing developers with a discount at the time of permit/building, rather than having to wait potentially years for the credit to come through.
- Need to **synchronize TSDCs with the City's overarching goals and policies**. The rate and relevant discounts/adjustments should support larger goals and policies.
- **Don't look at the TSDC fee in isolation**. Need to look at the whole cost to developers (both commercial and residential).
- For residential, look at what the TSDC fee does for the whole cost including the **cost of housing and affordability**.
- Residential development rates should support City planning goals by **incentivizing smaller, more affordable housing units**. The proposed rates don't go far enough to incentivize small units. Suggest using the **Parks SDC as a template**.
- **Support credits** when developer makes improvements such as building sidewalks or installing a traffic signal.
- Inclusionary zoning, overlays, etc. all add to development cost. Too many costs will stifle development. This also means **fewer jobs** (for supporting industries like construction and architecture).

- **ADUs should be charged a TSDC fee** because they impact the transportation system, too.
- Suggest a rate of 50% and above. It is important to **fund the project list** as much as we can.
- Consider credits for developments that reduce their impact on the transportation system. (Ex: credits for installing bike parking, showers, etc.)
- The **Central City Reduction should be higher**. There is a lot of trip chaining and very short trips in the central city, so the transportation impact is low.
    - Building in the Central City is far more expensive due to a number of factors (as compared to jurisdictions that have a higher TSDC)
- It will be important to come up with a **project selection process** to determine which of the projects on the TSDC project list to fund first.
- The **timing of when the TSDC rate goes into effect** is important. For example, what happens to development projects that are already in the pipeline?
- Question about how the residential rate was configured.

Next Steps and Closing

Christine Leon and Anne Hill thanked members for participating. They explained that PBOT would be taking into account all input from this meeting and other meetings with stakeholders and the members of the public. PBOT will provide a recommended rate the City Council in April, and City Council will make the final rate decision. The new TSDC rate will come into effect later in 2017.

Appendix 4:

Community Briefings and Meetings and Comment Log

PBOT TSDC Update Process

Stakeholder and Community Briefings

Overview

PBOT staff attended **23 community group meetings** to provide a briefing about the TSDC update process and solicit input on the TSDC project list. The stakeholder groups included neighborhood associations, transportation work groups, developers and real estate groups, and business organizations. PBOT met with the following groups:

Organization Name	Date
Streetcar Advisory Committee	10/2016
Hollywood Neighborhood Association	1/26/2017
Pearl District Neighborhood Transportation Committee	2/7/2017
East Portland Neighborhood Office - Land Use & Transportation Committee	2/8/2017
Neighbors West- Northwest Board	2/8/2017
Southwest Neighbors Inc.	2/15/2017
Bureau and Budget Advisory Committee (BBAC)	2/16/2017
Development Review Advisory Committee (DRAC)	2/16/2017
Trade Association for Building Owners and Managers (BOMA)	2/17/2017
Portland Business Alliance (PBA) Transportation and Central City Committees	2/21/2017
Pedestrian Advisory Committee (PAC)	2/21/2017
Institute of Transportation Engineers	2/27/2017
Portland Metro Association of Realtors (PMAR)	2/28/2017
Home Builders Association (HBA)	3/7/2017
Portland Freight Committee (PFC) Workgroup	3/8/2017
Columbia Corridor Association	3/17/2017
Commercial Real Estate Development Association (NAIOP)	3/17/2017
Central Eastside Industrial Council – Parking and Advisory Committee (CEIC)	3/22/2017
Central Eastside Interstate Coalition	3/22/2017
Go Lloyd	4/6/2017
Portland Business Alliance	4/11/2017
Bicycling Advisory Committee	4/2017
SE Uplift Neighborhood Coalition	4/17/2017

PBOT also reached out to the following groups to provide project information, but did not make a presentation briefing due to lack of interest or scheduling issues:

- Northeast Coalition of Neighbors
- SE Uplift

- North Portland Neighborhood Services
- Oregon Association of Minority Entrepreneurs (OAME)
- National Association of Minority Contractors (NAMC)
- Venture Portland
- Transportation Justice Alliance
- Asian Pacific American Network of Oregon
- Central Northeast Neighbors (CNN)

Summary of Comments

Key comments and questions from stakeholder briefings include:

Comments on project list:

- Neighborhood coalitions and associations had specific questions and comments about projects within their neighborhood boundaries.
- Desire to develop a project list that is equitable and provides benefit to East Portland.
- Freight workgroup member provided a long list of projects that should be prioritized and new ones that should be added to the list
- Several business and developer groups suggested more focus on vehicle-related projects on the TSDC project list. They commented that focusing on bike/pedestrian infrastructure will not alleviate traffic congestion.
- Recommendation to add specific additional projects from Transportation System Plan (TSP) project list onto the TSDC project list.
- Some questions about the equity of the Online Open House, how input will be used, and whether it could be made available to those without access to a computer or smart phone.

Comments on rate and methodology:

- Developers expressed concern about the proposed increased rate. They expressed concern about increases in rates and its impact on development, especially as housing needs increase in Portland.
- Several information requests were made from different groups, including a comparison of methodology for calculating TSDC in 2007 and 2017.
- Desire to provide information about the new TSDC rate as soon as possible, due to concern about effect on housing projects already in the pipeline.

Summary of Comments

The attached briefings and comment log includes the comments and outcomes from each of the community briefings, as well as emails and letters submitted to the project team.

PBOT TSDC Update - Stakeholder Briefings and Meetings

Organization	Date	Location	Meeting outcomes	Comments
Streetcar Advisory Committee	10/1/2016		15 attendees	
Hollywood Neighborhood Association	1/26/2017	Hollywood Senior Center, 1820 NE 40th Ave	12 members attended.	Christine presented general project information and encouraged stakeholders to participate in the Online Open House
Pearl District Neighborhood Transportation Committee	2/7/2017	PNCA - Hammer Board Room	10 -12 attendees	Most of the discussion on the Project List and how to get involved as the Central City Multimodal Safety Projects gets underway.
East Portland Neighborhood Office- Land Use & Transportation Committee	2/8/2017	EPNO Office, 1017 NE 117th Ave	10 - 12 attendees	I am also requesting a single electronic listing of the survey questions at the same time. The online format is useless for doing a comparison of projects in East Portland as well as a comparison of projects in the other parts of Portland. If PBOT is truly interested in meaningful public input, then the current survey will not work for everyone and I am requesting a version that I will be taking to the members of the East Portland Land Use and Transportation Committee for discussion. Asked how equity was considered re: the project list and developing the methodology for rates.
Neighbors West-Northwest Board	2/8/2017	Legacy Good Samaritan, Northrup Conference Room	6 attendees	Specific projects were asked about that related to their coalition area. They were interested in how the SDC credits applied to projects in their area—specifically the Conway and Naito LIDs
SWNI (Southwest Neighbors Inc.)	2/15/2017	7688 SW Capitol Hwy, Room 29	15 people were present. Mark presented a brief overview of the TSDC Update. SWNI had many questions, including detailed comments on which projects would be included.	Notes from project team: SWNI members made the following comments/questions: 1. Question how measure level of success in current program (A--projects funded) 2. Requested balanced list of revenue and expenditures by geography going forward 3. Requested a revenue and expenditures table based on geography (similar to east portland exercise) 4. Requested a comprehensive TSP list /table with indicators on it which projects sifted into SDC eligible list 5. Question about benefit to SW on how methodology shift will benefit them (A--deficiencies and the types of projects) 6. Comments on lack of infrastructure in general (agree--contest matters) See Marianne Fitzgerald's comment. Questions from the neighborhood group: - We would like to see the historical annual breakdown regarding what TSDC funds were raised and where they were spent, by coalition. - We would like to see the draft "person trip" methodology before the package goes to City Council. - We now understand that the TSDC project list is the recently adopted TSP list of financially constrained projects in the 1-10 year timeframe. I compared the TSDC list with the TSP list and found

				some discrepancies. I hope that PBOT also compares the TSDC list with the Southwest Corridor Plan project list to make sure we don't miss something.
BBAC	2/16/2017		Christine Leon of PBOT presented. 25 BBAC members present.	Notes from the meeting:BBAC members requested the following follow up items:--Graphic showing revenue and capital expenditures by quadrant of the City--White paper on housing size--They could consider a subcommittee--How to take survey multiple times from one laptop--video was not working--use case studies to explain choices--Video would be helpful in explaining methodology
Development Review Advisory Committee (DRAC)	2/16/2017	1900 SW 4th Ave, Room 2500 B, Portland, OR	25 DRAC members present.	Comment that the comparison to other cities in the region isn't a fair comparison because Portland isn't building brand new roads like they are in other cities like Tigard. Additional comment on not all the jurisdictions even have SDC (e.g., wash co has a transportation development tax) • We need more defensible data on how growth is accommodated in limited land / ROW - a project should be able to get to 100% SDC funding. Question on what roads are within PBOT jurisdiction vs state or county. Safety enhancement will increase capacity Innovation quadrant has a higher SDC rate? A land use that generates lower person trips, like an industrial expansion. Rich's group could look at alternative rate studies - but we're hoping that the need for this is reduced with the new methodology Question - are we going to try to calculate number of people per house (and thus trips) based on house size? Parks went there and commenter was hoping answer was no. Policy-wise we are going to look at affordability. Encourage DRAC to talk to commissioners if they are concerned about SDC going up - we'll know rates more around April Change language in presentation to say something instead of "developer" for whose going to pay? BDS said don't use "citizen" because of equity Timing - right now developers are putting proformas together based on current SDCs encourage PBOT to get rates out asap to not impact pipeline of new housing coming in Are we working with ODOT and do they contribute because of the impact of freeway congestion? We anticipate some funding share in major regional projects and we work it out with those partners What does the DRAC need to help process? • Project list - can we distribute the survey? • Methodology or % attributed to growth
Trade Association for Building Owners and Managers (BOMA)	2/17/2017		26 attendees.	BOMA Questions: • How is the TSDC calculated? It used to be number of trips – why did this change? • Does this new model increase or decrease the financial impact to building owners? • Can you provide a comparison of the 2007 methodology vs. the proposed 2017 methodology? Notes from PBOT staff: --Are the rates going up? --Commercial Development business group should be involved--how is the SDC list compared to the TSP list? Will get the TSP-CIP-SDC slide sent.--questions about the metro growth model and if it only looks forward, not back and does it account for lack of retail in the core and the homeless numbers and problem.

				Will get details--bike lanes have studies been done to demonstrate effects of bike lanes and the conversion of vehicle travel lanes--we will share the economic study that also compares all fees --across all bureaus- --why even bother doing this study if council can indiscriminately set the rate for each bureau?- --asked for input on land use categories (we should include a slide). – --will we still be allowing alternative rate studies?--yes, but this will be a lot simpler because we don't have to -comprehensive permit fees and what multi modal trips we have currently--
PBA Transportation and central City Committees	2/21/2017	Greater Portland's Chamber of Commerce	25 members attended	CONCERNED ABOUT THE RATES. THEY WOULD BE TOO HIGH—ESPECIALLY WITH THE HIGH PERMIT FEES & Parks SDC Ped/Bike focus doesn't address congestion with cars.
Pedestrian Advisory Committee (PAC)	2/21/2017	Portland Bldg.,	25 attendees	Question about Garden Home Road project--Mark to look into specifics. The online survey was not the best inclusive tool because many people do not have computers or limited data plans on their phones. The Online Open House survey was confusing—what was the intent of the feedback? To actually change the projects that are on the list?
Institute of Transportation Engineers	2/27/2017	ODOT Region 1 Conference Room		
Portland Metropolitan Association of Realtors (PMAR)	2/28/2017	150 SW Harrison	12 attendees	interested in the rates, the impact of the potential of an increase in the fees on development. Don't mind paying for transp capacity, do mind paying for narrower drive lanes and more bike lanes 1. Concern over the mix of TSDC-funded projects – want to make sure that we continue to invest in infrastructure that benefit autos, since many people rely on cars to get around. We responded that many projects benefit cars (such as signals and intersection enhancements), but as a mature built out city, there is nowhere to build new streetsb. They asked if our factsheet that describes the project list can be reworded to mention auto mobility projects. I have attached a suggested mark up. Specific question about bike projects- are there examples where we are adding capacity to streets (that benefit driving) in addition to adding bike lanes rather than road diet approaches (which repurpose traffic lanes to bike lanes)? Specific comment about recent Everett Street project, which removed a lane to add bike lanes Question about why the program is 10 years (Anne responded that this was in statute) and how we are forecasting land use. They noted that PSU and Metro are the two most typical sources. We shared that we are using one of these sources, but will respond with specific source.
HomeBuilders Association (HBA)	3/7/2017	NW Natural Gas--NW 2nd Ave	15 attendees	Interested in the rates, the impact of the potential of an increase in the fees on development.
Portland Freight Committee (PFC) Workgroup	3/8/2017	City Hall, Lovejoy Room	11 attendees (Tom Dechenne, Tim Collins, Steve Kountz, Raihana Ansary, Corky	For a full list of recommendations from PFC, please see the document titled "PFC Workgroup Meeting Summary." PFC recommends the following TSP projects be added to the eligibility list: South Waterfront Transit Improvements, MLK Jr Blvd Transit Improvements NE, Rivergate ITS, Time Oil Road Reconstruction, 82nd and Airport way Grade Separation 82nd Ave & Airport Way, NE, MLK Jr Blv Freight Improvements

			Collier, Tony Coleman, Tom Bouillion, Tom Mills, Bob Hillier, Mauricio Leclerc, Zef Wagner)	(Columbia- Lombard), Airtrans/Cornfoot intersection improvements, Columbia Blvd Freight Improvements (60th- 82nd), Columbia/MLK intersection improvements phase 2, Cesar chavez Corridor Improvements (Sandy - Woodstock), Inner Powell Blvd Corridor Improvements. For regional Over-dimensional Truck Route Projects, they recommended Columbia Blvd Ped Overpass Replacement, Columbia Blvd RR Undercrossing Improvement, N Portland Rd Columbia Slough Bridge Replacement). Other projects: N Suttle Rd Street Improvements
Columbia Corridor Association	3/17/2017	20th floor Pacificorp conference room Lloyd Tower 825 NE Multnomah St.		(after the mtg) Thank you for making the trip to our Board meeting this morning. I think it was a very good discussion. Of course, I wish we had more time to devote to the topic, but I think you did an excellent job of cutting to the point and explaining things well. (Corky's suggestion on presentation) I also want to avoid spending time justifying the increased TSDC fees—that detailed argument is best for the advisory committee. I suggest acknowledging the difficulty of the increase in fees (be empathetic and demonstrate understanding) and moving on to the good that will come out of it. How will you guarantee the increased fees will result in better service? People can understand the extra cost if you can prove that it will be spent more wisely than in the past. This is a common mistake. Standing in front of the people that you took money from and saying, "whoopee, look what I can spend it on!" doesn't work well, even if the projects are good. But recognizing previous problems and explaining how you plan to spend money more responsibly will gain respect.
Commercial Real Estate Development Assoc (NAIOP)	3/17/2017		12 attendees	Interested in the rates, the impact of the potential of an increase in the fees on development. Don't mind paying for transportation capacity, do mind paying for narrower drive lanes and more bike lanes
CEIC Parking and Advisory Committee Meeting	3/22/2017	1515 SE Water Avenue		
Central Eastside Interstate Coalition	3/22/2017	Bank of America building		
Go Lloyd	4/6/2017			
Portland Business Alliance	4/11/2017	Greater Portland Chamber of Commerce	30 attendees	Follow up mtg from 2/21/17. We are going to unveil the rates and final proposal Sent a letter to the Commisioner of Transportation
SE Uplift Neighborhood Coalition	4/17/2017			
Bicycling Advisory Committee	4/1/2017			

From: Hill, Anne
To: Sylvia Ciborowski; K.Breiland@fehrandpeers.com
Subject: Fwd: SWNI Thank You and follow-up re Project List
Date: Friday, March 03, 2017 11:29:21 AM

FYI--feedback for the project.

Sent from my iPad

Begin forwarded message:

From: "Wagner, Zef" <Zef.Wagner@portlandoregon.gov>
Date: March 3, 2017 at 11:19:01 AM PST
To: "Fitzgerald, Marianne" <fitzgerald.marianne@gmail.com>, "Hill, Anne" <Anne.Hill@portlandoregon.gov>
Cc: "Igarta, Denver" <Denver.Igarta@portlandoregon.gov>, Keith Liden <keith.liden@gmail.com>, "Averbeck, Roger" <roger.averbeck@gmail.com>, David Martin <transportation@swni.org>, John Tappero <john@swni.org>
Subject: RE: SWNI Thank You and follow-up re Project List

Hi Marianne,

I just wanted to follow up on a few of your comments and questions.

Regarding whether this list is "locked in" for the next 10 years, the answer is no. We have brought amendments to the TSDC list to City Council in the past during the middle of a 10-year program, and certainly can do so again if there is a good reason to do so. For example, after the SW Corridor DEIS, we could amend the TSDC list to reflect the priority projects needed to support the light rail project. Or as another example, if SWIM identifies new projects or refines existing projects, that could be put together as an amendment. Amendments to the TSDC list do have to be approved by City Council.

Most of the "widened shoulder" projects were added to the TSP based on public feedback from SW Trails, because they feel that an interim safety project should be on the table if there is not enough funding for a full build-out. Garden Home is a similar case, where it appears that residents recognized the challenge of building full sidewalk and pushed for a less expensive shoulder project instead. Speaking of Garden Home Rd, a co-worker pointed out to me the other day that if the extended shoulders met our minimum standard width for bike lanes, it could be counted as a capacity increase and thus eligible for TSDC. I will look into this further and see if we can add it to the list.

Thanks again for your feedback.

Zef Wagner

Transportation Planner
Portland Bureau of Transportation
Zef.Wagner@portlandoregon.gov
503-823-7164

From: Marianne Fitzgerald [mailto:fitzgerald.marianne@gmail.com]
Sent: Tuesday, February 28, 2017 5:37 PM
To: Wagner, Zef <Zef.Wagner@portlandoregon.gov>; Hill, Anne <Anne.Hill@portlandoregon.gov>
Cc: Igarta, Denver <Denver.Igarta@portlandoregon.gov>; Keith Liden <keith.liden@gmail.com>; Averbeck, Roger <roger.averbeck@gmail.com>; David Martin <transportation@swni.org>; John Tappero <john@swni.org>
Subject: Re: SWNI Thank You and follow-up re Project List

Zef and Anne: I know you wanted to wrap up public involvement this month so here's some further thoughts on the TSDC list. Personal comments.

First, I would still like to receive the historical annual breakdown of TSDC funds raised and spent, and the "person trip" methodology per my 2/20 email below.

Second, I really appreciate your explanation of the thought process behind the list. I added some "cc"s to this email because a lot of changes were made to the TSP list in the last update, which we appreciated because it made some much-needed projects more likely to get funded, but we may want to look at the changes more closely. In my review of this draft TSDC list of what PBOT considers priorities for SW Portland, I question whether the TSP update had the robust amount of public review toward whether these transportation projects will address growth in accordance with the transportation planning rule. I was looking forward to the Southwest In Motion (SWIM) project to reexamine the TSP list and prioritize needs in SW Portland. I hate to settle for this condensed 10-year TSDC update project review period as locking in projects that may or may not support growth in SW Portland and hope that both the TSP and TSDC lists have further public review sooner than 10 years from now. Are you going to take this proposal to the Planning and Sustainability Commission? You should.

Third, it occurred to me that we need a glossary of terms, because what you call a project is not necessarily what I would call a project. For example, "Pedestrian and Bicycle Safety Improvements" means extended shoulder; "Enhanced shared roadway bicycle facility" means new street signs? How is a "pedestrian walkway" different from a "sidewalk"? When we look more closely at projects through SWIM, I hope you (PBOT) clearly explain what your vision is for these

projects and include a glossary of terms used in the bike plan as well as current PBOT lingo.

I hadn't realized just how many widened shoulder projects are in the TSP until now, and I don't think these types of projects will accomplish the city's goals of encouraging more people to walk and bike rather than drive to their destinations. As I said earlier, I'm glad Michelle is working on criteria for safer shoulders since we have high traffic volumes and speeds on many of our busy streets, but our busy streets are where the infrastructure needs are greatest. I'm glad you noted that widened shoulders would not meet the requirements of TSDC projects (to add capacity to the system to address growth).

I also want to get back to you regarding something you said a few months ago (11/16/16 email), regarding Centers and Corridors. Many of us put a lot of thought into the Centers and Corridors and submitted comments on the comp plan regarding how they would support growth. SW Portland often does not have walking or biking infrastructure within the Centers and Corridors in the Comp Plan. I was under the mistaken impression that transportation projects in or leading to Centers and Corridors would be given priority because they support growth. Your earlier email indicated a preference for neighborhood greenways or off-street trails, even though in SW Portland these may not lead to Centers and Corridors that have infrastructure. I expect we will drill down into the TSP criteria and rankings during SWIM and prioritize projects that actually will build safe walking and biking facilities that will encourage people to walk or bike rather than drive to destinations.

I added some comments noted as MF: below. It seems to me that PBOT makes periodic changes to the lists without much public input, which adds to the urgency of prioritization through SWIM. I know there are a lot of challenges with building street improvements in SW Portland, not to mention the much needed stormwater system improvements, but SW as a whole has the least infrastructure of anywhere in the City of Portland. Residents value the rural character but we are faced with urban traffic volumes and speeds, and a street system built around topographical features rather than a grid. Our busy streets need help because we rely on them for connectivity.

