Council meeting agenda

Metro
600 NE Grand Ave.
Portland, OR 97232-2736

Thursday, January 6, 2022 **10:30 AM** **https://zoom.us/j/615079992 (Webinar ID: 615079992) or 888-475-4499 (toll free)**

Please note: To limit the spread of COVID-19, Metro Regional Center is now closed to the public.

This meeting will be held electronically. You can join the meeting on your computer or other device by using this link: https://zoom.us/j/615079992 (Webinar ID: 615079992) or 888-475-4499 (toll free).

If you wish to attend the meeting, but do not have the ability to attend by phone or computer, please contact the Legislative Coordinator at least 24 hours before the noticed meeting time by phone at 503-797-1916 or email at legislativecoordinator@oregonmetro.gov.

1. Call to Order and Roll Call

2. Public Communication

Public comment may be submitted in writing and will also be heard by electronic communication (video conference or telephone). Written comments should be submitted electronically by emailing legislativecoordinator@oregonmetro.gov. Written comments received by 4pm the day before the meeting will be provided to the council prior to the meeting.

Those wishing to testify orally are encouraged to sign up in advance by either: (a) contacting the legislative coordinator by phone at 503-797-1916 and providing your name and the agenda item on which you wish to testify; or (b) registering by email by sending your name and the agenda item on which you wish to testify to legislativecoordinator@oregonmetro.gov. Those requesting to comment during the meeting can do so by using the “Raise Hand” feature in Zoom or emailing the legislative coordinator at legislativecoordinator@oregonmetro.gov. Individuals will have three minutes to testify unless otherwise stated at the meeting.

3. Consent Agenda

3.1 Considerations of the Council Meeting Minutes for the December 7, 2021 Meeting 22-5648

Attachments: 120721c Minutes

3.2 Resolution No. 21-5218, For the Purpose of Amending the 2021-26 Metropolitan Transportation Improvement Program (MTIP) to Amend Three Projects Impacting Gresham and Oregon Department of Transportation (ODOT) Allowing Federal Approvals and Phase Obligations to be Approved (NV22-02-NOV1) — RES 21-5218

Attachments: Resolution No. 21-5218
Exhibit A
Staff Report

3.3 Resolution No. 21-5219, For the Purpose of Amending the 2021-26 Metropolitan Transportation Improvement Program (MTIP) to Add Portland's 82nd Ave Safety Upgrade Project Funded with $80 Million from the American Rescue Plan Act of 2021 (NV22-04-NOV3) — RES 21-5219

Attachments: Staff Report
Resolution No. 21-5219
Exhibit A

3.4 Resolution No. 22-5235, For the Purpose of Organizing the Metro Council and Confirming the Deputy President — RES 22-5235

Attachments: Resolution No. 22-5235
Staff Report

4. Resolutions

4.1 Resolution No. 21-5220, For the Purpose of Adopting the 2021 Regional Transportation System Management and Operations Strategy Replacing the 2010 Regional 2010-2020 Transportation Systems Management and Operations Action Plan — RES 21-5220

Presenter(s): Caleb Winter (he/him), Metro

Attachments: Resolution No. 21-5220
Exhibit A
Exhibit B
Exhibit C
Staff Report

4.2 Resolution No. 21-5206, For the Purpose of Adopting the Final I-5 Bridge Replacement Program: Values, Outcomes, and Actions — RES 21-5206

Presenter(s): Margi Bradway (she/her), Metro
Elizabeth Mros-O'hara (she/her), Metro

Attachments: Resolution No. 21-5206
Exhibit A
Staff Report

4.2.1 Public Hearing for Resolution No. 21-5206

4.3 Resolution No. 21-5217, For the Purpose of Amending the 2021-26 Metropolitan Transportation Improvement Program (MTIP) to Add the Preliminary Engineering Phase and Partial Funding of $71 Million Dollars for Oregon Department of Transportation (ODOT) and Washington State Department of Transportation's (WSDOT) Interstate 5- Interstate Bridge Replacement Project (NV22-03-NOV2) — RES 21-5217

Presenter(s): Ted Leybold (he/him), Metro
Ray Mabey (he/him), Interstate Bridge Project

Attachments: Resolution No. 21-5217
Exhibit A
Staff Report
Attachment 1
Attachment 2
Attachment 3
Attachment 4

4.3.1 Public Hearing for Resolution No. 21-5217

5. Chief Operating Officer Communication

6. Councilor Communication

7. Adjourn

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ការគោរពសិទ្ធិពលរដ្ឋរបស់ ។ សំរាប់ព័ត៌មានអំពីកម្មវិធីសិទ្ធិពលរដ្ឋរបស់ Metro ឬដើម្បីទទួលពាក្យបណ្តឹងរើសអើងសូមចូលទស្សនាគេហទំព័រ www.oregonmetro.gov/civilrights។ បើលោកអ្នកត្រូវការអ្នកបកប្រែភាសានៅពេលអង្គប្រជុំសាធារណៈ សូមទូរស័ព្ទមកលេខ 503-797-1700 (ម៉ោង 8 ព្រឹកដល់ម៉ោង 5 ល្ងាច ថ្ងៃធ្វើការ) ប្រាំពីរថ្ងៃថ្ងៃធ្វើការ មុនថ្ងៃប្រជុំដើម្បីអាចឲ្យគេសម្រួលតាមសំណើរបស់លោកអ្នក ។

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February 2017

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Clackamas, Multnomah and Washington counties, and Vancouver, WA Channel 30 – Community Access Network *Web site*: www.tvctv.org *Ph*: 503-629-8534 Call or visit web site for program times.	**Portland** Channel 30 – Portland Community Media *Web site*: www.pcmtv.org *Ph*: 503-288-1515 Call or visit web site for program times.
Gresham Channel 30 - MCTV *Web site*: www.metroeast.org *Ph*: 503-491-7636 Call or visit web site for program times.	**Washington County and West Linn** Channel 30– TVC TV *Web site*: www.tvctv.org *Ph*: 503-629-8534 Call or visit web site for program times.
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Agenda Item No. 3.1

Resolution No. 21-5218, For the Purpose of Amending the 2021-26 Metropolitan Transportation Improvement Program (MTIP) to Amend Three Projects Impacting Gresham and Oregon Department of Transportation (ODOT) Allowing Federal Approvals and Phase Obligations to be Approved (NV22-02-NOV1)

Consent Agenda

Metro Council Meeting
Thursday, January 6, 2022

BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF AMENDING THE 2021-26 METROPOLITAN IMPROVEMENT PROGRAM (MTIP) TO AMEND THREE PROJECTS IMPACTING GRESHAM AND ODOT ALLOWING FEDERAL APPROVALS AND PHASE OBLIGATIONS TO BE APPROVED (NV22-02-NOV1)	))))))	RESOLUTION NO. 21-5218 Introduced by: Chief Operating Officer Marissa Madrigal in concurrence with Council President Lynn Peterson

WHEREAS, the Metropolitan Transportation Improvement Program (MTIP) prioritizes projects from the Regional Transportation Plan (RTP) to receive transportation related funding; and

WHEREAS, the Joint Policy Advisory Committee on Transportation (JPACT) and the Metro Council approved the 2021-24 MTIP via Resolution 20-5110 on July 23, 2020; and

WHEREAS, JPACT and the Metro Council must approve any subsequent amendments to add new projects or substantially modify existing projects in the MTIP; and

WHEREAS, the U.S. Department of Transportation (USDOT) has issued clarified MTIP amendment submission rules and definitions for MTIP formal amendments and administrative modifications that both ODOT and all Oregon MPOs must adhere to which includes that all new projects added to the MTIP must complete the formal amendment process; and

WHEREAS, the final design requirements for Gresham's SE 242/Hogan NE Burnside to East Powell resulted in the need for $1.83 million in additional local construction funds to complete the construction phase due to revised design elements, the inclusion stormwater quality management infrastructure replacement requirements, higher than expected pavement degradation, and inflation which must be addressed now before the project can move forward into the construction phase; and

WHEREAS, ODOT's review of the OR99W North Schmeer Rd to SW Meinecke Pkwy and on US30B from Kerby to 165th Safety project that will upgrade signals, replace or modify signs and road markings, install lighting and bike lane conflict markings to improve safety for motorist has sufficient funding allowing it to split $25,000 from the current construction phase and commit the funds to ODOT's OR99W I-5 to McDonald Street safety upgrade project which is undergoing a scope enhancement; and

WHEREAS, ODOT's OR99W from I-5 to McDonald Street safety upgrade project which will provide repave the roadway, provide sidewalk/bicycle gap fill-ins, construct ADA ramps and access management upgrades, provide drainage upgrades, and a full signal upgrade at Johnson/Main, plus repair rutting and surface damage allowing safer travel will enhance its scope elements by adding a third site location to the project and add water quality facility resulting in a $2,525,000 cost increase to the project; and

WHEREAS, the a review of the proposed project changes has been completed against the current approved Regional Transportation Plan (RTP) to ensure the projects remain consistent with the goals and strategies identified in the RTP; and

WHEREAS, RTP consistency check areas included financial/fiscal constraint verification, an assessment of possible air quality impacts, consistency with regional approved RTP goals and strategies,

and a reconfirmation that the MTIP's financial constraint finding is maintained a result of the November #1, MTIP Formal Amendment Bundle; and

WHEREAS, Metro's Transportation Policy and Alternatives Committee (TPAC) received their notification plus amendment summary overview, and recommended approval to Metro's Joint Policy Advisory Committee on Transportation (JPACT) on November 5, 2021; and

WHEREAS, JPACT approved Resolution 21-5218 consisting of the November #1 2021 Formal MTIP Amendment on November 18, 2021 and provided their approval recommendation to Metro Council; now therefore

BE IT RESOLVED that the Metro Council hereby adopts the recommendation of JPACT on December 2, 2021 through Resolution 21-5218 to formally amend the 2021-26 MTIP to with the three projects included in the November #1 Formal MTIP Amendment Bundle.

ADOPTED by the Metro Council this ____ day of _____ 2021.

Lynn Peterson, Council President

Approved as to Form:

Carrie MacLaren, Metro Attorney

Proposed November #1 2021 (FFY 2022) Formal Transition Amendment Bundle
Amendment Type: **Formal/Full**
Amendment #: **NV22-02-NOV1**
Total Number of Projects: 3

Key Number & MTIP ID	Lead Agency	Project Name	Project Description	Amendment Action
Project #1 Key 19120	Gresham	SE 242nd/Hogan: NE Burnside - E. Powell (Gresham)	Operational improvements, signal upgrades, bicycle and pedestrian improvements	**COST INCREASE:** Additional local overmatching funds are committed to the construction phase to address the updated construction cost estimate
Project #2 Key 21616	ODOT	OR99W:N Schmeer Rd–SW Meinecke Pkwy & US30B: Kerby–165th	Upgrade signals, replace or modify signs and road markings, install lighting and bike lane conflict markings to improve safety on this section.	**SPLIT FUNDS:** Split $25koff the construction phase and commit to Key 20435.
Project #3 Key 20435	ODOT	OR99W: I-5 - McDonald St	~~Repave roadway; upgrade ADA ramps to current standards; improve access management; pedestrian improvements and address drainage as needed. Includes full signal upgrade at Johnson/Main.~~ **Repave roadway, sidewalk/bicycle gap fill-ins, construct ADA ramps and access management upgrades, provide drainage upgrades, add water quality facility, full signal upgrade at Johnson/Main, plus repair rutting and surface damage allowing safer travel**	**SCOPE CHANGE** Project limits are extended, a third site location is added to the project, additional scope work elements are included resulting in a cost increase of 10.49% for a revised total project cost of $26,585,468

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20121-24 Metropolitan Transportation Improvement Program (MTIP)
PROJECT AMENDMENT DETAIL WORKSHEET

Formal Amendment
COST INCREASE
Commit added local overmatch to the construction phase

Lead Agency:	**Gresham**		Project Type:	Operations	**ODOT Key:**	**19120**
Project Name:			ODOT Type	Modern	**MTIP ID:**	**70799**
SE 242nd/Hogan: NE Burnside - E. Powell (Gresham)		**1**	Performance Meas:	Yes	**Status:**	**5**
			Capacity Enhancing:	No	**Comp Date:**	**9/30/2026**
Project Status: 5 = (RW) Right-of Way activities initiated including R/W acquisition and/or utilities relocation.			Conformity Exempt:	Yes	RTP ID:	10512
			On State Hwy Sys:	No	RFFA ID:	N/A
			Mile Post Begin:	N/A	RFFA Cycle:	N/A
Short Description: Operational improvements, signal upgrades, bicycle and pedestrian improvements			Mile Post End:	N/A	UPWP:	No
			Length:	N/A	UPWP Cycle:	No
			Flex Transfer to FTA	No	Transfer Code	N/A
			1st Year Program'd:	2015	Past Amend:	7
			Years Active:	8	OTC Approval:	No
			STIP Amend #: 21-24-0993		MTIP Amnd:	**NV22-02-NOV1**

Detailed Description: Widen SE Hogan Road from NE Burnside St to E Powell Blvd to provide increased access for economic development and freight mobility. The project includes signals, bicycle and pedestrian improvements to provide safer and improved access for all road users

STIP Description: Widen NE Hogan Drive to provide increased access for economic development and freight mobility. The project includes signals, bicycle and pedestrian improvements to provide safer and improved access for all road users.

Last Amendment of Modification: Administrative, August 2021 - AB21-22-AUG2 - Slip $1,025,001 and matching funds of $117,316 plus local overmatch of $1,407,683 to FY 2022

PROJECT FUNDING DETAILS								
Fund Type	Fund Code	Year	Planning	Preliminary Engineering	Right of Way	Other (Utility Relocation)	Construction	**Total**
Federal Funds								
REDIST	Z030	2015		$ 150,000				$ 150,000
REDIST	Z030	2018			$ 325,000			$ 325,000
AC-STBGS	Z240	2022					$ 1,025,001	$ 1,025,001
							Federal Totals:	**$ 1,500,001**
Federal Fund Obligations $:				$ 150,000	$ 325,000			Federal Aid ID
EA Number:				PE002538	R9443000			3125(055)
Initial Obligation Date:				9/16/2015	9/24/2018			
EA End Date:				1/31/2023	12/31/2025			
Known Expenditures:				N/A	N/A			
State Funds								
								$ -
								$ -
								$ -
							State Total:	**$ -**
Local Funds								
Local	Match	2015		$ 17,168				$ 17,168
Other	OTH0	2015		$ 132,832				$ 132,832
Local	Match	2018			$ 37,198			$ 37,198
Other	OTH0	2018			$ 968,190			$ 968,190
Local	Match	2022					$ 117,316	$ 117,316
~~Other~~	~~OTH0~~	~~2022~~					~~$ 1,407,683~~	
Other	**OTH0**	**2022**					**$ 3,239,683**	**$ 3,239,683**
								$ -
							Local Total	**$ 4,512,387**
Phase Totals Before Amend:			$ -	$ 300,000	$ 1,330,388	$ -	~~$ 2,550,000~~	~~$ 4,180,388~~
Phase Totals After Amend:			$ -	$ 300,000	$ 1,330,388	**$ -**	**$ 4,382,000**	**$ 6,012,388**
							Year Of Expenditure (YOE):	$ 6,012,388

Notes and Summary of Changes:

> Red font = prior amended funding or project details. Blue font = amended changes to funding or project details. Black font indicates no change has occurred.
> What are we doing?
> Support Materials: STIP Summary Report, STIP Impacts Worksheet and Change Management Request (CMR)

Amendment Summary:

The formal amendment increases the local overmatch funding from $1,407,683 to $3,239,683 (an addition of $1,832,000) in to the construction phase. The total project cost increases from $4,180,388 to $6,012,388 which represents a 43.82% increase to the project. The primary factors cited by Gresham for the cost increase include (1) the increase in construction cost are the level of complexity of several design elements including stormwater quality management, stormwater infrastructure replacement and (2) significant pavement degradation since 2015 when the project was introduced to the STIP. (3) Construction costs have been on the rise for the past 10 years with even higher escalations anticipated resulting from material demand, more costly materials production, increases in petroleum cost, labor shortages, and finally the COVID Pandemic.

> Will Performance Measurements Apply: Yes - Safety, pavement also possible

RTP References:

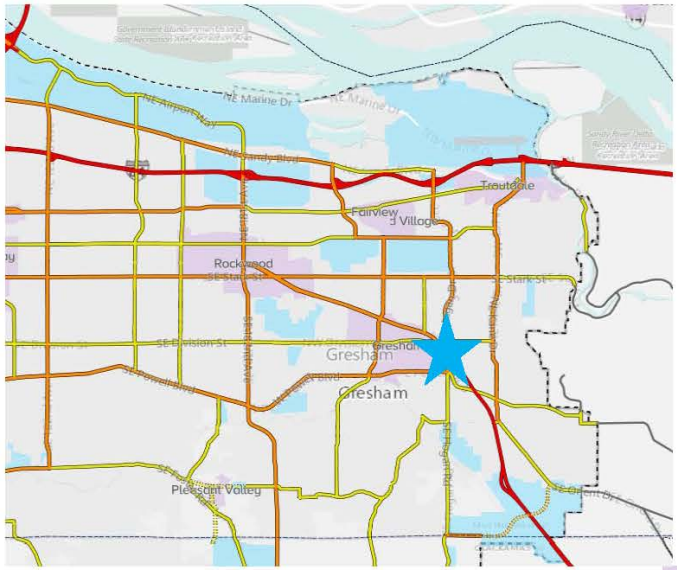
> RTP ID: 10512 - Hogan - Powell to Burnside: Boulevard Design + Intersection Improvements
> RTP Description: Improve to boulevard standards with center median, planter strip, and new sidewalk. Intersection improvements at Burnside and Powell. Multi-use path on west side from Wy'East Way path end to Powell Blvd. Bike lane east side between Powell and Burnside.
> Exemption status: Exempt project per 93 CFR 126, Table 2 - Safety - Projects that correct, improve, or eliminate a hazardous location or feature.
> UPWP amendment: No
> RTP Goals: Goal 5 - Safety and Security
> Goal Objective: 5.1 Transportation Safety
> Goal Description: Eliminate fatal and severe injury crashes for all modes of travel.

Fund Codes:

> REDIST = Federal Redistribution funds. These funds are allocated to states that meet their obligation targets. The funds are pulled from states that do not meet their obligation targets.
> AC-STBGS = Federal Advance Construction also referred to as "AC funds". AC funds are used by ODOT as a placeholder until the actual federal fund type code is known. AC-STBGS reflects that the expected fund type code will be federal Surface Transportation Block Grant funds appropriated to ODOT.
> Local = General local funds committed by the lead agency to the project and used as the required match against the federal funds.
> Other = Additional local funds above the required match committed to the project.

Other

> On NHS: No
> Does the project require transportation and air quality modeling: No
> Is the project located on the Metro Modeling network: Yes - Motor Vehicle Network
> Model category and type: Hogan is classified as a Major Arterial in the Motor Vehicle Networks
> TCM project: No
> Located on the CMP: Yes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Troutdale
Fairview
Rockwood
Gresham
Pleasant Valley


NE 18th St
NE 17th St
Gresham
NE Burnside Rd
Gresham Golf and Country Club
NW 12th St
NE Division St
NW Eastman Pkwy
N Main Ave
NE 9th St
NE 8th St
NE 6th St
NW 8th St
NE Hogan Dr
NE Kane Dr
NW 3rd St
NW 1st St
E Powell Blvd
SE 1st St
SE 2nd St
SE 3rd St
SE 4th St
SE 5th St
S Main Ave
SE Burnside Rd

Metro

Metro
20121-24 Metropolitan Transportation Improvement Program (MTIP)
PROJECT AMENDMENT DETAIL WORKSHEET

Formal Amendment
SPLIT FUNDS
Split $25k from Construction and commit to Key 20435

Lead Agency: ODOT		Project Type:	O&M	**ODOT Key:**	**21616**
Project Name: **OR99W:N Schmeer Rd– SW Meinecke Pkwy & US30B: Kerby–165th**	**2**	ODOT Work Type	Safety	**MTIP ID:**	**71170**
		Performance Meas:	Yes	**Status:**	**4**
		Capacity Enhancing:	No	**Comp Date:**	**9/30/2026**
Project Status: 4 = (PS&E) Planning Specifications, & Estimates (final design 30%, 60%,90% design activities initiated).		Conformity Exempt:	Yes	RTP ID:	12095
		On State Hwy Sys:	Various	RFFA ID:	N/A
		Mile Post Begin:	Various	RFFA Cycle:	N/A
		Mile Post End:	Various	UPWP:	No
Short Description: Upgrade signals, replace or modify signs and road markings, install lighting and bike lane conflict markings to improve safety on this section.		Length:	Multiple	UPWP Cycle:	No
		Flex Transfer to FTA	No	Transfer Code	N/A
		1st Year Program'd:	2021	Past Amend:	1
		Years Active:	2	OTC Approval:	Yes
		STIP Amend #21-24-1535		MTIP Amnd #:NV22-02-NOV1	

Detailed Description: On OR99W from -5.71 to 15.95 and on US30BY from 5.60 to 14.70, install various safety improvements including upgrading signals, replace or modify signs and road markings, install lighting and bike lane conflict markings to improve safety on this section.

STIP Description: Upgrade signals, replace or modify signs and road markings, install lighting and bike lane conflict markings to improve safety on this section

Last Amendment of Modification: Formal - JN21-11-JUN, June 2021 - LIMITS CORRECTION: The formal amendment updates the project name based on revised project limits MPs to match the approved charter when CMR00 was processed. The limits are adjusted significantly, but the scope remains unchanged.

PROJECT FUNDING DETAILS								
Fund Type	Fund Code	Year	Planning	Preliminary Engineering	Right of Way	Other (Utility Relocation)	Construction	**Total**
Federal Funds								
HSIP	ZS30	2021		$ 429,860				$ 429,860
HSIP	ZS30	2022			$ 69,856			$ 69,856
HSIP	ZS30	2023				$ 11,685		$ 11,685
~~HSIP~~	~~ZS30~~	~~2023~~					~~$ 1,790,224~~	$ -
HSIP	**ZS30**	**2023**					**$ 1,767,169**	**$ 1,767,169**
								$ -
							Federal Totals:	**$ 2,278,570**
Federal Fund Obligations $:				$ 429,860				Federal Aid ID
EA Number:				PE003252				SA00(385)
Initial Obligation Date:				12/4/2020				
EA End Date:				N/A				
Known Expenditures:				N/A				
State Funds								
State	Match	2021		$ 36,264				$ 36,264
State	Match	2022			$ 5,893			$ 5,893
State	Match	2023				$ 986		$ 986
~~State~~	~~Match~~	~~2023~~					~~$ 151,030~~	$ -
State	**Match**	**2023**					**$ 149,084**	**$ 149,084**
								$ -
							State Total:	**$ 192,227**
Local Funds								
								$ -
								$ -
							Local Total	**$ -**
Phase Totals Before Amend:			$ -	$ 466,124	$ 75,749	$ 12,671	~~$ 1,941,254~~	~~$ 2,495,798~~
Phase Totals After Amend:			$ -	$ 466,124	$ 75,749	$ 12,671	**$ 1,916,253**	**$ 2,470,797**
							Year Of Expenditure (YOE):	$ 2,470,797
Phase Change			$ -	$ -	$ -	$ -	$ (25,001)	$ (25,001)
Percent			0.00%	0.00%	0.00%	0.00%	-1.29%	-1.00%

Notes and Summary of Changes:

> Red font = prior amended funding or project details. Blue font = amended changes to funding or project details. Black font indicates no change has occurred.
> Approximately $25k is split off the contraction phase and committed to Key 20435
> Support Materials: STIP Summary Report

Amendment Summary:

The formal amendment splits a small portion of construction funding ($25k) and commits it to Key 20435 - also in this amendment bundle.
> Will Performance Measurements Apply: Yes, Safety

RTP References:

> RTP ID: 12095 - Safety & Operations Projects
> RTP Description: Projects to improve safety or operational efficiencies such as pedestrian crossings of arterial roads, railroad crossing repairs, slide and rock fall protections, illumination, signals and signal operations systems, that do not add motor vehicle capacity.
> Exemption status: Exempt project per 93 CFR 126, Table 2 - Safety - Projects that correct, improve, or eliminate a hazardous location or feature.
> UPWP amendment: No
> RTP Goals: Goal 5 - Safety and Security
> Goal Objective: 5.1 Transportation Safety
> Goal Description: Eliminate fatal and severe injury crashes for all modes of travel.

Fund Codes:

> HSIP = Federal Highway Safety Improvement Program funds appropriated to ODOT and then committed to eligible safety upgrade projects
> State = General state funds provided by the lead agency as part of the required match to the federal funds.

Other

> On NHS: Yes
> Metro Model: Yes - Motor Vehicle Network
> Model category and type: Throughway
> TCM project: No
> Located on the CMP: Yes

Metro

Metro
20121-24 Metropolitan Transportation Improvement Program (MTIP)
PROJECT AMENDMENT DETAIL WORKSHEET

Formal Amendment
SCOPE CHANGE
Add scope upgrades , extend project limits and increase funds

Lead Agency: ODOT		Project Type:	O&M	**ODOT Key:**	**20435**
Project Name:		ODOT Work Type	Preserve	**MTIP ID:**	**70988**
OR99W: I-5 - McDonald St	**3**	Performance Meas:	Yes	**Status:**	**5**
		Capacity Enhancing:	No	**Comp Date:**	**9/30/2025**
Project Status: 5 = (RW) Right-of Way activities initiated including R/W acquisition and/or utilities relocation.		Conformity Exempt:	Yes	RTP ID:	12095
		On State Hwy Sys:	OR99W	RFFA ID:	N/A
		Mile Post Begin:	7.47	RFFA Cycle:	N/A
Short Description: ~~Repave roadway; upgrade ADA ramps to current standards; improve access management; pedestrian improvements and address drainage as needed. Includes full signal upgrade at Johnson/Main.~~ **Repave roadway, sidewalk/bicycle gap fill-ins, construct ADA ramps and access management upgrades, provide drainage upgrades, add water quality facility, full signal upgrade at Johnson/Main, plus repair rutting and surface damage allowing safer travel**		Mile Post End:	~~10.29~~ **13.74**	UPWP:	No
		Length: (total linear distance)	~~2.82~~ **6.27**	UPWP Cycle:	No
		Flex Transfer to FTA	No	Transfer Code	N/A
		1st Year Program'd:	2018	Past Amend:	7
		Years Active:	5	OTC Approval:	No
		STIP Amend #21-24-1535		MTIP Amnd:NV22-02-NOV1	

Detailed Description: ~~On OR99W from I-5 to McDonald St (MP 7.47 to 10.29) north of King City, repave roadway, fill in sidewalk and bike lane gaps,upgrade ADA ramps to current standards, improve access management, and address drainage as needed. Includes full signal upgrade at Johnson/Main. This project will repair rutting and surface damage from vehicles and allow safer travel for motor vehicle operators, bicycle riders and pedestrians.~~
On OR99W from I-5 to McDonald St at three site locations (at MP 7.47 to MP 10.29 and MP 13.54 to MP 13.74) north of King City, repave roadway, fill in sidewalk and bike lane gaps, upgrade curb ramps to current standards, improve access management, and address drainage as needed. Includes full signal upgrade at Johnson/Main. The project will repair rutting and surface damage from vehicles and allow safer travel for motor vehicle operators, bicycle riders and pedestrians

STIP Description: Repave roadway, fill in sidewalk and bike lane gaps, upgrade curb ramps to current standards, improve access management, and address drainage as needed. Includes full signal upgrade at Johnson/Main. This project will repair rutting and surface damage from vehicles and allow safer travel for motor vehicle operators, bicycle riders and pedestrians.

Last Amendment of Modification: Administrative - January 2021 - AB21-08-JAN3 - PHASE FUND SHIFT The admin mod shifts construction to PE to address a PE funding need. No construction phase backfill required. There is no change the total project cost or scope.