I look forward to further conversations on the many transportation and neighborhood livability needs in SW Portland that help us better manage growth and enable us to get around without relying on a car.

Thanks for the opportunity to comment,

Marianne

On 2/21/2017 7:50 PM, Marianne Fitzgerald wrote:

> Thanks for the quick reply. I need to put some thought into this. I'll share this with the current chair/vice chair (David Martin/Stephan Lewis) and former chair (Roger Averbeck) and maybe one or two others that have been closely tracking SW Corridor and the TSP, such as Keith Liden who served on the TEG and the Bicycle Advisory Committee. It helps to have the rationale. There are improvements underway for Spring Garden Park but I don't know of any associated with Gabriel Park so I need to review this more closely. Thanks again for the information. It was quite a busy meeting last week and we're still reeling from ODOT's proposal to "improve" SW Barbur and SW Capitol Highway (West Portland Crossroads) that seems much more focused on vehicles than people, and prepping for ODOT's open house 2/22.
>
> I recently heard from Michelle Marx that she is working on standards for "safer shoulders", which I was very glad to hear. We all know they are better than nothing (you should see how bad the gullies next to the pavement are after all the rain this month), but not exactly safe for people to travel on. We can't always tell from the TSP description what was proposed, so this information is helpful.
>
> Marianne

On 2/21/2017 6:51 PM, Wagner, Zef wrote:

> Hi Marianne,
>
> While the proposed TSDC project list for the next 10 years mostly consists of the TSP 1-10 year list, you are correct in noting a few discrepancies. Most of these are intentional, and reflect the need to respond to changing circumstances and opportunities. I have offered by responses below in red text so you can get a sense of our thought processes regarding these deviations. I hope you will see that we have good reasons for them, but feel free to push back if you disagree. We welcome your feedback!
>
> By the way, we should probably have a meeting soon with

Mauricio, Teresa, etc, to talk specifically about SW Corridor… I realize we never gave you a real response to your concerns. The short version is that we would prefer to wait for the DEIS process to come to some conclusions before adding specific projects, since the alignment of the HCT line and which projects end up being considered "core" to the project will have a huge impact on which projects would be considered priorities and affect whether or not the TriMet re-scopes are woth the cost. Until then, we have the "SW Corridor Access to Transit" project as a placeholder, as well as a few other projects that are separately listed because they were already TSP priorities.

As always, thanks for your comments!

--Zef

Zef Wagner
Transportation Planner
Portland Bureau of Transportation
Zef.Wagner@portlandoregon.gov
503-823-7164

From: Marianne Fitzgerald [mailto:fitzgerald.marianne@gmail.com]
Sent: Monday, February 20, 2017 5:49 PM
To: Hill, Anne <Anne.Hill@portlandoregon.gov>
Cc: Leon, Christine <Christine.Leon@portlandoregon.gov>; Lear, Mark <Mark.Lear@portlandoregon.gov>; David Martin <transportation@swni.org>; John Tappero <john@swni.org>; Wagner, Zef <Zef.Wagner@portlandoregon.gov>; Averbeck, Roger <roger.averbeck@gmail.com>
Subject: SWNI Thank You and follow-up re Project List

Anne, Christine and Mark: I wanted to thank you very much for attending SWNI's Transportation Committee meeting last week. Your slide show helped explain the thinking behind the project list and methodology for updating the Transportation Systems Development Charge. Based on the questions raised, our neighbors seemed quite interested in the details.

Here are a couple of things I noted for follow-up:

- We would like to see the historical annual breakdown regarding what TSDC funds were raised and where they were spent, by coalition.
- We would like to see the draft "person trip" methodology before the package goes to City Council.
- We now understand that the TSDC project list is the recently adopted TSP list of financially constrained projects in the 1-10 year timeframe. I compared the TSDC list with the TSP list and found some discrepancies. I hope that PBOT also compares the TSDC list with the Southwest Corridor Plan project list to make sure we don't miss something.

Here is a summary of my handwritten **comments on the project** list that I shared with Mark Lear on 2/26:

First, I noted that the TSDC write-up for **SW Barbur Blvd** is significantly different from the TSP language. The TSP language is carried over from the old Barbur Streetscape Plan. This is the first time we've seen the new language. Also note that project 90016 (Inner Barbur) is listed twice, and misnamed on the very last page as "SW Corridor Access to Transit. When was this change made and how does it affect what will be built on Barbur? Does this mean only projects relating to the SW Corridor Plan will be built on Barbur?

The language and cost estimate you see here was adopted by City Council last summer as part of an ordinance updating the 2007 TSDC project list. The project was scoped by ODOT in response to the Road Safety Audit that Commissioner Novick and many community groups pushed for, and which recommended dropping a southbound lane at Capitol Hwy to provide space for bike lanes over the viaducts. This doesn't replace the entire Inner Barbur project from the TSP, but is rather a segment of it that seemed to have enough momentum that it warranted being on the TSDC project list. However, ODOT did not provide match funding last year, so we are showing it here on the new list so it would continue to be eligible for newly-collected TSDC funds.

MF: I was not aware of how PBOT takes one big project and slices

it into segments that it deems important. Regarding the Barbur/ Capitol Highway North project, when Art came to the SWNI Transportation Committee meeting, we supported the use of the TSDC funds for the project but did not agree with the design, we clearly told him that it needed further discussion.

Regarding "SW Corridor Access to Transit," we were simply using the TSP numbers for projects that come closest to describing the purpose of the project, which is to improve access along and connecting to Barbur. If you feel that is inappropriate, we can assign it a new number.

MF: I agree that we will need to revisit the TSP with the SW Corridor Project in mind. New materials from Metro today have some new details in the discussion of alignments.

MF: The Outer Barbur project goes from SW Terwilliger to SW 65th--about a 4 mile segment--and there are a lot of gaps in the sidewalk and bike infrastructure along that segment, and a lot of really poor infrastructure on the key access streets to transit stops (as Denver noted in the Tryon-Stephens Creek Neighborhood Street Plan). West Portland Crossroads--an official town center in the Comp Plan--is a safety nightmare for anyone trying to walk or bike through it. I just put together comments on ODOT's 2018-21 STIP and noted that every time they "improve" the crossroads they make it worse--two pedestrian fatalities and one serious bike injury since they "improved" it by adding southbound lanes on Barbur about 15 years ago. The widened shoulders on Barbur south of the Crossroads are not safe for walking but I see a lot of people walking and biking along them. I didn't push back on the 11-20 timeframe in the TSP update but now I am.

To answer your last question, what we are showing is that only the SW Corridor HCT project, SW Corridor Access to Transit project, and the Inner Barbur project described above would be eligible for TSDC funding. We could still build other projects on Barbur, but with three major projects on Barbur already, it seemed like enough for the TSDC list.

I also noted that project 90020 is listed twice and the "Hillsdale Town Center Pedestrian Connections" is not in the TSP (that I know of). Does this mean that only these improvements will be built on Beaverton-Hillsdale Highway (BHH) and not anything west of Dosch?

We split the TSP project into two segments, one east of 30th and one west of 30th. This was done because we scoped out the Hillsdale project for a Metro grant application.

Missing FC 1-10 Projects:

20106 I-405 South Portland Crossing Improvements (really central city but both Homestead and South Portland NA really want this) The Recommended Draft of Central City 2035 shows this project split into several discrete crossing projects, but we may end up combining them again since it could make it a more compelling project for grant funding. Either way, we will consider adding this to the TSDC list.
90019 BHH ITS This is actually on the list.
90031.1 Dosch Road, BHH-Patton This is an "interim safety improvement" (i.e. "safer shoulder") that would not be eligible for TSDC funding under state law.
90033 Garden Home Road Multnomah-Capitol Highway (The projects were separated into two projects over the last 10 years and only the intersection was funded. Ashcreek NA would like to keep the Garden Home Road project on the list; it's had a LOT of infill over the last 20 years.) My understanding, based on conversations with staff and the fairly low cost estimate, was that this project was also more of a non-standard safety improvement like an extended shoulder. If so, it would not be eligible for TSDC funding under state law.

MF: I helped Ashcreek NA review this and ANA recommended splitting the Garden Home Road project further into two segments: SW Capitol Highway to SW 45th, and SW 45th to SW Multnomah. There has been a lot of residential infill in the vicinity of Garden Home Road, and a lot of people walk to transit service on Garden Home Road or SW Capitol Highway. The segment between SW Capitol Highway to SW 45th could use sidewalks and stormwater improvements but I don't know if the Multnomah NA weighed in on this. It's key to accessing Multnomah Village.

90049.1 Marquam Hill Road This is an "interim safety improvement" (i.e. "safer shoulder") that would not be eligible for TSDC funding under state law.
90090 Barbur to PCC Greenway This has been identified as part of the core SW Corridor HCT project, which is already listed separately.
90114 Hewett Bikeway This is an "enhanced shared roadway" bicycle facility, which is primarily a way-finding improvement and is unlikely to be considered a "capacity" improvement in the way that a neighborhood greenway or bike lane project would be.

Listed TSDC projects that are FC 11-20 Projects:

90046 Macadam ITS (but this was on the last SDC list) Initial feedback on our first draft project list was that we did not have enough projects that benefit general traffic

flow or freight movement, so we added several low-cost ITS projects.
90062 Stephenson While the entire sidewalk project on Stephenson is unlikely to be done in the 1-10 year timeframe, our LID administrator identified a potential opportunity for a smaller project on Stephenson that could benefit from TSDC leverage.
90092 Inner Canby This was identified by the Parks Bureau as a potential leverage opportunity to improve the path or build a new one through Gabriel Park, so it seemed worth putting on the list.
90060 South Portland Circulation Study (tied to SW Corridor Project) By itself, this would be unlikely to be built in the 1-10 year timeframe, but if we can tie it to the SW Corridor project then it would happen in the next 10 years. This is enough of a possibility that we felt it should be on this list.
90017 Outer Barbur (also tied to SW Corridor Project) By itself, this would be unlikely to be built in the 1-10 year timeframe, but if we can tie it to the SW Corridor project then it would happen in the next 10 years. This is enough of a possibility that we felt it should be on this list.

Listed TSDC projects that are Not Financially Constrained:
90073, Dolph Court, The project as a whole was not on the financially constrained list, but our LID administrator identified the potential for TSDC leverage for a short segment near Spring Garden Park.
Southwest Corridor Project (of course tied to SW Corridor Project) We expect an RTP amendment to move this project to the constrained list, after which the TSP would be amended to match.

Please let me know if these are errors or deliberate deviations from the TSP FC 1-10 list.

Thanks very much for your help in understanding the TSDC update and I look forward to working with you all on the details.
Marianne

From: Sylvia Ciborowski
To: Sylvia Ciborowski
Subject: FW: TSDC Update comments on Update
Date: Monday, April 17, 2017 9:19:46 PM

Begin forwarded message:

From: Curt Schneider <curt.j.schneider@icloud.com>
Date: February 24, 2017 at 7:51:09 AM PST
To: <anne.hill@portlandoregon.gov>
Cc: Jennifer Vitello <je.vitello@gmail.com>, Jene deSpain <jenedespain@gmail.com>
Subject: TSDC Update comments on Update

24 February 2017

PBOT Transportation System Development Charges Update Project comments

To: Anne Hill, PBOT
From: Curt Schneider
6904 N Charleston Av
Portland, Oregon 97203

TSDC's are to be used to offset the impacts from increased development!

This is most significant as a number of large scale development has begun in the Cathedral Park Neighborhood, specifically the Riverfront Sub-District of the St Johns/Lombard Plan and will continue under the recently adopted 2035 Comprehensive Plan. One development has just been approved for 101 units with development to begin this spring, with two other large scale requests for 254 more units in the process. These developments will need to be using N Crawford and N Edison to connect and neither street can be classified as improved as they are not paved (oil mat mostly) and partial sidewalks that are in disrepair or missing entirely. These streets are classified as pedestrian/bike routes and Richmond and Edison are zoned as Recreational Trails. This large-scale development and future riverfront development will be and is generating a huge amount of SDCs that should be prioritized in the Cathedral Park Neighborhood, which is the area that will be dramatically impacted by this development. There does not seem to be a connection between development and the community's needs at large when development occurs. There is no continuity and actually appears to be haphazard!

Further, most of the designated St. Johns Pedestrian District is actually located in the Cathedral Park Neighborhood. None of the projects listed have been completed in the Cathedral Park Neighborhood - specifically, no pedestrian improvements have been made in Cathedral Park other than along Ivanhoe. Cathedral Park has over 15% of its streets unpaved. Many more still have no sidewalks. There are no crosswalks, lighting, signage, etc.

On the priority list are Willamette Boulevard prioritized as becoming a

Greenway, yet there have been no cyclist or pedestrian improvements there that appear to meet a greenway standard. Also, assistance is necessary to complete the segment 2 of the North Portland Greenway from Pier Park to Cathedral Park (a project that will provide an elevated crossing for pedestrians and bicyclists over Columbia Blvd from Chimney Park and the ‘old landfill’ site and Kelley Point Park has been approved and awaiting construction in 2018). Most of this Pedestrian District has been up-zoned to Mixed Use/ High Density under the new Comp Plan adopted in December 2016. For these reasons, and many others, project 30050 "St. John's Pedestrian Improvements" should be prioritized.

Adding to the discomfort of local residents is the amount of cut-through traffic between Ivanhoe and Edison and between Polk/Richmond and Baltimore that has made pedestrian crossing from the Cathedral Park Neighborhood to the St Johns business district and within the neighborhood extremely hazardous for me as a pedestrian. High speed cut-through traffic (greater than 25 mph usually) does not care about pedestrians; drivers look away when they see you and then act as though they didn’t see you rather than give you the required right-of-way at intersections. Dangerous!. This is aggravated by the fact that there are many missing sidewalks, causing neighbors to have to walk around parked cars and into the middle of the street to get to the grocery store, do every day errands or simply taking a walk for exercise or to meet a neighbor..

Currently, the Cathedral Park Neighborhood Association is working with PBOT to develop LIDs at the intersections of Willamette and Burlington and Willamette and Edison. We are seeking additional sources of funding to finally develop the Willamette Greenway, and prioritize bicycle and pedestrian transportation along Willamette Boulevard.

Thank you

PORTLAND
BUSINESS ALLIANCE
Commerce • Community • Prosperity

March 14, 2017

Honorable Dan Saltzman
City of Portland
1221 SW 4th Avenue, Suite 230
Portland, OR 97204

Dear Commissioner Saltzman,

The Portland Business Alliance ("Alliance") represents more than 1,850 small, medium, and large businesses in the Portland-metro and we are committed to improving the region's multimodal transportation network to help promote livability and a prosperous economy. We, therefore, have a vested interest in how transportation projects are funded and which transportation projects are funded. That is why we plan to review the Portland Bureau of Transportation's (PBOT) new rate structure and methodology for how transportation system development charges (TSDCs) are calculated when the details are made available in April 2017. Meantime, the purpose of this letter is to provide feedback on the TSDC project list and is not an early indication of an Alliance position on the new TSDC methodology or rate structure.

We understand that TSDCs are one-time fees assessed to new development and changes in use. The fee is required to help fund increased capacity or in other words transportation facilities needed to serve demand arising from new development. Further, the new fee will, in part, be based on the transportation projects identified as eligible and priorities for TSDC funding. We are gravely concerned that the draft TSDC project list is imbalanced and heavily skewed toward active transportation. There appears to be little consideration, if any, for a strong multimodal network that achieves both the efficient movement of people and goods. Instead, there is a pervasive bias toward active transportation as evidenced by the 75 percent of projects on the list that are classified as active transportation. Only 21 percent are classified as traffic/freight projects and a mere four percent are transit projects. Frankly, this is unacceptable.

We know that the city has aspirational mode split goals that may be dictating this divergent percentage breakdown among the various modes. We are concerned that the aspirational mode split goals were not developed based on a thorough analysis of data or modeling of what is possible. While we agree that in some cases the transportation system is constrained by the built environment and greater mode split will be necessary in the future as more people and jobs locate in the city, the current list does not appear to take into account the fact that automobile use is still the dominant mode of transportation now and for the foreseeable future. We need to be extremely thoughtful about the prioritization of modes and use of streets and evaluate transportation projects as part of the larger transportation network. That is why we urge that the following criteria be applied when prioritizing the projects eligible for funding on the TSDC project list:

- Alleviates congestion;
- Promotes freight mobility and the efficient movement of goods;

- Protects and enhances portal capacity at bridgeheads and freeway on-and off-ramps;
- Promotes economic development and real estate development in the surrounding area increasing property tax revenue and generating quality jobs;
- Does not compromise existing parking or loading and unloading zones;
- Does not convert existing road capacity for other community uses;
- Includes projects that have matching grants or other financial support to make them more likely to get built.

The above criteria will help address congestion and lead to a healthy quality of life and economy especially as we face significant population growth over the next 20 years. We look forward to working with you to refine the draft TSDC project list and providing feedback on the new TSDC methodology and rate structure once it is available for public comment this spring 2017. Thank you for your consideration.

Sincerely,

Sandra McDonough
President and CEO

cc: City Council
PBOT Director Leah Treat

sabin Community Association

Our Community in Action

March 16, 2017

VIA EMAIL AND US MAIL

Anne Hill
Anne Hill@portlandoregon.gov
Bureau of Transportation
City of Portland
1129 SW Fifth Avenue, Suite 800
Portland, OR 97204

Dear Ms. Hill:

The Sabin Community Association would like to provide feedback on the proposed projects in the Transportation System Development Charge Update.

The Sabin Community Association recommends that the Portland Bureau of Transportation prioritize Project 40116, the NE 7th/9th Neighborhood Greenway. There is currently no good north-south route in this area for bicycle users, and a neighborhood greenway on NE 7th/9th would address that lack. The Sabin Community Association also recommends prioritizing Project 30014, the Failing Street Neighborhood Greenway, which would improve east-west bicycle transportation north of Fremont. The Sabin Community Association strongly supports funding these projects.

Please feel free to contact me at (503) 964-8417 or at rach.c.lee@gmail.com should you have any questions. Thank you for considering the Sabin Community Association's comment.

Sincerely,

Rachel Lee

Rachel Lee
Chair, Sabin Land Use & Transportation Committee

cc via email: Sabin Community Association Board
Sabin Land Use & Transportation Committee

From:	Hill, Anne
To:	d.samdahl@fehrandpeers.com; Sylvia Ciborowski
Subject:	Fwd: PFC Workgroup Meeting Notes
Date:	Monday, March 13, 2017 3:27:34 PM
Attachments:	PFC Workgroup Meeting Summary.doc ATT00001.htm

Begin forwarded message:

From: "Hillier, Robert" <Robert.Hillier@portlandoregon.gov>
Date: March 13, 2017 at 3:25:20 PM PDT
To: TOM BOUILLION <tom.bouillion@portofportland.com>, TOM DECHENNE <tom.dechenne@colliers.com>, TIM COLLINS <tim.collins@oregonmetro.gov>, "Kountz, Steve" <Steve.Kountz@portlandoregon.gov>, "Ansary, Raihana" <RAnsary@portlandalliance.com>, "Collier, Corky" <corky@columbiacorridor.org>, TONY COLEMAN <anthony.t.coleman@odot.state.or.us>, "MillsT@trimet.org" <MillsT@trimet.org>
Cc: "Leclerc, Mauricio" <Mauricio.Leclerc@portlandoregon.gov>, "Wagner, Zef" <Zef.Wagner@portlandoregon.gov>, Pia Welch <piawelch@aol.com>, "Eisenhauer, Richard" <Richard.Eisenhauer@portlandoregon.gov>, "Hill, Anne" <Anne.Hill@portlandoregon.gov>, "Lear, Mark" <Mark.Lear@portlandoregon.gov>
Subject: PFC Workgroup Meeting Notes

Greetings All;
Thanks for participating in last week's PFC workgroup for reviewing the Transportation System Development Charge projects. Please find attached for your review/comment the meeting notes and recommendations from the workgroup. Let me know if I missed anything and I'll forward to the PFC Chairs for their consideration on next steps.