PROJECT FUNDING DETAILS								
Fund Type	Fund Code	Year	Planning	Preliminary Engineering	Right of Way	Other (Utility Relocation)	Construction	**Total**
Federal Funds								
NHPP	Z001	2018		$ 1,725,435				$ 1,725,435
AC-NHPP	ACP0	2018		$ 2,592,267				$ 2,592,267
HSIP (92.22%)	**ZS30**	**2018**		**$ 4,611**				**$ 4,611**
NHPP	Z001	2020			$ 360,715			$ 360,715
AC-NHPP	ACP0	2020			$ 3,154,332			$ 3,154,332
~~AC-NHPP~~	~~ACP0~~	~~2022~~					~~$ 10,990,655~~	$ -
AC-NHPP	**ACP0**	**2022**					**$ 13,233,905**	**$ 13,233,905**
HSIP (92.22%)	**ZS30**	**2022**					**$ 18,444**	**$ 18,444**
								$ -
							Federal Totals:	**$ 21,089,709**
Federal Fund Obligations $:				$ 4,322,313				Federal Aid ID
EA Number:				PE002905	R9599000			S091(090)
Initial Obligation Date:				2/21/18	9/18/2020			
EA End Date:				N/A	N/A			
Known Expenditures:				N/A	N/A			
State Funds								
State	Match	2018		$ 197,484				$ 197,484
State	Match	2018		$ 296,697				$ 296,697
State	**Match**	**2018**		**$ 389**				**$ 389**
State	Match	2020			$ 41,285			$ 41,285
State	Match	2020			$ 361,027			$ 361,027
HB2017	S017	2020			$ 82,641			$ 82,641
~~State~~	~~Match~~	~~2022~~					~~$ 1,257,930~~	$ -
State	**Match**	**2022**					**$ 1,514,680**	**$ 1,514,680**
State (HSIP)	**Match**	**2022**					**$ 1,556**	**$ 1,556**
Bikeways	S080	2022					$ 3,000,000	$ 3,000,000
							State Total:	**$ 5,495,759**

Local Funds								
								$ -
								$ -
							Local Total	$ -
Phase Totals Before Amend:			$ -	~~$ 4,811,883~~	$ 4,000,000	$ -	~~$ 15,248,585~~	~~$ 24,060,468~~
Phase Totals After Amend:			$ -	**$ 4,816,883**	$ 4,000,000	$ -	**$ 17,768,585**	**$ 26,585,468**
							Year Of Expenditure (YOE):	$ 26,585,468
Phase Change			$ -	$ 5,000	$ -	$ -	$ 2,520,000	$ 2,525,000
Percent			0.00%	0.10%	0.00%	0.00%	16.53%	10.49%

Notes and Summary of Changes:

> Red font = prior amended funding or project details. Blue font = amended changes to funding or project details. Black font indicates no change has occurred.
> Approximately $25k is split off the contraction phase and committed to Key 20435
> Support Materials: STIP Summary Report, STIP Impacts Worksheet, and Location Map

Amendment Summary:

The formal amendment completes a scope change, limits expansion, and cost increase to the project. As a result, the added scope elements increase the project cost by 10.49% to $26,585,468. A third site location is also added to the project scope which extends the project limits. The site location expansion is only 0.2 miles. The linear addition from the begin and end MP points increases to 6.27 miles.

> Will Performance Measurements Apply: Yes, Safety & Pavement

RTP References:

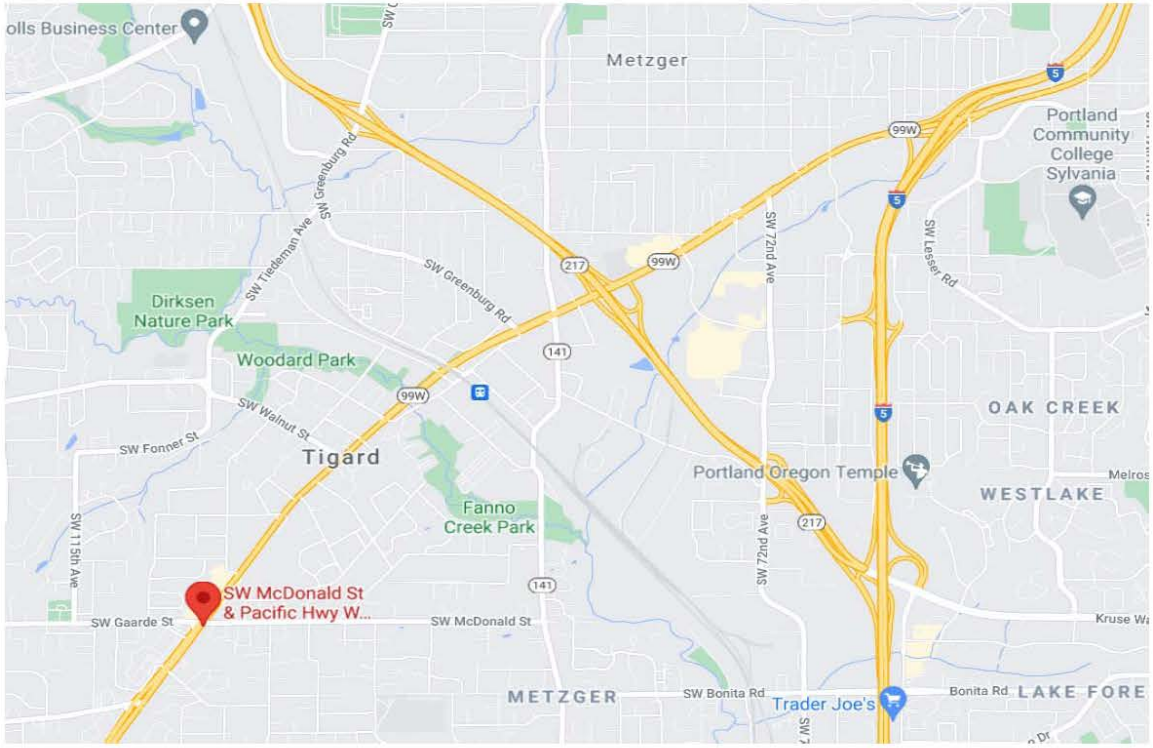
> RTP ID: 12095 - Safety & Operations Projects
> RTP Description: Projects to improve safety or operational efficiencies such as pedestrian crossings of arterial roads, railroad crossing repairs, slide and rock fall protections, illumination, signals and signal operations systems, that do not add motor vehicle capacity.
> Exemption status: Exempt project per 93 CFR 126, Table 2 - Safety - Projects that correct, improve, or eliminate a hazardous location or feature.
> UPWP amendment: No
> RTP Goals: Goal 5 - Safety and Security
> Goal Objective: 5.1 Transportation Safety
> Goal Description: Eliminate fatal and severe injury crashes for all modes of travel.

Fund Codes:

> NHPP = Federal National Highway Performance Program funds appropriated to ODOT and committed to eligible projects.
> AC-NHPP = Federal Advance Construction fund code placeholder with projection that the final federal fund type code will be NHPP
> HSIP = Federal Highway Safety Improvement Program funds appropriated to ODOT and then committed to eligible safety upgrade projects
> HB2017 = State allocated funds from HB2017 to various projects
> Bikeways = State funds dedicated to ped/bicycle upgrades
> State = General state funds provided by the lead agency as part of the required match to the federal funds.

Other

> On NHS: Yes
> Metro Model: Yes - Motor Vehicle Network
> Model category and type: Throughway


olls Business Center
Metzger
Portland Community College Sylvania
SW Greenburg Rd
SW Tiedeman Ave
SW Greenburg Rd
SW 72nd Ave
SW Lesser Rd
Dirksen Nature Park
Woodard Park
SW Walnut St
SW Fonner St
Tigard
Fanno Creek Park
Portland Oregon Temple
OAK CREEK
WESTLAKE
SW 115th Ave
SW McDonald St & Pacific Hwy W...
SW Gaarde St
SW McDonald St
SW 72nd Ave
Kruse Wa
METZGER
SW Bonita Rd
Trader Joe's
Bonita Rd
LAKE FORE
5
99W
217
141

Memo

Metro
600 NE Grand Ave.
Portland, OR 97232-2736

Date: November 18, 2021
To: Metro Council and Interested Parties
From: Ken Lobeck, Funding Programs Lead
Subject: November 2021 (FFY 2022) MTIP Formal Amendment & Resolution 21-5218 Approval Request

FORMAL AMENDMENT STAFF REPORT

FOR THE PURPOSE OF AMENDING THE 2021-26 METROPOLITAN IMPROVEMENT PROGRAM (MTIP) TO AMEND THREE PROJECTS IMPACTING GRESHAM AND ODOT ALLOWING FEDERAL APPROVALS AND PHASE OBLIGATIONS TO BE APPROVED (NV22-02-NOV1)

BACKROUND

What This Is:
The November 2021 Formal Metropolitan Transportation Improvement Program (MTIP) Formal/Full Amendment regular bundle which is contained in Resolution 21-5218 and being processed under MTIP Amendment NV22-02-NOV1. The bundle contains a total of 3 project amendments.

What is the requested action?
JPACT approved Resolution 21-5218 on November 18, 2021 and now is providing their approval recommendation to Metro Council to approve Resolution 21-5218 consisting of three projects which impacts the city of Gresham and ODOT allowing the required adjustments to occur to obtain their next federal approval step and/or phase obligation.

Proposed November 2021 (FFY 2022) Formal Amendment Bundle Amendment Type: Formal/Full Amendment #: NV22-02-NOV1 Total Number of Projects: 3					
ODOT Key #	**MTIP ID #**	**Lead Agency**	**Project Name**	**Project Description**	**Description of Changes**
Project #1 Key **19120**	70799	Gresham	SE 242nd/Hogan: NE Burnside - E. Powell (Gresham)	Operational improvements, signal upgrades, bicycle and pedestrian improvements	**COST INCREASE:** Additional local overmatching funds are committed to the construction phase to address the updated construction cost estimate

ODOT Key #	MTIP ID #	Lead Agency	Project Name	Project Description	Description of Changes
Project #2 Key **21616**	71170	ODOT	OR99W:N Schmeer Rd–SW Meinecke Pkwy & US30B: Kerby–165th	Upgrade signals, replace or modify signs and road markings, install lighting and bike lane conflict markings to improve safety on this section.	**SPLIT FUNDS:** Split $25koff the construction phase and commit to Key 20435.
Project #3 Key **20435**	70988	ODOT	OR99W: I-5 - McDonald St	~~Repave roadway; upgrade ADA ramps to current standards; improve access management; pedestrian improvements and address drainage as needed. Includes full signal upgrade at Johnson/Main.~~ **Repave roadway, sidewalk/bicycle gap fill-ins, construct ADA ramps and access management upgrades, provide drainage upgrades, add water quality facility, full signal upgrade at Johnson/Main, plus repair rutting and surface damage allowing safer travel**	**SCOPE CHANGE** Project limits are extended, a third site location is added to the project, additional scope work elements are included resulting in a cost increase of 10.49% for a revised total project cost of $26,585,468

AMENDMENT BUNDLE SUMMARY:

JPACT Meeting Summary:

JPACT approved Resolution 21-5218 on November 18, 2021. The three project regular amendment bundle in Resolution 21-5218 was passed without comment on the JPACT Consent agenda. There was no discussion.

TPAC Overview (11-5-2021):

TPAC members received an overview of the amendment bundle during their November 5, 2021 meeting. The amendment bundle of three projects contained the "regular" type of project changes they normally see as part of the MTIP Formal amendment process. Staff covered the summary changes to the three projects in the bundle. TPAC members had no discussion of the amendment bundle and provided a unanimous approval recommendation to JPACT.

The November 2021 (FFY 2022) Formal MTIP Amendment bundle initiates project programming adjustments needed for federal fiscal Year (FFY) 2022. The amendment bundle contains 3 projects.

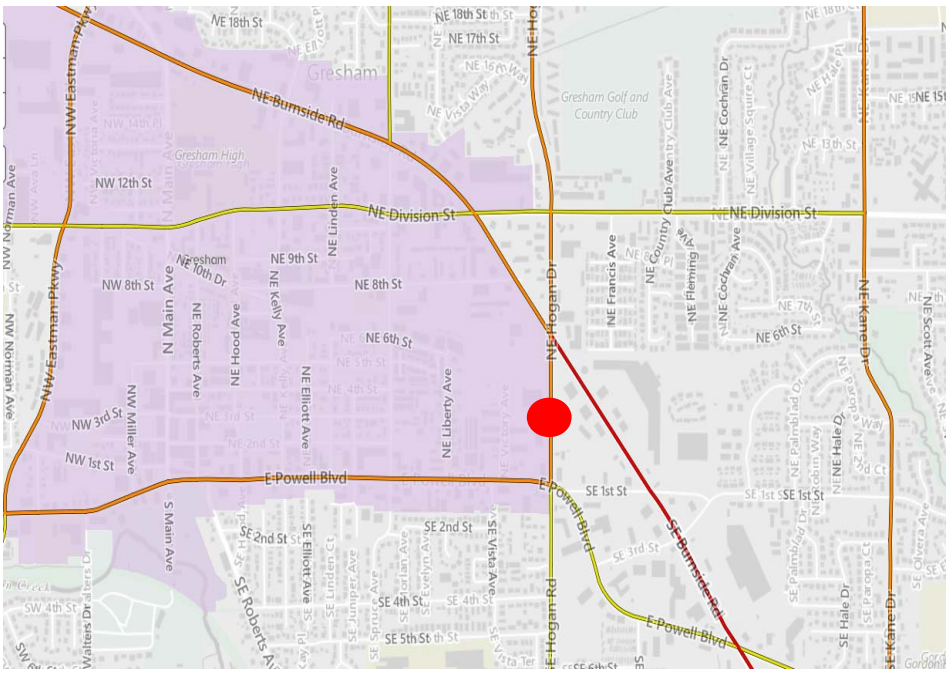
Below is a summary list of key acronyms used in the report:

- AC-STBG = "AC" = Federal Advance Construction programmatic fund type code used as placeholder. The "STBGS" tag represents the expected federal fund type code of State allocated Surface Transportation Block Grant funds that will become the final federal fund for the project.
- ADVCON = Generic Advance Construction fund type code where the future federal fund code is not yet known.
- AC-NHPP = Federal Advance Construction fund type code used with the expectation that the final federal fund code will be National Highway Performance Program funds.
- ADA = Americans with Disabilities Act

- Cons = Construction phase
- FFY = Federal Fiscal Year (e.g. October 1 through September 30)
- FHWA = Federal Highways Administration
- FMIS = FHWA's Financial Management Information System
- HSIP = Federal Highway Safety Improvement Program funds
- ITS = Intelligent Transportation System
- LAL = ODOT Local Agency Liaison staff member
- LPA = Locally Preferred Alternative
- MP = Mile Post limit markers on the State Highway system
- NHPP = Federal National Highway Performance Program funds appropriated to ODOT
- ODOT = Oregon Department of Transportation
- OTC = Oregon Transportation Commission
- PE = Preliminary Engineering
- ROW/RW = Right of Way phase

Project 1	**SE 242nd/Hogan: NE Burnside - E. Powell (Gresham)**		
Lead Agency:	**Gresham**		
ODOT Key Number:	**19120**	MTIP ID Number:	70
Projects Description:	Project Snapshot: • **<u>Quick Amendment Summary:</u> The amendment commits $1,832,000 of additional local overmatch funds to the construction phase. The increase is due to design and cost updates, plus additional requirements to complete the project. The cost increase equals a 43% increase to the project which triggered the formal amendment.** • <u>Metro UPWP Project:</u> No • <u>Proposed improvements:</u> Key 19120 will widen SE Hogan Road from NE Burnside St to E Powell Blvd to provide increased access for economic development and freight mobility. The project includes signals, bicycle and pedestrian improvements to provide safer and improved access for all road user. The widening does not provide add capacity through lanes. • <u>Source:</u> Existing project. • <u>Amendment Action:</u> Add $1,832,000 of extra local overmatch to the construction to address updated cost estimates • <u>Additional Amendment Evaluation Required:</u> No. The project does not add motor vehicle through lane capacity and is considered exempt for air quality and transportation modeling analysis. Additionally, the project cost does not exceed $100 million. • <u>Funding:</u> The funding for the project consists of federal Redistribution funds and Advance Construction funds. The final federal funds for the construction are estimated to be State STBG.		

	• FTA Conversion Code: Not applicable. No transit funds are involved. • Location, Limits and Mile Posts: o Location: In the city of Gresham on SE 242nd Ave/Hogan o Cross Street Limits: Burnside to Powell Blvd o Overall Mile Post Limits: N/A • Current Status Code: 5 = (RW) Right-of Way activities initiated including R/W acquisition and/or utilities relocation. • Air Conformity/Capacity Status: Key 19120 is a non-capacity enhancing project. It is exempt from air quality conformity analysis per 40 CFR 93.126, Table 2 – Safety, Projects that correct, improve, or eliminate a hazardous location or feature. • Regional Significance Status: The is regionally significant as it contains federal funds and is located on a defined Major Arterial in the Metro Motor Vehicle Modeling Network • Amendment ID and Approval Estimates: o STIP Amendment Number: 21-24-0993 o MTIP Amendment Number: NV22-02-NOV1 o OTC approval required: No. o Metro approval date: Tentatively scheduled for December 9, 2021.
What is changing?	**AMENDMENT ACTION: COST INCREASE** Key 19120 is a safety and operational improvement project on Hogan Dr. that will provide arterial widening, signal upgrades, bicycle and pedestrian improvements. The arterial widening does not add capacity through lanes. The amendment commits additional local funding overmatch to the construction phase to address a cost increase to the phase. The formal amendment increases the local overmatch funding from $1,407,683 to $3,229,683 (an addition of $1,883,000) in to the construction phase. The total project cost increases from $4,180,398 to $6,012,398 which represents a 43.82% increase to the project. The primary factors cited by Gresham for the cost increase include (1) the increase in construction cost are the level of complexity of several design elements including stormwater quality management, stormwater infrastructure replacement and (2) significant pavement degradation since 2015 when the project was introduced to the STIP. (3) Construction costs have been on the rise for the past 10 years with even higher escalations anticipated resulting from material demand, more costly materials production, increases in petroleum cost, labor shortages, and finally the COVID pandemic.

Additional Details:	Project Location Maps  
Why a Formal amendment is required?	The project cost increase at 43% exceeds the maximum administrative threshold of 20% for projects costing $1million or greater which triggers the need for a formal amendment
Total Programmed Amount:	The construction phase increases from $2,550,010 to $4,382,010. The total project cost increases from $4,180,392 to $6,012,398
Added Notes:	

Project 2	**OR99W:N Schmeer Rd– SW Meinecke Pkwy & US30B: Kerby–165th**		
Lead Agency:	**ODOT**		
ODOT Key Number:	**21616**	MTIP ID Number:	71170
Projects Description:	Project Snapshot: • **<u>Quick Amendment Summary:</u> The amendment splits $25,000 off the construction phase and commits it to Key 20435 (also part of this bundle)**		

- Metro UPWP Project: No

- Proposed improvements:
  Upgrade signals, replace or modify signs and road markings, install lighting and bike lane conflict markings to improve safety on this section.

- Source: Existing project.

- Amendment Action: Split $25k and commit it to key 20435.

- Additional Amendment Evaluation Required: No.
  The project does not add motor vehicle through lane capacity and is considered exempt for air quality and transportation modeling analysis. Additionally, the project cost does not exceed $100 million.

- Funding:
  The funding for the project consists of federal Highway Safety Improvement Program (HSIP) funds and state matching funds.

- FTA Conversion Code: Not applicable. No transit funds are involved.

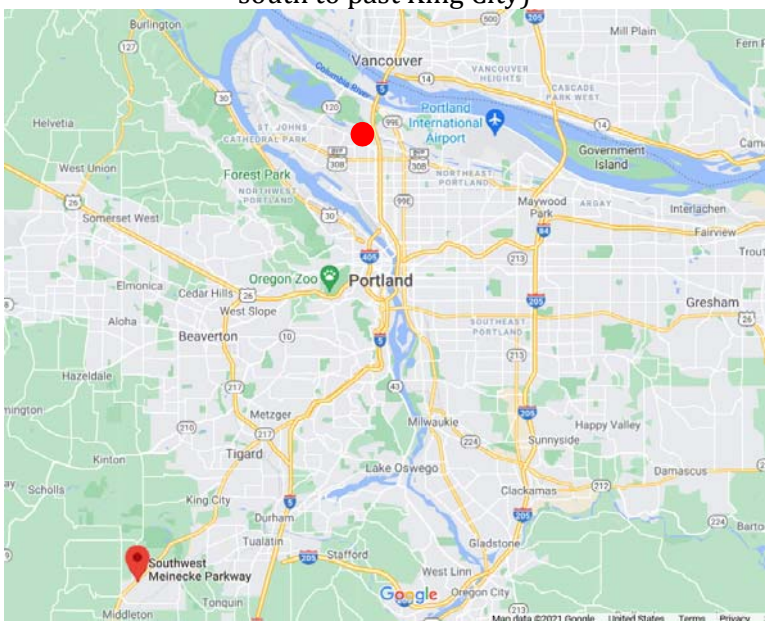
- Location, Limits and Mile Posts:
  - Location: On OR99E and US30BY
  - Cross Street Limits: Multiple
  - Overall Mile Post Limits:
    - OR99E = MP -5.71 to MP 15.95
    - US30BY = MP 5.60 to MP 14.70

- Current Status Code: 4 = (PS&E) Planning Specifications, & Estimates (final design 30%, 60%, 90% design activities initiated).

- Air Conformity/Capacity Status:
  Key 21616 is a non-capacity enhancing project. It is exempt from air quality conformity analysis per 40 CFR 93.126, Table 2 – Safety, Projects that correct, improve, or eliminate a hazardous location or feature.

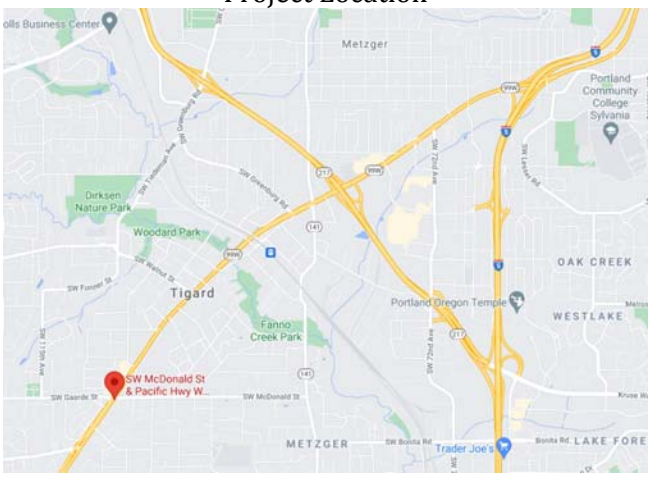
- Regional Significance Status: The project is regionally significant as it contains federal funds and is located on the Metro Motor Vehicle Modeling Network

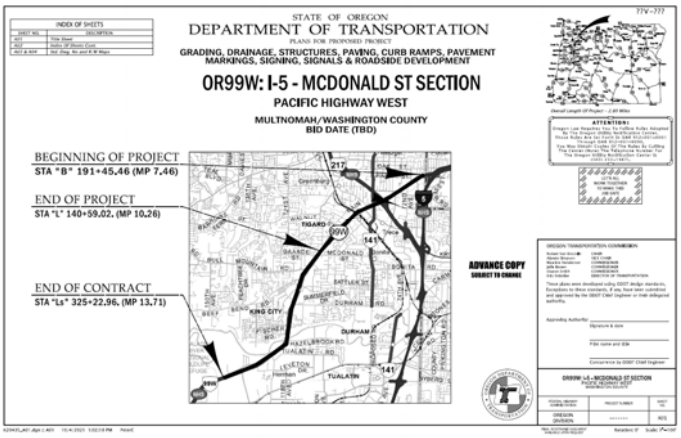
- Amendment ID and Approval Estimates:
  - STIP Amendment Number: 21-24-1535
  - MTIP Amendment Number: NV22-02-NOV1
  - OTC approval required: No.
  - Metro approval date: Tentatively scheduled for December 9, 2021.

What is changing?	**AMENDMENT ACTION: SPLIT FUNDS** The amendment splits off $25k from the construction phase and commits the funds to Key 20435 (next project) as the scope for Key 20435 is being adjusted.
Additional Details:	Project Location Map (Multiple site locations on OR99W and US30BY from northwest Portland south to past King City) 
Why a Formal amendment is required?	The project cost change is only 1%, but it is tied to the scope changes to Key 20435. Therefore, it is being processed as part of the formal change to Key 20435.
Total Programmed Amount:	The total project cost decreases from $2,495,798 to $2,470,797
Added Notes:	

Project 3	**OR99W: I-5 - McDonald St**		
Lead Agency:	**ODOT**		
ODOT Key Number:	**20435**	MTIP ID Number:	70988
Projects Description:	Project Snapshot: • **Quick Amendment Summary: The formal amendment completes required scope updates to three areas: (1) adds and expands scope activities, (2) extends project limits, and (3) increases the total project cost to address the revised project scope.** • Metro UPWP Project: No		

	• Proposed improvements: The revised overall project scope will now repave roadway, complete sidewalk/bicycle gap fill-ins, construct ADA ramps and access management upgrades, provide drainage upgrades, add water quality facility, include a full signal upgrade at Johnson/Main, plus repair rutting and surface damage allowing safer travel . • Source: Existing project • Amendment Action: Update the project sort and detailed descriptions based on the revised scope and update the project PE and construction phase costs. • Funding: The funding for the project consists of federal National Highway Performance Program (NHPP) funds, federal Highway Safety Improvement Program (HSIP) funds, federal Advance Construction funds, state HB2017 funds and state Bikeways funds along with required state matching funds • FTA Conversion Code: Not applicable. No transit funds are committed to the project. • Location, Limits and Mile Posts: o Location: ON OR 99W near King City o Cross Street Limits: N/A o Overall Mile Post Limits: Overall with the three site locations – MP 10.47 to MP 13.74 • Current Status Code: 5 = (ROW) Right-of Way activities initiated including R/W acquisition and/or utilities relocation. • Air Conformity/Capacity Status: The is exempt from air quality conformity analysis per 40 CFR 93.126, Table 2 – Safety - Projects that correct, improve, or eliminate a hazardous location or feature. • Regional Significance Status: Yes. • Amendment ID and Approval Estimates: o STIP Amendment Number: 21-24-1535 o MTIP Amendment Number: NV22-02-NOV1 o OTC approval required: No. o Metro approval date: Tentatively scheduled for December 9, 2021.
What is changing?	**AMENDMENT ACTION: SCOPE CHANGE** The required changes to ODOT's OR99W: I-5 - McDonald St project reflect more of a scope enhancement than an actual scope change. The project adjustments involve four areas: (1) adjustment in scope, (2)

	adding a third site location to the project, (3) extending the project limits, and (4) the resulting cost increase from the other changes. Overall, the project scope remains basically the same. The adjusted scope elements include added striping, signing, and tree cutting work is within the adjusted K20435 project limits. The project does continue as an overall safety improvement project Safety work type. The scope work now includes adding a water quality facility due to FAHP triggers. The third site location is on OR99W at MP 13.54 to MP 13.74. The updated description for the project is now the following: On OR99W from I-5 to McDonald St at three site locations (at MP 7.47 to MP 10.29 and MP 13.54 to MP 13.74) north of King City, repave roadway, fill in sidewalk and bike lane gaps, upgrade curb ramps to current standards, improve access management, and address drainage as needed. Includes full signal upgrade at Johnson/Main. The project will repair rutting and surface damage from vehicles and allow safer travel for motor vehicle operators, bicycle riders and pedestrians The scope adjustment triggers a cost increase of $2,525,000 to the project which equals a 10.49% change and primarily impacts the construction phase. Although the overall scope of work for the project basically remains the same, the complexity of all the changes together, cost increase + third site location + added scope element pushed the project outside of the Administrative modification threshold and triggered the formal amendment.
Additional Details:	Project Location 
Why a Formal amendment is required?	The multiple changes to the project including adding a third site location and scope elements pushed the project into the formal/full amendment category to complete the required changes
Total Programmed Amount:	The programmed increases from $24,060,468 to $26,585,468 which represent an increase of $2,525,000 or 10.49%.
Added Notes:	



Note: The Amendment Matrix located below is included as a reference for the rules and justifications governing Formal Amendments and Administrative Modifications to the MTIP that the MPOs and ODOT must follow.