Bob Hillier
Freight Planning Coordinator
City of Portland Bureau of Transportation
1120 SW 5th Avenue, Suite 800
Portland, Oregon 97204
Phone: 503 823-7567
E-Mail: Robert.hillier@portlandoregon.gov

PFC Workgroup Meeting Summary

RE: Portland Freight Committee Workgroup: Transportation System Development Charge Projects
Date/Time: March 8, 2017, 8-10AM
Location: Lovejoy Room, City Hall
Attendees: Tom Dechenne, Tim Collins, Steve Kountz, Raihana Ansary, Corky Collier, Tony Coleman, Tom Bouillion, Tom Mills, Bob Hillier, Mauricio Leclerc, Zef Wagner

The PFC workgroup considered projects in the Transportation System Plan and Regional Over-Dimensional Truck Route Study and recommends the following projects be added to the TSDC eligibility list:

Transportation System Plan Projects:

TSP ID	Lead Agency	Name	Description	Cost	Financially Constrained ?	Staff Response
20042	Portland/ TriMet	South Waterfront Transit Improvements	Implement transit improvements identified in the North Macadam Transportation Development Strategy, including multi-modal transit hub and local bus service improvements.	$2,806,000	Yes, Years 1 - 10	Most of the transit improvements identified in the North Macadam plan have been completed, and TriMet has not indicated plans for a transit hub or changes to local bus service in the Service Enhancement Plan. The Central City 2035 Plan proposes to remove this project from the TSP.
*30042	Portland/ TriMet	MLK Jr Blvd Transit Improvements NE (Broadway Lombard)	Provide capital improvements that enhance the frequent bus service along MLK Jr Blvd.	$1,926,330	Yes, Years 11 - 20	Staff agree that this is a priority, and will update the TSDC list to show a combined ITS, Transit, and Safety project on MLK.
30072	Portland/ Port	Rivergate ITS	Connect real-time information to ODOT's Highway ITC systems.	$ 480,000	Yes, Years 1 - 10	Based on staff feedback this appears to be a beneficial project that would complement the Rivergate Overcrossing. We will update the TSDC list to include this project.
30106	Port	Time Oil Road Reconstruction	Reconstruct Time Oil Road	$9,000,000	Yes, Years 1 - 10	Staff agree that this could be a beneficial partnership between PBOT and the Port. The project will be added to the TSDC list at a reduced eligibility to account for the expected contributions from other funding partners.
40025	Port	82nd & Airport Way Grade Separation 82nd Ave & Airport Way, NE	Construct a grade-separated overcrossing to allow for uninterrupted flow along Airport Way and remove at-grade light rail crossing.	$50,000,000	Yes, Years 1 - 10	Staff agree that this could be a beneficial partnership between PBOT and the Port. The project will be added to the TSDC list at a reduced eligibility to account for the expected contributions from other funding partners.
*40059	Portland/ ODOT	MLK Jr Blvd Freight Improvements MLK Jr, NE	Expand roadway to provide better connection between streets for improved freight movement in and through the	$12,605,000	No	This project was put on the financially unconstrained portion of the TSP because it is very expensive, performed poorly in the project evaluation, and does not yet have clear support or interest from ODOT, the facility owner. PBOT would like to finish

		(Columbia - Lombard)	area.			the current project on Columbia Blvd at MLK and then re-evaluate the need for this project and its priority level.
40093	Portland/ Port	Airtrans/Cornfoot Intersection Improvements	Add signals and improve turn lanes at AirTrans Way/Cornfoot Rd.	$650,000	Yes, Years 1 - 10	Staff agree that this could be a beneficial partnership between PBOT and the Port. The project will be added to the TSDC list at a reduced eligibility to account for the expected contributions from other funding partners.
40102	Portland/ Port	Columbia Blvd Freight Improvements Columbia Blvd, NE (60th - 82nd)	Construct street and intersection modifications to improve freight reliability and access to industrial properties. This project will be refined through the proposed Columbia Corridor Access Study.	$14,859,000	No	This project was put on the financially unconstrained portion of the TSP because it is very expensive, performed poorly in the project evaluation, and has major impacts on adjacent industrial properties. PBOT has proposed a comprehensive study of the corridor to evaluate the feasibility and need for this project and to analyze alternatives.
40113	ODOT	Columbia/MLK Intersection Improvements, Phase 2 Columbia/MLK, NE	Intersection and signalization improvements with a dedicated northbound right turn lane, a second dedicated southbound left turn lane, wider sidewalks adjacent to the roadway, and improvements to the geometry of the existing southbound through/right turn lane.	$12,000,000	No	This project was put on the financially unconstrained portion of the TSP because it is very expensive, performed poorly in the project evaluation, and does not yet have clear support or interest from ODOT, the facility owner. PBOT would like to finish the current project on Columbia Blvd at MLK and then re-evaluate the need for this project and its priority level.
70005	Portland	Cesar Chavez Corridor Improvements Cesar Chavez Blvd, NE/SE (Sandy - Woodstock)	Repair street, upgrade sidewalks, and add pedestrian/bicycle crossing improvements. Upgrade signals and make striping changes to improve traffic safety and transit operations.	$5,000,000	Yes, Years 11 - 20	While this is an important corridor for traffic, it is not a major freight route and is not a high priority based on equity or safety compared to other major traffic streets. For these reasons, it is appropriate to leave it in the 11-20 year timeframe for now.
70045	Portland/ ODOT	Inner Powell Blvd Corridor Improvements Powell Blvd, SE (Ross Island Bridge - 50th)	Retrofit existing street with multimodal safety improvements including enhanced pedestrian and bicycle crossings, pedestrian and bike activated signals, median islands with trees, redesign of selected intersections and stormwater management facilities. Project design will consider freight movement needs, consistent with policies, street classification(s) and uses.	$7,997,100	Yes, Years 11 - 20	Upcoming ODOT and TriMet projects will be addressing a majority of the elements identified in the Inner Powell Plan, and further improvements are unlikely without a jurisdictional transfer. If a jurisdictional transfer becomes a reality, this project could become more of a near-term priority.

*Combine 30042 with 40059 as one project

Regional Over-Dimensional Truck Route Study Projects:

TSP ID	Lead Agency	Name	Description	Cost	Staff Response
TBD	Portland	Columbia Blvd Pedestrian Overpass Replacement	Replace or reconstruct the pedestrian overpass near George Middle School with a higher overpass to enable the use of Columbia Blvd as an Over-dimensional freight route	$3,000,000	Staff agree with the conclusions of the study that this project would be beneficial for freight and would facilitate the use of Columbia Blvd for its intended function. This project will be added to the updated TSDC list.
TBD	Portland	Columbia Blvd Railroad Undercrossing Improvement	Lower the Columbia Blvd undercrossing at the UP Railroad Bridge just west of I-5 to enable the use of Columbia Blvd as an Over-dimensional freight route	$3,000,000	Staff agree with the conclusions of the study that this project would be beneficial for freight and would facilitate the use of Columbia Blvd for its intended function. This project will be added to the updated TSDC list.
TBD	Portland/ ODOT	N Portland Rd Columbia Slough Bridge Replacement	Replace the weight-restricted N Portland Rd bridge over the Columbia Slough to enable the use of N Portland Rd as an Over-dimensional freight route	$7,500,000	Staff agree with the conclusions of the study that this project would be beneficial for freight and would facilitate the use of N Portland Rd for its intended function. This project will be added to the updated TSDC list.

In addition to the projects referenced above the PFC also recommends the following project be included on the TSDC eligibility list:

TSP ID	Lead Agency	Name	Description	Cost	Staff Response
TBD	Portland	N. Suttle Rd Street Improvements (N Portland Rd to dead-end)	Construct 3,000 lineal feet of industrial street improvement including sidewalks	$9,402,000	Staff agree that this could be a beneficial partnership between PBOT and private property owners along Suttle Rd. The project will be added to the TSDC list at a reduced eligibility to account for the expected contributions from other funding partners and to reflect that a portion of the project could be seen as “major maintenance” rather than capacity.

MEMORANDUM

Date: April 19, 2017

To: Anne Hill, Rich Eisenhauer, and Christine Leon, PBOT

From: Kendra Breiland, Fehr & Peers

Subject: Summary of How Public Comment Influenced TSDC Project List

SE16-0459

This memorandum summarizes changes made to the TSDC project list in response to the public input summarized earlier in this Appendix. Specifically, the input influenced the project list in the following ways:

- Identified new projects that should be included in the TSDC project list
- Revised projects already on the list, in terms of geographic extent or project features

Recognizing that projects on the TSDC list must have a reasonable nexus with adopted capital plans, this memorandum summarizes the methodologies that staff used to add projects to the TSDC project list, as well as how project funding eligibility was determined.

New Projects Added in Response to Public Input

- The Growing Transit Communities (GTC) Plan, which will be going to City Council in April for adoption, has recommended several new projects in the Airport Way, Halsey, and outer Stark corridors.
- A recent Vision Zero gap analysis has recommended new TSP projects for segments of Columbia Blvd, Interstate Ave, MLK Blvd, Hawthorne Blvd, and Foster Rd.
- Errol Heights Local Street Improvements was added at the request of the Neighborhood Streets Program to support an active project.
- NW Naito/Front was added at the request of the Pearl District Neighborhood Association to provide eligibility for missing sidewalks that are not part of current LID project.
- Bond Ave, Phase 2 was added to support potential PDC and private leverage.
- I-405 South Portland Crossing Improvements and SW Garden Home Rd added at request of SWNI
- Rivergate ITS, Suttle Rd, Time Oil Rd, 82nd/Airport Way, and Airtrans/Cornfoot added at request of PFC and Port to support potential Port partnerships that benefit freight movement.
- Columbia Blvd Ped Overpass, Columbia Blvd Railroad Undercrossing, and N Portland Rd over Columbia Slough Bridge were recommended by the Over-dimensional Freight Route Study.

- Some area projects focused on designated Town Centers (St Johns, West Portland, etc) have been re-scoped as "Connected Centers" projects, and some new ones have been added (Lents, Division-Midway, NWDA, etc) in order to better meet address Regional Transportation Plan goals and make ped/bike projects around centers more competitive for grant funding. In many cases, these area investments include multiple existing TSP projects, small projects from Citywide Programs in the area, and pedestrian improvements to be identified through the Pedestrian Master Plan update.
- NWDA requested addition of two specific bikeway projects from CC2035. Rather than being listed separately, these have been folded into the NW District Connected Centers Project.
- Marquam Hill Ped/Bike project added at request of LID administrator based on LID potential.

Major Project Revisions in Response to Public Input

- Extended Better Naito project south to Harrison and expanded scope to include ped crossings and signals to leverage Fixing Our Streets projects and be more consistent with Bike Plan.
- Adjusted extents and scope of Lombard Corridor project to match active ODOT/PDC/PBOT discussions about project coordination.
- Modified MLK ITS project to be a multimodal safety project to better reflect active ITS and Vision Zero project under development.
- Adjusted Columbia Slough Trail project to reflect segments most likely in next 10 years.
- Split Streetcar Extension project into two pieces and clarified alignments, as requested by NWDA:
    - Montgomery Park Streetcar Extension
    - Broadway-Weidler to Hollywood Streetcar Extension
- Adjusted several projects to match recommendations from the Growing Transit Communities Plan.
- Adjusted several projects to better reflect active project scopes/budgets.
- Merged three separate Division Corridor projects into two, to better reflect active project scopes.
- Adjusted Outer Powell to focus on Segments 1 and 4, since Segments 2 and 3 are already covered on existing TSDC list.
- Adjusted Stephenson and Dolph projects to match LID project scopes.
- Adjusted several streetcar-related projects at the request of PBOT staff and Portland Streetcar

Methodologies for Adding Projects and Determining Project Eligibility

For projects that are not currently included in the first 10 years of the City's Transportation System Plan, the following methods were used to include projects:

- Project is recommended in another adopted or in-process planning process (CC2035, GTC, etc).
- Project is recommended in a recent study or analysis (Vision Zero gap analysis, Streetcar, Over-dimensional freight, etc).

- One segment of a larger, longer-term project has a near-term leverage opportunity (LIDs, PDC, etc)
- Project is in the TSP as another agency project (Port, ODOT, etc) and has been identified as a good partnership opportunity.
- Project in 11-20 year list was needed to provide modal or geographic balance to the list (several ITS projects, for example)
- Bundles of small programmatic investments have been identified for a discrete geographic area, consistent with TSP criteria (Connected Centers)

In determining eligibility for projects added, all project are considered 100% eligible, except under the following conditions:

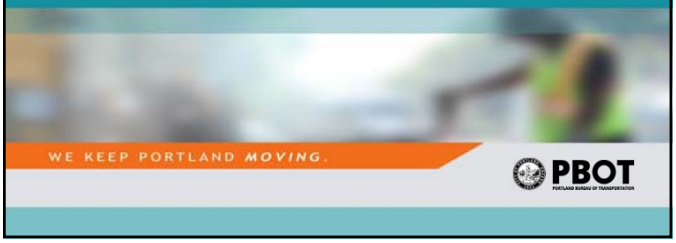
- Eligibility is reduced by the amount of non-TSDC funding already budgeted towards the project, in PBOT's CIP or other bureau/agency budgets.
- Eligibility is reduced by 50% if the project adds capacity or improves performance but also includes a substantial "major maintenance" or "asset replacement" component—for example, bridge replacements and roadway reconstructions.
- Eligibility is reduced by 75% if the project is a partnership with another agency or private developers and we expect others to pay the majority of the cost.
- Eligibility is capped at a set amount for large regional projects with multiple funding partners.

Appendix 5:

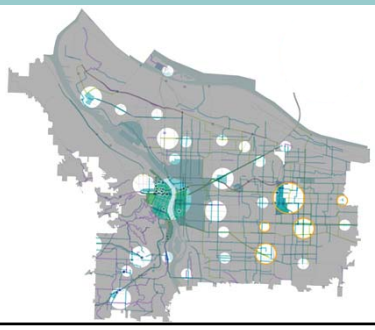
Outreach and Notification Materials

Presentation to Portland Freight Committee Workgroup
March 8, 2017

Portland Bureau of Transportation Transportation System Plan and SDC Project Selection

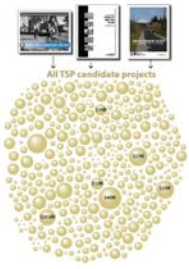


PBOT Investment strategy



TSP Project Selection Process

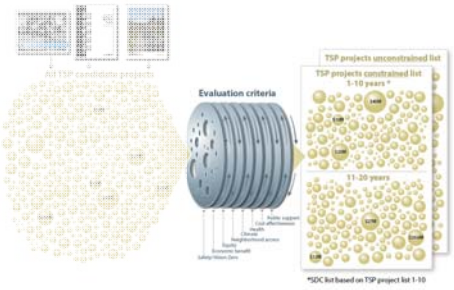
Drawing on area plans and modal plans, we gather all the good project ideas to include in the Transportation System Plan (TSP).

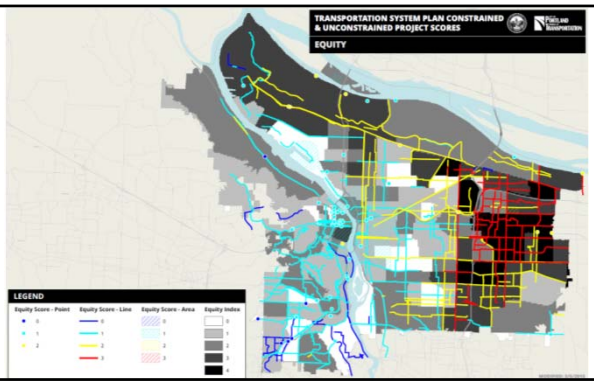


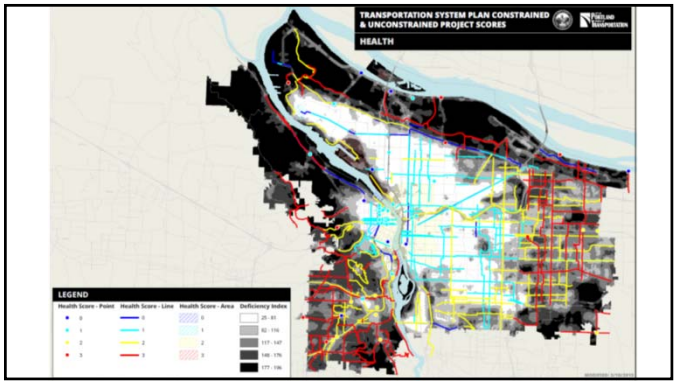
2035 TSP project list, sized by estimated cost

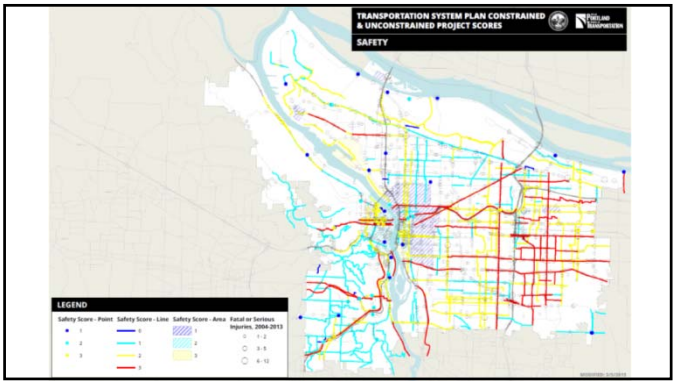
TSP Project Selection Process

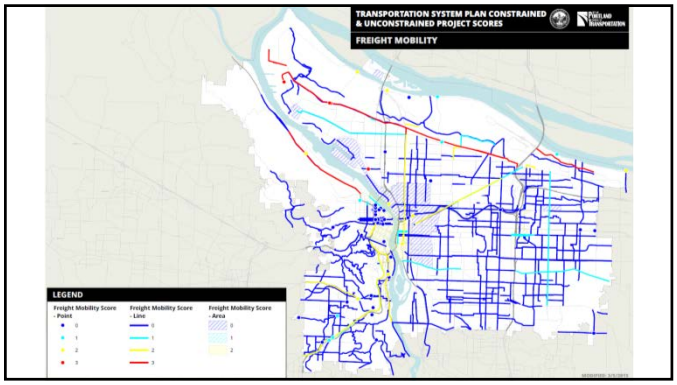
With each TSP update we create a "1-10 and 11-20 year" list. **SDC list is based on the "1-10 year" list.**
We pursue project planning funds for studies to refine project concepts with community input.





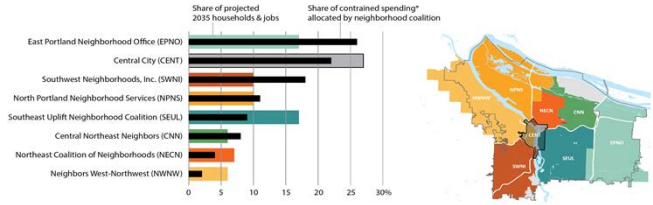






Investment strategy

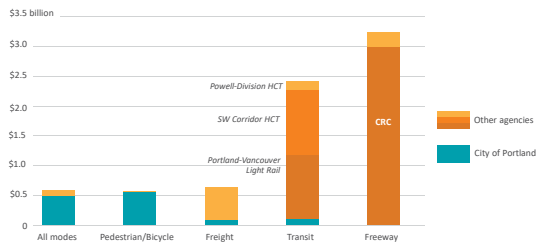
Spending on TSP projects compared to distribution of 2035 households and jobs by neighborhood coalition



*not including citywide programs

Investment strategy

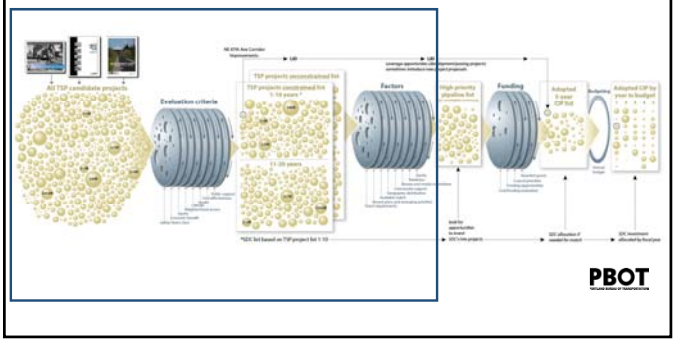
Constrained investments (20-year) by mode and agency



From TSP Project to SDC Project

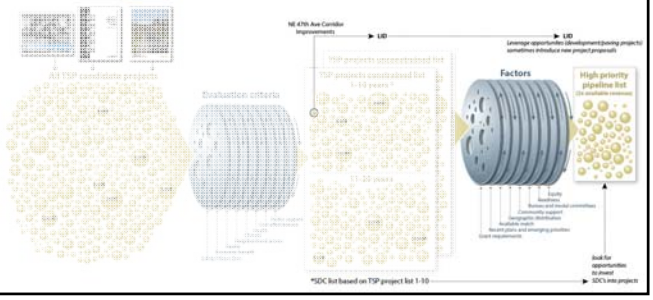
- Limited to projects in the TSP Constrained List
- Limited to 1-10 year list to match SDC's 10-year timeframe
- Mostly City of Portland projects and some regional projects
- Projects need to demonstrate that they "add capacity"; not just maintenance or replacement

Project Selection Process From TSP to CIP



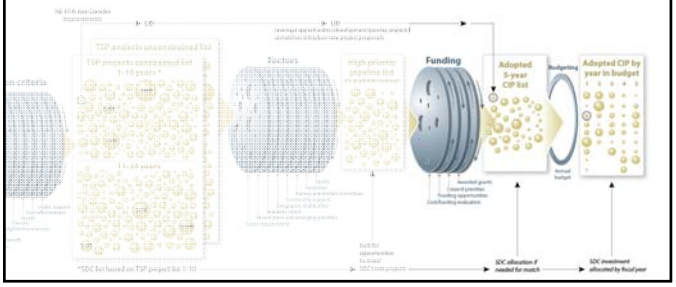
From TSP to implementation

We create a 1-2 year list of priorities for the 1-10 year projects. Refine cost estimates, evaluate projects based on grant criteria, and public feedback. Staff writes grant applications, pursues partnerships, and seeks funding to create a detailed project proposal to make projects more competitive.



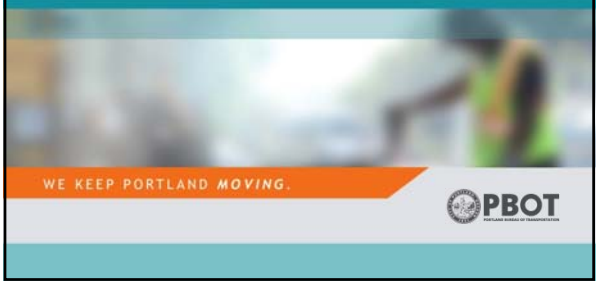
From TSP to implementation

Once projects are funded we allocate cost and funding by project phase. Assign engineers and project management staff to projects. Allocate staff and construction costs into each fiscal year.



PowerPoint Presentation to Portland Streetcar Board, Inc.
October 2016

Transportation System Development Charge Update



TSDC Key Elements

- Project list to accommodate growth
- Refine the methodology
- Determine rates charged to new development

Project List Development

- Must be included in Transportation System Plan
- Carried over from current TSDC project list
- New projects underway now or committed to be added to the project list
- New projects not yet underway but anticipated

Refining the Methodology

Shift to a "Person-Trip" model

- Instead of separating trips into modes of transportation, counts all trips in a multi-modal system
- Fits Portland's unique transportation characteristics
- Use of credits and/or discounts to incentivize developments that support the City's land-use goals

Rate Setting

- Affordability a key concern in community
- Current fees/charges on development are limitations on rate
- Project list total amount remains relatively consistent
- Project list grant leverage
- Existing TSDC balance
- Flexibility on level of funding

Draft Transit Projects

Streetcar Extension – Placeholder project

- Put all extension lines on the list but only commit to funding a portion of one with TSDC
- Flexible approach to allow for options and completion of the ongoing prioritization effort

Draft Transit Projects

Additional Streetcar elements:

- Capacity increasing improvements (Grand/I-84)
- Lloyd District Turnbacks
- Rolling Stock (would need to provide an exception in City Code)

Draft Transit Projects

Other High Capacity Transit

SE Division: $8 million existing TSDC
$7-12 million additional TSDC

SW Corridor: amount TBD. Potential for limit to TSDC contribution similar to previous limit on Orange Line

Schedule/Next Steps

- Outreach to Neighborhoods, Community Groups, and Modal Groups (Fall 2016)
- Methodology Concept to City Council (November 2016)
- Project List Finalized (Fall 2016)
- City Council (Winter 2017)

Outreach Materials

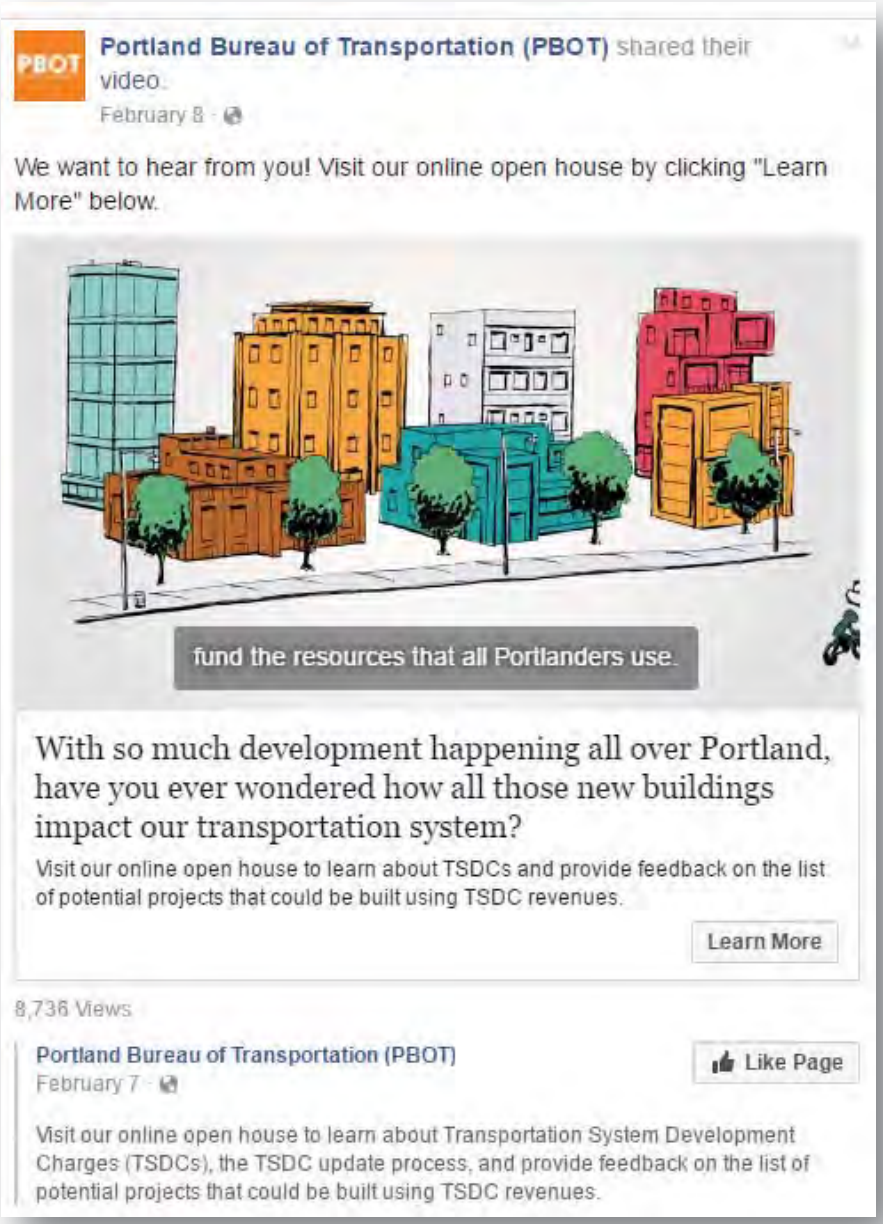
The project team developed the following outreach materials to provide information to the public about the TSDC update process.

Video

A project video was developed that described how TSDC funds are assessed and the types of projects the funding could go towards. The video was used in the Online Open House and Facebook Ads for the Online Open House, and was also streamed on a large screen at the Development Services Center.

Facebook Ads

PBOT developed two Facebook ads that ran on social media for a two week period (February 7-21, 2016). One ad included a static image of the project, and another included the project video. Both ads directed viewers to the online open house.



Fact Sheet

Two fact sheets were developed. The first fact sheet provided details on how the TSDC funds are calculated, the process for developing the draft TSDC project list, and information on how to participate in the Online Open House. The second provided information about the TSDC rates. Fact sheets were distributed through project emails, on the PBOT website,

and handed out at stakeholder briefings.

Poster Boards

Display boards were placed in the PBOT permitting office lobby to provide project information to the public at the Development Services Center. Display boards were also used at the Fix Our Streets Open House.

Email Blasts

PBOT invited the public to participate in the online open house through email blasts to the interested parties list, PBOT Transportation mailing list, and Gov.delivery list.

Portland Transportation System Development Charges Update Information

PBOT
PORTLAND BUREAU OF TRANSPORTATION

New Development: Helping to build our transportation system

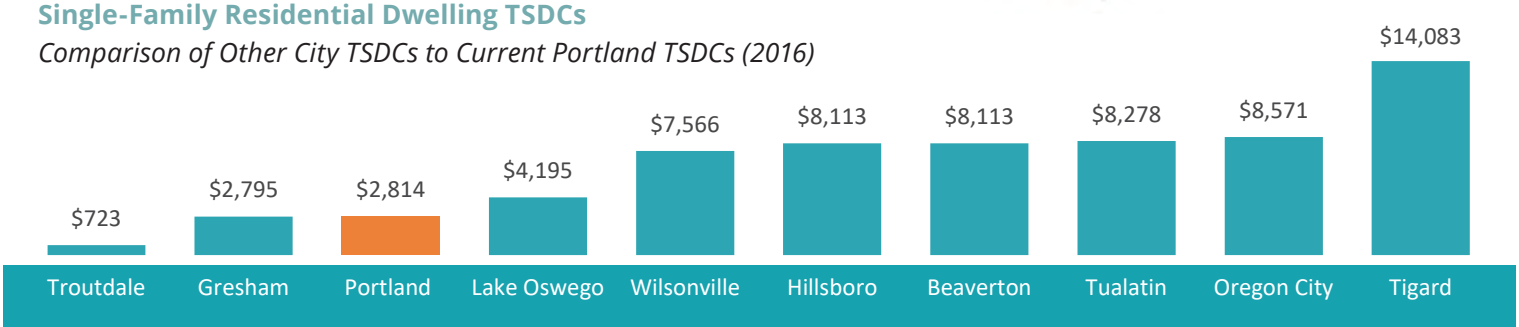
Transportation System Development Charges (TSDCs) are one-time fees paid by developers when they build a new residential or commercial development. The fee covers part of the cost of building transportation facilities to serve new development—things like roads, sidewalks and other facilities that get people to where they need to go.

The City of Portland Bureau of Transportation is updating Portland's TSDCs. The update includes three key components:

- **Update the rates that developers pay.** Each development type has a TSDC rate that is based on how many trips a new development will generate.
- **Update the methodology used to calculate TSDCs.** The update will better support Portland's urban characteristics and support travel by all modes—auto, transit, biking and walking.
- **Update the list of projects eligible for TSDC-funded investments.** Funds collected through the TSDC program can only be used to pay for projects that are on the TSDC project list.

Single-Family Residential Dwelling TSDCs

Comparison of Other City TSDCs to Current Portland TSDCs (2016)



Spotlight: TSDC Project List

The TSDC project list is used to guide spending of TSDC revenues. Projects are oriented toward accommodating development growth and improving travel for walking, biking, taking mass transit and freight. The current 2007-17 TSDC project list included 43 projects at a cost of about $400 million. Some of these projects have been completed since the list was last updated in 2007.

The 2017-27 TSDC project list is developed based upon the updated Transportation System Plan (TSP) and certain projects carried over from the 2007-17 TSDC project list. Key evaluation criteria used for the TSP update included economic benefits, equity, safety and neighborhood access along with consideration for geographic areas. The 2017-27 TSDC project list will include:

- **A broad range of projects** that benefit all geographic areas of the city and meet the needs of our diverse communities.
- **A mix of project types** that help people get around by all modes.
- **Projects that have grant or other financial support**, which are more likely to get built.

Get involved online

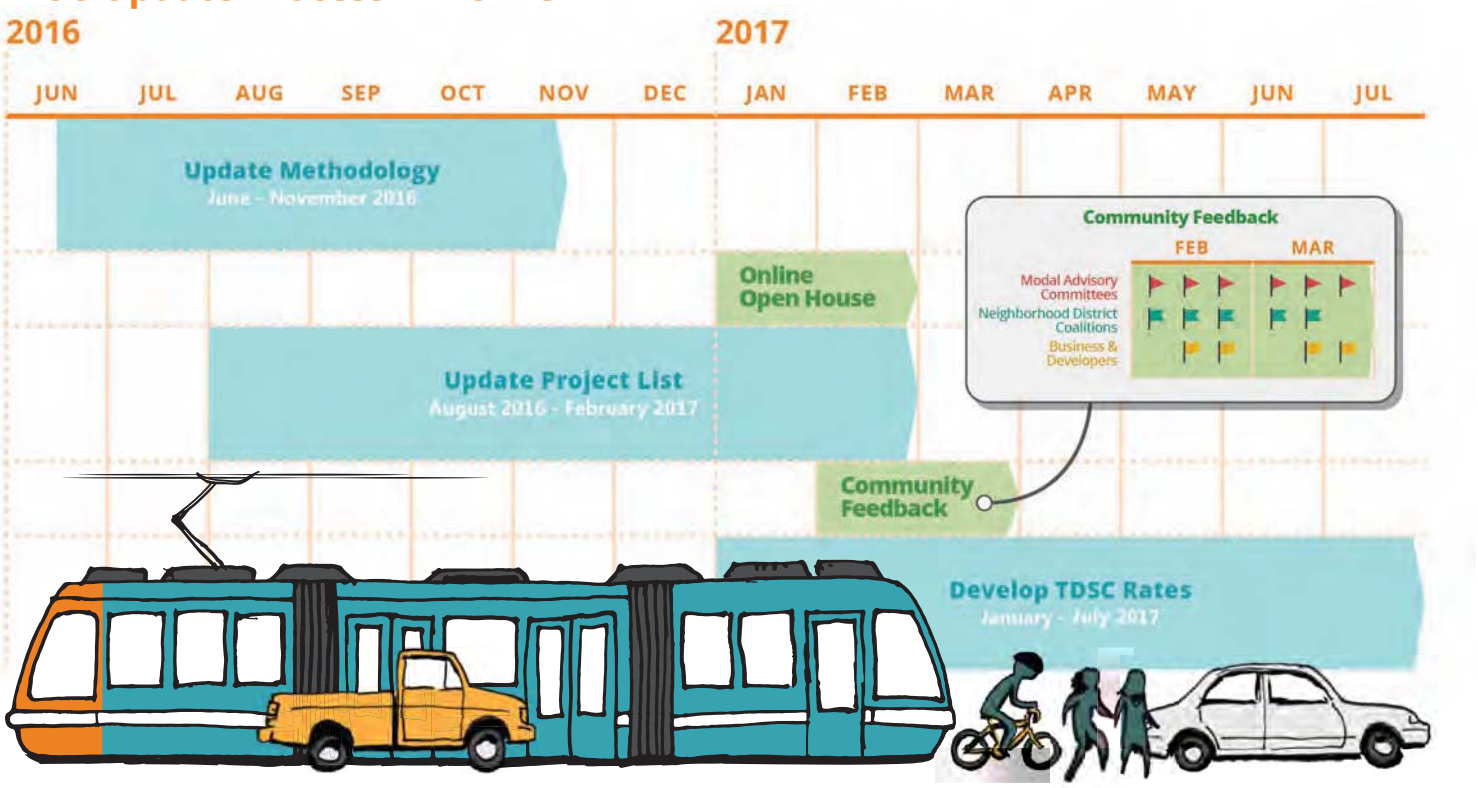
Visit an online open house to learn about the TSDC update and provide feedback on the list of potential projects that could be built using TSDC funds:
http://openhouse.jla.us.com/pbot-tsdc

For more information, contact:

Anne Hill, PBOT Project Manager
(503) 823-7239
anne.hill@portlandoregon.gov

https://www.portlandoregon.gov/transportation/71823

TDSC Update Process Timeline



The City of Portland complies with all non-discrimination, Civil Rights laws including Civil Rights Title VI and ADA Title II. To help ensure equal access to City programs, services and activities, the City of Portland will reasonably modify policies/procedures and provide auxiliary aids/services to persons with disabilities. Call 503-823-5185, TTY 503-823-6868 or Oregon Relay Service: 711 with such requests, or visit http://bit.ly/13EWaCg.

Portland Transportation System Development Charges Update Process

February 2017

PBOT
PORTLAND BUREAU OF TRANSPORTATION

What are we doing?

1. Simplifying the methodology used to calculate TSDCs.
2. Updating the list of projects eligible for TSDC-funded investments.
3. Reevaluating the rates that developers pay.

What does this mean for development?

- A simpler TSDC program using new person trip data
- Less need to conduct alternative rate studies
- Streamlined development review

What do person trips mean for you?

- People generate trips (not land uses)
- People make trips (not cars)
- Our current methodology does not fully capture these effects

Benefit: *Using person trips with new survey data will simplify the TSDC analysis- less need for alternative rate studies.*

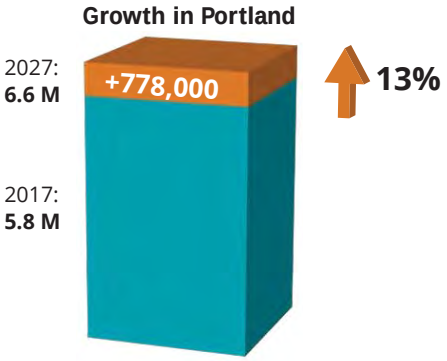
Large number of land use categories

Each development type pays a TSDC rate that is based on how many trips the new development is expected to create. The fee schedule currently contains 37 land use categories. The city plans to simplify the list with fewer categories and less detail.

Benefit: *Developers will need fewer alternative rate studies since the land use categories will become more general. The rate schedule will be easier for developers to understand.*

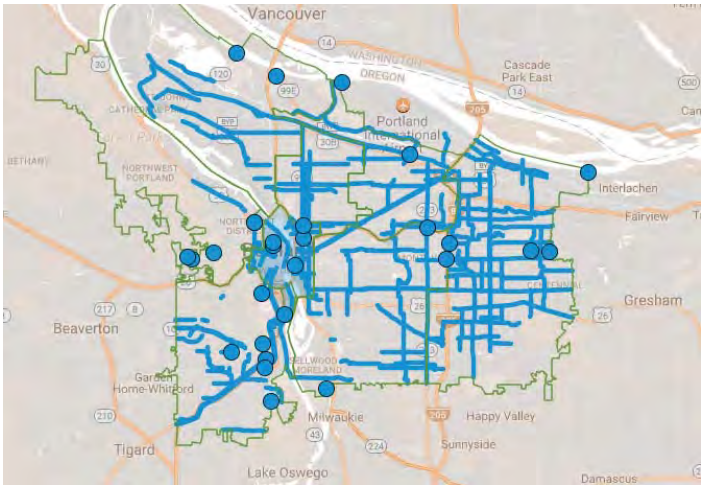
Why update the list of projects eligible for TSDC funding?

The city is expected to grow substantially over the next decade.

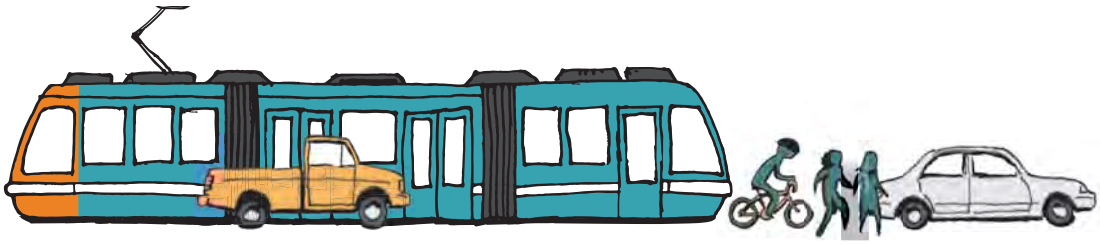


PM Peak Hour Person Trips

The projects on the TSDC list are oriented toward accommodating development growth and improving travel for all modes: walking, biking, driving and transit. The City is conducting a public input process to affirm and amend the list of projects to guide spending of TSDC revenues.

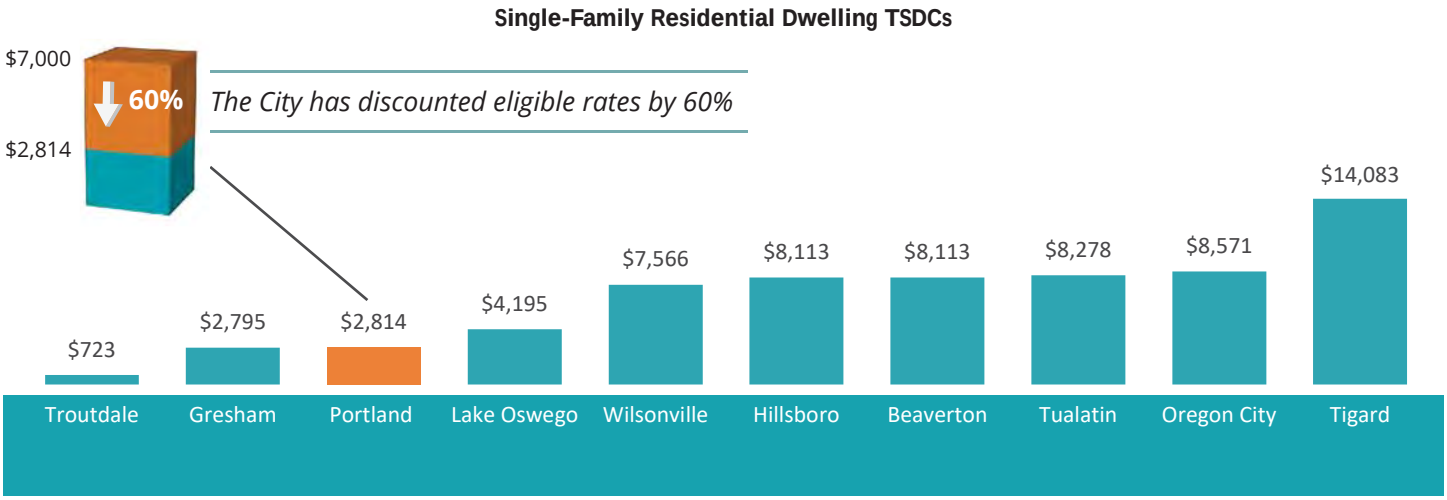


Benefit: *The TSDC revenues will be spent on projects needed to support new development growth.*

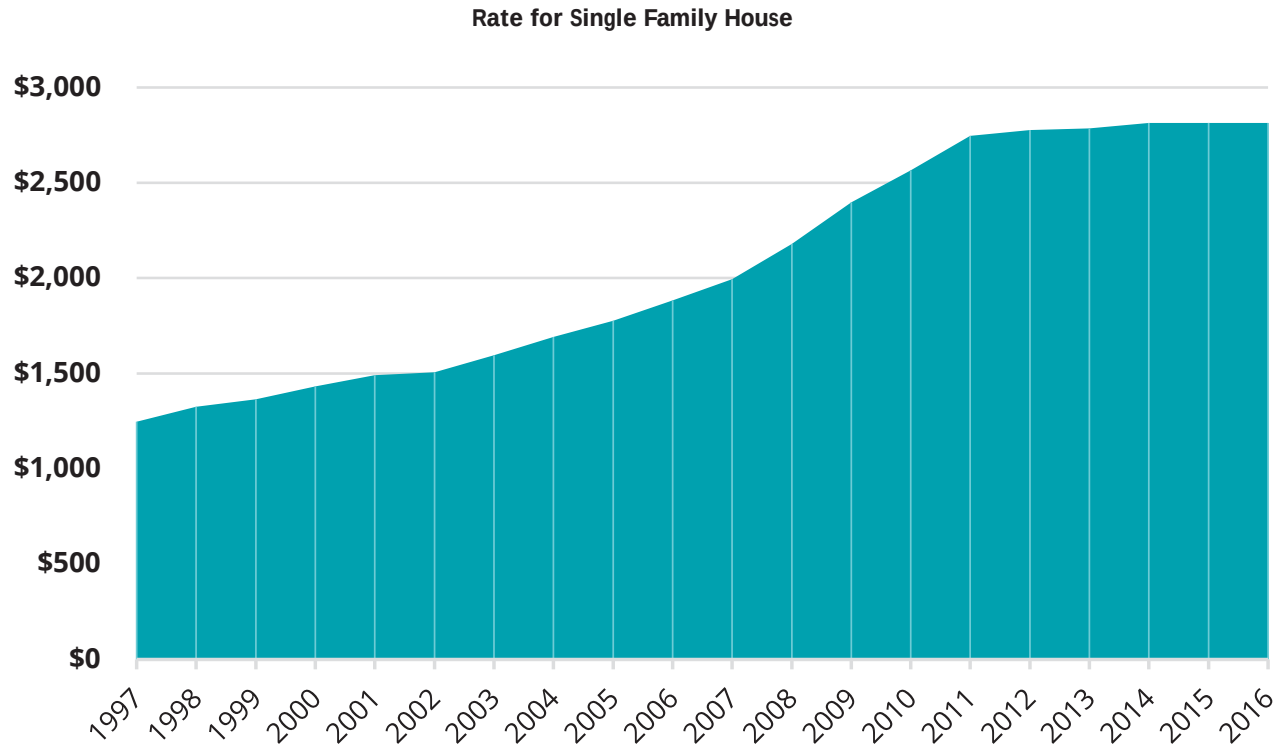


Rates will remain affordable to new development

The rates that developers pay are low as compared to rates in other cities:



And Portland's TSDC rates have remained fairly consistent over the years:



Additionally, the rate calculations will be simpler:

	Our Current Method							Our Proposed Method	
	Motorized Person Trips	TSDC Rate	Transit Person Trips	TSDC Rate	Non-Motorized Person Trips	TSDC Rate	Total TSDC Rate	Total Person Trips*	TSDC Rate*
Single Family House (DU)	9.9	$ 1,483	1.2	$ 256	0.96	$ 1,074	$ 2,814	12.1	$2,814
Restaurant (sq ft)	69.45	$ 10.15	8.47	$ 1.81	6.78	$ 7.59	$ 19.64	84.7	$19.64

* Rates may change with new trip and cost per trip data

Transportation System Development Charge (TSDC) Update

PBOT
PORTLAND BUREAU OF TRANSPORTATION

Transportation System Development Charges help support our transportation system

TSDCs are one-time fees paid by developers when they build a new residential or commercial development. The fee helps pay for new transportation facilities that will serve new development—things like roads, sidewalks and other facilities that get people to where they need to go.