METRO REQUIRED PROJECT AMENDMENT REVIEWS

In accordance with 23 CFR 450.316-328, Metro is responsible for reviewing and ensuring MTIP amendments comply with all federal programming requirements. Each project and their requested changes are evaluated against multiple MTIP programming review factors that originate from 23 CFR 450.316-328. The programming factors include:

- Verification as required to programmed in the MTIP:
  - Awarded federal funds and is considered a transportation project
  - Identified as a regionally significant project. Identified on and impacts Metro transportation modeling networks.
  - Requires any sort of federal approvals which the MTIP is involved.
- Passes fiscal constraint verification:
  - Project eligibility for the use of the funds
  - Proof and verification of funding commitment
  - Requires the MPO to establish a documented process proving MTIP programming does not exceed the allocated funding for each year of the four year MTIP and for all funds identified in the MTIP.
  - Passes the RTP consistency review: Identified in the

ODOT-FTA-FHWA Amendment Matrix
Type of Change
FULL AMENDMENTS
1. Adding or cancelling a federally funded, and regionally significant project to the STIP and state funded projects which will potentially be federalized
2. Major change in project scope. Major scope change includes: • Change in project termini - greater than .25 mile in any direction • Changes to the approved environmental footprint • Impacts to AQ conformity • Adding capacity per FHWA Standards • Adding or deleting worktype
3. Changes in Fiscal Constraint by the following criteria: • FHWA project cost increase/decrease: • Projects under $500K – increase/decrease over 50% • Projects $500K to $1M – increase/decrease over 30% • Projects $1M and over – increase/decrease over 20% • All FTA project changes – increase/decrease over 30%
4. Adding an emergency relief permanent repair project that involves substantial change in function and location.
ADMINISTRATIVE/TECHNICAL ADJUSTMENTS
1. Advancing or Slipping an approved project/phase within the current STIP (If slipping outside current STIP, see Full Amendments #2)
2. Adding or deleting any phase (except CN) of an approved project below Full Amendment #3
3. Combining two or more approved projects into one or splitting an approved project into two or more, or splitting part of an approved project to a new one.
4. Splitting a new project out of an approved program-specific pool of funds (but not reserves for future projects) or adding funds to an existing project from a bucket or reserve if the project was selected through a specific process (i.e. ARTS, Local Bridge...)
5. Minor technical corrections to make the printed STIP consistent with prior approvals, such as typos or missing data.
6. Changing name of project due to change in scope, combining or splitting of projects, or to better conform to naming convention. (For major change in scope, see Full Amendments #2)
7. Adding a temporary emergency repair and relief project that does not involve substantial change in function and location.

current approved constrained RTP either as a stand- alone project or in an approved project grouping bucket
    - RTP project cost consistent with requested programming amount in the MTIP
    - If a capacity enhancing project – is identified in the approved Metro modeling network
- Satisfies RTP goals and strategies consistency: Meets one or more goals or strategies identified in the current RTP.
- If not directly identified in the RTP's constrained project list, the project is verified to be part of the MPO's annual Unified Planning Work Program (UPWP) if federally funded and a regionally significant planning study that addresses RTP goals and strategies and/or will contribute or impact RTP performance measure targets.
- Determined the project is eligible to be added to the MTIP, or can be legally amended as required without violating provisions of 23 CFR450.300-338 either as a formal Amendment or administrative modification:
    - Does not violate supplemental directive guidance from FHWA/FTA's approved Amendment Matrix.
    - Adheres to conditions and limitation for completing technical corrections, administrative modifications, or formal amendments in the MTIP.
    - Is eligible for special programming exceptions periodically negotiated with USDOT.
    - Programming determined to be reasonable of phase obligation timing and is consistent with project delivery schedule timing.
- Reviewed and initially assessed for Performance Measurement impacts.
- MPO responsibilities completion:
    - Completion of the required 30 day Public Notification period:
    - Project monitoring, fund obligations, and expenditure of allocated funds in a timely fashion.
    - Acting on behalf of USDOT to provide the required forum and complete necessary discussions of proposed transportation improvements/strategies throughout the MPO.

APPROVAL STEPS AND TIMING

Metro's approval process for formal amendment includes multiple steps. The required approvals for the November 2021 Formal MTIP amendment (regular bundle) (NV22-02-NOV1) will include the following:

Action	Target Date
Initiate the required 30-day public notification process	November 2, 2021
TPAC notification and approval recommendation	November 5, 2021
JPACT approval and recommendation to Council	November 18, 2021
Completion of public notification process	December 1, 2021
Metro Council approval	**December 2, 2021**

Notes:

* The above dates are estimates. JPACT and Council could change

** If any notable comments are received during the public comment period requiring follow-on discussions, they will be addressed by JPACT.

USDOT Approval Steps (The below time line is an estimation only):

Action	Target Date
Final amendment package submission to ODOT & USDOT	December 17, 2021
USDOT clarification and final amendment approval	Early to mid-January, 2022

ANALYSIS/INFORMATION

1. **Known Opposition:** None known at this time.
2. **Legal Antecedents:**
    a. Amends the 2021-24 Metropolitan Transportation Improvement Program adopted by Metro Council Resolution 20-5110 on July 23, 2020 (FOR THE PURPOSE OF ADOPTING THE 2021-2024 METROPOLITAN TRANSPORTATION IMPROVEMENT PROGRAM FOR THE PORTLAND METROPOLITAN AREA).
    b. Oregon Governor approval of the 2021-24 MTIP: July 23, 2020
    c. 2021-2024 Statewide Transportation Improvement Program (STIP) Approval and 2021 Federal Planning Finding: September 30, 2020
3. **Anticipated Effects:** Enables the projects to obligate and expend awarded federal funds, or obtain the next required federal approval step as part of the federal transportation delivery process.
4. **Metro Budget Impacts:** None to Metro

RECOMMENDED ACTION:

JPACT approved Resolution 21-5218 on November 18, 2021 and now is providing their approval recommendation to Metro Council to approve Resolution 21-5218 consisting of three projects which impacts the city of Gresham and ODOT allowing the required adjustments to occur to obtain their next federal approval step and/or phase obligation.

- JPACT Approval; November 18, 2021
- TPAC Approval: November 5, 2021

No Attachments

Agenda Item No. 3.2

Resolution No. 21-5219, For the Purpose of Amending the 2021-26 Metropolitan Transportation Improvement Program (MTIP) to Add Portland's 82nd Ave Safety Upgrade Project Funded with $80 Million from the American Rescue Plan Act of 2021 (NV22-04-NOV3)

Consent Agenda

Metro Council Meeting
Thursday, January 6, 2022

BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF AMENDING THE 2021-26 METROPOLITAN TRANSPORTATION IMPROVEMENT PROGRAM (MTIP) TO ADD PORTLAND'S 82ND AVE SAFETY UPGRADE PROJECT FUNDED WITH $80 MILLION FROM THE AMERICAN RESCUE PLAN ACT OF 2021 (NV22-04-NOV3)	)))))))	RESOLUTION NO. 21-5219 Introduced by: Chief Operating Officer Marissa Madrigal in concurrence with Council President Lynn Peterson

WHEREAS, the Metropolitan Transportation Improvement Program (MTIP) prioritizes projects from the Regional Transportation Plan (RTP) to receive transportation related funding; and

WHEREAS, the Joint Policy Advisory Committee on Transportation (JPACT) and the Metro Council approved the 2021-24 MTIP via Resolution 20-5110 on July 23, 2020; and

WHEREAS, JPACT and the Metro Council must approve any subsequent amendments to add new projects or substantially modify existing projects in the MTIP; and

WHEREAS, the U.S. Department of Transportation (USDOT) has issued clarified MTIP amendment submission rules and definitions for MTIP formal amendments and administrative modifications that both ODOT and all Oregon MPOs must adhere to which includes that all new projects added to the MTIP must complete the formal amendment process; and

WHEREAS, on March 11, 2021, the American Rescue Plan Act was signed into law, and established the Coronavirus State Fiscal Recovery Fund and Coronavirus Local Fiscal Recovery Funds, which together make up the Coronavirus State and Local Fiscal Recovery Funds ("SLFRF") program; and

WHEREAS, this program is intended to provide support to State, territorial, local, and Tribal governments in responding to the economic and public health impacts of COVID-19 and in their efforts to contain impacts on their communities, residents, and businesses; and

WHEREAS, the Oregon Department of Administrative Services (DAS) received a portion of the ARPA Oregon apportionment of which $80 million has been approved for Portland's 82nd Ave Safety Upgrade project; and

WHEREAS, the Oregon Department of Transportation (ODOT) will act as oversight manager for the timely and proper use, obligation and expenditure of the ARPA funds approved for the 82nd Ave Safety Upgrade project; and

WHEREAS, the unique structure of the ARPA program and appropriation to DAS results in the 82nd Ave funds being considered "local" funds and not federal; and

WHEREAS, the 82nd Ave Safety Upgrade project is considered regionally significant, and MTIP programming is occurring for informational purposes; and

WHEREAS, a review of the proposed project has been completed against the current approved Regional Transportation Plan (RTP) for consistency with the goals and strategies identified in the RTP; and

WHEREAS, RTP consistency check areas included financial/fiscal constraint verification, and eligibility and proper use of committed funds, which review confirmed that the MTIP's financial constraint finding is maintained a result of the November #3, Portland 82nd Ave Safety Upgrade MTIP Formal Amendment; and

WHEREAS, the 82nd Ave Safety Upgrade Project total project cost at $80 million is under the $100 million threshold, and includes only non-capacity scope improvements which are exempt from air transportation demand and air quality conformity modeling analysis negating the need to complete and include a special amendment performance evaluation beyond the regular MTIP consistency checks completed for formal/full amendments; and

WHEREAS, Metro's Transportation Policy and Alternatives Committee (TPAC) received their notification plus amendment summary overview, and recommended approval to Metro's Joint Policy Advisory Committee on Transportation (JPACT) on November 5, 2021; and

WHEREAS, JPACT approved Resolution 21-5219 consisting of the November #3 2021 Formal MTIP Amendment on November 18, 2021 and provided their approval recommendation to Metro Council; now therefore

BE IT RESOLVED that the Metro Council hereby adopts the recommendation of JPACT on December 2, 2021 through Resolution 21-5219 to formally amend the 2021-26 MTIP to include Portland's 82nd Ave Safety Upgrade ARPA funded project.

ADOPTED by the Metro Council this ____ day of _____ 2021.

_____
Lynn Peterson, Council President

Approved as to Form:

_____
Carrie MacLaren, Metro Attorney

Proposed November #3 2021 (FFY 2022) Formal Transition Amendment Bundle
Amendment Type: **Formal/Full**
Amendment #: **NV22-04-NOV3**
Total Number of Projects: 1

Key Number & MTIP ID	Lead Agency	Project Name	Project Description	Amendment Action
Project #1 Key **TBD** **NEW PROJECT**	Portland	**82nd Ave: NE Killingsworth St - SE Clatsop St (Portland)**	Complete safety upgrades including enhance crossings, lighting, intersection left-turn pocket lanes and signal TSMO upgrades, sidewalk improvements, ADA compliance upgrades, and pavement rehabilitation for motorist and pedestrian/cyclist increased safety	**ADD NEW PROJECT** The formal amendment adds Portland's 82nd Ave Safety Upgrade project funded from the American Rescue Plan Act of 2021 to the 2021-26 MTIP

Metro

Metro
20121-24 Metropolitan Transportation Improvement Program (MTIP)
PROJECT AMENDMENT DETAIL WORKSHEET

Formal Amendment
ADD NEW PROJECT
Add Portland's new ARPA funded Safety project for 82nd Ave

Lead Agency: Portland		Project Type:	Safety	**ODOT Key:**	**NEW TBD**
Project Name:		ODOT Work Type	Safety	**MTIP ID:**	**NEW TBD**
82nd Ave: NE Killingsworth St - SE Clatsop St (Portland)	**1**	Performance Meas:	Yes	**Status:**	**2**
		Capacity Enhancing:	No	**Comp Date:**	**9/30/2026**
Project Status: 2 = Pre-design/project development activities (pre-NEPA) (ITS = ConOps.)		Conformity Exempt:	Yes	RTP ID:	11844
		On State Hwy Sys:	No	RFFA ID:	N/A
Short Description: Complete safety upgrades including enhance crossings, lighting, intersection left-turn pocket timing and signal TSMO upgrades, sidewalk improvements, ADA compliance upgrades, and pavement rehabilitation for motorist and pedestrian/cyclist increased safety		Mile Post Begin:	N/A	RFFA Cycle:	N/A
		Mile Post End:	N/A	UPWP:	No
		Length:	N/A	UPWP Cycle:	No
		Flex Transfer to FTA	No	Transfer Code	N/A
		1st Year Program'd:	2022	Past Amend:	0
		Years Active:	0	OTC Approval:	Yes
		STIP Amend # TBD		MTIP Amnd:NV22-04-NOV3	

Detailed Description: In northeast to southeast Portland on 82nd Ave from NE Killingsworth St south to SE Clatsop St, complete safety upgrades to include enhance crossings, lighting, intersection left-turn pocket timing and signal TSMO upgrades, sidewalk improvements, ADA compliance upgrades, and pavement rehabilitation for motorist and pedestrian/cyclist increased safety (ARPA 2021 allocation and considered local funds, non federal delivery)

STIP Description: TBD

Last Amendment of Modification: None - Initial programming action

PROJECT FUNDING DETAILS								
Fund Type	Fund Code	Year	Planning	Preliminary Engineering	Right of Way	Construction	Other	**Total**
Federal Funds								
								$ -
								$ -
								$ -
							Federal Totals:	**$ -**
Federal Fund Obligations $:								Federal Aid ID
EA Number:								
Initial Obligation Date:								
EA End Date:								
Known Expenditures:								
State Funds								
								$ -
								$ -
							State Total:	**$ -**
Local Funds								
Other	**OTH0**	**2022**					**$ 80,000,000**	**$ 80,000,000**
								$ -
Other = ARPA 2021 allocated funds to DAS and then to Portland							**Local Total**	**$ 80,000,000**
Phase Totals Before Amend:			$ -	$ -	$ -	$ -	$ -	$ -
Phase Totals After Amend:			$ -	$ -	$ -	$ -	**$ 80,000,000**	**$ 80,000,000**
							Year Of Expenditure (YOE):	$ 80,000,000
Phase Change			$ -	$ -	$ -	$ -	$ 80,000,000	$ 80,000,000
Percent			0.00%	0.00%	0.00%	0.00%	100.00%	100.00%

Notes and Summary of Changes:

> Red font = prior amended funding or project details. Blue font = amended changes to funding or project details. Black font indicates no change has occurred.

> The amendment adds the allocated ARPA of Portland which were allocated to DAS with ODOT acting as oversight manager. Since the allocation was to DAS, the funds are considered "Local" and not federal.

> Support Materials: 82nd Ave Exhibit, project allocation overview, and meetings between Salem, Portland, and Metro

Amendment Summary:

The formal amendment adds $80 million of American Rescue Plan Act of 2021 funding for Portland to complete various safety improvements on 82nd Ave. The ARPA funds were allocated to the Oregon Department of Administrative Services (DAS) and approved for Portland's 82nd Ave Safety Upgrade project. ODOT will act as oversight manager to ensure the project is properly delivered. Because of the ARPA funds appropriation format to the Oregon DAS, they now are considered local funds. The funds will not obligate through FHWA's FMIS system or complete the regular federal transportation delivery process. As a result, the funds are being programmed as local "Other" funds.

Since the regular federal approval steps will not apply to this project, programming in the MTIP is for information purposes only. With a total project cost of $80 million dollars, the project is considered regionally significant. Final allocation of the funds will require OTC approval. The OTC is expected to address the item during their December 2021 meeting. Programming in the MTIP is occurring contingent on OTC approval in December which is expected to occur without issue.

> Will Performance Measurements Apply: Yes, Safety

RTP References:

> RTP ID: 11844 - 82nd Ave Corridor Safety Improvements: Local Contribution to State-owned Arterial

> RTP Description: 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.

> Exemption status: Exempt project per 93 CFR 126, Table 2 - Safety - Projects that correct, improve, or eliminate a hazardous location or feature.

> UPWP amendment: No

> RTP Goals: Goal 5 - Safety and Security

> Goal Objective: 5.1 Transportation Safety

> Goal Description: Eliminate fatal and severe injury crashes for all modes of travel.

Fund Codes:

> Other = Normally additional local funds committed to the project above the minimum required federal match. In this specific case, the Other funds are considered local, but trace their origin back to the federal ARPA Act of 2021..

Other

> On NHS: Yes. 82nd Ave is designated as a MAP-21 NHS Principal Arterial on the NHS.

> Metro Model. Yes to the following Metro networks: Motor Vehicle, Transit, and Pedestrian

> Model category and type: Major Arterial in the Motor Vehicle Network, Frequent Bus route in the Transit Network, and Pedestrian Parkway in the Pedestrian Network

> TCM project: No

> Located on the CMP: Yes

FIGURE 2. 82ND AVENUE
PROPOSED $80M INITIAL SAFETY INVESTMENT

PBOT and ODOT will take near-term action to invest in urgent safety improvements.

- 1. Potential crossing location
- 2. Add lighting where missing
- 2 & 3. Corridor-wide improved lighting and systemic safety
- 3. Identified intersection safety upgrades

	DELIVERY TIMEFRAME	BUDGET
1. Additional new or enhanced crossings (6 to 10) Locations to be determined, drawing on unfunded locations identified in PBOT's 82nd Avenue Plan.	1-2 years	$10-12M
2. Lighting for safety throughout the corridor Fill in lighting where it is missing on one side, add pedestrian lighting at crossings and intersections, and upgrade existing lighting to meet standards.	1-2 years	$10-12M
3. Intersection safety enhancements Systemic safety and intelligent transportation system investments, including treatments such as leading pedestrian intervals, protected left turn phasing, high visibility crossings, etc.	1-4 years	$8-10M
4. Cross Section Planning and Project Development PBOT-led project development and implementation planning to develop envisioned cross section and transit investment approach.	0-4 years	$2-3M
5. Sidewalk improvements, ADA, signals, and pavement investments Depending on the outcome of the cross section planning, invest in pavement, sidewalks, ADA ramps, signals, and safety upgrades on a portion of 82nd Ave.	2-4 years	$43-50M
TOTAL		$80M

Memo

Metro
600 NE Grand Ave.
Portland, OR 97232-2736

Date: November 18, 2021
To: Metro Council and Interested Parties
From: Ken Lobeck, Funding Programs Lead
Subject: November 2021 (FFY 2022) MTIP Formal Amendment & Resolution 21-5219 Approval Request for Portland's 82nd Ave Safety Upgrade Improvement Project

FORMAL AMENDMENT STAFF REPORT

FOR THE PURPOSE OF AMENDING THE 2021-26 METROPOLITAN TRANSPORTATION IMPROVEMENT PROGRAM (MTIP) TO ADD PORTLAND'S 82ND AVE SAFETY UPGRADE PROJECT FUNDED WITH $80 MILLION FROM THE AMERICAN RESCUE PLAN ACT OF 2021 (NV22-04-NOV3)

BACKROUND

What This Is:
The November #3 2021 Formal Metropolitan Transportation Improvement Program (MTIP) Formal/Full Amendment bundle #3 is contained in Resolution 21-5219 and being processed under MTIP Amendment NV22-04-NOV3. The amendment contains the new Portland 82nd Ave Safety Upgrade project.

What is the requested action?
JPACT approved Resolution 21-5219 on November 18, 2021 and is providing their approval recommendation to Metro Council for Resolution 21-5219 consisting of the 82nd Ave Safety Upgrade project impacting the city of Portland which requires to be added to the MTIP.

Proposed November 2021 (FFY 2022) Formal Amendment Bundle #3 Amendment Type: Formal/Full Amendment #: NV22-04-NOV3 Total Number of Projects: 1					
ODOT Key #	**MTIP ID #**	**Lead Agency**	**Project Name**	**Project Description**	**Description of Changes**
Project #1 Key **New**	TBD	Portland	**82nd Ave: NE Killingsworth St - SE Clatsop St (Portland)**	Complete safety upgrades including enhance crossings, lighting, intersection left-turn pocket lanes and signal TSMO upgrades, sidewalk improvements, ADA compliance upgrades, and pavement rehabilitation for motorist and pedestrian/cyclist increased safety	**ADD NEW PROJECT** The formal amendment adds Portland's 82nd Ave Safety Upgrade project funded from the American Rescue Plan Act of 2021 to the 2021-26 MTIP

JPACT Meeting Summary:

JPACT approved Resolution 21-5219 on November 18, 2021. The item was included on the Consent calendar. There was no discussion of the item.

TPAC Meeting Summary (11/5/2021):

TPAC members received an overview of Portland's 82nd Ave Safety Upgrade project originally funded from the ARPA and approved by the Oregon Legislature during their November 5, 2021 meeting. Staff provided the overview of the unique nature of the project that the funding creates. Since the original funding was allocated to the Oregon Department of Administrative Services (DAS) and then was awarded to Portland, the funds are now considered local and will not follow the regular transportation federal delivery process. TPAC members had no discussion of the amendment and provided a unanimous approval recommendation to JPACT.

One change has been made to the Resolution 21-5219 from what was submitted to For added clarification, the following statement was added to the resolution to note that a special amendment performance evaluation assessment was not required to be completed as part of the amendment submission and approval process:

"WHEREAS, the 82nd Ave Safety Upgrade Project total project cost at $80 million is under the $100 million threshold, and includes only non-capacity scope improvements which are exempt from air transportation demand and air quality conformity modeling analysis negates the need to complete and include a special amendment performance evaluation beyond the regular MTIP consistency checks completed for formal/full amendments;"

The Staff Report already contains this acknowledgment that a special amendment performance evaluation was not required as part of this amendment submission.

AMENDMENT BUNDLE SUMMARY:

The November 2021 #3 (FFY 2022) Formal MTIP Amendment bundle #3 adds a new regionally significant project to the MTIP for federal fiscal Year (FFY) 2022. The amendment bundle contains Portland's 82nd Ave Safety Upgrade project.

Below is a summary list of key acronyms used in the report:
ADA = Americans with Disabilities Act
Cons = Construction phase
DAS = Oregon Department of Administrative Services
FFY = Federal Fiscal Year (e.g. October 1 through September 30)
FHWA = Federal Highways Administration
FMIS = FHWA's Financial Management Information System
ITS = Intelligent Transportation System
MP = Mile Post limit markers on the State Highway system
ODOT = Oregon Department of Transportation
OTC = Oregon Transportation Commission
PE = Preliminary Engineering phase
ROW/RW = Right of Way phase
TSMO = Transportation System Management and Operations

The next pages contain summary elements of the MTIP amendment to add Portland's new 82nd Ave Safety Upgrade project.

Project 1	**82nd Ave: NE Killingsworth St - SE Clatsop St (Portland)**		
Lead Agency:	**Portland**		
ODOT Key Number:	**NEW - TBD**	MTIP ID Number:	TBD
Projects Description:	Project Snapshot: **<u>Quick Amendment Summary:</u> The amendment adds Portland's new 82nd Ave Safety Upgrade project with $80 million of American Rescue Plan Act (ARPA) for informational purposes to the MTIP.** <u>Metro UPWP Project</u>: No <u>Proposed improvements:</u> The project will complete safety upgrades including enhance crossings, lighting, intersection left-turn pocket lanes and signal TSMO upgrades, sidewalk improvements, ADA compliance upgrades, and pavement rehabilitation for motorist and pedestrian/cyclist increased safety <u>Source:</u> New project. <u>Amendment Action:</u> Add the new project funded from the ARPA to the MTIP for informational purposes. <u>Additional Amendment Evaluation Required:</u> No. The project does not add motor vehicle through lane capacity and is considered exempt for air quality and transportation modeling analysis. Additionally, the project cost does not exceed $100 million. <u>Funding:</u> The origin of the $80 million is from the ARPA. The ARPA funds were appropriated to the State of Oregon to the Department of Administrative Services (DAS). $80 million of these funds has been approved for the Portland 82nd Ave Safety Upgrade project. Once the funds were appropriated to DAS, they were considered local funds and are being programmed this way. <u>FTA Conversion Code:</u> Not applicable. No transit funds are involved. <u>Location, Limits and Mile Posts:</u> Location: In the city of Portland on 82nd Ave. Cross Street Limits: NE Killingsworth St south to SE Clatsop St Overall Mile Post Limits: N/A <u>Current Status Code:</u> 2 = Pre-design/project development activities (pre-NEPA) (ITS = ConOps.). <u>Air Conformity/Capacity Status:</u> The project is a non-capacity enhancing project. It is exempt from air quality conformity analysis per 40 CFR 93.126, Table 2 – Safety, Projects that correct, improve, or eliminate a hazardous location or feature.		

	Regional Significance Status: The project is regionally significant as it is located on a defined Major Arterial in the Metro Motor Vehicle Modeling Network and provides safety improvements which support a key RTP improvement goal. Amendment ID and Approval Estimates: STIP Amendment Number: TBD MTIP Amendment Number: NV22-04-NOV3 OTC approval required: Yes. OTC action is schedule for their December 2021 meeting. Metro approval date: Tentatively scheduled for December 2, 2021.
What is changing?	**AMENDMENT ACTION: ADD NEW PROJECT** The formal amendment adds $80 million of American Rescue Plan Act of 2021 funding for Portland to complete various safety improvements on 82nd Ave. The ARPA funds were appropriated to the Oregon Department of Administrative Services (DAS) and approved for Portland's 82nd Ave Safety Upgrade project. ODOT will act as oversight manager to ensure the project is properly delivered. Because of the ARPA funds appropriation format to the Oregon DAS, they now are considered local funds. The funds will not obligate through FHWA's Financial Management Information System (FMIS), or complete the regular federal transportation delivery process. As a result, the funds are being programmed as local "Other" funds and be delivered under the logic of a locally funded project. Since the regular federal approval steps will not apply to this project, programming in the MTIP is for information purposes only. With a total project cost of $80 million dollars, the project is considered regionally significant. Final allocation of the funds will require OTC approval. The OTC is expected to address the item during their December 2021 meeting. Programming in the MTIP is occurring contingent on OTC approval in December which is expected to occur without issue. Proposed 82nd Ave safety improvements include: • Additional new or enhanced crossings (6-10) • Safety lighting improvements through the corridor • Intersection safety enhancements such as: o Transportation System Management and Operations (TSMO) signal improvements o High visibility pedestrian crossings o Protected left-turn lane signal phasing improvements

<table>
<tr><td>Additional Details:</td><td>Project Location Map and Improvement

FIGURE 2. 82ND AVENUE
PROPOSED $80M INITIAL SAFETY INVESTMENT

PBOT and ODOT will take near-term action to invest in urgent safety improvements.