The City of Portland Bureau of Transportation is updating Portland's TSDCs. The update includes three key components:

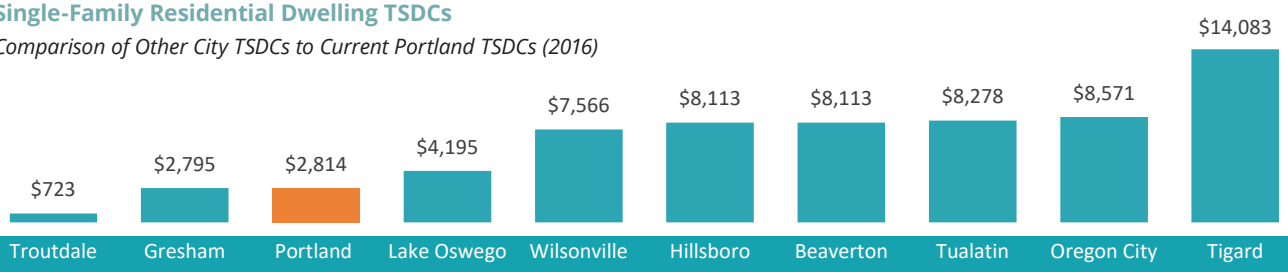
1. Reevaluating the rates that developers pay

Each development type has a TSDC rate that is based on how many trips a new development will generate. For example, a single family home will bring much less impact than a large grocery store, so the fee is much lower for a home. The greater the impact a new development will have on our transportation system, the higher its rate.

Currently, the rates that developers pay are low as compared to rates in other cities:

Single-Family Residential Dwelling TSDCs

Comparison of Other City TSDCs to Current Portland TSDCs (2016)



2. Person Trip Methodology

Historically, the city has calculated TSDCs by asking how many ***vehicle trips*** new development is likely to create, but now the city is shifting to considering ***person trips***—whether by car, bike, bus or on foot. The updated TSDC methodology will take into account how walking, transit, bike and vehicle trips all have different levels of impact on our transportation system.

The update will compare the cost of future transportation needs to the value of today's system to determine a cost per person trip.

Past projects built with TSDC funds.

3. Updating the list of projects eligible for TSDC funding

Projects on the TSDC list are oriented toward accommodating development growth and improving travel for all modes: walking, biking, freight and transit. The current list was last updated in 2007. The 2017-27 TSDC project list will include:

- **A broad range of projects** that benefit all geographic areas of the city and meet the needs of our diverse communities.
- **A mix of project types** that help people get around by all modes.
- **Projects that have grant or other financial support**, which are more likely to get built.

Get involved online

Visit an online open house to learn about the TSDC update and provide feedback on the list of potential projects that could be built using TSDC funds:

https://www.portlandoregon.gov/transportation/71823

Contact

Anne Hill, Program Manager

503-823-7239 | *anne.hill@portlandoregon.gov*

PBOT
PORTLAND BUREAU OF TRANSPORTATION

3

We Need Your Input! Help Inform the TSDC Update + Project List by Feb. 26th

Portland Bureau of Transportation sent this bulletin at 01/20/2017 01:07 PM PST

Transportation System Development Charge (TSDC)

Help inform the TSDC update and project list

by February 26th via this Online Open House.

PBOT WANTS TO HEAR FROM YOU!

We are updating our Transportation System Development Charge (TSDC) program. Projects on the TSDC list are oriented toward accommodating development growth and improving travel for all modes: walking, biking, driving and transit. The current list was last updated in 2007. Some of

the projects on that list are now complete, some have received funding from other sources, and some of them may no longer fit the city's transportation priorities. Every few years, the City engages in an extensive public input process to reaffirm and amend the list of projects to guide spending of TSDC revenues. As part of this process, the project team is also revisiting the criteria that determine whether projects are eligible for TSDC funding.

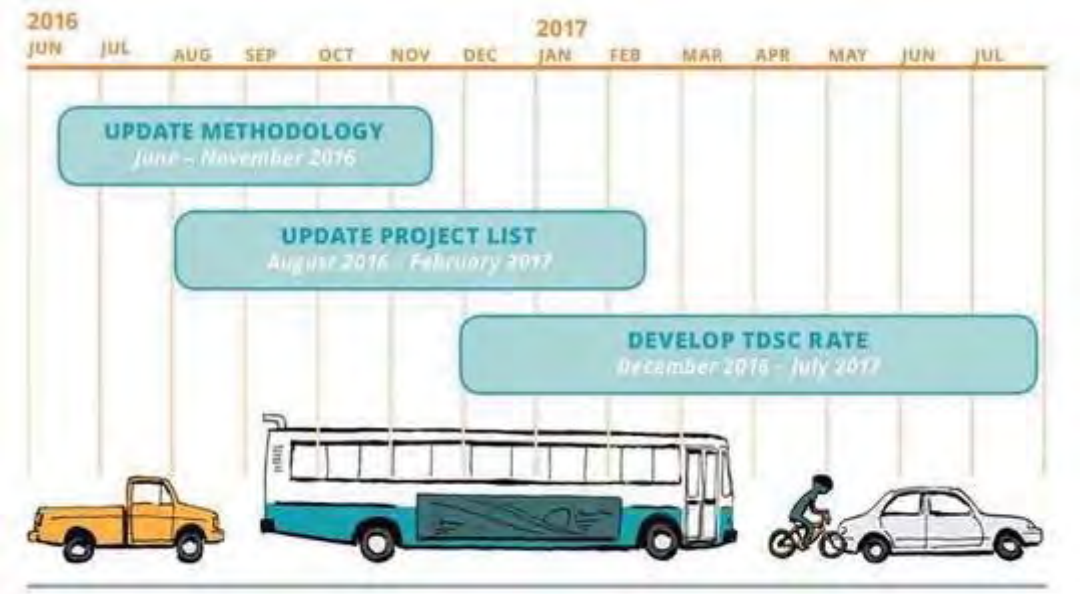
PROVIDE YOUR INPUT TODAY!

Visit the Online Open House

to view the proposed Project List and provide input

Tell us what you think **by February 26th, 2017** and invite your friends and neighbors to weigh in!

ABOUT THE TSDC UPDATE PROCESS



The current TSDC update process began in mid 2016 and is expected to end in July 2017. The update includes three main components:

1. Updating the list of projects eligible for TSDC funding

2. Refining the methodology for calculating TSDC charges

3. Reevaluating the rates that developers pay

If you have questions or require additional information visit the program page here or contact Anne Hill, TSDC Project Manager:

anne.hill@portlandoregon.gov

503-823-7239

Stay Connected with the Portland Bureau of Transportation:

APPENDIX F – SDC RATE COMPARISONS

MEMORANDUM

Date: February 13, 2017

To: Anne Hill, Rich Eisenhauer, PBOT

From: Deb Galardi, Galardi Rothstein Group
Matt Craigie, ECONorthwest
Don Samdahl, Fehr & Peers

Subject: SDC Rate Comparisons

INTRODUCTION AND PURPOSE

Oregon local governments have authority to assess system development charges (SDCs) on new development to pay for a portion of the capital costs of certain public facilities[6]. The Portland Bureau of Transportation (PBOT) is in the process of updating its Transportation System Development Charge (TSDC). A Consultant Team, led by Fehr & Peers, is assisting PBOT with the update. The scope of work for the project includes development of an SDC comparison. This memorandum provides a summary of existing TSDCs and other SDCs assessed by the City of Portland (the City) for selected development types, and provides a comparison with other cities in Oregon.

METHODS AND APPROACH

Overview

The SDC comparison, as originally envisioned, was to include sample TSDCs for nine different development types for a limited number of cities in the Portland metro area. However, a recent survey published by the League of Oregon Cities (LOC) provided a more robust data source that covered all SDC types for over 100 Oregon cities statewide. The City/Consultant Project Team agreed to use the LOC survey as the basis for the comparison, as it covered all SDC areas, and allowed for comparison against statewide averages; however, the LOC data includes only two out of the original nine development types: single family residential and commercial office building.

The LOC's most recent SDC survey and summary report is dated August 2016[7]. The compiled survey data are provided online and also summarized in a report. In this memorandum, we present selected information on TSDCs and total SDCs from the LOC report. The LOC database was supplemented with data collected regionally for specific cities (i.e., Portland, Beaverton, Hillsboro, Tigard and Tualatin), in order to more fully describe the range of SDCs in the Portland metropolitan area.

The rest of this section describes the data available from the LOC study, and how it was used in this comparison. While data on individual SDCs for other systems are not provided, the total SDC burden for

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[6] Per Oregon Revised Statutes 223.299, SDCs may be collected for water, wastewater, drainage, transportation, and parks and recreation facilities.

[7] System Development Charges Survey, League of Oregon Cities, August 2016. http://www.orcities.org/Portals/17/Library/2016%20SDC%20Survey%20Report.pdf

a new development in Portland is compared to other Oregon cities, both in the metro area and across the state.

Survey Methods used by the League of Oregon Cities

The LOC surveys Oregon cities every three years. It distributes the survey to city staff and asks that SDCs be calculated for two development types: a detached, single-family residence, and an office building. The use of prototypical developments allows LOC to standardize responses and to more accurately compare charges. **Exhibit 1** shows LOC's specifications of the two development prototypes.

Exhibit 1. League of Oregon Cities Survey Examples

Example 1 - House (Residential):	Example 2 - Office Building (Non- Residential):
Single - family, 3 bedroom home	Professional building fo general office use
Lot size: 9,000 sq. ft.	Lot size: 47,000 sq. ft.
Building size: 2,000 sq. ft.	Building size: 20,000 sq ft.
Development value: $190,000	Development value: $960,000
Land value: $60,000	Land value: $180,000
Parking spaces: 2	Parking spaces: 50
Water meter size: 3/4 inch	Water meter size: 2 inches
water flow (gallons/mo.): 6,000	Water flow (gallons/ mo.): 33,000
Fixture units 16	Fixture units: 64
Number of employees : N/A	Number of employees: 96
Impervious square footage: 1,000 sq. ft.	Impervious surface area: 50% of lot size
	Storage: 35% of sq. ft.
	ITE Code #710

Source: League of Oregon Cities, 2016

Most cities assess SDCs uniformly city-wide; however, in some cases geographically differentiated SDCs may be used to more accurately reflect infrastructure costs for certain public facilities. For example, the City of Portland has two SDC areas for purposes of assessing parks SDCs: a "Central" area, and a "Non Central" area. Parks SDCs are the only SDCs for which the City currently has differentiated charges between the Central and Non-Central areas. Gresham is another city in the metro area with multiple TSDC and other SDC areas. The City of Gresham has different TSDCs for three areas: Gresham City Limits, Pleasant Valley, and Springwater. For cities like Portland and Gresham with geographically differentiated fees, a single fee area is included in the LOC survey. The Portland information reflects Central City parks SDCs. Similarly, the Gresham SDCs included in the survey reflect rates in the Gresham City Limits SDC area.

A number of jurisdictions in the metro area charge overlay TSDCs which are assessed in addition to the base SDCs. The City charges supplemental or overlay TSDCs in two geographical areas: the North Macadam overlay area, and the Innovation Quadrant overlay area. Hillsboro and Tigard also charge overlay SDCs in portions of their service areas. The LOC survey includes base SDCs only (i.e., it does not include any overlay SDCs); therefore, the majority of exhibits presented in this memorandum represent base SDCs only. However, we provide a comparison of overlay TSDCs later this this report.

Finally, some cities partner with other government agencies or taxing districts to collect and administer their SDCs. Cities within Washington County, for example, collect a countywide Transportation Development Tax (TDT) that has a uniform fee structure across the entire county. In addition to the countywide TDT, some cities in Washington County (for example, Tigard) also assess a local TSDC in order to fully recover projected infrastructure costs within the city. The TSDCs shown in this report for cities in Washington County include both the TDT, and any applicable local TSDC.

Methods Used in This memorandum

The Consultant Team sought to compare TSDCs from the following cities:

- Beaverton
- Gresham
- Hillsboro
- Lake Oswego
- Oregon City
- Portland
- Tigard
- Troutdale
- Tualatin
- Wilsonville

The 2016 LOC SDC data, however, do not include rates from Beaverton, Tigard, and Tualatin. Thus, additional information was obtained directly from these cities. To obtain SDCs for Beaverton, we provided the city with the two development type examples shown in Exhibit 1. Using LOC's development types, staff from the city's Site Development Division[8] calculated the sample TSDC and total SDC burdens. For Tigard and Tualatin, data was obtained from fee schedules provided on the respective city's websites.

In addition to the detailed TSDC and other SDC information from the ten metro cities, we present summary statewide TSDC and other SDC information from the LOC survey in the Appendix.

FINDINGS

Summary of TSDCs and Total SDCs for Selected Cities in the Portland Region

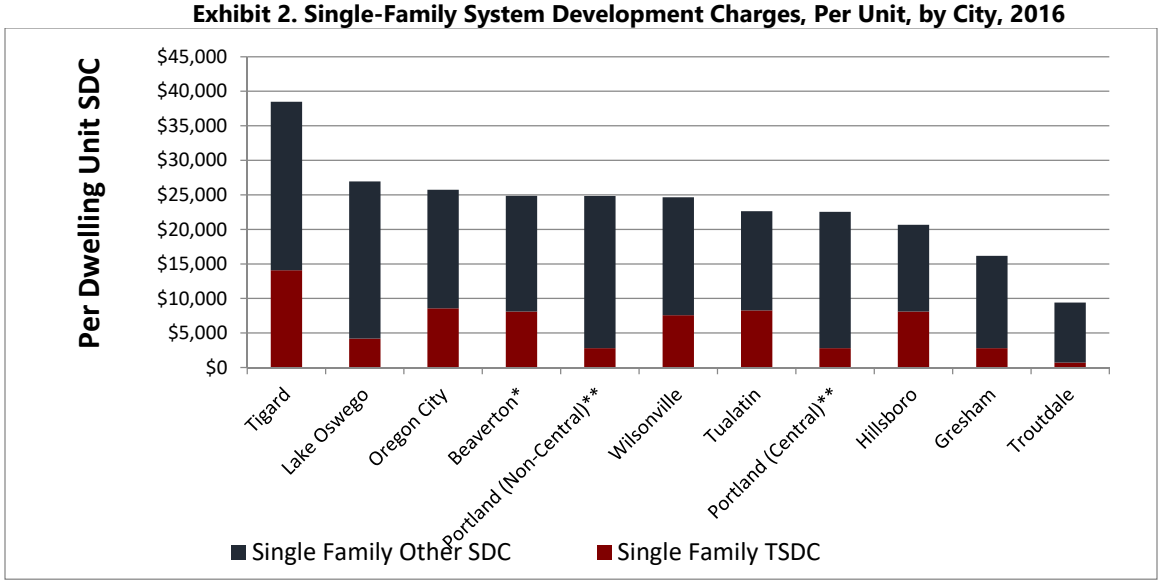
This section summarizes the data for the seven cities that had complete data in the LOC survey, and for the cities of Beaverton, Tigard and Tualatin, where the Consulting Team gathered data. The data for Portland were also updated by the Consulting Team to include parks and other SDCs that were effective July 1, 2016. Because the new parks SDCs vary by area, and we had detailed fee schedule information available for the City, the SDCs for prototype developments in Portland are shown for both Central and Non-Central areas.

Exhibit 2 shows the SDC comparison for the LOC prototype single-family residential dwelling. TSDCs are shown in red and all other SDCs are shown in blue. Other SDCs include parks, sanitary sewer, storm water, and potable water SDCs. The total SDC burden is the sum of the stacked bars. Single-family TSDCs are the highest in Tigard, owing to the combined Washington County TDT ($8,278 based on April 2016 rates) and local city TSDC ($5,805). TSDCs for Oregon City, Beaverton, Hillsboro, and Wilsonville are between $7,600 and $8,600, and account for between 31 and 39 percent of the total SDC burden in those cities.

Portland's TSDC burden per single-family unit is about $2,800 (second lowest in the comparison) and is about 12 percent of the total SDC burden. In the City's last TSDC update, the rates were capped at the current fee levels in order to have the fees be near what was then the middle of the ranged charged by other jurisdictions in the metro area. Since that time, growth in other area TSDCs have outpaced Portland. However, In terms of the *total* SDC, Portland is near the middle of the cities included in the comparison, with a prototypical residential dwelling paying near $25,000 in the Non-Central area, and about $22,500 in the Central area.

[8] City of Beaverton, Public Works Department, Site Development Division. http://www.beavertonoregon.gov/439/Site-Development

Exhibit 2. Single-Family System Development Charges, Per Unit, by City, 2016



Source: League of Oregon Cities SDC survey, 2016, and *City of Beaverton. **Portland, Tigard and Tualatin data updated with SDCs effective July 1, 2016.

It should also be noted that the City's revised parks SDCs now vary by dwelling unit size (in addition to area). The residential SDCs included in the LOC survey (and in Exhibit 2) are based on a 2,000 square foot home. For dwellings exceeding 2,200 square feet, the total SDC burden increases by approximately $1,000, putting the total SDC burden for a non-central SDC residential development near $26,000. Exhibit 3 shows the full range of SDCs charged for a single-family dwelling unit in Portland, by house size and area, with the parks SDCs shown in blue. The other SDCs do not vary by house or area.

Exhibit 3. Single Family Residential Park and Total SDCs in Central and Non-Central Areas

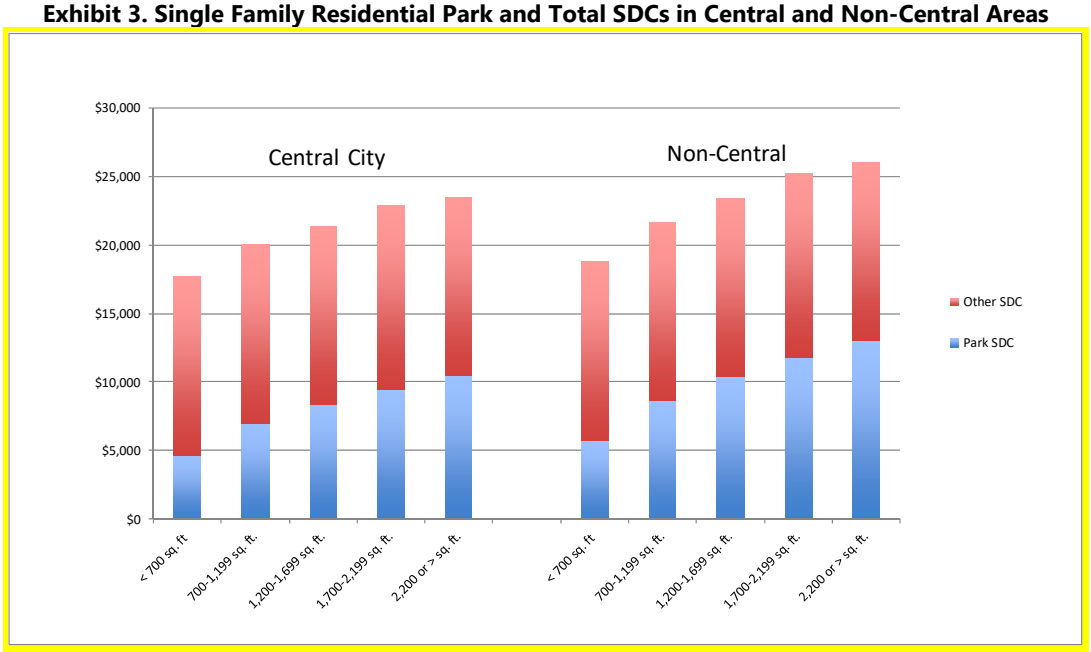
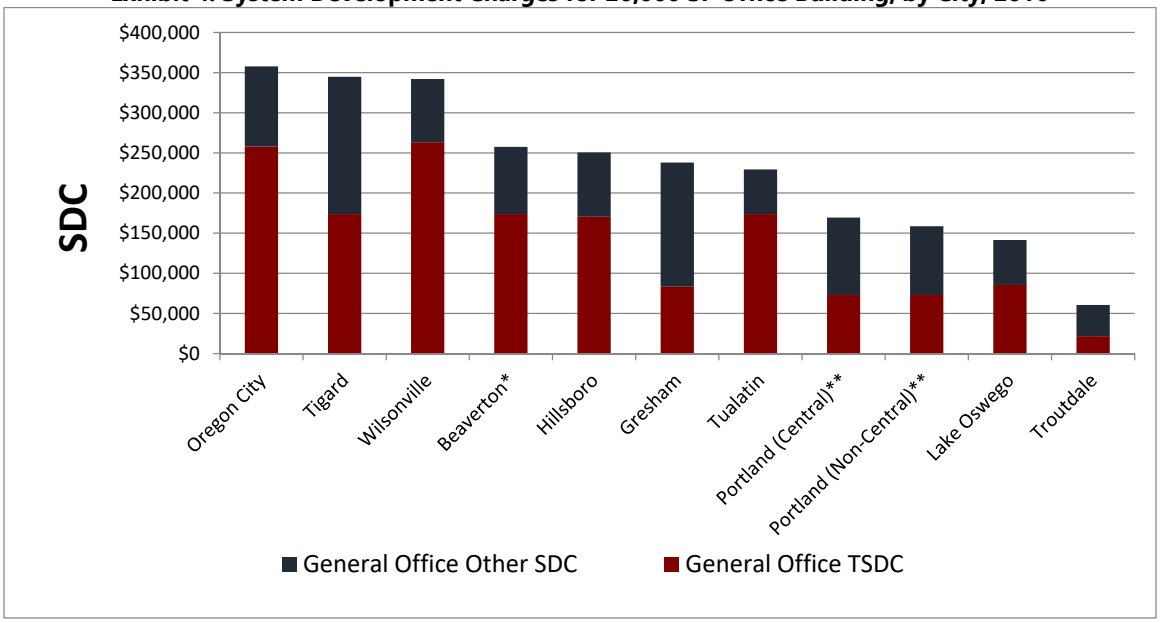


Exhibit 4 shows the TSDC comparison for the general office prototype development. General office TSDCs in Wilsonville and Oregon City are the highest in the comparison ($257,000 and $263,000 respectively), and account for 72 and 77 percent of the total SDC burden in those cities. Unlike residential development,

commercial developments in Tigard do not pay a supplemental city TSDC, so the Tigard TSDCs shown in Figure 4 reflect only the Washington County TDT (similar to Beaverton, Hillsboro, and Tualatin.)

Portland's TSDC burden for the prototypical office building is about $72,800 (one of the lowest in the comparison), and accounts for 43-46 percent of the total SDC burden, depending on location (Central vs. Non-Central). TSDCs tend to make up a higher portion of the total SDC for commercial developments, compared to residential developments. A primary factor is that parks SDCs for nonresidential development tend to be significantly lower than residential (75 percent or more per equivalent unit), given that use of parks tends to be attributed more to residents compared to employees.

Exhibit 4. System Development Charges for 20,000 SF Office Building, by City, 2016



Source: League of Oregon Cities SDC survey, 2016 and *City of Beaverton, **Portland, Tigard and Tualatin updated with SDCs effective July 1, 2016.

Appendix A shows the data used in exhibits 2 and 4.

Overlay and Supplemental SDCs

Overlays and supplemental SDCs are tools that some cities use to raise additional revenue within a certain part of the service area for specific infrastructure projects that directly benefit the area. As with SDCs generally, the local revenue collected through supplemental SDCs can be used by cities to leverage other regional, state, and federal funds, expanding the scale of potential local infrastructure projects.

Portland has two TSDC overlays; the North Macadam Overlay, and the Innovation Quadrant Overlay[9]. The North Macadam Overlay was adopted by the City of Portland in 2009 and covers the North Macadam Urban Renewal Area, an area that encompasses Portland's South Waterfront district. Portland's Innovation Quadrant Overlay was adopted by the City of Portland in 2011 and is composed of areas surrounding Portland State University in the southern portion of Portland's downtown area, as well as areas on the east side of the Willamette River, from the Central Eastside Industrial Area, east to SE 20th Avenue, and south throughout the Brooklyn neighborhood.

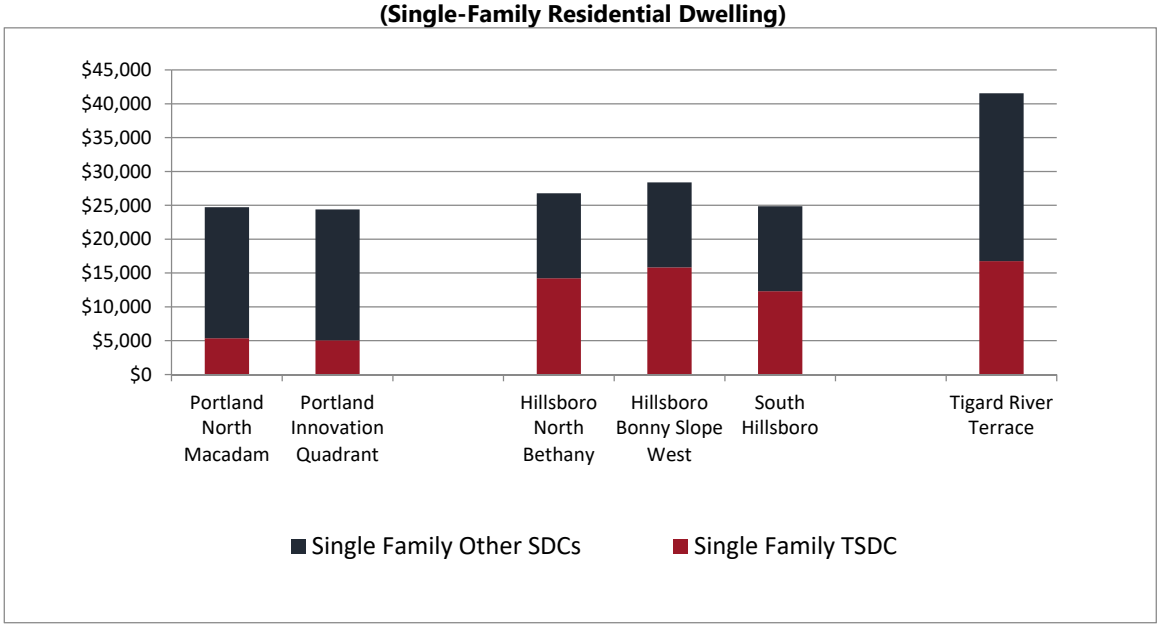
Two other cities in the metro area have overlays for TSDCs: Hillsboro and Tigard. The City of Hillsboro currently has three supplemental TSDC areas: North Bethany, Bonnie Slope West, and South Hillsboro. Each one of these areas has been incorporated into the City of Hillsboro within the past 15 years, and the supplemental transportation fees have been designed to pay for infrastructure costs incurred to support new development of these neighborhoods. The City of Tigard has one TSDC overlay: the River Terrace Neighborhood Overlay.

Exhibit 5 shows a comparison of the supplemental TSDC and total SDC burden for a residential dwelling unit in Portland's overlay areas, compared to the other areas. The single-family TSDC specific to the North Macadam Overlay is $2,554 per dwelling unit[10]. Combined with the citywide TSDC of $2,814, the total single family TSDC burden within the North Macadam area is $5,368 per dwelling unit. The overlay-specific single-family TSDC within the Innovation Quadrant is $2,236 per dwelling unit. Combined with the citywide TSDC rate of $2,814 per dwelling unit, the total TSDC burden for single-family dwelling unit within the Innovation Quadrant Overlay is $5,050.

[9] Portland Bureau of Transportation. TSDC overlays,.2016, https://www.portlandoregon.gov/transportation/article/386070

[10] Portland Bureau of Transportation. North Macadam Overlay TSDC Rates: July 1, 2014– June 30, 2017. https://www.portlandoregon.gov/transportation/article/490877

Exhibit 5. Comparison of Supplemental and Total SDCs in Overlay Areas (Single-Family Residential Dwelling)



In Hillsboro, the North Bethany area's supplemental transportation fee for single-family homes is $6,111 per dwelling unit. Combined with Hillsboro's citywide rate, the total transportation charge in North Bethany is $14,221. The Bonnie Slope West's supplemental transportation SDC for single- family is $7,725. Combined with the citywide rate, the total transportation charge in Bonnie Slope West is $15,335 per single-family dwelling unit. The supplemental transportation SDC for single-family in South Hillsboro is $4,201 per dwelling unit. Combined with the citywide rate, the total transportation charge in South Hillsboro is $12,314.[11] The addition of the supplemental transportation fee in these areas of Hillsboro results in some of the highest TSDC burdens across the Portland Metropolitan Region.

The City of Tigard's single-family TSDC specific to the River Terrace Overlay is $2,684 per dwelling unit. Combined with the county and citywide TSDC of $14,083, the total single family TSDC burden within the River Terrace Neighborhood is $16,767 per dwelling unit. In addition to the overlay for TSDCs, Tigard also assesses charges an overlay for parks.

The commercial office building TSDC specific to the Innovation Quadrant and Northern Macadam overlay areas, are $47,800 and $59,600 respectively. Combined with the citywide TSDC of $72,800, the total TSDC burden for the office prototype within the overlay areas is $120,600 and $132,400. When combined with the City's other SDCs (based on the July 1, 2016 data), the total SDC burden is $217,202 and $229,002 (still on the lower end of the comparison).

Summary of TSDCs in Oregon[12]

Overall, the LOC conducted SDC surveys of 135 cities across Oregon. Of the 135 cities surveyed, 49 cities had a transportation SDC for residential properties, and 46 had a transportation SDC for commercial office

[11]Board of Commissioners Staff Report. Infrastructure Funding Plan for Bonny Slope West. September 28, 2015. http://www.co.washington.or.us/LUT/PlanningProjects/Area93/upload/Staffreport_100615_final.pdf

[12] System Development Charges Survey, League of Oregon Cities, August 2016. http://www.orcities.org/Portals/17/Library/2016%20SDC%20Survey%20Report.pdf

properties. As shown in **Exhibits 6 and 7**, Portland's TSDCs are the 20th highest for residential TSDCs of the 51 cities with TSDCs, and 17th highest for commercial TSDCs of the 47 cities with TSDCs.

Exhibits 8 and 9 show comparison of TSDCs from the 10 most populous cities (where data was available either from the LOC survey or the Consultant Team's additional data collection). Portland's TSDCs are on the lower end of larger cities; ranking 8th highest for both the residential dwelling, and the commercial office example.