1. Potential crossing location
2. Add lighting where missing
2 & 3. Corridor-wide improved lighting and systemic safety
3. Identified intersection safety upgrades

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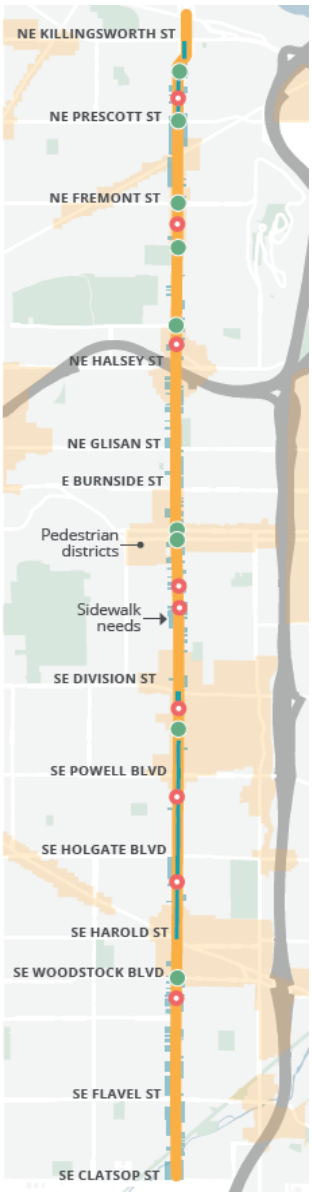
<tr><th></th><th>DELIVERY TIMEFRAME</th><th>BUDGET</th></tr>
<tr><td>1. Additional new or enhanced crossings (6 to 10)
Locations to be determined, drawing on unfunded locations identified in PBOT's 82nd Avenue Plan.</td><td>1-2 years</td><td>$10-12M</td></tr>
<tr><td>2. Lighting for safety throughout the corridor
Fill in lighting where it is missing on one side, add pedestrian lighting at crossings and intersections, and upgrade existing lighting to meet standards.</td><td>1-2 years</td><td>$10-12M</td></tr>
<tr><td>3. Intersection safety enhancements
Systemic safety and intelligent transportation system investments, including treatments such as leading pedestrian intervals, protected left turn phasing, high visibility crossings, etc.</td><td>1-4 years</td><td>$8-10M</td></tr>
<tr><td>4. Cross Section Planning and Project Development
PBOT-led project development and implementation planning to develop envisioned cross section and transit investment approach.</td><td>0-4 years</td><td>$2-3M</td></tr>
<tr><td>5. Sidewalk improvements, ADA, signals, and pavement investments
Depending on the outcome of the cross section planning, invest in pavement, sidewalks, ADA ramps, signals, and safety upgrades on a portion of 82nd Ave.</td><td>2-4 years</td><td>$43-50M</td></tr>
<tr><td>TOTAL</td><td></td><td>$80M</td></tr>
</table>

 
</td></tr>
<tr><td>Why a Formal amendment is required?</td><td>Per the ODOT/FWHA/FTA/MPO Amendment Matrix, adding a new project to the MTIP requires a formal/full amendment.</td></tr>
<tr><td>Total Programmed Amount:</td><td>The project is being programmed under the logic of a project grouping bucket with all $80 million in the MTIP's Other phase.</td></tr>
<tr><td>Added Notes:</td><td>MTIP programming is for informational purposes and not to comply with standard federal transportation project delivery requirements</td></tr>
</table>

Note: The Amendment Matrix located on the next page is included as a reference for the rules and justification governing Formal Amendments and Administrative Modifications to the MTIP that the MPOs and ODOT must follow.

METRO REQUIRED PROJECT AMENDMENT REVIEWS

In accordance with 23 CFR 450.316-328, Metro is responsible for reviewing and ensuring MTIP amendments comply with all federal programming requirements. Each project and their requested changes are evaluated against multiple MTIP programming review factors that originate from 23 CFR 450.316-328. The programming factors include:

- Verification as required to programmed in the MTIP:
  - Awarded federal funds and is considered a transportation project
  - Identified as a regionally significant project. Identified on and impacts Metro transportation modeling networks.
  - Requires any sort of federal approvals which the MTIP is involved.

ODOT-FTA-FHWA Amendment Matrix
Type of Change
FULL AMENDMENTS
1. Adding or cancelling a federally funded, and regionally significant project to the STIP and state funded projects which will potentially be federalized
2. Major change in project scope. Major scope change includes: • Change in project termini - greater than .25 mile in any direction • Changes to the approved environmental footprint • Impacts to AQ conformity • Adding capacity per FHWA Standards • Adding or deleting worktype

3. Changes in Fiscal Constraint by the following criteria:
• FHWA project cost increase/decrease:
  • Projects under $500K – increase/decrease over 50%
  • Projects $500K to $1M – increase/decrease over 30%
  • Projects $1M and over – increase/decrease over 20%
• All FTA project changes – increase/decrease over 30%

4. Adding an emergency relief permanent repair project that involves substantial change in function and location.
ADMINISTRATIVE/TECHNICAL ADJUSTMENTS
1. Advancing or Slipping an approved project/phase within the current STIP (If slipping outside current STIP, see Full Amendments #2)
2. Adding or deleting any phase (except CN) of an approved project below Full Amendment #3
3. Combining two or more approved projects into one or splitting an approved project into two or more, or splitting part of an approved project to a new one.
4. Splitting a new project out of an approved program-specific pool of funds (but not reserves for future projects) or adding funds to an existing project from a bucket or reserve if the project was selected through a specific process (i.e. ARTS, Local Bridge...)
5. Minor technical corrections to make the printed STIP consistent with prior approvals, such as typos or missing data.
6. Changing name of project due to change in scope, combining or splitting of projects, or to better conform to naming convention. (For major change in scope, see Full Amendments #2)
7. Adding a temporary emergency repair and relief project that does not involve substantial change in function and location.

- Passes fiscal constraint verification:
  - Project eligibility for the use of the funds
  - Proof and verification of funding commitment
  - Requires the MPO to establish a documented process proving MTIP programming does not exceed the allocated funding for each year of the four year MTIP and for all funds identified in the MTIP.
  - Passes the RTP consistency review: Identified in the current approved constrained RTP either as a stand- alone project or in an approved project grouping bucket
  - RTP project cost consistent with requested programming amount in the MTIP
  - If a capacity enhancing project – is identified in the approved Metro modeling network

- Satisfies RTP goals and strategies consistency: Meets one or more goals or strategies identified in the current RTP.

- If not directly identified in the RTP's constrained project list, the project is verified to be part of the MPO's annual Unified Planning Work Program (UPWP) if federally funded and a regionally significant planning study that addresses RTP goals and strategies and/or will contribute or impact RTP performance measure targets.

- Determined the project is eligible to be added to the MTIP, or can be legally amended as required without violating provisions of 23 CFR450.300-338 either as a formal Amendment or administrative modification:

- Does not violate supplemental directive guidance from FHWA/FTA's approved Amendment Matrix.
- Adheres to conditions and limitation for completing technical corrections, administrative modifications, or formal amendments in the MTIP.
- Is eligible for special programming exceptions periodically negotiated with USDOT.
- Programming determined to be reasonable of phase obligation timing and is consistent with project delivery schedule timing.

- Reviewed and initially assessed for Performance Measurement impacts.

- MPO responsibilities completion:
  - Completion of the required 30 day Public Notification period:
  - Project monitoring, fund obligations, and expenditure of allocated funds in a timely fashion.
  - Acting on behalf of USDOT to provide the required forum and complete necessary discussions of proposed transportation improvements/strategies throughout the MPO.

APPROVAL STEPS AND TIMING

Metro's approval process for formal amendment includes multiple steps. The required approvals for the November 2021 Formal MTIP amendment (82nd Ave Safety Upgrade project) (NV22-04-NOV3) will include the following:

Action	Target Date
• Initiate the required 30-day public notification process	November 2, 2021
• TPAC notification and approval recommendation	November 5, 2021
• JPACT approval and recommendation to Council	November 18, 2021
• Completion of public notification process	December 1, 2021
• **Metro Council approval**	**December 2, 2021**

Notes:

* The above dates are estimates. JPACT and Council could change

** If any notable comments are received during the public comment period requiring follow-on discussions, they will be addressed by JPACT.

USDOT Approval Steps (The below time line is an estimation only):

Action	Target Date
• Final amendment package submission to ODOT & USDOT	December 17, 2021
• USDOT clarification and final amendment approval	Early to mid-January, 2022

ANALYSIS/INFORMATION

1. **Known Opposition:** None known at this time.
2. **Legal Antecedents:**
   a. Amends the 2021-24 Metropolitan Transportation Improvement Program adopted by Metro Council Resolution 20-5110 on July 23, 2020 (FOR THE PURPOSE OF ADOPTING THE 2021-2024 METROPOLITAN TRANSPORTATION IMPROVEMENT PROGRAM FOR THE PORTLAND METROPOLITAN AREA).
   b. Oregon Governor approval of the 2021-24 MTIP: July 23, 2020
   c. 2021-2024 Statewide Transportation Improvement Program (STIP) Approval and 2021 Federal Planning Finding: September 30, 2020

3. **Anticipated Effects:** Enables the projects to obligate and expend awarded federal funds, or obtain the next required federal approval step as part of the federal transportation delivery process.
4. **Metro Budget Impacts:** None to Metro

RECOMMENDED ACTION:

JPACT approved Resolution 21-5219 on November 18, 2021 and is providing their approval recommendation to Metro Council for Resolution 21-5219 consisting of the 82nd Ave Safety Upgrade project impacting the city of Portland which requires to be added to the MTIP.

- TPAC Approval Date: November 5, 2018
- JPACT Approval Date: November 18, 2021

No Attachments

Agenda Item No. 3.3

Resolution No. 22-5235, For the Purpose of Organizing the Metro Council and Confirming Committee Members

Consent Agenda

Metro Council Meeting
Thursday, January 6, 2022

BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF ORGANIZING THE METRO COUNCIL AND CONFIRMING THE DEPUTY PRESIDENT	)))	RESOLUTION NO. 22-5235 Introduced by Council President Lynn Peterson

WHEREAS, the Metro Charter, Chapter IV Section 16 (5) directs the Metro Council to adopt an annual organizing resolution for the orderly conduct of Council business; and

WHEREAS, Chapter 2.01 of the Metro Code directs the Metro Council at its first meeting after the first Monday in January each year to elect a Deputy Council President for the ensuing year; and

WHEREAS, the Council President has nominated Councilor Christine Lewis to serve as the Deputy Council President for 2022; now

BE IT RESOLVED:

1. That the Metro Council elects Councilor Christine Lewis as Deputy Council President for 2022.

ADOPTED by the Metro Council this 6th day of January 2022.

Lynn Peterson, Council President

Approved as to Form:

Carrie MacLaren, Metro Attorney

IN CONSIDERATION OF RESOLUTION NO. 22-5235 FOR THE PURPOSE OF ORGANIZING THE METRO COUNCIL AND CONFIRMING THE DEPUTY PRESIDENT

Date: December 3, 2020

Prepared by: Jaye Cromwell
jaye.cromwell@oregonmetro.gov

Meeting Date: January 6, 2022

ISSUE STATEMENT

To satisfy Metro Charter and Metro Code requirements, the Metro Council must adopt an annual organizing resolution for the orderly conduct of Council business.

ACTION REQUESTED

Consideration and adoption of an organizing resolution for the orderly conduct of business for 2022.

IDENTIFIED POLICY OUTCOMES

N/A

POLICY QUESTION(S)

N/A

POLICY OPTIONS FOR COUNCIL TO CONSIDER

N/A

STAFF RECOMMENDATIONS

Staff recommends the adoption of Resolution No. 22-5235

STRATEGIC CONTEXT & FRAMING COUNCIL DISCUSSION

Known Opposition/Support/Community Feedback
There is no known opposition to this resolution.

Legal Antecedents
Metro Charter, Chapter IV, Section 16 (5)
Metro Code, Chapter 2.01

Anticipated Effects

Adoption of this resolution would:

a. Elect Councilor Christine Lewis as Deputy Council President for 2022.

Financial Implications (current year and ongoing)

None

BACKGROUND

The Metro Charter, Chapter IV, Section 16(5) directs the Metro Council to adopt an annual organizing resolution for the orderly conduct of council business. Further, Metro Code, Chapter 2.01 directs the Metro Council at its first meeting after the first Monday in January each year to:

a. Elect a Deputy Council President for the ensuing year;
b. Establish such committees as the council deems necessary for the orderly conduct of council business; and
c. Confirm by resolution the Council President's appointment of certain committee members and committee chairs.

Only the appointment of the Deputy Council President is required by the charter. The annual organizing resolution before the Metro Council satisfies the requriement of appointing the Deputy Council President. Other actions to establish committees and assign committee appointments will be taken after the appointment of the new Disctrict 6 Councilor, set to be apppointed on January 11th, 2022.

ATTACHMENTS

None

Agenda Item No. 4.1

Resolution No. 21-5220, For the Purpose of Adopting the 2021 Regional Transportation System Management and Operations Strategy Replacing the 2010 Regional 2010-2020 Transportation Systems Management and Operations Action Plan

Resolutions

Metro Council Meeting
Thursday, January 6, 2022

BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF ADOPTING THE 2021 REGIONAL TRANSPORTATION SYSTEM MANAGEMENT AND OPERATIONS STRATEGY, REPLACING THE 2010 REGIONAL 2010-2020 TRANSPORTATION SYSTEMS MANAGEMENT AND OPERATIONS ACTION PLAN	)))))))	RESOLUTION NO. 21-5220 Introduced by Chief Operating Officer Marissa Madrigal in concurrence with Council President Lynn Peterson

WHEREAS, the Regional Transportation Plan (RTP) is the federally-recognized metropolitan transportation plan for the greater Portland region, and must be updated every five years; and

WHEREAS, the Metro Council adopted the 2010 RTP by Ordinance No. 10-1241B on June 10, 2010, which included the region's first Regional Transportation Systems Management and Operations (TSMO) Action Plan as a component of the RTP; and

WHEREAS, the 2010 TSMO Action Plan gave direction to the regional TSMO program partners to collaborate and invest in multimodal traffic management, traveler information, traffic incident management and transportation demand management strategies to effectively and efficiently manage the region's transportation system; and

WHEREAS, the Metro Council adopted the 2018 RTP by Ordinance No. 18-1421 on December 6, 2018, which identified four overarching policies for improving our regional transportation system – equity, safety, climate and congestion relief– and reaffirmed the need to effectively and efficiently manage our regional transportation system; and

WHEREAS, federal law requires metropolitan planning organizations such as Metro to adopt a Congestion Management Process with performance measures and targets; and

WHEREAS, ongoing efforts to address congestion in the region include directing growth in designated centers and corridors served by high-quality transit in combination with investments in system and demand management strategies, improving transit service and reliability, increasing bicycle and pedestrian connections and adding roadway capacity in targeted ways; and

WHEREAS, in 2021 Metro convened an 11-member TSMO Stakeholder Advisory Committee (SAC) consisting of Metro's Planning and Development Deputy Director, transportation engineers, planners, operators, researchers, transportation agency leaders and community leaders tasked with applying an equity focus to the TSMO vision, goals, objectives, performance measures, targets and actions; and

WHEREAS, Metro and the Oregon Department of Transportation (ODOT) and consultants formed a project team that engaged stakeholders through a survey, an online workshop, interviews, focus groups, and discussions with the Metro Council and regional technical and policy advisory committees, including the TSMO SAC, the Transportation Policy Alternatives Committee (TPAC), TransPort (a subcommittee of TPAC) and the Joint Policy Advisory Committee on Transportation (JPACT) between December 2020 through August 2021; and

WHEREAS, the 2021 TSMO Strategy establishes a new regional vision, goals, objectives, performance measures, targets and actions to provide reliable, agile, and connected travel choices so that all users are free from harm, and to eliminate the disparities experienced by Black, Indigenous, people of color and people with low incomes; and

WHEREAS, the 2021 TSMO Strategy will replace the 2010 TSMO Action Plan and inform development of the 2023 RTP; and

WHEREAS, Metro held a 30-day public comment period on the 2021 TSMO Strategy from September 24 to October 25, 2021; and

WHEREAS, on November 18, 2021, JPACT recommended approval of the 2021 TSMO Strategy by the Metro Council; now therefore,

BE IT RESOLVED THAT:

1. The Metro Council hereby adopts as a component of the 2018 RTP the 2021 TSMO Strategy, as shown in the attached Exhibit A and amended by the "Summary of Comments Received and Recommended Actions" in Exhibit C.

2. The "Summary of Comments Received and Recommended Actions," attached as Exhibit C, is incorporated by reference and any amendments reflected in the recommended actions are included in Exhibit A.

ADOPTED by the Metro Council this sixth day of January, 2022.

Lynn Peterson, Council President

Approved as to Form:

Carrie MacLaren, Metro Attorney

Adopted January 6, 2022
Resolution 21-5220

2021 Transportation System Management & Operations (TSMO) Strategy

Portland Metro Region

TSMO

Portland Metro Region

Metro

FEHR & PEERS

This document is best viewed when downloaded and opened in Adobe Acrobat Reader.

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Metro fully complies with Title VI of the Civil Rights Act of 1964 that requires that no person be excluded from the participation in, be denied the benefits of, or be otherwise subjected to discrimination on the basis of race, color or national origin under any program or activity for which Metro receives federal financial assistance.

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Metro provides services or accommodations upon request to persons with disabilities and people who need an interpreter at public meetings. If you need a sign language interpreter, communication aid or language assistance, call **503-797-1700** or TDD/TTY **503-797-1804** (8 a.m. to 5 p.m. weekdays) 5 business days before the meeting. All Metro meetings are wheelchair accessible. For up-to-date public transportation information, visit TriMet's website at www.trimet.org.

Metro is the federally mandated metropolitan planning organization designated by the governor to develop an overall transportation plan and to allocate federal funds for the region.

The Joint Policy Advisory Committee on Transportation (JPACT) is a 17-member committee that provides a forum for elected officials and representatives of agencies involved in transportation to evaluate transportation needs in the region and to make recommendations to the Metro Council. The established decision-making process strives for a well-balanced regional transportation system and involves local elected officials directly in decisions that help the Metro Council develop regional transportation policies, including allocating transportation funds. JPACT serves as the MPO board for the region in a unique partnership that requires joint action with the Metro Council on all MPO decisions.

Project website:
https://www.oregonmetro.gov/tsmo

The preparation of this report was financed in part by the U.S. Department of Transportation, Federal Highway Administration and Federal Transit Administration. The opinions, findings and conclusions expressed in this report are not necessarily those of the U.S. Department of Transportation, Federal Highway Administration and Federal Transit Administration.

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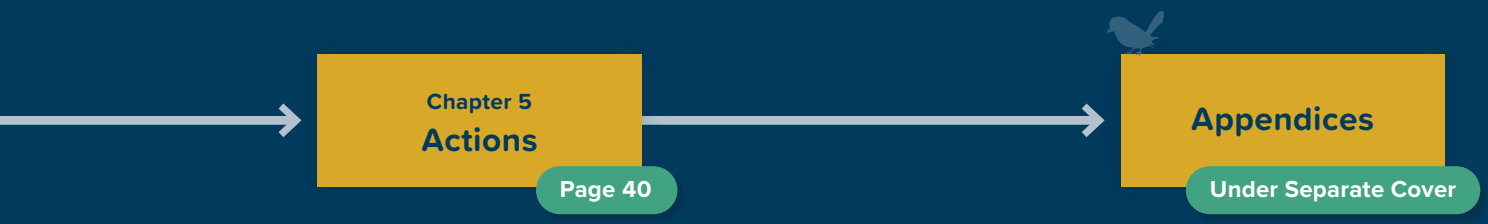
For operators of greater Portland's roads, highways, transit, shared-use mobility services, freight and active transportation facilities, this TSMO Strategy will bolster partnerships to achieve a shared vision.

With increased coordination, we will effectively and efficiently manage publicly funded transportation assets, optimize operations for reliability, innovate through technology research and advance the Regional Transportation Plan policy priorities.

The actions in this strategy will help people connect to more transportation options that are **equitable, safe, reliable and climate-friendly**.



Executive Summary

This transportation system management and operations (TSMO) strategy is an innovative, holistic, multimodal, and cost-effective approach to managing the region's transportation system. An effective TSMO Strategy prioritizes optimization of the existing transportation system by improving business practices and collaboration, encouraging behavior changes through travel demand management, and using technology to understand and manage how the system operates.

Process

This Strategy's **Vision** and **Goals** define what the transportation system in the region should provide.

The **Objectives** define how progress towards the desired outcomes will be achieved over the next 10 years.

Performance Measures and Targets define how progress will be measured.

Lastly, the **Actions** present time constrained and achievable actions needed to achieve the Goals and Vision.

Equity

This Strategy is rooted in equity with both Goals and Objectives that aim to correct past disparities and undue burdens experienced by **Black, Indigenous, people of color, and people with low incomes**. The Strategy planning process began with an equity focus, developing an assessment tool called the **Equity Tree** that will now apply to TSMO decision making in the region for years to come. The Equity Decision Tree is a tool for widening perspectives from "solving congestion" to "solving disproportional impacts of congestion and transportation" by including the context, choices, and voices that lead to well-defined problems, solutions and is accountable for outcomes.

Vision Statement

Collaborate to provide reliable, agile, and connected travel choices so that all users are free from harm, and to eliminate the disparities experienced by Black, Indigenous, people of color, and people with low incomes.

Goals

Free From Harm

Create a transportation system where all users are free from harm.

Collaboration & Partnerships

Collaborate as effective stewards of the transportation system.

Eliminate Disparities

Eliminate the disparities in the transportation system experienced by Black, Indigenous, people of color, and people with low incomes

Prepare for Change

Manage the system to be agile in the face of growth, disruptions, and changing technology.

Reliable Travel Choices

Provide a transportation system that is reliable for all users.

Connected Travel Choices

Connect all people to the goods, services, and destinations they need through a variety of travel choices.

Performance Measures

Vehicle Miles Traveled (VMT) per Capita

A measure of the average number of auto miles driven per person.

Number of Crashes by Severity

A measure of transportation safety and performance.

Buffer Index

The extra time a traveler adds to their trip (buffer) to ensure on-time arrival.

Agency Collaboration and Communication Events

Frequency of staff collaborating and communicating progress towards TSMO Goals.

System Connectivity

How complete and connected the infrastructure system is for each travel mode.

Targeted TSMO Investments

Distribution of investments regionally and on key corridors for modal efficiency.

Timely Traveler Information

How effectively information is being relayed to travelers to reduce delay associated with planned or unexpected events.

Actions

Planning

- 03 Develop a Mobility on Demand strategy and policy.
- 05 Pilot Origin-Destination data to prioritize TSMO investments.
- 18 Participate in regional public outreach to assist in guiding, listening and learning through TSMO-focused conversations.
- 21 Update the regional ITS Architecture.

Listening & Accountability

- 06 Track and prioritize TSMO Investments for and with Black, Indigenous, people of color, and people with low incomes.
- 13 Create a community listening program.
- 19 Improve TSMO data availability to aid in traveler decisions and behavior.

Data Needs

- 01 Establish TSMO performance measures baseline.
- 12 Explore new TSMO data sources.

Concepts, Capabilities, and Infrastructure

- 02 Inventory and manage regional signal and ITS Communication infrastructure.
- 04 Manage transportation assets to secure the network.
- 07 Continue freight technology and ITS deployment.
- 08 Facilitate ground truthing of emerging technologies.
- 09 Establish a Regional Transit Operators TSMO Group.
- 10 Unify and standardize fare subsidies for transit and MOD.
- 11 Develop an ITS travel time information data collection and distribution plan for RDPO regional emergency routes.
- 14 Create continuous improvement process for existing and new signal systems and related performance.
- 15 Deploy regional traveler information systems.
- 16 Implement integrated corridor management and mainstream into corridor planning.
- 17 Create a TSMO safety toolbox.
- 20 Build and use a TSMO Toolbox to connect gaps in bicycle and pedestrian infrastructure.

Beaverton, OR

Chapter 1

Overview

TSMO focuses on making the most of the existing system.

A Strategy that supports a systems approach must build on existing efforts, align with other regional efforts to manage the transportation system and move the region towards desired outcomes.

1.1 Metro

Metro works with communities, businesses and residents in the Portland metropolitan area to chart a course for the future while protecting the things we love about the place. The region has experienced consistent growth in population, jobs, and housing in the last decade. As the region grows, it brings an influx of new ideas, new opportunities, and new technology, but this growth also strains our transportation system. As the federally designated Metropolitan Planning Organization (MPO) for Clackamas, Multnomah and Washington counties, Metro is tasked with coordinating and planning the transportation system for the area. Metro's elected Council engages community to develop transportation policy that lead to strategies for on expanding transportation options, making the most of existing streets, and improving public transit services, efforts aligned with the goals of Transportation System Management & Operations (TSMO).

1.2 What is TSMO?

TSMO is making the most of what we have, to make the system more efficient and effective for users.

TSMO is a way for transportation professionals to be good stewards of the transportation system by managing and operating the system as efficiently and effectively as possible. TSMO strategies provide alternatives to chasing capacity growth by continuously building more lanes, miles of roadways, and larger intersections. Instead, TSMO aims to get the most out of the existing system by managing demand, improving business practices and collaboration across jurisdictional boundaries, using technology to measure and manage transportation operations and track progress towards regional goals.

TSMO is...

A holistic systems approach

A broad set of strategies

Innovative, cost-effective solutions

TSMO is not...

Large and costly construction projects

1.3 Who is Responsible for TSMO?

Metro partners with the Oregon Department of Transportation (ODOT), counties, and cities in the Portland region to create a TSMO strategy that establishes a shared set of goals, objectives and actions that will advance TSMO in the region.

When it comes to implementing TSMO, it is the responsibility of the agency that owns and operates the system to complete the actions outlined in the regional plan. On state owned roadways, ODOT is responsible for implementing TSMO while responsibility for implementing these strategies on local roadways lies with the City or County. Transit operators, Washington State partners, federal partners and Metro also have roles and responsibilities through TSMO implementation.

Transportation Planning Rule (TPR)

OAR 660.012, the Oregon's Transportation Planning Rule (TPR), stipulates that coordinated land use and transportation plans should increase transportation choices and make more efficient use of the existing transportation system through transportation system management and demand management measures. This approach is core to TSMO.

Many of the transportation plans and strategies within the region include TSMO-related actions and strategies. These plans, developed by Metro and their partner agencies, were used to inform the 2021 TSMO Strategy. Specifically, these plans were used a source for developing goals and actions that are consistent with ongoing efforts across the region.

Transportation Policy Alternatives Committee (TPAC):

TPAC reviews area plans and advises area leaders on transportation investment areas and policies. The group consists of technical staff from several local governments, agencies, and community groups, The goals of this group are aligned with TSMO, as they advise elected officials on policies and projects that will help the region be better stewards of the transportation system.

TransPort

TransPort is a subcommittee of Metro's Transportation Policy Alternatives Committee (TPAC). The group is charged with advancing the TSMO Strategy and providing a forum for cooperative planning and deployment. Broad TransPort participation is encouraged. Core membership consists of seven agencies:

- ODOT
- TriMet
- Metro
- Clackamas County
- Multnomah County
- Washington County
- City of Portland

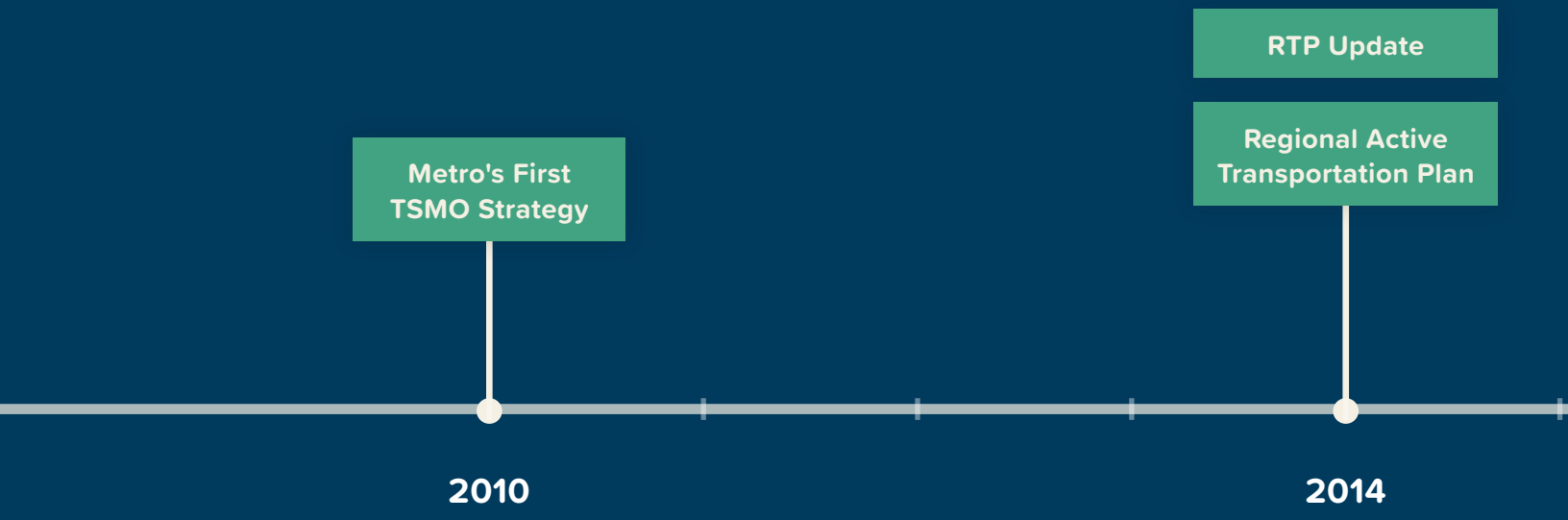
This group, comprised primarily of transportation system operators and engineers who play a key part in coordinating and advancing TSMO in the region.