Exhibit 6. Statewide Residential TSDCs by Rank

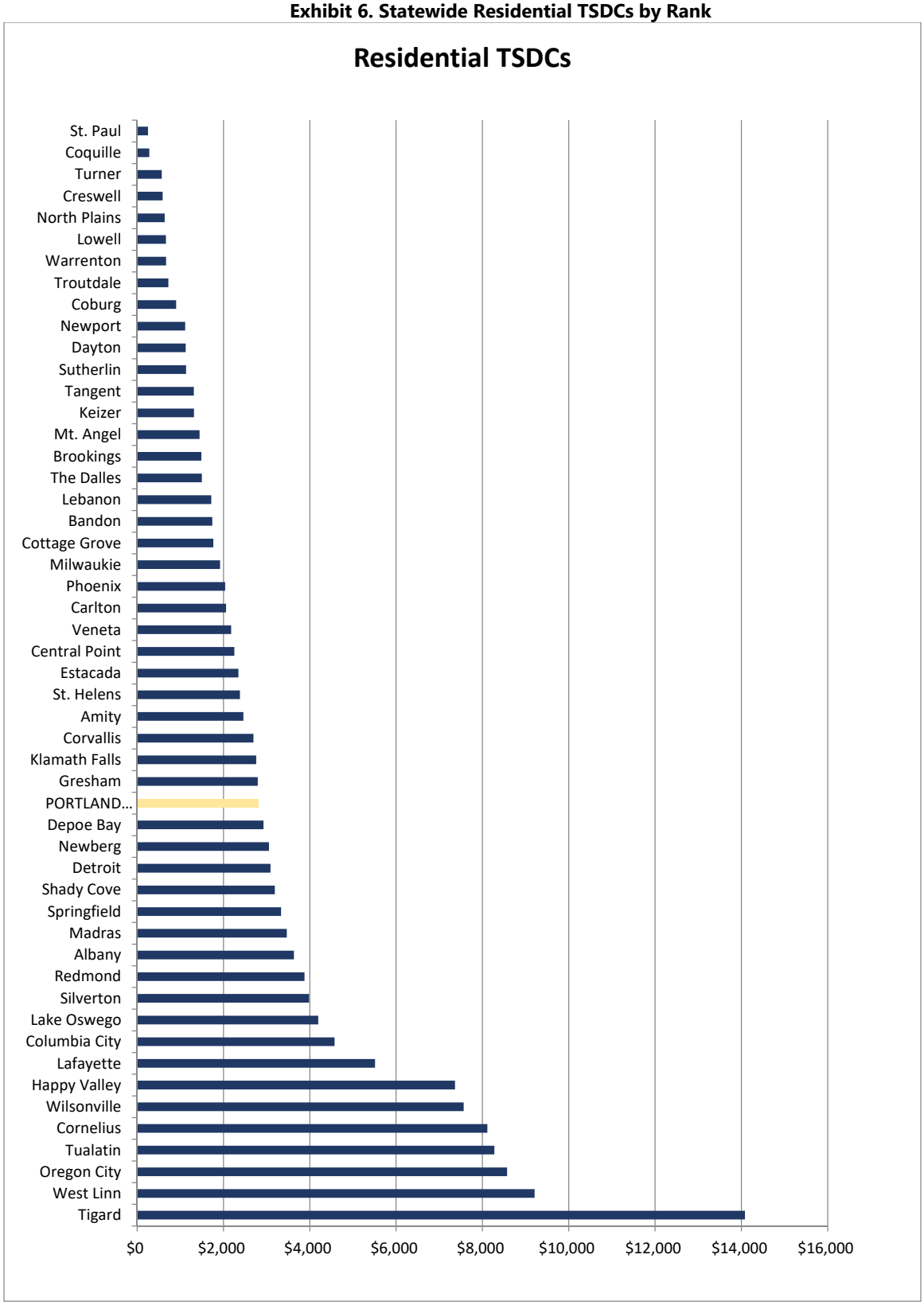


Exhibit 7. Statewide Office TSDCs by Rank

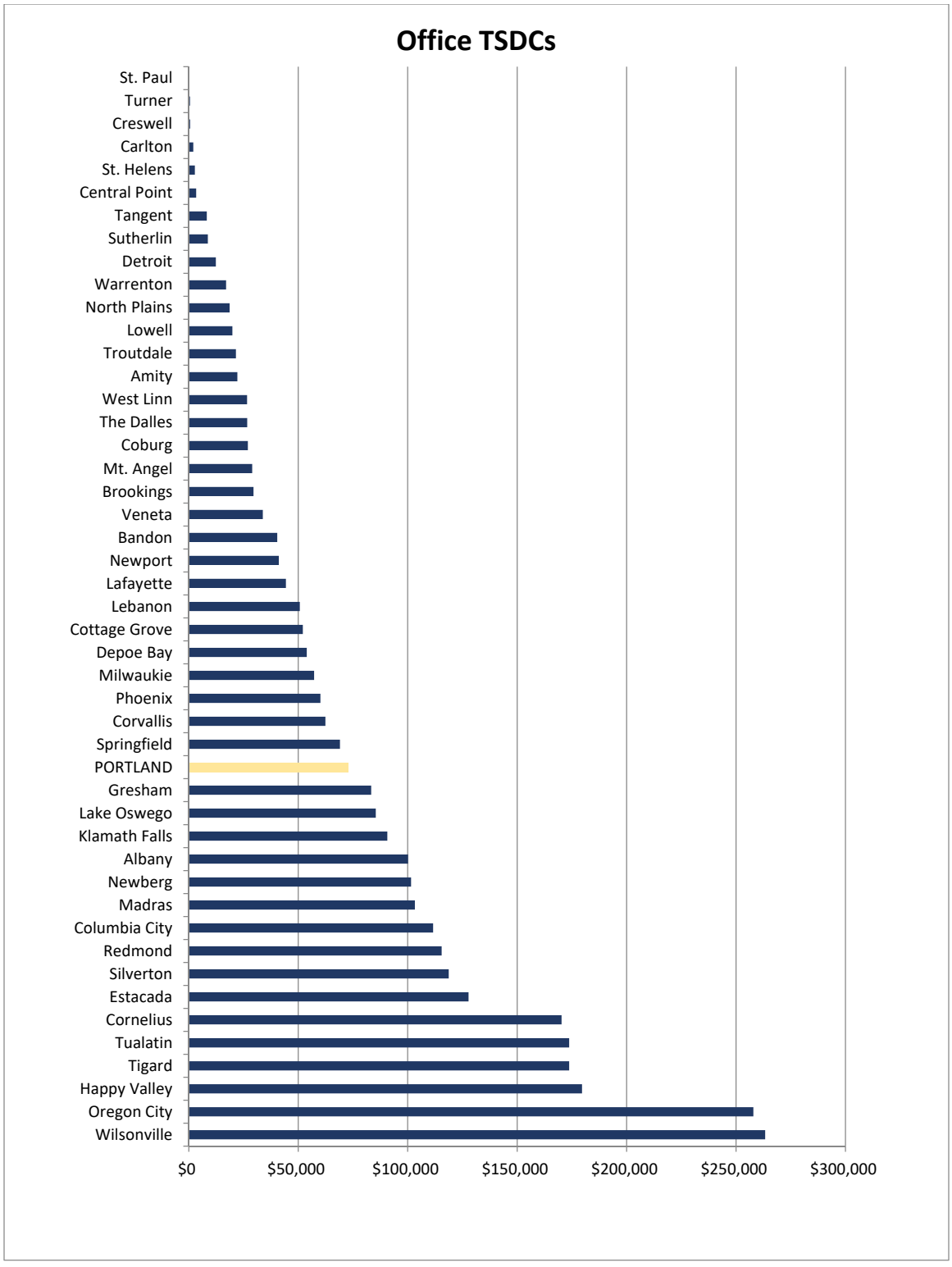


Exhibit 8. Comparison of 10 Most Populous Cities Residential TSDC

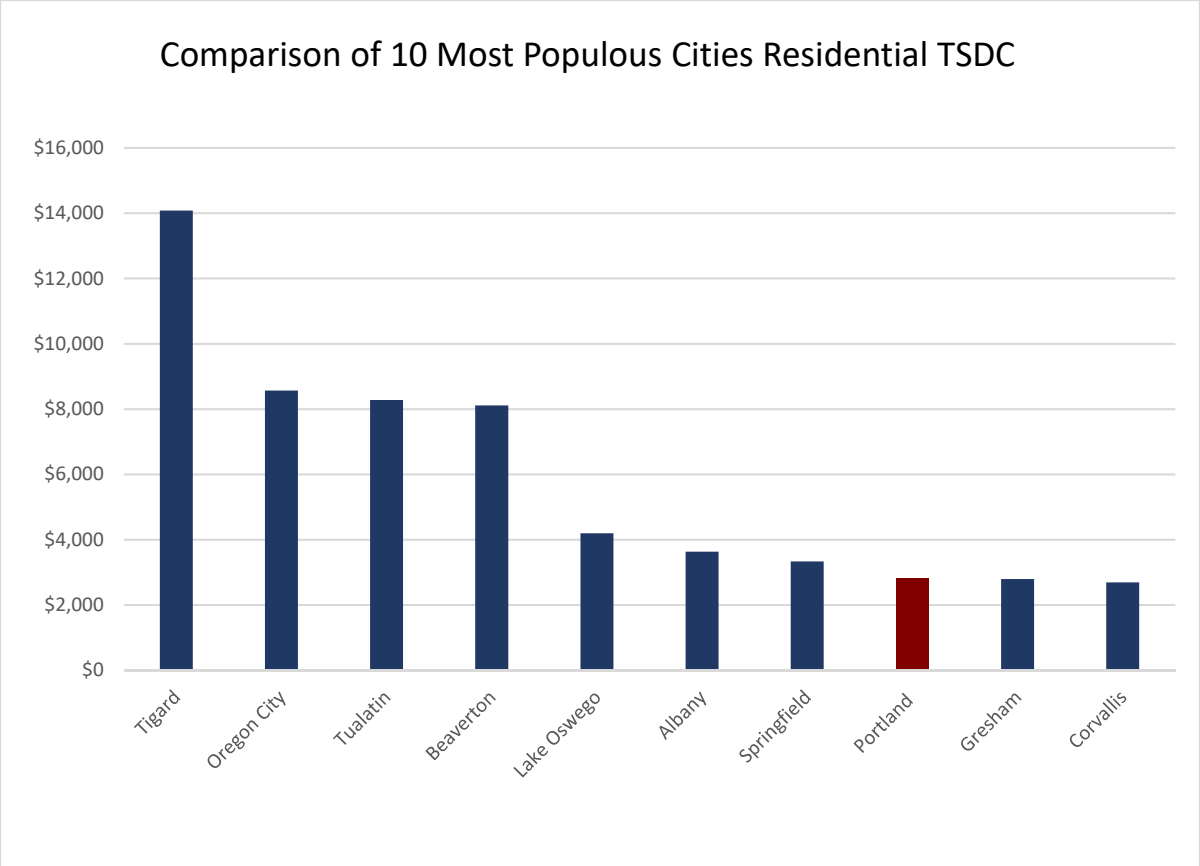
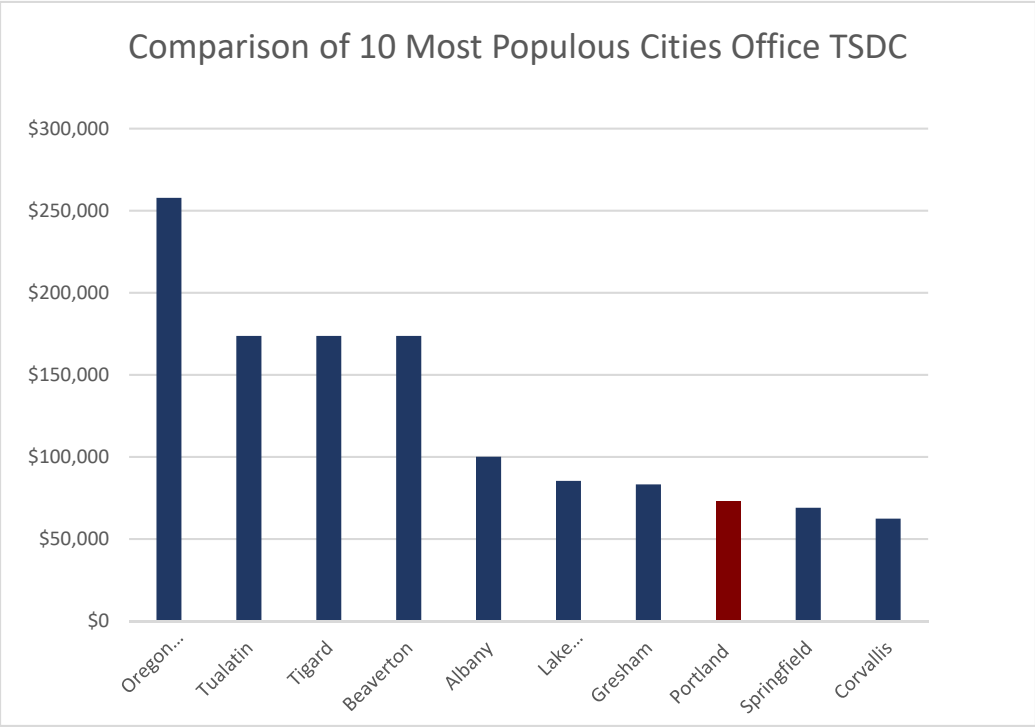

Comparison of 10 Most Populous Cities Residential TSDC
$16,000
$14,000
$12,000
$10,000
$8,000
$6,000
$4,000
$2,000
$0
Tigard
Oregon City
Tualatin
Beaverton
Lake Oswego
Albany
Springfield
Portland
Gresham
Corvallis

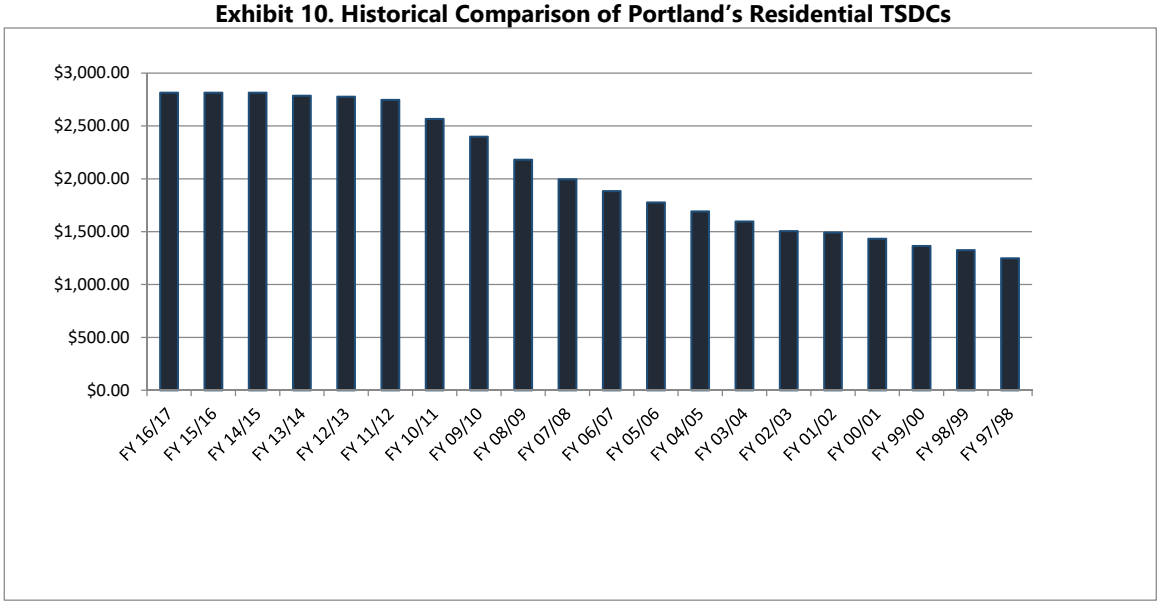
Exhibit 9. Comparison of 10 Most Populous Cities Office TSDC



Comparing Fees over Time

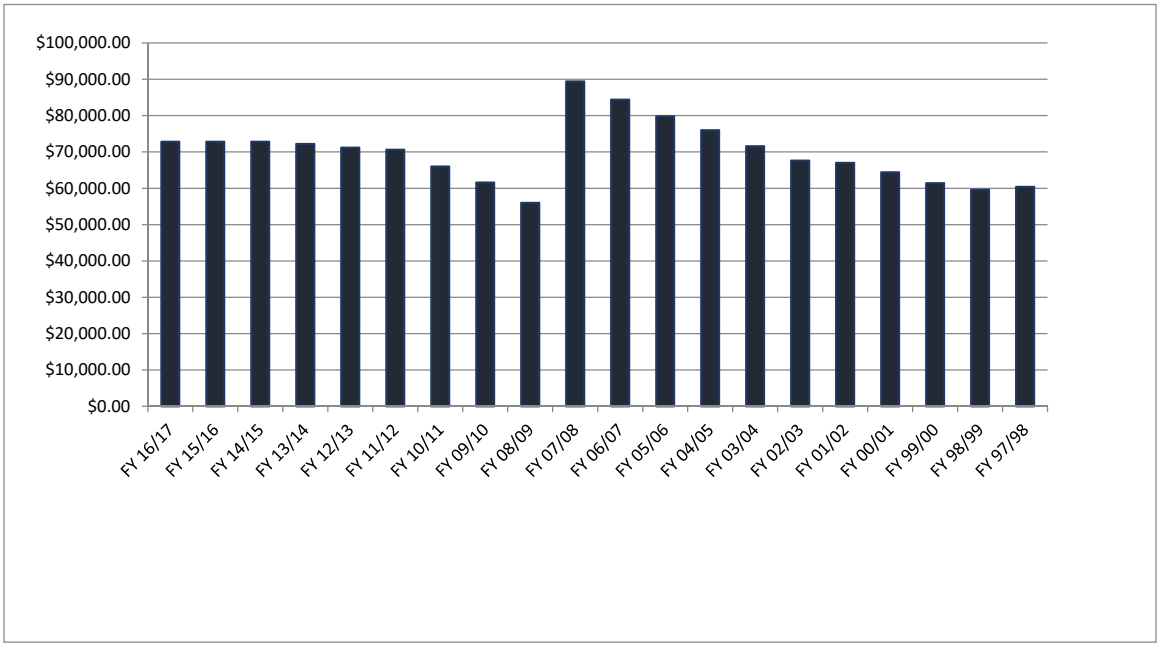
Exhibits 10 and 11 show historical comparisons of Portland's residential and office TSDCs over the last 20 years. TSDC rates have remained unchanged since fiscal year (FY) 2011/12.

Exhibit 10. Historical Comparison of Portland's Residential TSDCs



The drop in the office rate from FY07/08 to FY08/09 was due to changes the City made to how office buildings were assessed, eliminating the range of rates that varied according to building size, and establishing a single rate for all office buildings, based on the low end of the prior range.

Exhibit 11. Historical Comparison of Portland's Office Building SDCs



Statewide, total SDCs per city, have risen statewide by 17 percent since 2013 levels, a rate that outpaces inflation. The LOC report observed that cities with populations over 10,000 saw major differences in the amount of fees charged and the complexity of the fee system. The report points out that despite these higher rates, the larger cities are more likely to have waivers, accommodations, and other incentives for development within their boundaries. These measures attempt to balance the need to collect SDCs to finance public infrastructure projects, with encouraging new development

Comparison with TSDCs in Other States

The study team examined a range of TSDC rates charged in Washington and California. **Table 1** summarizes typical rates for moderate to larger cities in Washington State. Note that the largest cities in Western Washington- Seattle and Tacoma, do not have TSDC's at this time. While both cities are considering implementing SDC programs, they currently rely on the State Environmental Policy Act (SEPA) to require new development to mitigate transportation impacts. Seattle has a voluntary transportation mitigation program in some subareas of the city. These programs operate similar to an SDC payment program and have been increasingly used by developers in lieu of conducting detailed traffic impact assessments.

Table 1- Typical TSDC Rates in Washington State

	Single Family Home	Office Building (20K sq ft)
Typical Range	$1,000-$7,000 ($14,000 max)	$40,000-$350,000

Average	$2,900	$130,000
Larger Communities	$3,000-7,000	$90,000-$340,000

Table 2 summarizes typical rates for larger cities in California. The TSDC rates are highly variable but generally in scale with the rates in Oregon.

Table 2- Typical TSDC Rates in California

	Single Family Home	**Office Building (20K sq ft)**
Typical Range	$1,000-$8,000	$40,000-$80,000
San Francisco	$7.74 per square foot (All multifamily)	$360,000
Oakland	$750 (multifamily only)	$40,000
LA	Variable	$129,000-$440,000

APPENDIX A: SDC COMPARISON TABLES

Table A-1
Single-Family Residential Dwelling TSDC and Other SDC
Comparison of 2016 Other City SDCs to Current Portland SDCs

		$/Dwelling Unit	
City	TSDC	Other SDC	Total SDC
Tigard	$14,083	$24,390	$38,473
Lake Oswego	$4,195	$22,752	$26,947
Oregon City	$8,571	$17,157	$25,728
Beaverton*	$8,113	$16,754	$24,867
Portland (Non-Central)**	$2,814	$22,015	$24,829
Wilsonville	$7,566	$17,087	$24,653
Tualatin	$8,278	$14,350	$22,628
Portland (Central)**	$2,814	$19,719	$22,533
Hillsboro	$8,113	$12,546	$20,659
Gresham	$2,795	$13,376	$16,171
Troutdale	$723	$8,681	$9,404

Source: Other City data from League of Oregon Cities 2016 SDC Survey
Beaverton SDCs from City of Beaverton, Building division, September 2016.

Portland, Tigard, and Tualatin SDCs, effective July 1, 2016
Note: LOC collected SDC rates from May 31 to June 30, 2016

.

Table A-2
Office Building TSDC and Other SDC
Comparison of 2016 Other City SDCs to Current Portland SDCs

		$/Development	
City	TSDC	Other SDC	Total SDC
Oregon City	$257,874	$100,010	$357,884
Tigard	$173,740	$171,185	$344,925
Wilsonville	$263,300	$78,682	$341,982
Beaverton*	$173,740	$83,750	$257,490
Hillsboro	$170,300	$80,200	$250,500
Gresham	$83,291	$154,611	$237,902
Tualatin	$173,740	$55,589	$229,329
Portland (Central)**	$72,800	$96,602	$169,402
Portland (Non-Central)**	$72,800	$85,802	$158,602
Lake Oswego	$85,400	$55,987	$141,387
Troutdale	$21,545	$38,960	$60,505

Source: Other City data from League of Oregon Cities 2016 SDC Survey
Beaverton SDCs from City of Beaverton, Building division, September 2016.

Portland, Tigard, and Tualatin SDCs, effective July 1, 2016
Note: LOC collected SDC rates from May 31 to June 30, 2016

Table A-3

Single-Family Residential Dwelling

Comparison of Supplemental and Total SDCs in Overlay Areas

City	$/Dwelling Unit Supplemental SDC	Base TSDC	Total TSDC	Total SDC
Portland				
North Macadam	$2,554	$2,814	$5,368	$24,714
Innovation Quadrant	$2,236	$2,814	$5,050	$24,396
Hillsboro				
North Bethany	$6,111	$8,113	$14,224	$26,770
Bonny Slope West	$7,725	$8,113	$15,838	$28,384
South Hillsboro	$4,201	$8,113	$12,314	$24,860
Tigard				
River Terrace	$2,684	$14,083	$16,767	$41,545

Table A-4

Comparison of 10 Most Populous Cities Residential TSDC

Rank	City	Population	$/Dwelling Unit
1	Tigard	51,253	$14,083
2	Oregon City	33,940	$8,571
3	Tualatin	27,154	$8,278
4	Beaverton	93,542	$8,113
5	Lake Oswego	37,300	$4,195
6	Albany	51,670	$3,634
7	Springfield	60,135	$3,335
8	Portland	613,355	$2,814
9	Gresham	107,065	$2,795
10	Corvallis	57,390	$2,693

Table A-5

Comparison of 10 Most Populous Cities Office TSDC

Rank	City	Population	TSDC
1	Oregon City	33,940	$257,874
2	Tualatin	27,154	$173,740
3	Tigard	51,253	$173,740
4	Beaverton	93,542	$173,740
5	Albany	51,670	$100,153
6	Lake Oswego	37,300	$85,400
7	Gresham	107,065	$83,291
8	Portland	613,355	$72,800
9	Springfield	60,135	$69,076
10	Corvallis	57,390	$62,414

APPENDIX B: STATEWIDE TRANSPORTATION SDC RANKINGS

Table B-1: Residential TSDCs by Rank		
Rank	City	TSDC Fee
1	Tigard	$14,083
2	West Linn	$9,208
3	Oregon City	$8,571
4	Tualatin	$8,278
5	Cornelius	$8,113
6	Wilsonville	$7,566
7	Happy Valley	$7,366
8	Lafayette	$5,513
9	Columbia City	$4,575
10	Lake Oswego	$4,195
11	Silverton	$3,984
12	Redmond	$3,876
13	Albany	$3,634
14	Madras	$3,467
15	Springfield	$3,335
16	Shady Cove	$3,191
17	Detroit	$3,091
18	Newberg	$3,053
19	Depoe Bay	$2,928
20	PORTLAND (Central)	$2,814
21	Gresham	$2,795
22	Klamath Falls	$2,758
23	Corvallis	$2,693
24	Amity	$2,461
25	St. Helens	$2,383
26	Estacada	$2,347
27	Central Point	$2,251
28	Veneta	$2,179
29	Carlton	$2,061
30	Phoenix	$2,040
31	Milwaukie	$1,921
32	Cottage Grove	$1,766
33	Bandon	$1,742
34	Lebanon	$1,718
35	The Dalles	$1,500
36	Brookings	$1,487
37	Mt. Angel	$1,447
38	Keizer	$1,315
39	Tangent	$1,315
40	Sutherlin	$1,135
41	Dayton	$1,125
42	Newport	$1,112
43	Coburg	$903
44	Troutdale	$723
45	Warrenton	$669
46	Lowell	$668
47	North Plains	$638
48	Creswell	$592
49	Turner	$569
50	Coquille	$280
51	St. Paul	$250

Table B-2: Office TSDCs by Rank	

Rank	City	TSDC Fee
1	Wilsonville	$263,300
2	Oregon City	$257,874
3	Happy Valley	$179,630
4	Tigard	$173,740
5	Tualatin	$173,740
6	Cornelius	$170,300
7	Estacada	$127,812
8	Silverton	$118,723
9	Redmond	$115,505
10	Columbia City	$111,580
11	Madras	$103,287
12	Newberg	$101,549
13	Albany	$100,153
14	Klamath Falls	$90,654
15	Lake Oswego	$85,400
16	Gresham	$83,291
17	PORTLAND	$72,800
18	Springfield	$69,076
19	Corvallis	$62,414
20	Phoenix	$60,125
21	Milwaukie	$57,246
22	Depoe Bay	$53,860
23	Cottage Grove	$52,100
24	Lebanon	$50,720
25	Lafayette	$44,380
26	Newport	$41,144
27	Bandon	$40,414
28	Veneta	$33,781
29	Brookings	$29,524
30	Mt. Angel	$28,941
31	Coburg	$26,999
32	The Dalles	$26,695
33	West Linn	$26,618
34	Amity	$22,149
35	Troutdale	$21,545
36	Lowell	$19,906
37	North Plains	$18,625
38	Warrenton	$17,004
39	Detroit	$12,364
40	Sutherlin	$8,699
41	Tangent	$8,218
42	Central Point	$3,353
43	St. Helens	$2,746
44	Carlton	$2,061
45	Creswell	$592
46	Turner	$569
47	St. Paul	$250

APPENDIX G – ECONOMIC IMPACTS OF TRANSPORTATION SYSTEM DEVELOPMENT CHARGE

ECONorthwest
ECONOMICS • FINANCE • PLANNING

DATE: April 7, 2017
TO: Don Samdahl, Fehr & Peers
FROM: Matthew Craigie and Terry Moore,
SUBJECT: ECONOMIC IMPACTS OF TRANSPORTATION SYSTEM DEVELOPMENT CHARGE

I. Introduction

To accommodate new development, Oregon local governments have authority to use system development charges (SDCs) to pay for the expansion of certain public facilities. The Portland Bureau of Transportation (PBOT) is updating its Transportation System Development Charge (TSDC). A consultant team, led by Fehr & Peers, is assisting PBOT with the update. ECONorthwest, a subcontractor to Fehr & Peers, completed one task of that update: researching the effects of these SDCs on development activity and property values.[1]

This memorandum has three additional sections:

- **Section II, Framework** clarifies the broader question this review is addressing, definitions, and potential effects of SDCs on development *in theory.*
- **Section III, Summary of Research about SDCs** summarizes some key studies that have tried to estimate the direction and magnitude of SDCs economic impacts.
- **Section IV, Conclusion** discusses the findings from the research and how they may apply to SDCs used by the City of Portland.

II. Framework

The purpose of this technical memorandum is to summarize findings of research conducted, both nationally and for the Portland region, on the topic of the economic impacts of SDCs on development activity and property values. It focuses on the impacts on housing affordability, as required by the scope of work.

Definitions

System Development Charges (SDCs) are fees levied on real estate development projects at the time of development. Local jurisdictions use SDCs to pay for capital projects—e.g., parks, sewer/stormwater infrastructure, and transportation infrastructure—that are generally acknowledged to be ones that are necessary for urban development to occur.

[1] Scope of Work for Task **2.E.** Economic impacts**.** Research and write a memo on the effects of impact fees (SDCs) on development activity and property values. This will include a review of national research on the topic, including previous work conducted by ECONorthwest, as well as research from the City's previous TSDC update in 2007. However, this task will not include the creation of new technical models or analysis specific to this update of the TSDC for the City of Portland. Although the research should consider the impacts to a range of land uses, the research should emphasize the impacts on housing affordability.

SDCs vary widely from jurisdiction to jurisdiction in fee amounts and the way they are calculated. The Consultant Team produced a companion memorandum to this one that compared SDCs (including transportation SDCs) across cities in Oregon.[2] Outside of Oregon, many other states refer to SDCs as "impact fees:" this memorandum uses the terms interchangeably.

"Economic impact" can have different meanings depending on the situation. In the context of this memorandum, economic impacts refer to effects on the price or *amount* of development (focusing on residential development) in the City of Portland. The term *amount* can also have different meanings. Here *amount* refers to the number of units developed. The types of units, density of units, and size of units may also be affected by SDCs. Defining the amount of development more broadly than simply the number of units is important because different SDCs may incentivize developers to build larger or higher-quality units. That change affects housing price and affordability directly on the units in question, and can also spillover into the broader market.

How SDCs Interact with Development Activity

SDCs are levied on real estate development projects at the time of development construction. In Oregon, jurisdictions typically have more than one SDC because they are trying to fund the future construction of more than one type of public facility. An SDC for sewer, for example, might be calculated on a development's contribution to the need for future sewer system improvements (and charged as a function of needed pipe size and expected flow). Transportation SDCs are usually calculated as a function of an estimated number of automobile or person trips that a new development would generate.