Multidisciplinary

TSMO participation is multidisciplinary, and requires collaboration across several disciplines, including planners, engineers, emergency responders, demand management specialists, operators, and maintenance professionals. Through the TSMO project development process, these disciplines will each fill different role. Regardless of the stage of the overall TSMO strategy, each role remains engaged to ensure the successful implementation of the plan, or to help redirect the progress to a more successful conclusion.

1.4 History of Regional TSMO Planning

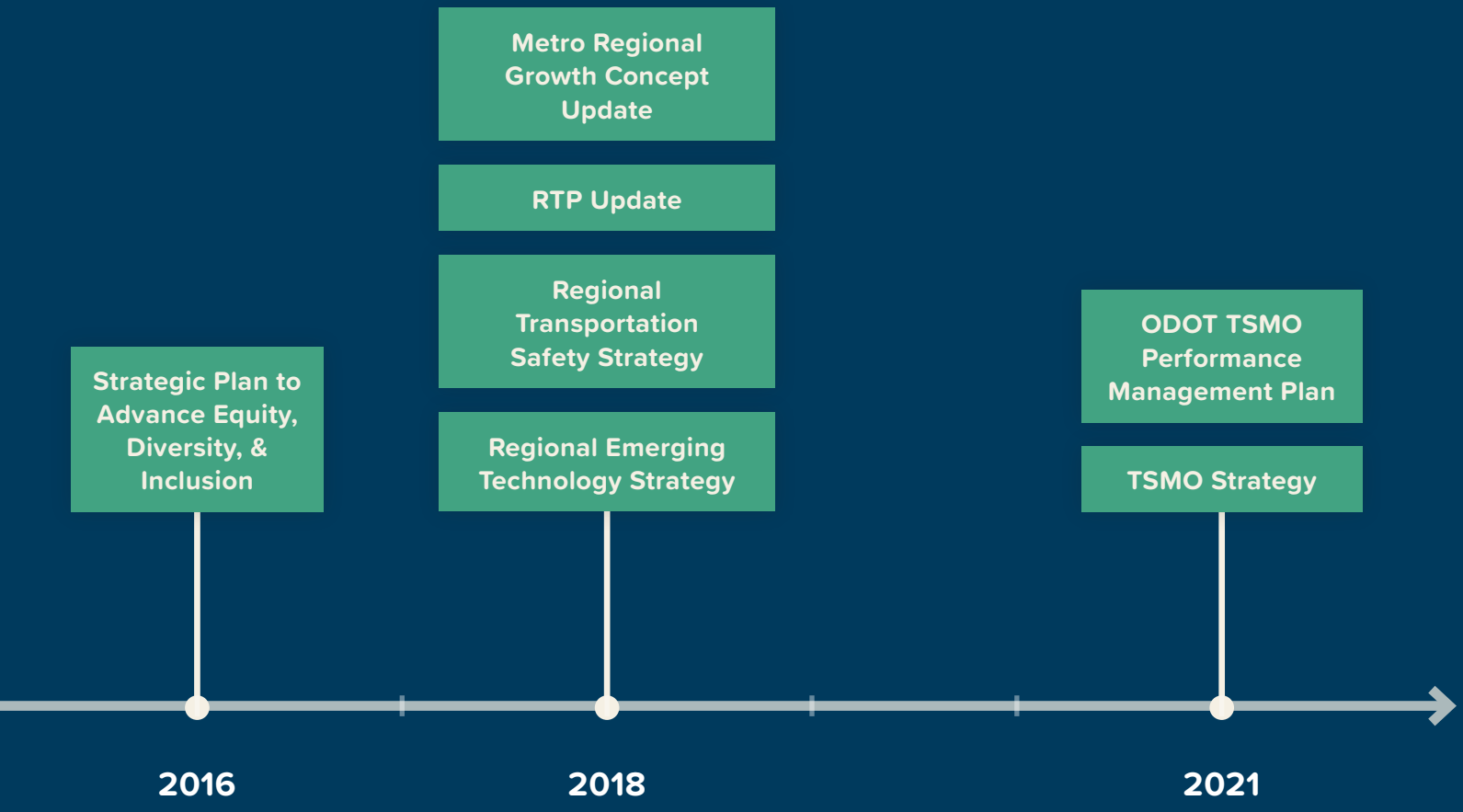
TSMO is not new to the Metro region. The first TSMO Strategy was developed in 2010. Over the last 10 years goals identified in that plan have been supported by other planning efforts including the 2018 Regional Transportation Plan (RTP), Metro's Safety Strategy, and ODOT's TSMO Performance Management Plan. The timeline below depicts the history of TSMO planning in the region and identifies key plans that inform and support this Strategy.



2010: Metro's First TSMO Plan

This plan established the region's first TSMO goals and guiding principles, applied through a list of projects ranging from ITS to travel demand management, which guided regional implementation between 2010 and 2020. A summary of projects included in the 2010 TSMO Plan can be found in **Appendix A**.

- **Reliability**: Provide reliable travel times for people and goods movement.
- **Safety & Security**: Enhance transportation safety and security for all modes.
- **Quality of Life**: Enhance the environment and quality of life by supporting state and regional greenhouse gas reduction and air quality goals.
- **Traveler Information**: Provide comprehensive multimodal traveler information to people and businesses.



2018: RTP Update

The plan is an outcomes-based framework and identifies the following desired outcomes:

- **Equity**: The benefits and burdens of growth and change are distributed equitably.
- **Vibrant Communities**: People live, work, and play in vibrant communities where their everyday needs are easily accessible.
- **Economic Prosperity**: Current and future residents benefit from the region's sustained economic competitiveness and prosperity.
- **Clean Air and Water**: Current and future generations enjoy clean air, clean water, and healthy ecosystems.
- **Climate Leadership**: The region is a leader in minimizing contributions to global warming.

1.5 2021 TSMO Strategy

The 2021 Strategy update created an opportunity to engage a more diverse set of stakeholders and expand the TSMO focus to address the disproportionate impacts of the transportation system on Black, Indigenous, people of color, and people with low incomes.

The 2021 TSMO Strategy is a joint collaboration between Metro and ODOT and benefited from input provided by a diverse set of stakeholders through the Stakeholder Advisory Committee (SAC). The SAC was made up of individuals representing various agencies, community based organizations, and the community at-large. For a full list of SAC members, see **Appendix B**.

The planning process used to create the 2021 TSMO Strategy is shown on this page. This process allowed for input from the SAC and other leadership groups in the region including the Transportation Policy Alternatives Committee (TPAC) and TransPort at the key milestones shown to the right.

The Planning Process

Vision & Goals

The vision for the 2021 TSMO Strategy is an aspirational statement that defines what TSMO should achieve over the life of this strategy. The goals provide strategic direction for collaboration and investments decisions to make progress towards the vision. The priorities and needs that shape the vision and goals for the 2021 TSMO Strategy were shaped by considering three key questions about the region's transportation system:

What do we want to protect?

What do we want to create?

What do we want to avoid?

Objectives

Objectives clarify what each goal should achieve. The 26 objectives in this Strategy are specific, measurable, actionable, and realistic. Over the life of this Strategy, Metro and their partner agencies will track progress towards these objectives and make changes to ensure progress is made.

Performance Measures and Targets

To track progress towards the vision and goals, Metro and their agency partners will rely on the performance measures and targets developed for this Strategy. Throughout the life of the Strategy, the performance measures will indicate how successful the actions are at moving the region towards the vision for the transportation system, including progress on many RTP performance measures.

Actions

The Actions for this Strategy map how stakeholders will achieve the vision and goals over the life of this Strategy. Actions presented in this Strategy reflect input from partner agencies and key stakeholders. Each Action also includes a timeline for achievement, including who will track and report on progress over the next 10 years.

Oregon City, OR

Chapter 2

Equity in TSMO

> By addressing the barriers experienced by Black, Indigenous, people of color, and people with low incomes, we will effectively also identify solutions and remove barriers for other disadvantaged groups.

— Metro's Strategic Plan to Advance Equity, Diversity, & Inclusion.

Equity in transportation means improving equitable outcomes by creating a transportation system that removes barriers and eliminates disparities faced by Black, Indigenous, people of color, and people with low incomes. By defining Transportation System Management & Operations (TSMO) solutions through an equity lens, this Strategy will focus solutions on those most impacted by the negative impacts of the transportation system and improve transportation equity in the region.

TSMO strategies and implementation historically focused on reliability, safety, traveler information, and congestion management. While these elements are not forgotten in this Strategy, the Metro region recognized that equity implications should be incorporated into all of their transportation planning efforts.

In 2016 Metro published their Strategic plan to advance racial equity, diversity and inclusion. This guiding document establishes racial equity "as the approach to ensure that all people who live, work and recreate in the Portland region have the opportunity to share in and help define a thriving, livable and prosperous region.... By addressing the barriers experienced by all of their people of color, we will effectively also identify solutions and remove barriers for other disadvantaged groups." This approach influenced the vision, goals, and projects included in the 2018 Regional Transportation Plan (RTP) update and served as the foundation of the equity focus woven throughout this Strategy.

So how can TSMO address equity issues? The first step is reframing the discussion from focusing on the problem locations, to who is being affected by the problems and how solutions can remove barriers for people who are most burdened. Instead of jumping straight into identifying congestion bottlenecks and solutions to fix them, instead we should ask whether there are certain groups who bear the greatest burden of congestion, do they have access to other reliable modes of travel, and what solutions do they say would be most helpful?

These questions were the basis for creating the Vision, Goals, Objectives, Performance Measures, Targets, and Actions that make up this Strategy.

Navigating the Equity Tree

1. Start at the root and **define a problem**
2. Follow the branches and leaves of the through the Plans level to **identify keys** to solving a problem
3. Continue through the Strategies level to **develop a solution step** to a problem
4. At the tree top, **evaluate and refine** actions, being accountable to the result

Why Equity?

More than **1 in 10** Americans have a mobility disability such as serious difficulty walking or climbing stairs.

People who are Black, Asian, Native American, Pacific Islander or Latino-origin are **4 times more likely** to rely on transit for their work commute than people who are White.

Households in the bottom 90% income bracket spend **twice the amount on transportation** than households in the top 10% income bracket spend each year

Pedestrian Fatality Rates

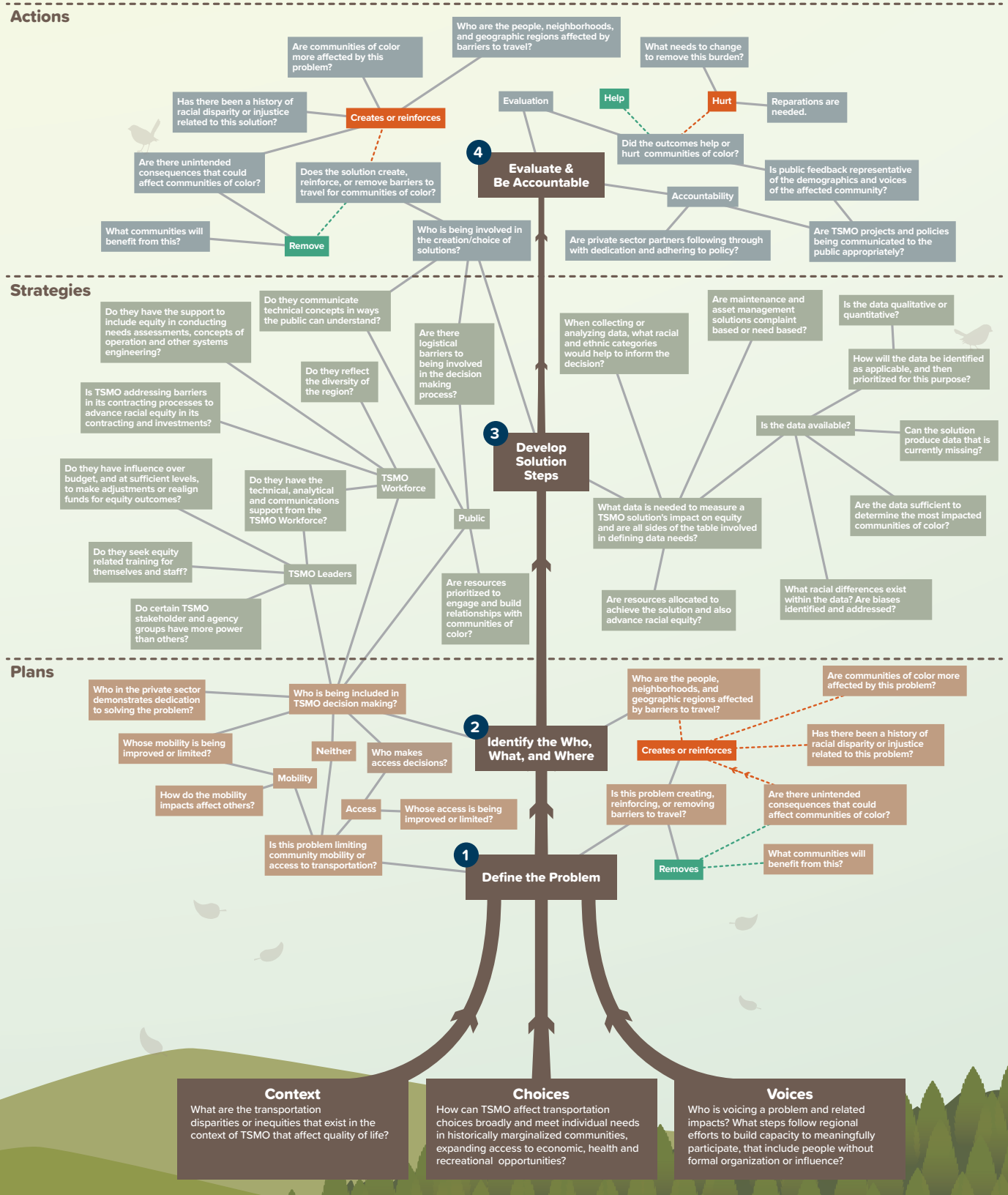
Households Without a Car

Sources: Smart Growth America; Centers for Disease Control and Prevention; Census; Treasury

TSMO Equity Tree

oregonmetro.gov/tsmo

As a user moves up the tree from root to branches, they 1 define the problem, 2 identify keys to solving the problem, 3 develop a solution, and then 4 evaluate and refine the actions to be accountable for the result.




AMERICAN
BANK BUILDING
Portland, OR

Chapter 3
Vision, Goals, & Objectives

Vision, Goals, and Objectives illustrate what the Transportation System we desire to create looks like.

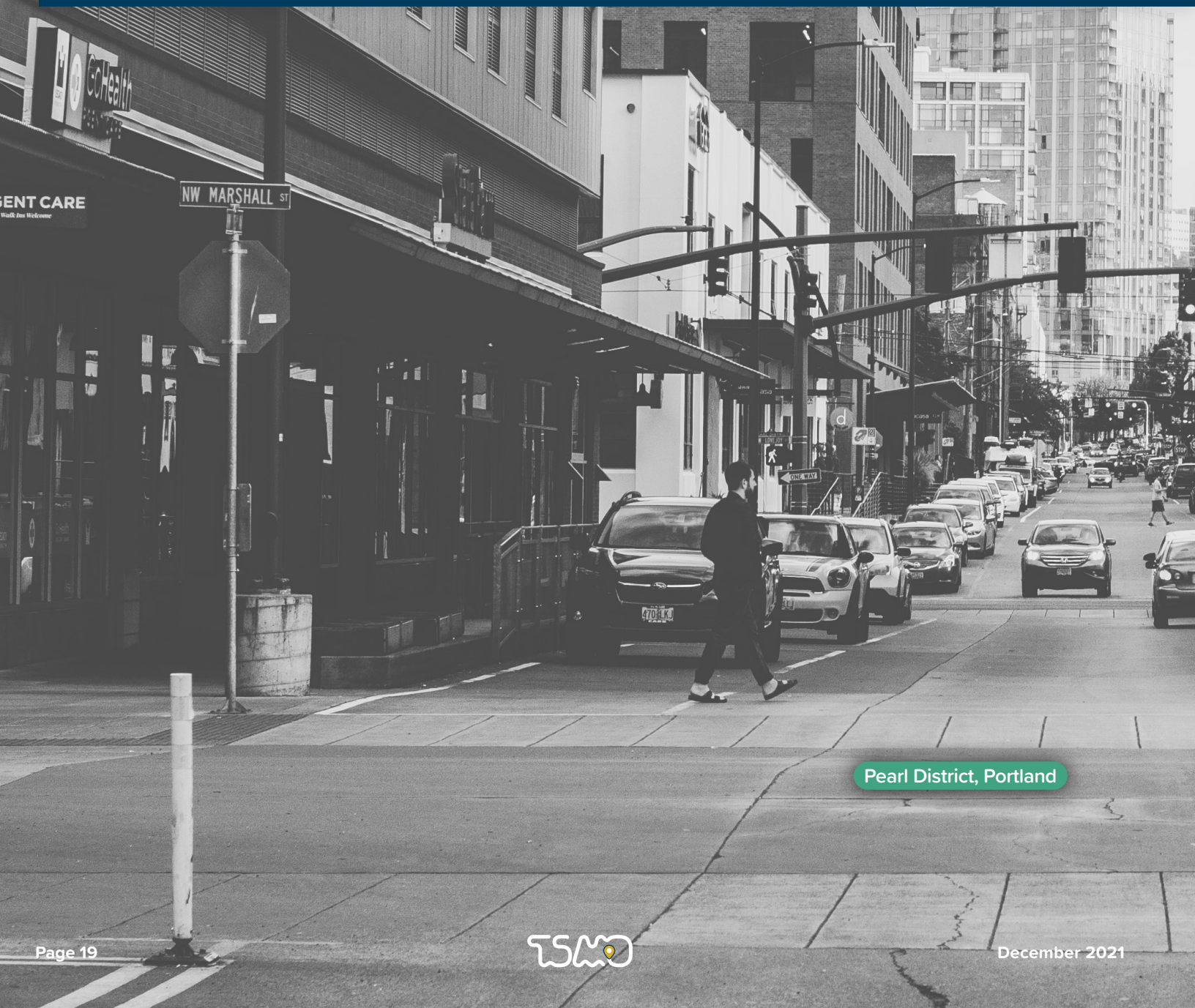
The Vision for the future of the greater Portland region's Transportation System Management & Operations (TSMO) strategy was created by asking three questions: What do we want to protect? What do we want create? What do we want to avoid? Together the Vision, Goals, and Objectives illustrate what the TSMO Strategy advances for the transportation system. This is the system the region wants to move towards over the lifetime of this Strategy.

More information on the development of the Vision, Goals, and Objectives is included in **Appendix C.**

3.1 The Vision

The vision for the Strategy is an aspirational statement that defines what implementation of the Strategy should achieve over of the next ten years.

Collaborate to provide reliable, agile, and connected travel choices so that all users are free from harm, and to eliminate the disparities experienced by Black, Indigenous, people of color, and people with low incomes.



Pearl District, Portland

3.2 Goals & Objectives

The six goals for the Strategy provide direction for collaboration and investment decisions that will result in progress towards the Vision. These goals will move the region towards a transportation system that travelers can use without harm, that provides access for all travelers, reflects the needs and desires of all voices, and that supports travelers to access and choose different modes when traveling.

Each goal has a set of objectives that reflect collaboration with the Stakeholder Advisory Committee (SAC). These objectives define how the region will achieve the six goals.

1. Free From Harm

Create a transportation system where all users are free from harm.

Objectives

1.1 Manage the transportation system to reduce negative health impacts so that public health risk does not adversely affect people's mode choice.

1.2 Ensure Black, Indigenous, people of color, and people with low incomes benefit from safety improvements.

1.3 Provide a transportation system where human error does not result in serious injury or loss of life.

1.4 Ensure people of color and low income individuals can safely access multiple low stress mode choices and routes within the transportation system by improving access to and accessibility of transit stops, pedestrian, and bicycle facilities.

2. Regional Partnerships & Collaboration

Collaborate as effective stewards of the transportation system.

Objectives

2.1 Collaborate to provide consistent travel experiences across jurisdictional boundaries through knowledge-sharing on best approaches to multimodal traffic signal timing integrated payment and scheduling systems, integrated corridor management, and data sharing between agencies.

2.2 Collaborate with emergency management when prioritizing investments on key emergency response routes.

2.3 Collaborate with and educate travelers.

2.4 Improve interagency collaboration to ensure efficient operations by identifying and addressing barriers in communication when making decisions about network operation or expansion.

3. Eliminate Disparities

Eliminate the disparities in the transportation system experienced by Black, Indigenous, people of color, and people with low incomes.

Objectives

3.1 Prioritize reaching underrepresented groups when providing traveler information and community outreach and ensure that modal access and traveler information is free from technological and financial barriers.

3.2 Identify and correct disparities when planning, operating, and maintaining the transportation system (e.g., transit access, exposure to air toxics, allocation of funds).

3.3 Identify and increase awareness of the unique travel experiences of Black, Indigenous, people of color, and people with low incomes.

3.4 Reduce the transportation cost burden experienced by Black, Indigenous, people of color, and people with low incomes.

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4. Connected Travel Choices

Connect all people to the goods, services, and destinations they need through a variety of travel choices.

Objectives

4.1 Connect decentralized travel options to facilitate viable destinations in Regional Centers, Town Centers, and employment areas outside downtown Portland.

4.2 Prioritize the completion and expansion of planned transit and active mode networks when investing discretionary revenues especially to destinations with limited travel choices.

4.3 Connect goods and delivery services to people and businesses by providing for and managing last mile connections for goods delivery.

4.4 Increase availability and accessibility of low-cost transportation options for Black, Indigenous, people of color, and people with low incomes and acknowledgement that a significant percentage of people will not have access to an automobile.

5. Reliable Travel Choices

Provide a transportation system that is reliable for all users.

Objectives

5.1 Manage recurring and non-recurring congestion to improve travel time reliability for all users, including active transportation, transit, and freight.

5.2 Expand travel time reliability improvements for Black, Indigenous, people of color, and people with low incomes burdened with long travel distances.

5.3 Manage critical freight corridors to create reliable routes for freight movement between key destinations.

5.4 Communicate expected changes in reliability so that travelers can make informed travel choices.

6. Prepare for Change

Manage the system to be agile in the face of growth, disruptions, and changing technology.

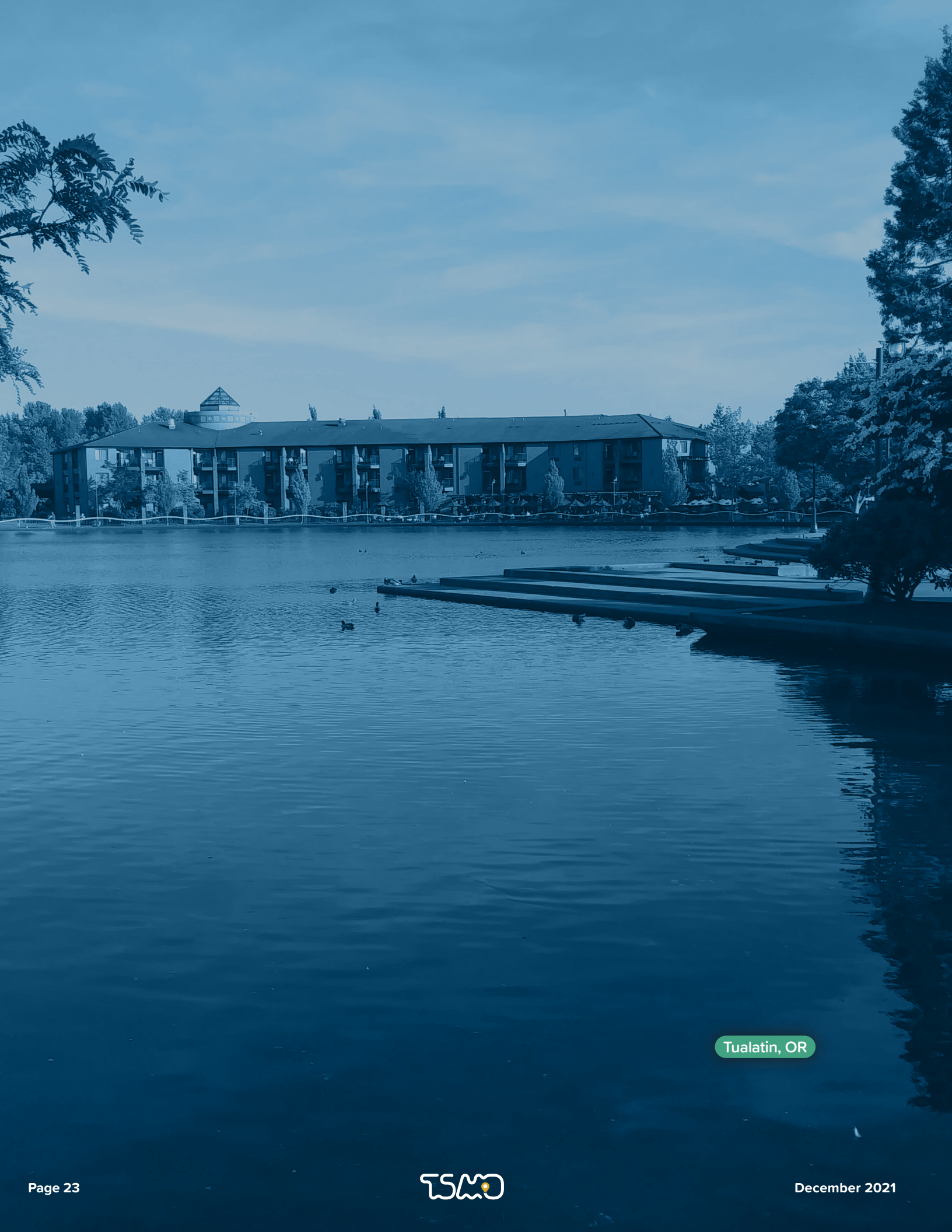
Objectives

6.1 Plan and design a flexible transportation network that can adapt to new technology and travel choices that are consistent with the region's desired land use and transportation outcomes.

6.2 Manage projects and resources to be responsive to changes in land use planning and growth patterns.

6.3 Minimize long term disruptions to the transportation system by creating resiliency to climate change and economic shifts.

6.4 Provide public agency staff with the data, tools, models, and training needed to assess long-term disruptive transportation trends.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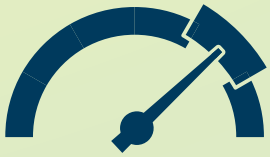

Chapter 4

Performance Measures & Targets

Seven performance measures were identified that will be used to measure progress toward the Strategy's Goals & Objectives. These measures are Transportation System Management & Operations (TSMO):

- → Vehicle Miles Traveled (VMT) per Capita
- → Number of Crashes by Severity
- → Buffer Index
- → Agency Collaboration & Communication Events
- → System Connectivity
- → Targeted TSMO Investments
- → Timely Traveler Information

More information on the development of these Performance Measures and Targets are included in **Appendix D**.

Vehicle Miles Traveled (VMT) per Capita

A measure of the average number of auto miles driven per person.

This performance measure supports the following TSMO goals:

- Free From Harm
- Collaboration & Partnerships
- Eliminate Disparities
- Prepare for Change
- Reliable Travel Choices
- Connected Travel Choices

Key Performance Metrics

Regional VMT per Capita measures how much travelers are driving in the region.

- The measure is related to air toxics and greenhouse gas emissions, but does not account for vehicle electrification. Historically, VMT responded to land use context and economic changes (as the economy grew, so did VMT). However, as gas prices rose in 2008, VMT and the economy began to separate. VMT is still related to economics, and can represent upward economic movement, but new technology, higher seat utilization, and greater mobility choices can help reduce overall VMT, reducing recurring and non-recurring congestion. VMT can also be measured by geography determining an area's VMT generation and exposure.

VMT Exposure per Capita is an indicator of the transportation systems impact.

- Exposure to VMT can result in increased exposure to air toxics and higher crash risk. Historically, major routes have been constructed in Black, Indigenous, people of color, and low income neighborhoods, disproportionately exposing those communities. Measuring VMT exposure tracks these impacts.

VMT Generation per Capita is an indicator of transportation choices and economic activity.

- VMT per capita is a measure of land use efficiency and travel choice. Areas with higher densities, mixed uses, and robust networks for walking, bicycling, and transit produce lower VMT per capita. However, VMT per capita may also be low due to low incomes, high unemployment, and a lack of travel choices. Comparing VMT per capita across the region can help identify areas with disparate outcomes.

Exploratory Metrics

Number of Coordination Events and Number of Agencies Involved.

- Coordination between agencies can take a variety of forms. Making connections across departments and agency boundaries deepens the level of knowledge and empathy for the work and challenges staff face across the region.
- Coordination events build relationships and communication paths that lead to information sharing that allow agencies to be more agile and responsive in a rapidly changing environment.

Performance Measures & Targets

Vehicle Miles Traveled (VMT) per Capita	» Reduce average vehicle miles traveled per person by 10 percent from 2021.
Number of Crashes by Severity	» Show progress toward meeting the 2035 Vision Zero Goal (Eliminate Fatal and Severe Injury crashes), and collisions in Equity Focus Areas are equal to or less than the regional average.
Buffer Index	» Buffer Index (vehicle or transit, calculated as noted) is below 50% for all identified routes.
Agency Collaboration & Communication Events	» 100% of engagement activities involve Black, Indigenous, people of color, and people with low incomes and 100% of agencies are sharing data annually.
System Connectivity	» 100% of signals on identified routes have communications. » There is a 10% increase (from 2021) in the connectivity index and percent of households/employers within 10 minutes of transit, and a 15% increase in these metrics in Equity Focus Areas
Targeted TSMO Investments	» TSMO investments benefiting the identified key corridors/geographies make up at least 50% of total TSMO investments in the region.
Timely Traveler Information	» 50% of transit shelters, and 100% of shelters in Equity Focus Areas have real-time arrival displays. » 100% of agencies have a traveler information system plan.

Direct Relationships

As **VMT per Capita** goes up ↑, **increases** ↑ are expected for:

- Tailpipe air toxics and greenhouse gases
- Economic activity
- Volume of cut-through traffic
- Crash risk

Inverse Relationships

As **VMT per Capita** goes up ↑, **decreases** ↓ are expected for:

- Use of non-auto modes such as walking, biking, and transit
- Seat utilization

Number of Crashes by Severity

A measure of transportation safety and performance.

This performance measure supports the following TSMO goals:

- Free From Harm
- Collaboration & Partnerships
- Eliminate Disparities
- Prepare for Change
- Reliable Travel Choices
- Connected Travel Choices

Key Performance Metrics

Total Crashes per MVMT

» Total Crashes per Million Vehicle Miles Traveled (MVMT). Metro's Safety Strategy aims to eliminate severe crashes (crashes with major injuries or fatalities) by 2035. Crashes on the transportation network cause non recurring congestion, and fatal crashes result in longer incident response times with sustained impacts. The TSMO Strategy aims to reduce harm and reduce the non-recurring congestion created by incident by improving the safety of the system overall. Therefore, tracking total crashes should be evaluated inthe following subsets:

- Crash rate by severity (crashes/MVMT/per100,000 capita).
- Crash rate by mode (crashes/MVMT/per100,000 capita).
- Crash frequency of fatal, pedestrian, andbicycle related crashes (number of crashes).
- Ratio of crashes that occur in equity focus areasto total regional crashes (percent).

Exploratory Metrics

Crash Demographics

» Current crash demographics is not readily available. Metro's Safety Strategy identifies that "Traffic deaths are increasing and are disproportionately impacting people of color, people with low incomes and people over age 65." This metric would improve the region's understanding of the disproportional impacts of crashes, and how to correct them.

Secondary Crashes

» Secondary crashes are those that occur at the scene of the original crash or in the queue, even in the opposite direction. Current crash reporting documents do distinguish between a primary and secondary crash. This metric would help Metro measure the region's ability to manage, clear, and reopen facilities following an incident.

Crash Risk

» Crash analysis is currently conducted using historical data and is therefore reactive. Technology and data sources are available to identify locations of increased crash risk before crashes occur but can be costly and privately owned. This metric would help the region be proactive in transportation safety improvements.

Average Miles Biked or Walked

» Pedestrian and Bicycle miles traveled are lower than the total vehicle miles traveled. Therefore, when evaluating pedestrian and bicycle crash rates per miles traveled data on the average trip length or total miles walked or biked, better correlates than the total miles traveled by vehicles in the region. A data source for this measurement needs to be researched and determined for this work. These could include traveler surveys or data from a third-party provider.

Performance Measures & Targets

Vehicle Miles Traveled (VMT) per Capita	» Reduce average vehicle miles traveled per person by 10 percent from 2021.
Number of Crashes by Severity	» Show progress toward meeting the 2035 Vision Zero Goal (Eliminate Fatal and Severe Injury crashes), and collisions in Equity Focus Areas are equal to or less than the regional average.
Buffer Index	» Buffer Index (vehicle or transit, calculated as noted) is below 50% for all identified routes.
Agency Collaboration & Communication Events	» 100% of engagement activities involve BIPOC and low income communities and 100% of agencies are sharing data annually.
System Connectivity	» 100% of signals on identified routes have communications. » There is a 10% increase (from 2021) in the connectivity index and percent of households/employers within 10 minutes of transit, and a 15% increase in these metrics in Equity Focus Areas
Targeted TSMO Investments	» TSMO investments benefiting the identified key corridors/geographies make up at least 50% of total TSMO investments in the region.
Timely Traveler Information	» 50% of transit shelters, and 100% of shelters in Equity Focus Areas have real-time arrival displays. » 100% of agencies have a traveler information system plan.

Direct Relationships

As **Number of Crashes by Severity** goes up ↑, **increases** ↑ are expected for:

- Black, Indigenous, people of color, and people with low incomes that are seriously injured or killed while using the transportation system
- Non-recurring congestion events related to crashes
- Resources needed for incident management
- Tailpipe air toxics & greenhouse gases

Inverse Relationships

As **Number of Crashes by Severity** goes up ↑, **decreases** ↓ are expected to any progress toward reducing:

- Disproportional impacts of transportation on neighborhood safety

Buffer Index

The extra time a traveler adds to their trip (buffer) to ensure on-time arrival.

This performance measure supports the following TSMO goals:

Free From Harm | Collaboration & Partnerships | **Eliminate Disparities** | Prepare for Change | **Reliable Travel Choices** | **Connected Travel Choices**

Key Performance Metrics

Buffer Index

» Travel time reliability is measured by taking the ratio of the longest to shortest duration trips for trips of the same distance on the network. Buffer index measures is the variability between 90th percentile and 10th-percentile or run time for transit, or between the 90th percentile and average travel time for vehicles, as calculated by the following equation:

$$\frac{90th\text{-}Percentile - 10th\text{-}Percentile}{10th\text{-}Percentile} = Transit\ Buffer\ Index\ (\%)$$

$$\frac{90th\text{-}Percentile - 50th\text{-}Percentile}{50th\text{-}Percentile} = Vehicle\ Buffer\ Index\ (\%)$$

A higher percent value indicates a higher degree of variability during congested hours. Buffer index can measure by mode, and the TSMO strategy will report on changes to Transit Buffer Index and Vehicle Buffer Index:

- Transit Buffer Index for Frequent Bus Routes & Light Rail
- Transit Buffer Index for BIPOC and Low-Income Service Routes
- Vehicle Buffer Index for Throughway Segments and Arterials
- Freight Buffer Index for Regional Intermodal Connectors

Performance Measures & Targets

Vehicle Miles Traveled (VMT) per Capita	» Reduce average vehicle miles traveled per person by 10 percent from 2021.
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Timely Traveler Information	» 50% of transit shelters, and 100% of shelters in Equity Focus Areas have real-time arrival displays. » 100% of agencies have a traveler information system plan.

Direct Relationships

As **Buffer Index** goes up ↑, **increases** ↑ are expected for:

- Reliability of transit routes and on time performance
- Transit run time variability
- Reliability of routes in a corridor
- Congested areas that delay transit

Inverse Relationships

As **Buffer Index** goes up ↑, **decreases** ↓ are expected for:

- Total elapsed time in which responders are able to clear incidents from roadways, railroads, and transit tracks

Agency Collaboration and Communication Events

Frequency of staff collaborating and communicating progress towards TSMO Goals.

This performance measure supports the following TSMO goals:

Free From Harm | **Collaboration & Partnerships** | **Eliminate Disparities** | **Prepare for Change** | Reliable Travel Choices | **Connected Travel Choices**

Key Performance Metrics

Number of Agencies with a public participation plan that includes Black, Indigenous, people of color, and people with low incomes.

- Metro and their agency partners develop transportation solutions that serve the entire community. The solutions aim to correct historically disproportional impacts to Black, Indigenous, people of color, and people with low incomes. This relies on creating strategic opportunities for these communities to participate in the decision making. This metric is a pass/fail for each agency represented by Metro.

Number of Agencies Attending TransPort

- Transport is a group of engineers and planners representing partner agencies that coordinate TSMO and Intelligent Transportation Systems projects regionally. Continuing this coordination is key to TSMO's success in the region.

Percent of Key Operating Agreements Executed.

- Metro and their partner agencies create agreements for collecting and sharing data, managing systems, and traffic incident management. These agreements are key to TSMO's success. This metrics ensure that agencies are following through on agreements or modifying them as needed for interagency coordination.

Exploratory Metrics

Number of Coordination Events and Number of Agencies Involved.

- Coordination between agencies can take a variety of forms. Making connections across departments and agency boundaries deepens the level of knowledge and empathy for the work and challenges staff face across the region.
- Coordination events build relationships and communication paths that lead to information sharing that allow agencies to be more agile and responsive in a rapidly changing environment.

Performance Measures & Targets

Vehicle Miles Traveled (VMT) per Capita	» Reduce average vehicle miles traveled per person by 10 percent from 2021.
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Timely Traveler Information	» 50% of transit shelters, and 100% of shelters in Equity Focus Areas have real-time arrival displays. » 100% of agencies have a traveler information system plan.

Direct Relationships

As **Agency Collaboration and Communication Events** goes up ↑, **increases** ↑ are expected for:

Economic activity | Crash risk

Inverse Relationships

As **Agency Collaboration and Communication Events** goes up ↑, **decreases** ↓ are expected for:

Use of non-auto modes

System Connectivity

How complete and connected the infrastructure system is for each travel mode.

This performance measure supports the following TSMO goals:

Free From Harm | Collaboration & Partnerships | Eliminate Disparities | Prepare for Change | Reliable Travel Choices | Connected Travel Choices

Key Performance Metrics

Percent of Signals with Communications.

» Installing communications across signals allows for connection to a central signal system, improved data collection, and signal management and operations. These connections should be prioritized for signals on regionally-designated and other important routes, including:

- Frequent bus routes
- Arterials serving equity focus areas
- Freeway Segments and Mobility Corridors
- Regional Intermodal Freight Connectors

Percent of Households and Employers within 10-minute Walk or Bike Travel Shed from Transit.

» This measurement determines how easily travelers can access and interface with transit by low-stress bicycle and walking routes. The 10-minute walk or bike travel shed shows how far from transit a traveler can live but still have reasonable access to the system. The walk and bike travel shed connectivity using the existing system, assuming travelers are only able to use identified lowstress and accessible bike and walking routes. The metrics should be measured by census block, breaking out equity focus areas, regional centers, and town centers.

Connectivity Index of Infrastructure.

» A connectivity index is the comparison of 30-minute travel shed on the existing network as compared to an ideal grid network. A high connectivity index represents redundancy in the transportation network that can reduce the impacts of unforeseen events and the non-recurring congestion those events can cause. For example, a high connectivity index for bicycles represents an alternative route when trails are flooded, or bridges are raised. A high connectivity index for vehicles could present shorter trips through neighborhoods, or alternative routes in regions impacted by natural disasters such as forest fire or mudslides. Connectivity Index should be measured mode and geography, including:

- for active modes (pedestrian, bicycle) by route level of stress;
- for vehicular modes; and
- measured by census block, breaking out equity focus areas, regional centers, and town centers.

Performance Measures & Targets

Vehicle Miles Traveled (VMT) per Capita	» Reduce average vehicle miles traveled per person by 10 percent from 2021.
Number of Crashes by Severity	» Show progress toward meeting the 2035 Vision Zero Goal (Eliminate Fatal and Severe Injury crashes), and collisions in Equity Focus Areas are equal to or less than the regional average.
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Direct Relationships

As **System Connectivity** goes up ↑, **increases** ↑ are expected for:

- Miles of infrastructure by mode in Equity Focus Areas where field devices are connected to centers
- Geographic transit coverage
- Systems infrastructure such as transit signal priority or stop amenities
- Transit, jobs, and services
- Walking and biking network completeness

Inverse Relationships

As **System Connectivity** goes up ↑, **decreases** ↓ are expected for:

- Sidewalk and bicycle system gaps

Targeted TSMO Investments

Distribution of investments regionally and on key corridors for modal efficiency.

This performance measure supports the following TSMO goals:

- Free From Harm
- Collaboration & Partnerships
- Eliminate Disparities
- Prepare for Change
- Reliable Travel Choices
- Connected Travel Choices

Key Performance Metrics

Percent of TSMO Investments benefiting key corridors.

» Where TSMO investments are made is an indication of who is benefiting from the efficiencies that result from this strategy. To ensure those efficiencies are realized in an equitable way, and to match the priorities and values of the region, the distribution of the investments should be measured through the life of the strategy. This strategy will track where investment benefit the following types of corridors as defined by other regional plans.

- Frequent bus routes
- Arterials serving equity focus areas
- Freeway Segments and Mobility Corridors
- Regional Intermodal Freight Connectors

Performance Measures & Targets

Vehicle Miles Traveled (VMT) per Capita	» Reduce average vehicle miles traveled per person by 10 percent from 2021.
Number of Crashes by Severity	» Show progress toward meeting the 2035 Vision Zero Goal (Eliminate Fatal and Severe Injury crashes), and collisions in Equity Focus Areas are equal to or less than the regional average.
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Targeted TSMO Investments	» TSMO investments benefiting the identified key corridors/geographies make up at least 50% of total TSMO investments in the region.
Timely Traveler Information	» 50% of transit shelters, and 100% of shelters in Equity Focus Areas have real-time arrival displays. » 100% of agencies have a traveler information system plan.

Direct Relationships

As **Targeted TSMO Investments** goes up ↑, **increases** ↑ are expected for:

- Equitable distribution of resources and ensuring that Equity Focus Areas are receiving equal or greater investment than the regional average
- Collaboration across jurisdictions as Mobility Corridors cross jurisdictional boundaries and connect cities.
- Transit signal priority investments
- Transportation operator's ability to integrate corridor management
- Economic gains from greater freight access
- Reliability, access, and safety on intermodal connectors and other freight routes.
- Resiliency of key facilities such as bridges
- Truck drivers finding places to park for required rest periods
- Preparation for short- and long-term disruptions
- Improving reliability for high frequency transit

Timely Traveler Information

How effectively information is being relayed to travelers to reduce delay associated with planned or unexpected events.

This performance measure supports the following TSMO goals:

Free From Harm | **Collaboration & Partnerships** | **Eliminate Disparities** | **Prepare for Change** | **Reliable Travel Choices** | Connected Travel Choices

Key Performance Metrics

Percent of transit shelters with functional real-time arrival displays.

» Travelers without access to smart phones or online data sources at bus stop locations may not be aware of transit delays or missed buses. Shelters are installed at high frequency and high ridership locations as identified by the transit operators. Ensuring these locations have on-time arrival displays can provide travelers with needed information. Ensuring that these displays are functional and continue to operate is key to ensuring the maintenance of the system moving forward. These should be reported as a total forthe region and for equity focus areas.

Number of Agencies with a Traveler Information System (TIS) plan.

» Metro and their partner agencies regularly provide information to the public around both planned and unexpected incidents. The creation of a TIS plan will help agencies to be prepared to rapidly distribute information to travelers about detours, closures, and hazardous conditions. The plan should at a minimum include standards for communication in a variety of languages and an equitable variety ofcommunication channels.

Exploratory Metrics

Non-recurring delay associated with incidents.

» It is currently difficult to quantify and report non-recurring delay that is associated with specific incidents such as a crash. Exploring new data sources that can measure this delay would enable Metro to better understand whether their travel notifications are successful rerouting drivers and what share of delay is associated with recurring vs non-recurring congestion.

Data sharing with Connected & Automated Vehicles (CAV), Smart Phones, and Mobility Devices.

» CAV technology enables a new level of traveler communication through in-vehicle data sharing. That data sharing also extends to specific Smart Phone apps, and other smart mobility devices. Applications include Mobility on Demand, Mobility as a Service, on-board notifications of traffic incidents, dangerous queues, or other roadway hazards. Mobility data can also be used to identify and report hard braking and other behaviors related to unexpected delays and non-recurring congestion. These data sources should be researched, with specific attention given to impacts to equity, safety, reliability, and cost.

Performance Measures & Targets

Vehicle Miles Traveled (VMT) per Capita	» Reduce average vehicle miles traveled per person by 10 percent from 2021.
Number of Crashes by Severity	» Show progress toward meeting the 2035 Vision Zero Goal (Eliminate Fatal and Severe Injury crashes), and collisions in Equity Focus Areas are equal to or less than the regional average.
Buffer Index	» Buffer Index (vehicle or transit, calculated as noted) is below 50% for all identified routes.
Agency Collaboration & Communication Events	» 100% of engagement activities involve Black, Indigenous, people of color, and people with low incomes and 100% of agencies are sharing data annually.
System Connectivity	» 100% of signals on identified routes have communications. » There is a 10% increase (from 2021) in the connectivity index and percent of households/employers within 10 minutes of transit, and a 15% increase in these metrics in Equity Focus Areas.
Targeted TSMO Investments	» TSMO investments benefiting the identified key corridors/geographies make up at least 50% of total TSMO investments in the region.
Timely Traveler Information	» 50% of transit shelters, and 100% of shelters in Equity Focus Areas have real-time arrival displays. » 100% of agencies have a traveler information system plan.

Direct Relationships

As **Timely Traveler Information** goes up ↑, **increases** ↑ are expected for:

- Traveler happiness and comfort using the system

Inverse Relationships

As **Timely Traveler Information** goes up ↑, **decreases** ↓ are expected for:

- Non-recurring congestion associated with both planned and unexpected events


Fanno Creek Trail
TRAIL RULES:
Trail open dawn to dusk.
No smoking.
Alcohol, camping, fires, motorized vehicles are prohibited.
Dogs must be on leash and waste must be removed.
Walkers have the right-of-way.
Bicyclists yield to pedestrians.
No collecting plants or animals.
Trail contact
503.718.2598
Security
503.629.0111
YOU ARE HERE
FANNO CREEK PARK
ASH AVE DOG PARK
JIM GRIFFITH MEMORIAL CITY HALL SKATE PARK
SENIOR CENTER
LIBRARY
Tigard, OR

Chapter 5

Actions

Twenty-one Transportation System Management & Operations (TSMO) Actions were identified by the Regional TSMO Stakeholders. Each action was categorized with one of four activity areas:

- → Planning
- → Concepts, Capabilities, & Infrastructure
- → Listening & Accountability
- → Data Needs

Each action was given a priority and completion timeline, as well as an agency that would track and report the action progress over the life of the plan.

These actions are meant to be a starting direction for the Regional TSMO Strategy. Over the course of the plan, if progress is not being measured on the strategy's objectives, the actions should be revised to better meet the region's needs.

More information on the development of these actions is included in **Appendix E**.

1. Establish TSMO performance measures baseline.

Planning | Concepts, Capabilities, & Infrastructure | Listening & Accountability | **Data Sources**

Action Description

Create a baseline for measuring regional TSMO performance and advancement by:

- Mapping regionally significant routes as identified in other Metro planning documents where TSMO Performance Measures will be reported. These should include state routes, freight routes, transit routes, emergency transportation routes, and Mobility Corridors.
- Summarize findings from TSMO project before/after studies.
- Establish a standard calculation for VMT exposure and generation by census block and calculate a baseline for census blocks within the region.
- Extend bicycle and pedestrian Level of Traffic Stress (LTS) threshold and inventory existing LTS for through corridors and arterials.
- Calculate a 2021 baseline connectivity index for all census block groups, downtowns (Regional and Town Centers) and mainstreets, informed by community-identified barriers to connectivity.
- Calculate a 2021 baseline of total households and employment within a 10-minute walk or bike from transit for all census block groups and Regional/Town Centers.
- Identify gaps in travel time information available for identified routes needed calculating buffer index. Identify gaps on routes where travel time information is needed for calculating reliability (e.g., buffer index).
- Establish benchmarks, milestones and/or estimte costs for Actions. Complete this as early as possible in the scoping of each Action and communicate this information throughout the life of this Strategy.

Advancing TSMO Objectives

This data is needed to track the identified TSMO Performance Measures

References to other Plans and Projects

NCHRP 17-87 Enhancing Pedestrian Volume Estimation and Developing HCM Pedestrian Methodologies for Safe and Sustainable Communities: *https://trec.pdx.edu/research/project/1366*

Priority

Low | Medium | High

Required but not urgent

Timeline

Near: '21 | '22 | '23 | '24 | '25 | '26 | '27 | '28 | '29 | '30 | '31

Milestone: Complete in coordination with RTP update

Tracked By

Metro and ODOT

2. Inventory and manage regional signal and ITS Communication infrastructure.

Planning | **Concepts, Capabilities, & Infrastructure** | Listening & Accountability | Data Sources

Action Description

- Create a regional inventory of traffic signal capabilities by location and operator (e.g., connected to central signal system for traffic signal timing updates, utilizing Next Generation Transit Signal Priority, serving freight, sensing bike and pedestrian movements).
- Using the inventory, develop a high quality, reliable, and redundant signal communication, and fiber network by identifying gaps, prioritizing high need projects, and completing high priority projects.

  Upgrade traffic signals and communication networks on regionally significant corridors to meet the needs of advanced applications such as Next-Generation Transit Signal Priority (NextGen TSP) and Automated Traffic Signal Performance Measures (ATSPM) that require Advanced Transportation Controllers (ATCs) and fiber optic communication.
- Monitor and address signal performance on regionally significant corridors by identifying performance issues such as freight delay, transit delay, or high pedestrian and bicycle traffic stress.

Advancing TSMO Objectives

5.1 Manage recurring and non-recurring congestion to improve travel time reliability for all users, including active transportation, transit, and freight.

6.2 Manage projects and resources to be responsive to changes in land use planning and growth patterns.

Priority

Low | Medium | **High**

Ensure the benefits of Next Generation Transit Signal Priority are extended region-wide

Timeline

Ongoing

'21 | '22 | '23 | '24 | '25 | '26 | '27 | '28 | '29 | '30 | '31

Milestone: September 2022 Division Transit Project

Tracked By

TransPort's Central Signal System Subcommittee and PBOT

3. Develop a Mobility on Demand strategy and policy.

Planning | Concepts, Capabilities, & Infrastructure | Listening & Accountability | Data Sources

Action Description

Create a Regional Mobility on Demand (MOD) Working Group consisting of agency staff, transportation demand management non-profits (e.g., Transportation Management Associations), private partners, and community based organizations and stakeholders representing and helping to solve accessibility issues common to online services, to:

- Build on existing regional policy conversations in support of mobility partnerships, and technology solutions for last-mile connections.
- Participate in expanding access through micro freight delivery (curb side delivery such as on-line purchases, food delivery apps, etc).
- Coordinate with parking managers to improve operations particularly in downtowns and along main streets (e.g., Regional and Town Centers).
- Examine regulations for shared mobility. Examine benchmarks set for shared mobility services (such as the PBOT Scooter Policy) by partner agencies and establish regional minimum level of service benchmarks for MOD service in equity focus areas connecting to opportunities, to Black, Indigenous, people of color, and people with low incomes.
- Evaluate unified payment strategy and related policies, including congestion pricing, as they function to provide demand and system management through MOD, transit and connected travel options.
- Establish a strategy for connecting people to recreational destinations not well served by traditional transit during off-peak service hours.
- Identify opportunities for pilots to connect people to MOD and support them through programs with MOD service providers.
- Develop a pilot package delivery hub program for the “last 50 feet freight delivery”, focusing on equity focus areas, incorporating guidance on siting package lockers, and the ability to co-locate with transit and other services.
- Develop communications with travelers inclusive of people with app or online services accessibility needs, to inform more travelers about these choices.
- Establish public-agency person-to-person lines of communication, formal agreements as necessary, pre-planned emergency needs and information flows supportive of MOD operations.
- Use information flows with forecast models to optimize traveler’s experience and MOD operator logistics.

Priority

Low | Medium | **High**

Timeline

'21	Near '22	'23	'24	'25	'26	'27	'28	'29	'30	'31

Milestone: Form the working group in 2022.

Responsibility

Metro convenes across planners and operators

Advancing TSMO Objectives

2.1 Ensure Black, Indigenous, people of color, and people with low incomes benefit from safety improvements.

2.4 Improve inter-agency & intra-agency collaboration to ensure efficient operations by identifying and addressing barriers in communication when making decisions about network operation or expansion.

4.1 Connect decentralized travel options to facilitate viable destinations in Regional Centers, Town Centers, and employment areas outside downtown Portland.

4.2 Prioritize the completion and expansion of planned transit and active mode networks when investing discretionary revenues especially to destinations with limited travel choices.

4.3 Connect goods and delivery services to people and businesses by providing for and managing last mile connections for goods delivery.

4.4 Increase availability and accessibility of low-cost transportation options by Black, Indigenous, people of color, and people with low incomes.

6.1 Plan and design a flexible transportation network that can adapt to new technology and travel choices that are consistent with the region's desired land use and transportation outcomes.

6.2 Manage projects and resources to be responsive to changes in land use planning and growth patterns.

6.4 Provide public agency staff with the data, tools, models, and training needed to assess long-term disruptive transportation trends.

References to other Plans and Projects

TriMet Mobility on Demand Sandbox Grant 2017-2019: ***https://trimet.org/mod/***

TriMet Integrated Mobility Innovation: ***https://trimet.org/imi/***

City of Portland Transportation Wallet: ***https://www.portland.gov/transportation/wallet***

4. Manage transportation assets to secure the network.

Planning | **Concepts, Capabilities, & Infrastructure** | Listening & Accountability | Data Sources

Action Description

Secure the network from natural disasters, cyber attacks, and other disruptions by physically securing signal cabinets, junction box, and other infrastructure on critical communication corridors to reduce unscheduled downtime. Identifying end of life equipment, and replacing it proactively.

Further Objectives

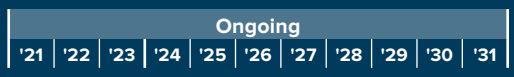
2.2 Collaborate with emergency management when prioritizing investments on key emergency response routes.

6.3 Minimize long term disruptions to the transportation system by creating resiliency to climate change and economic shifts.

Priority

Low | Medium | **High**

Timeline



Tracked By

Individual Agency Responsibilities and TransPort's ITS-NMT Group

5. Pilot Origin-Destination data to prioritize TSMO investments.

Planning | Concepts, Capabilities, & Infrastructure | Listening & Accountability | Data Sources

Action Description

- Identify data sources and obtain Origin-Destination (OD) data to determine the highest use trip pairs in the region, pairs with the greatest trip lengths, pairs with a trip end in an equity focus area, and pairs without existing transit connections for use in planning and project prioritization.
- Use the data to identify TSMO upgrades that benefit multiple modes and are adaptable to emerging technologies (i.e. charging stations for e-bikes and EVs, controller upgrades that allow for varying communication systems).
- Create an active system of OD collection, monitoring, and reporting.