Because SDCs are one-time fees, they are viewed as costs by developers and added to a developer's budget for construction costs. Thus, the primary effect of an SDC on an individual development project is as an added cost to construct the project. In the terms of economics, prices change in response to changes in factors of supply and demand, and SDCs affect primarily the supply (cost) side of the that relationship. They can, however, affect the demand side to the extent that they lead to the building of better infrastructure that provides better services that businesses and housing consumers are willing to pay for—for example a sewer system compared to a septic system, or the addition or improvement of a local park. That effect, to the extent that it occurs, is typically longer run.

SDCs: Short-Run Cost vs. Long-Run Benefit

The feasibility of any real estate development is based on a relationship between revenue and costs. Developers compare projected lease rates and for-sale values with construction costs and operating costs to determine if a project is viable to pursue.[3] Higher upfront costs, whether hard

[2] See "SDC Rate Comparisons," February 13, 2017

[3] In the terms of real estate economics, a developer's question is: Is the present discounted value of the expected stream of revenues greater than the present discounted value of the expected stream of costs, and is the rate of return

costs (construction inputs like wood, steel, concrete), or soft costs (design fees, city fees including SDCs) require developers to make difficult decisions about the viability of their projects. SDCs increase the upfront costs of a particular development without necessarily providing any direct benefit to that development that increases its value. The *direction* of this effect is clear in theory: it will reduce the number of new developments that get built. But more important to an assessment of the effects of SDCs is the *magnitude* of that reduction, which could be small. This is the *short-run view* of the impact of SDCs on development.

The key when understanding the impact of an SDC on the amount of development is to understand the incidence of the fee: Who pays for the fee—the landowner, the developer, or the buyer? The incidence rarely is absorbed entirely by one party, but the shares of who pays vary based on local market conditions and the type of development.

One key distinction in the incidence of the SDC is for single-family homes compared to apartments.[4] A single-family home developer has the option of building more square feet when not constrained by density limits. For SDCs that are not based on the gross size of the house, but on fixtures and room counts, if the developer does not change the bedroom and bathroom count, presumably that would not change the SDC amount[5]. That change spreads the impact of a fixed fee SDC over more square footage, thereby reducing the impact and increasing the ability to pass on the fee to the buyer. The implication of this adjustment is that there is an incentive to increase the price of new homes as non-variable SDCs increase. There are three possible market impacts that follow:

1. The market preferences and ability to pay for higher price homes are present, and developers will deliver homes that have higher prices and therefore are less affordable to the broader market.
2. The market demand does not support higher price homes; therefore the supply of new construction is decreased.
3. The landowner decreases the price of the land and incurs more of the incidence of the increased SDC. For this to happen, property owner must believe that the lower land price still delivers an acceptable profit…even if the rate of return is, in some objective sense, quite high, speculative expectations could keep the property owner from offering the land at a lower price.

positive and high enough to persuade equity and debt to invest in this project rather than some other project (or no project)?

[4] The incidence of condominium is somewhere in between single family homes and apartments, however, currently in Portland there are very few condominiums being constructed, therefore they are not discussed specifically in the memo.

[5] In the City of Portland, only the Parks SDC is based on square footage. PBOT will also be considering a square-footage fee structure for the TSDC.

For an apartment development, the incentive structure does not apply in same way. The relationship between apartment size and rent is non-linear—as one increases the size of the apartment, the per square foot rent decreases.[6] Developers would be worse off building larger units, so there is not the same ability to distribute a higher fixed SDC and pass it off to the tenant. Thus, the incidence of the SDC is more likely to be paid by the landowner or developer.

That's *the short-run view*.

In the *long-run view*, however, the revenue generated from SDCs has the potential to benefit development. If SDC fees are being used efficiently to develop valuable public infrastructure, they can transform undevelopable land into more valuable, developable land. The crucial distinction when identifying long-term impacts is whether SDCs are used to fund projects on a priority list for the City. If a developer can select an improvement that directly benefits his project and receive full or partial credit towards the SDC, he will choose that option. If the project is not on the priority list, it is less likely that is one that is providing the most system-wide improvement and increasing the supply or value of land.

If SDCs are directed to a priority list compiled by the City, the long-run benefit would be to increase the value of existing properties and possibly the supply of buildable land.[7] Increasing the value of land does not necessarily increase the amount of development that will occur. For new development to occur, the value of the new development must be higher than that of the existing use. By increasing the value of the land, it is possible that it actually decreases the likelihood of new development occurring. In cases where infrastructure improvements increase the likelihood of increased development, SDCs, at the margin, increase the supply of buildable land.

Which effect dominates? Do SDCs tend to hinder development by raising the cost to construct projects? Or do they benefit development by efficiently creating public infrastructure that enables new development to occur? Section III reviews studies that have tested this hypothesis in the real world and attempted to measure the actual impact SDCs have on real estate development and economic activity.

III. Summary of Research about SDCs

This section presents an overview of a few selected as representative of research on the relationship between SDCs and the amount and pace of development, especially residential development.

[6] Another constraint is that apartment developments are more likely to be constrained by height and FAR limits, so they cannot increase the size of the development.

[7] Infrastructure investments in the City of Portland are unlikely to increase the supply of buildable land, as there are no green fields that are underserved by infrastructure. Improvements could increase the value of land or allow for increased density which would have a similar impact of increasing the supply of land.

Paying for Prosperity: Impact Fees and Job Growth

Arthur C. Nelson and Mitch Moody. Brookings Institution Center on Urban and Metropolitan Policy. 2003.

This analysis is based on an assessment of impact fee and economic data for 67 counties in Florida from 1993 to 1999. The purpose of the study is to review academic literature regarding the effect of impact fees on the economy in general, and to analyze the relationship of impact fees on job creation.

Regarding the literature reviewed, the authors draw conclusions about some key issues:

1. **Economic efficiency and impact fees.** "When impact fees are equivalent to market prices they are considered to be efficient." (Altshuler and Gomez-Ibanez 1993) "A key advantage of impact fees (and user charges generally) is the possibility of improving economic efficiency in the provision of infrastructure. Resources are allocated efficiently when prices are equal to the marginal cost of a good – the price to produce one or more of something." (Downing and Frank, 1983)
2. **Impact fee effect on land supply**. "From an economic development perspective, the availability of key infrastructure such as water, sewer, drainage and roads to make land buildable is perhaps the most important ingredient to increasing the supply of land commensurate with development pressures." (Blair and Premus, 1987)
3. **Impact fees reduce risk and uncertainty**. The results of studies in both Sarasota, Florida, and Loveland, Colorado, demonstrate that impact fees appear to reduce the uncertainty and risk of development through the funding and implementation of planned capital improvements and the local government's use of impact fee revenue to leverage other revenues to expand public facilities. (Nelson and others, 1991, 1992).

The study found that impact fees did not adversely affect job growth. In fact, impact fees seemed to associate positively with job growth. There is a significant and positive correlation between impact fees assessed on building permits in one year and job growth over the following two years. This finding contradicts the traditional view that impact fees slow growth. The study did not find any noticeable adverse effects of Florida's impact fees on the economy, and could potentially be said to have a growth promoting effect.

The paper notes that the study results should not be implied to mean that higher impact fees always lead to job growth. Areas experiencing declining growth or those that already have enough infrastructure capacity for growth may not see the same result. Nevertheless, impact fees can enhance job growth in areas experiencing population growth and the demand for more infrastructure by allowing for the increase in the buildable land supply. Impact fees may even be necessary for growth if the community lacks other ways to finance infrastructure expansion needed to maintain an acceptable level of service.

A fundamental issue highlighted by this study is whether government is using SDC money to efficiently produce goods and services that developers and property users believe are valuable. If so, then the cost of the fee is offset either in part, totally, or more than totally by the value derived by the developer.

Impact Fees and Single-Family Home Construction

Gregory Burge and Keith Ihlanfeldt. Florida State University, DeVoe Moore Center and Department of Economics. 2005.

This article presents a theoretical model to examine 41 counties in Florida from 1993 to 2003 in order to determine whether impact fees reduced the construction of new homes, especially within the small home market. The study distinguishes between impact fees that fund public facilities normally supported with property taxes (i.e. non-water/sewer) and public facilities typically paid for through user fees (i.e. water/sewer fees). The study looked at the counties in Florida that had enacted impact fees or water/sewer fees or both over an 11-year time period.

Among the study's findings:

1. The findings showed that impact fees could both reduce housing supply by increasing development costs, or increase supply by easing development approval restrictions related to public services, through funding the infrastructure needed for development to occur.
2. An increase in housing construction occurs if impact fees pay for public facilities that would otherwise be paid for by property taxes rather than by user fees.
3. Impact fees that fund infrastructure typically financed through property taxes increase housing construction of all types of homes within inner-suburban areas, and medium to large-sized homes in outer suburban areas. Impact fees that reduce existing development's burden of the cost of public facilities needed for new development allow the construction of more affordable housing in suburban areas.
4. The study estimates simple housing models to test if the adoption of impact fees or an increase in impact fee rates leads to consumers finding those communities more attractive. The results seem to support the idea that demand for housing increases in response to the adoption of an increase in rates of impact fees that supports public facilities usually paid for with property taxes because of the expectation of future tax savings. Conversely, changes in water/sewer fees had a much smaller impact on demand for housing in an area.

The Effects of Impact Fees on Multifamily Housing Construction

Gregory Burge and Keith Ihlanfeldt. Florida State University, DeVoe Moore Center and Department of Economics. 2006.

This study follows the authors' earlier work examining the effects of impact fees on single-family home construction with an analysis of the fee's effect on multifamily housing

construction. The analysis concentrates on the effects in three distinct areas -- the central city, as well as inner and outer-ring suburbs -- to determine if there is a spatial difference in the effect on the amount of multifamily construction observed. Looking at panel data from the 67 Florida counties, the authors estimate the different effects imposed by distinct types of impact fees on multifamily housing construction. The study distinguishes between impact fees that fund facilities typically funded through property taxes, and public facilities that are normally supported with user fees, such as water and sewer. Over the years covered by the study (1996-2003) 31 counties increased or decreased their water/sewer fees, and real values of non-water/sewer fees increased in 18 counties, and decreased in 9 counties.

Results of the models used indicate that:

1. Across all three area types, water/sewer impact fees are found to reduce multifamily housing construction. The largest effect was found for the inner suburbs, and the authors conjecture that this is because the elasticity of demand for multifamily housing is relatively high within these areas.
2. The results were quite different for non-water/sewer impact fees (including transportation fees). For central city and outer suburban areas, the study found that effects on multifamily housing construction are insignificant. Conversely, inner ring suburbs are predicted to see an increase in multifamily housing construction with an increase in non-water/sewer impact fees.

The study determined that increases in water/sewer impact fees reduce multifamily construction because those fees impose direct costs on developers and likely yield few savings in project-approval costs. Thus, water/sewer impact fees act as a tax on development and shift the supply curve in. The authors also found that non-water/sewer impact fees reduced project-approval costs by more than the increase in the fees themselves, therefore they result in an outward shift in the supply curve toward more multifamily housing construction. The authors conclude that, if the goal is to increase the stock of multifamily housing within inner suburban areas, policy makers should encourage communities to adopt non-water/sewer fees but discourage the use of water/sewer fees.

Impact Fees and Housing Affordability

Vicki Been. Cityscape: A Journal of Policy Development and Research, 8:1, 139. 2004

This report presents an overview of studies from the past 25 years of research on impact fees as a means to control growth, as well as their effect on affordability of housing. The report concludes that existing literature does not establish that impact fees raise the net cost of housing after accounting for the benefits the impact fees finance, and the savings on alternative financing means.

Several articles are cited that demonstrate that jurisdictions using impact fees present a lower risk of higher taxes in the future, while providing for the maintenance and improvement of quality of life as it relates to service levels and infrastructure funded by impact fees. The lower risk of higher taxes, as well as the improvements to infrastructure, make those communities

better environments in which to buy and sell. **The impact fees are considered to be of value to consumers as long as they perceive that the impact fee or the avoidance of an increase in taxes funds the amenities they enjoy.**

The report also concludes that impact fees can actually enable growth if they accurately reflect the costs directly related to growth, providing more certainty to existing homeowners that they will not bear the cost of the new growth.

An Empirical Examination of the Effect of Impact Fees on the Housing Market

Larry D. Singell and Jane H. Lillydahl. Land Economics, Vol. 66, No. 1, pp 82-92. 1990.

This study uses data from Loveland, Colorado to examine the effects of impact fees on the cost and supply of housing. The authors use regression analysis to determine the incidence of the impact fee, and the efficiency of its allocation. The study examined periods before and after the City of Loveland instituted a new impact fee. By using cross-section data with a sample period that includes an 18-month window on either side of the expanded impact fee system, the authors estimate a reduced form equation for both new and existing housing prices. The authors argue that impact fees on new development affect the price of existing, as well as new homes and therefore cannot be justified on the grounds that they effectively recover the cost of new infrastructure without spillover effects. Owners of existing houses may receive a capital gain as a result of the impact fee, thus undercutting the logic of the fee's incidence.

Study results include:

1. The impact fee variable was found to have a statistically significant positive effect on new housing prices. The authors explain the relatively large impact they found by explaining that builders may mark up the impact fee to cover additional carrying costs, and that builders might have used the imposition of the new impact fee as a reason to reconsider their mark up on all development fees. The study also determined that it is the buyers of new homes, rather than the landowners or developers, who bear the burden of the fees. The incidence of the fee falls on the buyer because builders are able to pass along the fee when buyers are willing to pay a premium for a home in a particular community.
2. Echoing the findings on new housing prices, the results for existing houses also show an increase in price associated with the imposition of a new impact fee. The increase in home value indicates that the "owners of existing homes may experience capital gains as a result of the fees imposed on new development." The results also suggest that the prices of older homes in unique communities, far from nearby housing substitutes, are also affected significantly.
3. **The study presented preliminary evidence suggesting that impact fees cause some developers to leave the market and others to reduce their production.** The number of building permits issued in the 18 months following the new impact fee assessment was significantly lower than during the 18-month period prior to the institution of the fee.

Finally, the author's found an interesting correlation between the new impact fee and a reduction in lot size.

The study concluded with several implications from their results. First, **the authors conclude that up to two-thirds of the housing price increase over the three-year study period could be attributed to the new impact fees. The authors conclude that impact fees may therefore negatively impact the affordability of housing**. Buyers of new homes may incur an increase in housing price greater than the impact fee itself, while builders and developers who profit from growth bear little or no burden. Furthermore, all renters are expected to face increased costs due to impact fees. Finally, impact fees may discourage development by increasing housing prices, but might also encourage growth by leading to new city revenue generation.

Evaluation of the Impact of Proposed LTIC on Housing Affordability

Nick Popenuk and Mike Wilkerson. ECONorthwest. 2016.

This study evaluated the potential effect of a new development charge under consideration by the City of Portland. The charge, called the Local Transportation Improvement Charge (LTIC), would be a new charge on single-family home development on local streets that are unpaved or under-improved. In the current system, developers building homes on under-improved streets can either develop street improvements along the frontage of their property, or request an exemption. Both options are viewed as an inefficient use of resources. The development of the frontage by the builder creates scattered, disconnected frontage improvements and the appeals process for exemptions is time-consuming, with uncertain outcomes. The idea behind the LTIC is to create a clear and expedited process. The option to develop the frontage would remain, but developers would no longer have the option to appeal the decision on their required frontage improvements.

The LTIC is essentially a fee-in-lieu payment. Although it is similar to a system development charge in that it is a fee on new development, it differs as the payment is directly linked to frontage improvements of the specific development.

The study authors present the hypothesis that the LTIC would increase the cost of developing a home and therefore lead in an increase in the price of the home; potentially impacting housing affordability along the way. The authors find this not to be the case and argue that the LTIC will have little impact on housing prices citywide.

To make their case, the authors examine the potential impacts of the LTIC on housing supply and demand. They conclude with the following findings:

- LTIC effect on housing demand. The LTIC is unlikely to have any significant effects on housing demand. The LTIC fee would be difficult for a seller to pass on to a buyer thus leaving the housing price unchanged. Additionally, federal standards and mortgage

rules restrict significant increases in housing prices in most cases thereby further reducing the ability of the seller to pass on the fee to the buyer.

- LTIC effect on housing supply. Because the LTIC fee is ultimately paid by the landowner through a reduction in the value of the land, theoretically the fee could discourage some landowners from selling their land and negatively affect the supply of housing. All else equal, a limit to housing supply would increase housing prices.

The study concludes that the subset of homes affected by the LTIC is relatively small and the developers are already either paying for frontage improvements or spending the time in the appeals process to get an exemption (a cost in itself). Therefore, overall the LTIC does not constitute a new fee, will likely affect few homes, and will have a relatively small impact on housing price. The authors point out that the LTIC could actually result in more property owners deciding to develop their properties, thereby increasing the supply of homes. This increase would be difficult to quantify, but could offset any negative impacts on supply.

Summary of Study's Reviewed

The studies reviewed do not present a clear answer to the question of the effects of SDCs on real estate development, property values, and housing affordability. Some studies found linkages between housing price increases and new SDCs, and found developers self-selecting to leave those markets due to infeasibility of development. Others found that SDCs are viewed as a value to home buyers as it signaled more certainty in future tax rates. In general, it is difficult to apply the findings of the literature to the City of Portland because the areas studied often have an abundance of undeveloped (green field) land. There are unique circumstances applicable to Portland that could benefit from a local study; otherwise, theory is the best reference to guide the likely outcomes.

Notwithstanding the above, the studies do align with our view that SDCs are a cost to individual development projects in the short-term, and can be a benefit to development in general in the long-term. However, the costs and benefits appear to vary from place to place and depend on the efficiency of fee disbursement to fund future infrastructure projects.

These findings are consistent with those of a similar study to this one conducted during the 2007 PBOT TSDC update.

IV. Conclusions

In broad terms, the studies we reviewed support the theory that SDCs are certainly a cost to individual development projects in the short-term, and potentially (if a jurisdiction is doing a good job of planning its transportation infrastructure and not allowing developers to opt out and direct fees to improvements directly benefitting their projects) a benefit to development in in the long-term. The benefits depend on the efficiency of fee disbursement to fund future infrastructure projects.

Theory suggests that the most likely impact of increased TSDCs will be to increase the price of homes. Those increased prices, other things being equal, are one way to define a decrease in housing affordability. This is particularly relevant to single-family homes, although the impact on apartments is more likely to decrease the number of units that are financially feasible. The implication is that in the short run an SDC will decrease the supply of units, thereby putting upward pressure on rents and decreasing affordability.

In Portland, however, the TSDC *by itself* is unlikely to have much of an effect on decreasing new housing supply. At $2,800 per single family home, Portland now has the second lowest TSDC in the region. It is the *combined total SDC amount* that is more likely to have an impact on development. Portland's total SDC burden is in-line with those of other cities in the region—developers do not escape paying SDCs by pursuing projects outside Portland city boundaries. Cities outside of Portland would also be hard pressed to replicate the marketability of some of Portland's neighborhoods. The TSDC is certainly adds a cost to development projects in Portland, but that cost is on the order of 1% of housing price: the magnitude of the effect on new housing starts is likely to be relatively small as well.

In the long run, increasing rents allow for more development to be feasible, so strategically investing in infrastructure can increase the likelihood of development occurring in desired locations and possibly allow for increased density in those locations.

Probably the most relevant finding is that the studies that argue for the potential for long-run benefits of SDCs either state or imply that those benefits depend on how the SDCs funds get used. If SDC fees are being used in a way that developers find valuable, they can have a positive effect on development.

In concept, PBOT currently uses Transportation SDC fees to build projects on a predetermined list, and that list is created through a process that arguably evaluates all potential needs for transportation system improvements in Portland and selects the ones that are most needed (most valuable). But in practice PBOT allows developers to construct other projects not on the list and get partial credit[8] towards fulfilling their SDC requirement. We do not have estimates of the extent to which this practice is used, but our impression is that it is not a rare exception; rather it relatively common.

If it is common, some inferences seem supportable. From the perspective of an individual developer, paying the fee by making local improvements (and getting credit that relieves payment of the TSDC, totally or partially) is better for the project's financial pro forma than just paying the fee. An individual developer (and especially a smaller developer without extensive holdings of vacant land) will emphasize what we called the short-run view: he or she will see the fee as an unavoidable cost and brings little or no corresponding benefit: the money paid goes to fund larger transportation projects that will broadly benefit the City in some future that

[8] Credit is provided only for the portion of project costs that are beyond the capacity needed to directly serve the development.

is 5 – 20 years off. But the alternative practice of building some local transportation improvement and be allowed to fund it with TSDC funds could deliver direct and immediate benefits to the developer's project.

In the cases where a developer uses that credit, we can say with some confidence that the negative cost effects of the TSDC are at least partially offset by value to the development. In some cases, it is possible that the local transportation improvements are so valuable to development that a developer would have built them even without the credit. More often, it seems likely that, but for the credit, the developer would not build the local improvements (unless required by other regulations, in which case the TSDC is mainly irrelevant to the development decision—it just gets applied to offset the cost of some other requirement).

In the cases where developers just pay the full TSDC, most will take a short-run view: how does the fee affect *my* project *now*? The answer must be that the fee makes every development project more expensive and that, at the margin, it will contribute to some projects' inabilities to clear financial hurdles and they won't occur.

The fees that the developers pay go on to fund transportation infrastructure that is at least of some benefit (and, in some cases, critical) to future development. Thus, in theory the TSDC is likely to have the economic impact of reducing development today and increasing it in the future.

We say "in theory" because if the City's and developers' use of credits is extensive, the amount of TSDC funding for future transportation system improvements is smaller than the fee calculations assumed, and some or much of the presumably needed infrastructure will not get built on the schedule the fees assumed. Maybe it will, in fact, get built, but only if more of its funding comes from non-TSDC sources.