Further Objectives

4.2 Prioritize the completion and expansion of planned transit and active mode networks when investing discretionary revenues especially to destinations with limited travel choices.

5.2 Expand travel time reliability improvements for Black, Indigenous, people of color, and people with low incomes burdened with long travel distances.

6.1 Plan and design a flexible transportation network that can adapt to new technology and travel choices that are consistent with the region's desired land use and transportation outcomes.

6.4 Provide public agency staff with the data, tools, models, and training needed to assess long-term disruptive transportation trends.

Priority

Low | **Medium** | High

Timeline

Near: '23 | '24 | '25

'21 | '22 | '26 | '27 | '28 | '29 | '30 | '31

Tracked By

Metro considers pilot with partners

6. Track and prioritize TSMO Investments for and with Black, Indigenous people of color, and people with low incomes.

Planning | Concepts, Capabilities, & Infrastructure | **Listening & Accountability** | Data Sources

Action Description

- Create a priority process that identifies TSMO solutions for identified needs and guides funding for and with Black, Indigenous people of color, and people with low incomes.
- Review and update TSMO discretionary revenue prioritization to reflect the 2021 TSMO Strategy's updated Goals and Objectives.
- Evaluate TSMO prior investments from the last 10 years and identify disparities for Black, Indigenous, people of color, and people with low incomes.
- Identify and multimodal connectivity disparities to target future TSMO investments.
- Track TSMO investments in equity focus areas and report bi-annually.

Advancing TSMO Objectives

1.4 Ensure Black, Indigenous, people of color, and people with low incomes can safely access multiple low stress mode choices and routes within the transportation system by improving access to transit stops, pedestrian, and bicycle facilities.

3.2 Identify and correct past disparities when planning, operating, and maintaining the transportation system (e.g., transit access, exposure to air toxics, allocation of funds).

4.2 Prioritize the completion and expansion of planned transit and active mode networks when investing discretionary revenues especially to destinations with limited travel choices.

Priority

Low | Medium | **High**

Timeline

Near: '21 | '22 | '23 | '24 | '25 | '26 | '27 | '28 | '29 | '30 | '31

Milestone: RTP Update

Tracked By

Metro, ODOT, and a third-party.

7. Continue freight technology and ITS deployment.

Planning | **Concepts, Capabilities, & Infrastructure** | Listening & Accountability | Data Sources

Action Description

- Utilize existing and pilot new freight ITS technologies that identifies solutions to optimize freight operations and improve safety on critical corridors, such as optimizing progression for trucks, progress to pilot programs, freight dilemma zone detection and green extension.
- Share TSMO-generated data resources broadly with start-ups and established freight services.

Advancing TSMO Objectives

4.3 Connect goods and delivery services to people and businesses by providing for and managing last mile connections for goods delivery.

5.3 Manage critical freight corridors to create reliable routes for freight movement between key destinations.

References to other Plans and Projects

Metro Regional Freight Plan: *https://www.oregonmetro.gov/regional-freight-plan*

City of Portland convened a Freight Committee: *https://www.portlandoregon.gov/transportation/54899*

ODOT Commercial Truck Parking Study: *https://www.oregon.gov/odot/Projects/Pages/Commercial-Truck-Parking-Study.aspx*

Priority

Low | **Medium** | High

Timeline

Tracked By

All Agency Operators

8. Facilitate Ground Truthing of Emerging Technologies.

Planning | **Concepts, Capabilities, & Infrastructure** | Listening & Accountability | Data Sources

Action Description

Respond to community-voiced needs to initiate agency partnerships to test emerging technologies. Consider efforts in context provided by the forthcoming Metro Emerging Trends Study. Consider these as examples, recognizing that more pilots are needed to keep pace with technology advancements:

- Collaborate with ODOT on the connected vehicle infrastructure environment to reduce pedestrian related collisions.
- Explore best practices for collision avoidance systems, policy implications, and implementation.
- Create a readiness training program for the region to evaluate and prepare for risks from technology, economic, and ecological disruptions.
- Identify solutions to changes in growth patterns, travel behavior, and other non-emergency travel trends.
- Partner to increase mobility with electric vehicle (EV) adoption, including e-bikes, shared vehicles and fleets. EVs relate to connectivity index in equity focused areas, downtowns (Regional and Town Centers), main streets and employment areas.

  Collect and evaluate safety and operational performance metrics for multimodal users (including pedestrians, bicyclists, and transit) through emerging detection technologies.

  Partner with regional university transportation research centers in identifying and implementing projects exploring emerging technologies and data sources.
- Collaborate with ODOT Public Transit Division, transit agencies and rail operators to identify technologies for safe, efficient and reliable operations.

Priority

Low | **Medium** | High

Timeline

Ongoing

'21 | '22 | '23 | '24 | '25 | '26 | '27 | '28 | '29 | '30 | '31

Milestone: Metro Emerging Trends Study

Tracked By

Washington County, ODOT, PBOT, and Portland State University (PSU) Transportation Research & Education Center (TREC)

Advancing TSMO Objectives

1.1 Manage the transportation system to reduce negative health impacts so that public health risk does not adversely affect people's mode choice.

1.3 Provide a transportation system where human error does not result in serious injury or loss of life.

4.4 Increase availability and accessibility of low-cost transportation options for Black, Indigenous, people of color, and people with low incomes.

6.1 Plan and design a flexible transportation network that can adapt to new technology and travel choices that are consistent with the region's desired land use and transportation outcomes.

6.4 Provide public agency staff with the data, tools, models, and training needed to assess long-term disruptive transportation trends.

References to other Plans and Projects

ODOT Office of Innovation: *https://www.oregon.gov/odot/Programs/Pages/OfficeOfInnovation.aspx*

FHWA Office of Research, Development, and Technology: *https://highways.dot.gov/research*

FHWA Experimental Features Program

9. Establish a Regional Transit Operators TSMO Group.

Planning | **Concepts, Capabilities, & Infrastructure** | Listening & Accountability | Data Sources

Action Description

Establish a Metro Regional Transit Operators TSMO Group as a subcommittee of Transport consisting of representation from local and regional transit operators. Collaborate with the group to:

- Identify transit stops on high frequency routes without real time bus information technology, prioritize improvements, and complete high priorities.
- Coordination with ODOT Rail Crossing Safety Unit to identify and implement mitigations at transit and train at grade rail crossing locations with a history of collisions.
- Review and Regional NextGen Transit Signal Priority (TSP) projects and develop a coordination standard for deploying TSP throughout the region.
- Coordinate with transit operators to identify TSMO solutions to support a bus on shoulder implementation plan, building on lessons learned from I-5/I-205 pilot program.
- Inform and review speed and reliability project need and solutions.
- Create a standard for reviewing and deploying new technology.

Priority

Low | Medium | **High**

Timeline

Ongoing

'21 | '22 | '23 | '24 | '25 | '26 | '27 | '28 | '29 | '30 | '31

TriMet

Advancing TSMO Objectives

1.3 Provide a transportation system where human error does not result in serious injury or loss of life

2.3 Collaborate with emergency management when prioritizing investments on key emergency response routes.

5.1 Manage recurring and non-recurring congestion to improve travel time reliability for all users, including active transportation, transit, and freight.

5.2 Expand travel time reliability improvements for Black, Indigenous, people of color, and people with low incomes burdened with long travel distances.

5.4 Communicate expected changes in reliability so that travelers can make informed travel choices.

10. Unify and standardize fare subsidies for transit and MOD.

Planning | **Concepts, Capabilities, & Infrastructure** | Listening & Accountability | Data Sources

Action Description

- Create a policy that includes standardized eligibility criteria with regard for ADA, Medicaid, and other assistance programs. Utilize existing efforts such as the General Transit Feed Specification for Eligibilities and Capabilities.
- Expand low or free fare/price subsidies to include MOD and transit for Black, Indigenous, people of color, and people with low incomes.
- Evaluate feasibility of implementing City of Portland's Transportation Wallet pilot program for connecting affordable transportation options with people living in affordable housing.

Advancing TSMO Objectives

2.1 Collaborate to provide consistent travel experiences across jurisdictional boundaries through integrated payment and scheduling systems, integrated corridor management, and data sharing between agencies.

4.4 Increase availability and accessibility of low-cost transportation options for Black, Indigenous, people of color, and people with low incomes.

References to other Plans and Projects

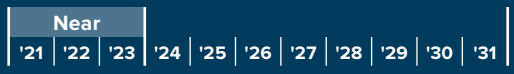
ODOT General Transit Feed Specification (GTFS) Eligibilities and Capabilities Project: *https://github.com/full-path/gtfs-eligibilities/blob/main/project_summary.md*

Portland BIKETOWN for all: *https://www.biketownpdx.com/pricing/biketown-for-all?utm_medium=email&utm_source=govdelivery*

Priority

Low | Medium | **High**

Timeline



Tracked By

TriMet

11. Develop an ITS travel time Information Data Collection and Distribution Plan for RDPO Regional Emergency Routes.

Planning | **Concepts, Capabilities, & Infrastructure** | Listening & Accountability | Data Sources

Action Description

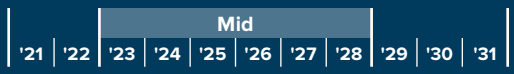
- Coordinate with agency partners to identify bottlenecks on Regional Disaster Preparedness Organization (RDPO) Regional Emergency Transportation Routes, Oregon State Seismic Lifeline Routes and routes lacking redundancy and develop TSMO solutions to address these.
- Model strategies to reduce emergency response times and evacuation scenarios through technology or other actions.
- Create an Emergency Route travel time data collection plan. The plan should:
  - Identify Intelligent Transportation Systems (ITS) travel time information data collection and distribution gaps on RDPO Regional Emergency Transportation Routes and Oregon State Seismic Lifeline Routes to inform detour routing decisions and provide alternative route information during evacuations.
  - Prioritize data collection and distribution gaps on RDPO Regional Emergency Transportation Routes and Oregon State Seismic Lifeline Routes.
  - Install data collection and distribution infrastructure on RDPO Regional Emergency Transportation Routes and Oregon State Seismic Lifeline Routes.

Priority

Low | **Medium** | High

8 SAC Votes

Timeline



Tracked By

ODOT

Advancing TSMO Objectives

6.2 Manage projects and resources to be responsive to changes in land use planning and growth patterns.

6.3 Minimize long term disruptions to the transportation system by creating resiliency to climate change and economic shifts.

References to other Plans and Projects

PORTAL Archive: *https://portal.its.pdx.edu/home*

Regional Emergency Transportation Route (RETR) Phase 1: *https://rdpo.net/emergency-transportation-routes*

12. Explore new TSMO data sources.

Planning | Concepts, Capabilities, & Infrastructure | Listening & Accountability | Data Sources

Action Description

» Explore new sources to measure identified exploratory TSMO performance measures. Exploratory metrics include:

- Average miles walked and biked
- Frequency of secondary crashes
- Collision risk
- Transportation cost burden for Black, Indigenous, people of color, and people with low incomes
- Non-recurring delay associated with incidents
- Freight travel time and movement data

» Develop a National Highway Traffic Safety Administration Fatality Analysis Reporting System data reporting policy and incorporate into annual reporting.

Priority

Low | Medium | High

SAC did not vote on this

Timeline

Ongoing

'21 | '22 | '23 | '24 | '25 | '26 | '27 | '28 | '29 | '30 | '31

Responsibility

PSU TREC

Advancing TSMO Objectives

1.2 Ensure Black, Indigenous, people of color, and people with low incomes benefit from safety improvements.

1.3 Provide a transportation system where human error does not result in serious injury or loss of life.

1.4 Ensure Black, Indigenous, people of color, and people with low incomes can safely access multiple low stress mode choices and routes within the transportation system by improving access to transit stops, pedestrian, and bicycle facilities.

3.2 Identify and correct past disparities when planning, operating, and maintaining the transportation system (e.g., transit access, exposure to air toxics, allocation of funds).

5.1 Manage recurring and non-recurring congestion to improve travel time reliability for all users, including active transportation, transit, and freight.

5.3 Manage critical freight corridors to create reliable routes for freight movement between key destinations.

References to other Plans and Projects

Portal: *http://portal.its.pdx.edu/*

BikePed Portal: *http://bikeped.trec.pdx.edu/*

NHTSA FARS Data: *https://www.nhtsa.gov/research-data/fatality-analysis-reporting-system-fars*

13. Create a community listening program.

Planning | Concepts, Capabilities, & Infrastructure | **Listening & Accountability** | Data Sources

Action Description

Build capacity for a community listening program to reduce barriers for travelers to report experiences related to TSMO. Tactics may involve but are not limited to partnering with large-scale public outreach to facilitate a breakout group specific to TSMO, supporting equity-focused consultants and Community Based Organizations (CBOs) to share input, initiating a study of agency customer feedback (including social media), piloting an anonymous feedback system generated by and for Black, Indigenous people of color, and people with low incomes to report travel experiences related to operations. Build capacity at CBOs to share an understanding of this Strategy and to guide partnership. Collaborate with CBOs using a culturally specific model and approach to reach out to non-English speakers or limited-English-proficiency groups.

As part of the listening program, create a pilot where Black, Indigenous people of color, and people with low incomes are paid to provide feedback and share their traveler experiences/stories with agency staff. Support efforts with service providers to add capacity. Participate to listen for TSMO-related issues and follow up on previous efforts, identifying TSMO-related solutions.

Priority

Low | Medium | **High**

Timeline

Near										
'21	'22	'23	'24	'25	'26	'27	'28	'29	'30	'31

Responsibility

ODOT, Metro, and PSU TREC

Advancing TSMO Objectives

3.1 Prioritize reaching underrepresented groups when providing traveler information and community outreach and ensure that modal access and traveler information is free from technological and financial barriers.

3.3 Identify and increase awareness of the unique travel experiences for Black, Indigenous, people of color, and people with low incomes.

References to other Plans and Projects

TriMet Reimagine Transportation

ODOT Office of Social Equity

Metro Regional Travel Options Program.

14. Create continuous improvement process for existing and new signal systems and related performance.

Planning | **Concepts, Capabilities, & Infrastructure** | Listening & Accountability | Data Sources

Action Description

Outline and begin continuous improvement process for signal systems and new concepts that serve major arterials and high-injury corridors. The continuous improvement process will utilize systems engineering from concept of operations through retirement of legacy systems and prioritize solutions based on effectiveness and costs.

In coordination with asset managers, inventory automatic traffic recorder stations, Advanced Transportation Controllers, and detection sensors (location, status, age, and operability). Identify through corridors and major arterials that do not currently have travel time information collection by mode to identify gaps existing system. Create a plan to mitigate identified gaps by completing high priority projects targeted for either technological upgrades (sensors, automatic traffic recorders, etc.) or crowd sourced data.

Advancing TSMO Objectives

2.1 Collaborate to provide consistent travel experiences across jurisdictional boundaries through integrated payment and scheduling systems, integrated corridor management, and data sharing between agencies.

5.1 Manage recurring and non-recurring congestion to improve travel time reliability for all users, including active transportation, transit, and freight.

6.1 Plan and design a flexible transportation network that can adapt to new technology and travel choices that are consistent with the region's desired land use and transportation outcomes.

6.4 Provide public agency staff with the data, tools, models, and training needed to assess long-term disruptive transportation trends.

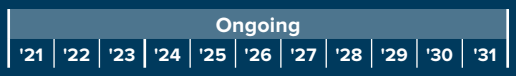
References to other Plans and Projects

ODOT ITS Master Communication Plan.

Priority

Low | Medium | High

Timeline



Responsibility

TransPort's Center Signal System Users Group and PBOT

15. Deploy regional traveler information systems.

Planning | **Concepts, Capabilities, & Infrastructure** | Listening & Accountability | Data Sources

Action Description

Create a traveler information and educational campaign with Black, Indigenous, people of color, people with low incomes, and people with limited English proficiency. The campaign should also start deploying traveler information systems (TIS) where community-voiced need and multiple transportation options are present, building into a methodology TIS priorities that may involve transit stops, public buildings, major destinations within regional centers and on-vehicle displays. The TIS should incorporate a broad cross section of traveler needs which may include travel time, route, and real-time transit and shared-use mobility information.

Further Objectives

2.3 Collaborate with and educate travelers.

3.1 Prioritize reaching underrepresented groups when providing traveler information and community outreach and ensure that modal access and traveler information is free from technological and financial barriers.

References to other Plans and Projects

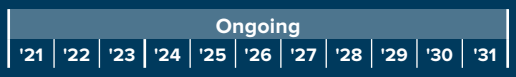
ODOT's TripCheck Program: *https://tripcheck.com*

TriMet Third Party Apps: *https://trimet.org/apps/*

Priority

Low | Medium | **High**

Timeline



Responsibility

Metro for convening and scoping

16. Implement Integrated Corridor Management and mainstream into corridor planning.

Planning | **Concepts, Capabilities, & Infrastructure** | Listening & Accountability | Data Sources

Action Description

Provide tools for regional partners based on I-84 Multimodal Integrated Corridor Management (ICM) Deployment Plan including:

- Establish a multimodal detour policy across agencies. Define lines of communication and pre-plan emergency needs by rehearsing scenarios for a variety of events impacting operations. Provide job-shadow and training experiences.
- Create a data sharing policy and inter-agency(s) agreement with agency partners to incorporate data into PORTAL or another identified internal sharing system. Share construction schedules across agencies. Implement a decision support system, employing forecast models as useful
- Participate in all phases of a corridor project listening for needs voiced by communities, considering disruptions and proposing TSMO-related solutions where applicable. Keeep communication lines open post-project to recognize ongoing burdens and participate in adjustments

Beginning with the next Regional Transportation Plan update, consider corridor needs that can be met through ICM based on regional efforts and Federal Highway Administration guidance and local operators.

Advancing TSMO Objectives

1.1 Collaborate to provide consistent travel experiences across jurisdictional boundaries through integrated payment and scheduling systems, integrated corridor management, and data sharing between agencies.

2.2 Collaborate with emergency management when prioritizing investments on key emergency response routes.

2.4 Improve inter-agency & intra-agency collaboration to ensure efficient operations by identifying and addressing barriers in communication when making decisions about network operation or expansion.

5.1 Manage recurring and non-recurring congestion to improve travel time reliability for all users, including active transportation, transit, and freight.

6.4 Provide public agency staff with the data, tools, models, and training needed to assess long-term disruptive transportation trends.

References to other Plans and Projects

I-84 Multimodal ICM Deployment Plan

Priority

Low | Medium | High

Timeline

Near: '21 | '22 | '23 | '24 | '25 | '26 | '27 | '28 | '29 | '30 | '31

Milestone: RTP Update

Responsibility

Metro

17. Create a TSMO Safety Toolbox.

Planning | **Concepts, Capabilities, & Infrastructure** | Listening & Accountability | Data Sources

Action Description

Create a TSMO Safety Toolbox to advance actions identified in the Metro Regional Safety Strategy. The toolbox should utilize the Safe Systems Approach. Include guidance for the deployment of new technologies and create policy for evaluating their effectiveness.

Create a Speed Management Plan in coordination with Statewide Policy, and collaborate with local agencies to provide guidance and implementation program for active speed management and feedback including, automated speed feedback signs, changeable speed limits, automated enforcement, and traffic calming solutions. Evaluate speed limits and identify opportunities to apply a safe systems approach to speeds in regional and town centers, high pedestrian, and bicycle corridors, and in equity focus areas. Apply Automated Traffic Signal Performance Measures (ATSPMs), including speeds, to emerging research related to speed reduction through signal timing strategies.

The toolbox should respond to context and point out where overlapping road functions or classifications have potential for creating risk and/or preventing implementation of TSMO safety tools.

Advancing TSMO Objectives

1.2 Ensure Black, Indigenous, people of color, and people with low incomes benefit from safety improvements.

1.3 Provide a transportation system where human error does not result in serious injury or loss of life.

References to other Plans and Projects

Metro's Regional Transportation Safety Strategy: ***https://www.oregonmetro.gov/regional-transportation-safety-plan***

Priority

Low | Medium | **High**

Timeline

'21	Near '22	'23	'24	'25	'26	'27	'28	'29	'30	'31

Milestone: Achieve Vision Zero by 2035.

Responsibility

18. Participate in regional public outreach to assist in guiding, listening and learning through TSMO-focused conversations.

Planning | Concepts, Capabilities, & Infrastructure | Listening & Accountability | Data Sources

Action Description

TSMO-focused public outreach should include traveler safety information and be focused on Black, Indigenous, people of color, people with low incomes, and people with limited English proficiency. Work with local agencies to create/update public outreach that specifically include equity focused TSMO that include Black, Indigenous, people of color, people with low incomes, and people with limited English proficiency.

Advancing TSMO Objectives

1.2 Ensure Black, Indigenous, people of color, and people with low incomes benefit from safety improvements.

2.3 Collaborate with and educate travelers.

3.1 Prioritize reaching underrepresented groups when providing traveler information and community outreach and ensure that modal access and traveler information is free from technological and financial barriers.

5.4 Communicate expected changes in reliability so that travelers can make informed travel choices.

Priority

Low | **Medium** | High

Timeline

Near: '21 | '23 | '23 | '24

'25 | '26 | '27 | '28 | '29 | '30 | '31

Responsibility

Metro, ODOT, and a Third Party

19. Improve TSMO data availability to aid in traveler decisions and behavior.

Planning | Concepts, Capabilities, & Infrastructure | **Listening & Accountability** | Data Sources

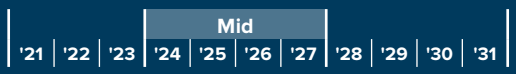
Action Description

- Unify multimodal trip planning by coordinating among transit service providers' and riders' needs, creating opportunities for TriMet and other Open Trip Planner partners.
- Create an external facing dashboard for TSMO metrics accountability connecting each metrics' relevance to travelers.
- Communicate TSMO to raise awareness in the need for travelers to participate to improve transportation system outcomes and metrics. For example, signage about moving over for emergency vehicles, merging, or moving property-damage-only crashes out of the travel lane will help with overall system management and clearance metrics.
- Increase communication about how the system could operate safer and more efficiently using signage and coordinating agency Public Service Announcements (PSAs.)

Priority

Low | **Medium** | High

Timeline



Responsibility

Metro, Trimet, and ODOT

Advancing TSMO Objectives

2.1 Collaborate to provide consistent travel experiences across jurisdictional boundaries through integrated payment and scheduling systems, integrated corridor management, and data sharing between agencies.

2.3 Collaborate with and educate travelers.

5.4 Communicate expected changes in reliability so that travelers can make informed travel choices.

References to other Plans and Projects

TBD

20. Build and use a TSMO Toolbox to connect gaps in bicycle and pedestrian infrastructure.

Planning | **Concepts, Capabilities, & Infrastructure** | Listening & Accountability | Data Sources

Action Description

Create a connected bicycle and pedestrian infrastructure with TSMO tools. Start with a Connectivity Index of existing pedestrian and bicycle infrastructure that includes community-voiced barriers, inventories of low stress facilities, and other identified gaps in the system. The toolbox should consider how pedestrian and bicycle modes interact with signals, illumination, and transit connections, while also the disparities experienced by Black, Indigenous, people of color, and people with low incomes. Investments made using the toolbox should afford complete treatment to address these disparities.

Advancing TSMO Objectives

1.4 Ensure Black, Indigenous, people of color, and people with low incomes can safely access multiple low stress mode choices and routes within the transportation system by improving access to transit stops, pedestrian, and bicycle facilities.

4.1 Connect decentralized travel options to facilitate viable destinations in Regional Centers, Town Centers, and employment areas outside downtown Portland.

4.2 Prioritize the completion and expansion of planned transit and active mode networks when investing discretionary revenues especially to destinations with limited travel choices.

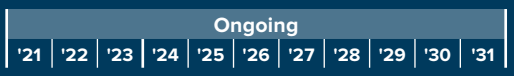
References to other Plans and Projects

ODOT Active Transportation Needs Inventory (ATNI): *https://www.oregon.gov/odot/RPTD/Pages/Statewide-Active-Transportation-Needs-Inventory.aspx*

Priority

Low | Medium | **High**

Timeline



Milestone: ODOT Pedestrian and Bicycle Priority Routes

Responsibility

All Agencies, and PSU TREC

21. Update the Regional Intelligent Transportation Systems (ITS) Architecture.

Planning | Concepts, Capabilities, & Infrastructure | Listening & Accountability | Data Sources

Action Description

Collaborate on updates to the Regional ITS Architecture by reviewing changes on a quarterly basis and adjusting every two years to include innovations in the national and statewide architecture.

Advancing TSMO Objectives

2.4 Improve inter-agency & intra-agency collaboration to ensure efficient operations by identifying and addressing barriers in communication when making decisions about network operation or expansion.

6.1 Plan and design a flexible transportation network that can adapt to new technology and travel choices that are consistent with the region's desired land use and transportation outcomes.

References to other Plans and Projects

Metro's Regional ITS Architecture 2016 Update: ***https://www.oregonmetro.gov/public-projects/regional-tsmo-strategy/2010-2020-tsmo***

Priority

Low | Medium | High

Timeline

'21	Near '22	'23	'24	'25	'26	'27	'28	'29	'30	'31

Responsibility

Metro, ITS Architecture Group

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If you picnic at Blue Lake or take your kids to the Oregon Zoo, enjoy symphonies at the Schnitz or auto shows at the convention center, put out your trash or drive your car **– we've already crossed paths.**

So, hello.
We're Metro – nice to meet you.

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Adopted January 6, 2022
December 2021

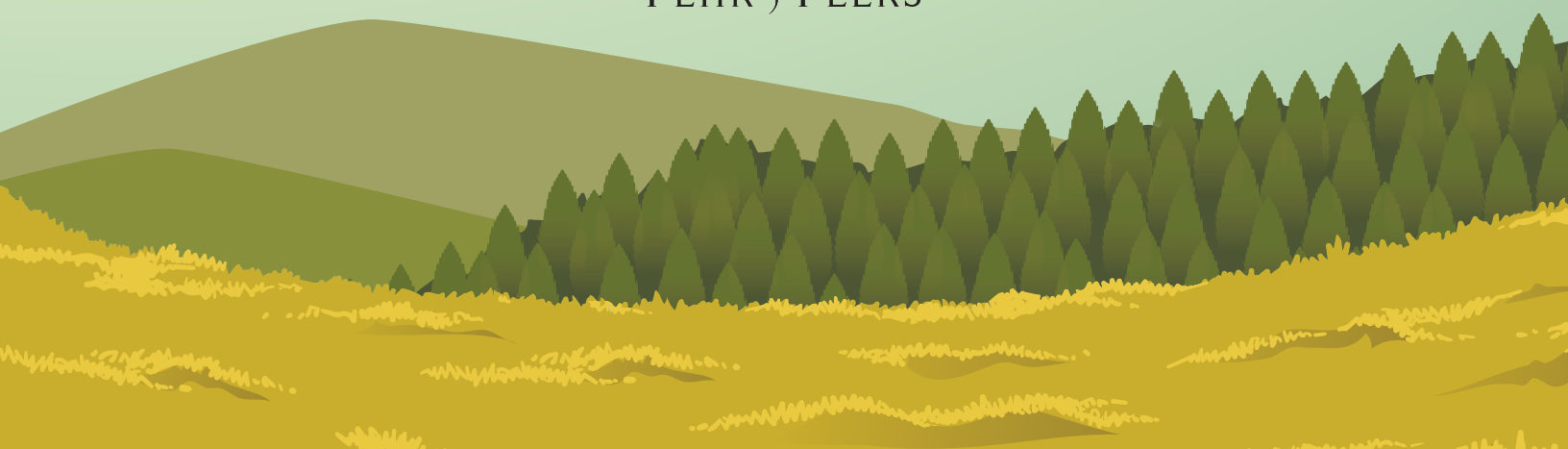
2021 Transportation System Management & Operations (TSMO) Strategy

Portland Metro Region

TSMO
Portland Metro Region

Metro

FEHR & PEERS



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Final Draft

Exhibit B

2021 TSMO Strategy Appendices

December 2021

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Appendix A

List of TSMO Projects Planned in 2010

2010 TSMO Planned Projects

Project	Timeframe	Goals				Capital $ Planned by 2020	OM $ Planned by 2020
		Reliability	Safety and Security	Quality of Life	Traveler Information		
Region Wide Projects							
Operate and Maintain Regional ITS Communications Network	Ongoing	x				$ -	$ 1,000,000
Active Traffic Management RCTO	1-5 years	x				$ 350,000	$ -
Transit Priority Treatment Performance Measurement	1-5 years	x				$ 200,000	$ 2,000,000
Region-wide Access Management Strategies	6-10years		x			$ 500,000	$ -
Enhance Regional Traffic Signal System	1-5 years	x				$ 12,000,000	$ 500,000
Implement Freight Data Collection System	6-10years	x				$ 50,000	$ 500,000
Congestion Pricing/ High Occupancy Toll Lanes	1-5 years			x		$ 5,000,000	$ -
Active Traffic Management Pilot Project	6-10years	x				$ 5,000,000	$ 500,000
Next Generation Transit Signal Priority System	6-10years	x				$ 500,000	$ 500,000
24-Hour Transportation Operations Coverage	Beyond 10 years	x			x	$ -	$ -
Automated Speed Enforcement	Beyond 10 years		x			$ 1,000,000	$ -
Portland OR Regional Transportation Data Archive Listing (PORTAL) Enhancements	Ongoing				x	$ -	$ 1,000,000
Multi-modal traveler data and tools	Ongoing				x	$ -	$ 1,500,000
Park & Ride Traveler Information	Ongoing				x	$ 500,000	$ 1,500,000
TripCheck Travel Information Portal (TTIP) Enhancement	1-5 years				x	$ 3,000,000	$ 20,000,000
Arterial Performance Measure	1-5 years	x				$ 750,000	$ 1,000,000
Transit Performance Measurement System	1-5 years			x		$ 350,000	$ 500,000
Incident Management	1-5 years	x				$ 2,000,000	$ 2,000,000
Expand Incident Management Teams/Training	1-5years		x			$ -	$ 5,000,000
Integrate Voice and Data Networks	6-10years		x			$ 10,000,000	$ 2,500,000
Emergency Responders GIS System Upgrades	6-10years		x			$ 200,000	$ 250,000
Dynamic Routing and Preemption Pilot Project	Beyond 10 years	x				$ 500,000	$ -
Collaborative Marketing	Ongoing			x		$ -	$ 9,750,000
Employer Services	Ongoing			x		$ -	$ 10,000,000
Rideshare Services	Ongoing			x		$ -	$ 3,600,000
Measurement	Ongoing	x				$ -	$ 1,500,000
TSMO Program	Ongoing	x				$ -	$ 3,350,000
Parking Management Strategy	1-5 years			x		$ 100,000	$ -
Parking Management Pilot Program	1-5 years			x		$ -	$ 1,000,000
Smartcard fare system RCTO	1-5 years	x				$ 100,000	$ -
Smartcard fare system pilot project	1-5 years	x				$ 12,000,000	$ -
Youth transit pass program	6-10years			x		$ -	$ 500,000
Youth transit pass program	1 year (6-10 years)			x		$ -	$ 15,000,000
Regional Incentive/Disincentive System	Beyond 10 years	x				$ 9,000,000	$ -
				Region-Wide Totals		**$ 63,100,000**	**$ 84,950,000**

2010 TSMO Planned Projects

Project	Timeframe	Goals				Capital $ Planned by 2020	OM $ Planned by 2020
		Reliability	Safety and Security	Quality of Life	Traveler Information		
Corridor Projects							
1. Portland Central City to Vancouver	Varies	x	x	x	x	$ 7,030,000	$ 43,210,000
2. Portland Central City to Tualatin		x	x	x	x	$ 15,760,000	$ 17,302,000
3. Tualatin to Wilsonville		x	x	x	x	$ 2,900,000	$ 10,448,000
4. Portland City Central Loop		x	x	x	x	$ 7,615,000	$ 14,705,900
5. Portland Central City to Gateway		x	x	x	x	$ 17,830,000	$ 9,828,330
6. Gateway to Troutdale, Wood Village, and Fairview		x	x	x	x	$ 20,650,000	$ 17,507,000
7. Tualatin to Oregon City		x	x	x	x	$ 650,000	$ 1,262,000
8. Oregon City to Gateway		x	x	x	x	$ 13,900,000	$ 21,247,000
9. Gateway to Clark County		x	x	x	x	$ 6,420,000	$ 3,510,000
10. Portland Central City to Milwaukie		x	x	x	x	$ 4,480,000	$ 9,175,000
11. Milwaukie to Clackamas		x	x	x	x	$ 1,400,000	$ 3,847,000
12. Intersate 205 to Rock Creek Junction		x	x	x	x	$ 4,160,000	$ 4,097,000
13. Rock Creek Junction to US 26		x	x	x	x	$ 3,400,000	$ 1,172,000
14. Oregon City to Willamette Valley		x	x	x	x	$ 5,390,000	$ 792,000
15. Troutdale/Wood Village/Fairview to Damascus		x	x	x	x	$ 15,400,000	$ 2,060,000
16. Rivergate to Interstate 5		x	x	x	x	$ 10,475,000	$ 4,735,000
17. Interstate 5 to Columbia Shore South		x	x	x	x	$ 8,300,000	$ 5,183,330
18. Portland Central City to Columbia County		x	x	x	x	$ 600,000	$ 3,752,000
19. Beaverton to Tigard		x	x	x	x	$ 11,200,000	$ 22,595,000
20. Tirgard/Tualatin to Sherwood		x	x	x	x	$ 13,000,000	$ 4,800,000
21. Portland Central City to Beaveron		x	x	x	x	$ 15,410,000	$ 10,020,000
22. Beaverton to North Plains		x	x	x	x	$ 29,150,000	$ 7,417,000
23. Forest Grove to North Plains		x	x	x	x	$ 950,000	$ 2,667,000
					Corridor Totals	**$ 216,070,000**	**$ 221,332,560**

Notes:
Costs do not include projects in the 11+ year timeframe
Assumes projects in timeframe "1-5 years" and "through 10 years" were all active for 10 years, and projects in the timeframe "6-10 years" were active for 5 years. Projects in the "11+ years" timeframe were not included in this total.

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Appendix B

SAC Member List

2021 TSMO Strategy Stakeholder Advisory Committee

Margi Bradway, Metro's Deputy Director of Planning & Development

Kate Freitag, ODOT's Region 1 Traffic Engineer, TransPort Chair

Millicent Williams, former Portland Bureau of Transportation's Deputy Director

Wendy Cawley, Portland Bureau of Transportation's City Engineer

Joe Marek, Clackamas County's Transportation Safety Program Manager

Lisha Shrestha, Division Midway Alliance's Executive Director

Debra Dunn, Synergy Resources Group's President and Founder, Oregon Environmental Council Board Member

Avi Unnikrishnan, Ph.D., Portland State University's Professor, Dept. of Civil and Environmental Engineering

Matt Ransom, Southwest Washington Regional Transportation Council's Executive Director

Geoff Bowyer, ODOT's Region 1 Traffic Management Operations Center

Jon Santana, TriMet's Interim Executive Director of Transportation

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Appendix C

Vision & Goals Memo + Objectives Memo

Portland Metro Region

Memorandum

Date: March 16, 2021

To: Caleb Winter, Metro and Scott Turnoy, ODOT

From: Briana Calhoun, Kara Hall, and Chris Grgich, Fehr & Peers

Subject: DRAFT Vision & Goals for the 2021 Transportation Systems Management and Operations Strategy

PT20-0045 ODOT Key 21411

Metro, the Oregon Department of Transportation (ODOT), and their partner agencies are collaborating to develop the 2021 Regional Transportation Systems Management and Operations Strategy (2021 TSMO Strategy).

The 2021 TSMO Strategy will position the region to collaboratively manage the transportation system in a rapidly changing environment while achieving regional goals such as safety, equity, vibrant communities, shared prosperity, and a healthy environment.

This memorandum presents two components essential to creating a Strategy that meets the needs of the region, the vision and goals.

The **vision** presented below, is an aspirational statement that is clear on what TSMO stakeholders are trying to achieve through investments and collaboration.

This is followed by six **goals**, which provide strategic direction for collaboration and investment decisions to make progress toward the vision over the next 10 years.

Input gathered during the first Stakeholder Advisory Committee (SAC) workshop was used to inform development of the draft vision and goals. During the meeting, committee members were asked to share what components of the existing transportation system the Strategy should protect, what it should create, and what it should avoid. Input provided during the workshop resulted in the identification of four themes that the vision and goals should address:

- **Equity**: all people can travel and all voices are heard
- **Safety**: all people can travel without harm
- **Access** and **Choice**: all people can access and choose different modes when traveling
- **Coordination** and **Collaboration**: continued communication across agencies and state lines, within agency departments, and with the public

Portland Metro Region

2021 TSMO Strategy Vision

Following the SAC workshop, several vision statements were developed for consideration by the Project Management Team (PMT). Collaboration with the PMT, resulted in selection of the draft vision statement below as the aspirational statement that sets the path for what this strategy will achieve over the long-term.

> **Collaborate to provide reliable, agile, and connected travel choices so that all users are free from harm, and to eliminate the disparities experienced by people of color and historically marginalized communities.**

2021 TSMO Strategy Goals

With Metro staff input, Fehr & Peers developed six goals to provide broad strategic direction for what TSMO stakeholders are trying to achieve through investments and collaboration. The goal themes and statements are presented in **Table 1**. We drafted these goals to advance the vision for the 2021 TSMO Strategy and show they align with other regional plans, contributing to consistent policy within the region. Two goals, **Eliminate Disparities** and **Plan for the Future** were not part of the 2010-2020 TSMO Plan; however, they are supported by ODOT's Oregon Transportation Plan (OTP) and Oregon Highway Plan (OHP) and/or Metro's Regional Transportation Plan (RTP).

Portland Metro Region

Table 1. Draft Goals

2021 TSMO Strategy Goals	Similar Goals	2018 RTP Pillar
Free from Harm: Create a transportation system where all users are free from harm.	• 2010 TSMO Plan • Metro RTP • ODOT OTP	• Safety & Equity
Regional Partnerships/Collaboration: Collaborate as effective stewards of the transportation system.	• 2010 TSMO Plan • Metro RTP • ODOT OTP	• Accountability, Safety, & Reliability
Eliminate Disparities: Eliminate the disparities in the transportation system experienced by people of color and historically marginalized communities.	• Metro RTP	• Equity
Connected Travel Choices: Connect all people to the goods, services, and destinations they need through a variety of travel choices.	• Metro RTP • ODOT OTP • ODOT OHP	• Congestion & Climate
Reliable Travel Choices: Provide a transportation system that is reliable for all users.	• 2010 TSMO Plan • Metro RTP • ODOT OHP	• Reliability & Congestion
Prepare for Change: Manage the system to be agile in the face of growth, disruptions, and changing technology.	• Metro RTP • ODOT OTP	• Climate & Resilience

Portland Metro Region

Memorandum

Date: July 28, 2021

To: Caleb Winter, Metro and Scott Turnoy, ODOT

From: Briana Calhoun, Kara Hall, and Chris Grgich, Fehr & Peers

Subject: Objectives for the 2021 Transportation Systems Management and Operations Strategy

PT20-0045 ODOT Key 21411

Introduction

Metro, the Oregon Department of Transportation (ODOT), and their partner agencies are collaborating to develop the 2021 Regional Transportation Systems Management and Operations Strategy (2021 TSMO Strategy).

The 2021 TSMO Strategy will position the region to collaboratively manage the transportation system in a rapidly changing environment while achieving regional goals such as safety, equity, vibrant communities, shared prosperity, and a healthy environment.

This memorandum introduces the objectives developed for the six goals of the 2021 TSMO Strategy. The objectives, presented below, are the first step in defining how the region will achieve the goals. Development of the objectives will be followed by the identification of Performance Metrics, Targets, and Actions.

2021 TSMO Strategy Goals

With input from the Stakeholder Advisory Committee**,** the Project Management Team (PMT), and Metro staff**,** six goals were drafted for the 2021 TSMO Strategy. The goals, which provide strategic direction for collaboration, network operation, and investment decisions to make progress toward the vision for the next 10 years are presented in Table 1. See Table A1, included as an attachment to this memorandum, for more detail on how the six goals align with other regional plans and contribute to consistent policy within the region.

Portland Metro Region

Table 1. 2021 TSMO Strategy Draft Goals

2021 TSMO Strategy Goals
Free from Harm: Create a transportation system where all users are free from harm.
Regional Partnerships/Collaboration: Collaborate as effective stewards of the transportation system.
Eliminate Disparities: Eliminate the disparities in the transportation system experienced by black, indigenous, (and) people of color and low income individuals.
Connected Travel Choices: Connect all people to the goods, services, and destinations they need through a variety of travel choices.
Reliable Travel Choices: Provide a transportation system that is reliable for all users.
Prepare for Change: Manage the system to be agile in the face of growth, disruptions, and changing technology.

2021 TSMO Objectives

To initiate development of objectives for the 2021 TSMO Strategy, Fehr & Peers compiled existing objectives and policies documented in regional and statewide plans that aligned with the six goals developed for the strategy update. Plans reviewed include:

- 2010 Regional TSMO Plan (Metro)
- 2018 Regional Transportation Plan (Metro)
- Oregon Transportation Plan (ODOT, 2006)
- Oregon Highway Plan (ODOT, 1999)

This review of other regional and statewide plans served as a source of example policies and facilitated a comparison between existing policy and objectives to confirm that objectives being developed for the 2021 TSMO Strategy contribute to consistent policy within the region and state. To see how existing policies and objectives align with the goals for the 2021 TSMO Strategy see **Tables B1-3** in **Attachment B**.

The draft objectives, presented below, were informed by input from the Stakeholder Advisory Committee (SAC) through two workshops. Each workshop focused on three goals and provided the opportunity for the SAC members to collaborate and draft objectives for each goal. This input was then compiled by Fehr & Peers to develop draft objectives that capture the key themes that emerged during the SAC workshop.

The final objectives will reflect collaboration with Metro Staff and the PMT before being presented back to the SAC.

Portland Metro Region

Free from Harm

Goal	Draft Objectives
Create a transportation system where all users are free from harm.	Manage the transportation system to reduce negative health impacts so that public health risk does not adversely effect people's mode choice.
	Ensure black, indigenous, (and) people of color and low income individuals benefit from safety improvements.
	Provide a transportation system where human error does not result in serious injury or loss of life.
	Ensure people of color and low income communities can safely access multiple low stress mode choices and routes within the transportation system by improving access to transit stops, pedestrian, and bicycle facilities.

Regional Partnerships/Collaboration

Goal	Draft Objectives
Collaborate as effective stewards of the transportation system.	Collaborate to provide consistent travel experiences across jurisdictional boundaries through integrated payment and scheduling systems, integrated corridor management, and data sharing between agencies.
	Collaborate with emergency management when prioritizing investments on key emergency response routes.
	Collaborate with and educate travelers.
	Improve interagency collaboration to ensure efficient operations by identifying and addressing barriers in communication when making decisions about network operation or expansion.

Portland Metro Region

Eliminate Disparities

Goal	Draft Objectives
Eliminate the disparities in the transportation system experienced by black, indigenous, (and) people of color and low income individuals.	Prioritize reaching underrepresented groups when providing traveler information and community outreach and ensure that modal access and traveler information is free from technological and financial barriers.
	Identify and correct disparities when planning, operating, and maintaining the transportation system (e.g., transit access, GHG exposure, allocation of funds).
	Identify and increase awareness of the unique travel experiences of people of color and low income individuals.
	Reduce the transportation cost burden experienced by black, indigenous, (and) people of color and low income individuals.

Connected Travel Choices

Goal	Draft Objectives
Connect all people to the goods, services, and destinations they need through a variety of travel choices.	Connect decentralized travel options to facilitate viable destinations in Regional Centers, Town Centers, and employment areas outside downtown Portland.
	Prioritize the completion and expansion of planned transit and active mode networks when investing discretionary revenues especially to destinations with limited travel choices.
	Connect goods and delivery services to people and businesses by providing for and managing last mile connections for goods delivery.
	Increase availability and accessibility of low-cost transportation options for low income individuals and people of color.

Portland Metro Region

Reliable Travel Choices

Goal	Draft Objectives
Provide a transportation system that is reliable for all users.	Manage recurring and non-recurring congestion to improve travel time reliability for all users, including active transportation, transit and freight.
	Expand travel time reliability improvements for people of color and historically marginalized communities burdened with long travel distances.
	Manage critical freight corridors to create reliable routes for freight movement between key destinations.
	Communicate expected changes in reliability so that travelers can make informed travel choices.

Prepare for Change

Goal	Draft Objectives
Manage the system to be agile in the face of growth, disruptions, and changing technology.	Plan and design a flexible transportation network that can adapt to new technology and travel choices that are consistent with the region's desired land use and transportation outcomes.
	Manage projects and resources to be responsive to changes in land use planning and growth patterns.
	Minimize long term disruptions to the transportation system by creating resiliency to climate change and economic shifts.
	Provide public agency staff with the data, tools, models, and training needed to assess long-term disruptive transportation trends.

Portland Metro Region

Table A1. Goals Summary

2021 TSMO Strategy Goals	Similar Goals	2018 RTP Pillar
Free from Harm: Create a transportation system where all users are free from harm.	• 2010 TSMO Plan • Metro RTP • ODOT OTP	• Safety & Equity
Regional Partnerships/Collaboration: Collaborate as effective stewards of the transportation system.	• 2010 TSMO Plan • Metro RTP • ODOT OTP	• Accountability, Safety, & Reliability
Eliminate Disparities: Eliminate the disparities in the transportation system experienced by black, indigenous, (and) people of color and low income individuals.	• Metro RTP	• Equity
Connected Travel Choices: Connect all people to the goods, services, and destinations they need through a variety of travel choices.	• Metro RTP • ODOT OTP • ODOT OHP	• Congestion & Climate
Reliable Travel Choices: Provide a transportation system that is reliable for all users.	• 2010 TSMO Plan • Metro RTP • ODOT OHP	• Reliability & Congestion
Prepare for Change: Manage the system to be agile in the face of growth, disruptions, and changing technology.	• Metro RTP • ODOT OTP	• Climate & Resilience

Portland Metro Region

Table B1. 2010 Regional TSMO Plan

2021 TSMO Strategy Goals	2010 Regional TSMO Plan Objective	2010 Regional TSMO Plan Goal	Objective #
Create a transportation system where all users are free from harm.	Reduce crashes at signalized intersections.	Safety & Security	1
	Reduce crashes resulting from weather, construction, and secondary crashes from incidents.	Safety & Security	2
	Reduce crashes involving vulnerable road users (pedestrians and bicycles).	Safety & Security	3
	Provide a safe environment for transit, bicycling and walking.	Safety & Security	4
Collaborate as effective stewards of the transportation system.	Integrate arterial and freeway roadway systems and operate the transportation system from the overall system perspective.	Reliability	5
	Improve communication and coordination between transportation agencies and emergency management agencies.	Safety & Security	6
	Continue a regional collaborative marketing campaign to increase awareness and use of travel options and reduce drive-alone trips.	Quality of Life	6
	Support initiatives to reduce greenhouse gas emissions from vehicles.	Quality of Life	3
	Enhance regional multi-modal trip planning tools.	Traveler Information	3
Eliminate the disparities in the transportation system experienced by black, indigenous, (and) people of color and low income individuals.	Encourage transit ridership by providing safe and secure public transportation facilities.	Safety & Security	5
	Support equitable distribution of transportation services and investment.	Quality of Life	4
Connect all people to the goods, services, and destinations they need through a variety of travel choices.	Improve connections between modes to enhance traveler mobility and reduce reliance on the automobile.	Quality of Life	2
	Market and provide travel options services to employers and commuters.	Reliability	6
	Enhance pre-trip and en-route traveler information tools.	Traveler Information	2
Provide a transportation system that is reliable for all users.	Expand traffic incident and event management capabilities to restore roadway capacity reduced by incidents, weather and construction.	Reliability	1
	Enhance regional traffic signal coordination systems and support systems that respond to current conditions.	Reliability	2
	Implement and expand systems that improve reliability for transit, pedestrians, and bicycles.	Reliability	3
	Implement systems that reduce delays through known bottlenecks.	Reliability	4
	Encourage transit ridership by improving transit travel times and services	Quality of Life	1
	Provide current information that may affect roadway users and travel choices across all modes.	Traveler Information	1
Operate the system to be resilient to growth and disruptions.	Protect physical infrastructure and transportation communication networks from harm or misuse.	Safety & Security	7
	Support systems that implement future pricing strategies (e.g., congestion, tolls, parking).	Quality of Life	5

	Expand traffic surveillance and transportation system condition data collection capabilities.	Traveler Information	4

Table B2. 2018 Metro Regional Transportation Plan

2021 TSMO Strategy Goals	2018 RTP Objective	2018 RTP Goal	Objective #
Create a transportation system where all users are free from harm.	Eliminate fatal and severe injury crashes for all modes of travel.	Safety and Security	1
	Reduce the vulnerability of the public and critical passenger and freight transportation infrastructure to crime and terrorism.	Safety and Security	2
	Improve public health by providing safe, comfortable and convenient transportation options that support active living and physical activity to meet daily needs and access services.	Healthy People	1
Collaborate as effective stewards of the transportation system.	Focus growth and transportation investment in designated 2040 growth areas (the Portland central city, regional and town centers, corridors, main streets, and employment and industrial areas).	Vibrant Communities	1
	Build an integrated system of throughways, arterial streets, freight routes and intermodal facilities, transit services and bicycle and pedestrian facilities, with efficient connections between modes that provide access to jobs, markets and community places within and beyond the region.	Shared Prosperity	1
	Plan communities and design and manage the transportation system to increase the proportion of trips made by walking, bicycling, shared rides and use of transit, and reduce vehicle miles traveled.	Transportation Choices	1
	Complete all gaps in regional bicycle and pedestrian networks.	Transportation Choices	2
	Minimize unnecessary light pollution to avoid harm to human health, farms and wildlife, increase safety and improve visibility of the night sky.	Healthy Environment	4
	Improve wildlife and habitat connectivity in transportation planning and design to avoid, minimize and mitigate barriers resulting from new and existing transportation infrastructure.	Healthy Environment	5
	Reduce transportation-related air pollutants, including criteria pollutants and air toxics emissions.	Healthy People	2
	Minimize air, water, noise, light and other transportation-related pollution health impacts.	Healthy People	3
	Reduce transportation-related consumption of energy and reliance on sources of energy derived from petroleum and gasoline.	Climate Leadership	5
	Meet adopted targets for reducing transportation-related greenhouse gas emissions.	Climate Leadership	2
	Improve coordination and cooperation among the owners and operators of the region's transportation system.	Transparency and Accountability	3

	Make transportation investment decisions using a performance-based planning approach that is aligned with the RTP goals and supported by meaningful public engagement, multimodal data and analysis.	Transparency and Accountability	2
	Increase the number of households and businesses with access to outreach, education, incentives and other tools that increase shared trips and use of travel options.	Reliability and Efficiency	5
Eliminate the disparities in the transportation system experienced by black, indigenous, (and) people of color and low income individuals.	Increase the number and variety of community places that households, especially households in historically marginalized communities, can reach within a reasonable travel time for all modes of travel.	Vibrant Communities	4
	Increase the number and diversity of regulated affordable housing units within walking distance of current and planned frequent transit service.	Vibrant Communities	3
	Reduce the share of income that households in the region spend on transportation to lower overall household spending on transportation and housing.	Shared Prosperity	4
	Protect historic and cultural resources from the negative impacts of transportation.	Healthy Environment	2
	Plan, build and maintain regional transportation assets to maximize their useful life, minimize project construction and maintenance costs and eliminate maintenance backlogs.	Fiscal Stewardship	1
	Engage more and a wider diversity people in providing input at all levels of decision-making for developing and implementing the plan, particularly people of color, English language learners, people with low income and other historically marginalized communities.	Transparency and Accountability	1
	Eliminate disparities related to access, safety, affordability and health outcomes experienced by people of color and other historically marginalized communities.	Equitable Transportation	1
	Eliminate barriers that people of color, low-income people, youth, older adults, people with disabilities and other historically marginalized communities face to meeting their travel needs.	Equitable Transportation	2
Connect all people to the goods, services, and destinations they need through a variety of travel choices.	Increase the share of households in walkable, mixed-use areas served by current and planned frequent transit service.	Vibrant Communities	2
	Attract new businesses and family-wage jobs and retain those that are already located in the region while increasing the number and variety of jobs that households can reach within a reasonable travel time.	Shared Prosperity	3
	Increase household and job access to current and planned frequent transit service.	Transportation Choices	3
	Increase household and job access to planned regional bike and walk networks.	Transportation Choices	4

	Implement policies, investments and actions identified in the adopted Climate Smart Strategy, including coordinating land use and transportation; making transit convenient, frequent, accessible and affordable; making biking and walking safe and convenient; and managing parking and travel demand.	Climate Leadership	1
Provide a transportation system that is reliable for all users.	Increase access to industry and freight intermodal facilities by a reliable and seamless freight transportation system that includes air cargo, pipeline, trucking, rail, and marine services to facilitate efficient and competitive shipping choices for goods movement in, to and from the region.	Shared Prosperity	2
	Maintain reasonable person-trip and freight mobility and reliable travel times for all modes in the region's mobility corridors, consistent with the designated modal functions of each facility and planned transit service within the corridor.	Reliability and Efficiency	1
	Increase the use of real-time data and decision-making systems to actively manage transit, freight, arterial and throughway corridors.	Reliability and Efficiency	2
	Increase the number of travelers, households and businesses with access to real-time comprehensive, integrated, and universally accessible travel information.	Reliability and Efficiency	3
	Reduce incident clearance times on the region's transit, arterial and throughway networks through improved traffic incident detection and response.	Reliability and Efficiency	4
	Expand the use of pricing strategies to manage vehicle congestion and encourage shared trips and use of transit.	Reliability and Efficiency	6
	Manage the supply and price of parking in order to increase shared trips and use of travel options and to support efficient use of urban land.	Reliability and Efficiency	7
Operate the system to be resilient to growth and disruptions.	Reduce the vulnerability of regional transportation infrastructure to natural disasters, climate change and hazardous incidents.	Safety and Security	3
	Protect fish and wildlife habitat and water resources from the negative impacts of transportation.	Healthy Environment	1
	Integrate green infrastructure strategies in transportation planning and design to avoid, minimize and mitigate adverse environmental impacts.	Healthy Environment	3
	Promote green infrastructure that benefits both climate and other environmental objectives, including improved stormwater management and wildlife habitat.	Climate Leadership	6
	Reduce vehicle miles traveled per capita.	Climate Leadership	3

Support state efforts to transition Oregon to cleaner, low carbon fuels and increase the adoption of more fuel-efficient vehicles and alternative fuel vehicles, including electric and hydrogen vehicles.	Climate Leadership	4
Develop new revenue sources to prepare for increased demand for travel on the transportation system as our region grows.	Fiscal Stewardship	2

Portland Metro Region

Table B3. Oregon Transportation Plan

2021 TSMO Strategy Goals	OTP Policy	OTP Goal	Objective #
Create a transportation system where all users are free from harm.	Provide access to healthy lifestyle options by supporting the ability of people to reach goods and services such as groceries, recreation, parks and natural areas, health care, and social opportunities via public transportation.	Health	1
	Plan for, design, and locate transit stops and stations to support safe and user-friendly facilities, including providing safe street crossings.	Safety and Security	1
	Provide for passenger and operator security on public transportation vehicles and at stops and stations through investments in facility design, amenities, appropriate security systems and personnel, and coordination with law enforcement staff.	Safety and Security	2
	Enhance the safety of public transportation through personnel training and education programs.	Safety and Security	3
	Promote public transportation as a safe travel option through public outreach campaigns and rider education programs.	Safety and Security	4
Collaborate as effective stewards of the transportation system.	Coordinate and enhance mobility management services and strategies to better coordinate services to enable riders and potential riders to use public transportation.	Mobility	4
	Encourage employers, educational institutions, and others to provide opportunities for employees' and clients' use of public transportation, carpool, vanpool, shuttles, and other shared rides.	Accessibility and Connectivity	4
	Integrate health considerations into public transportation planning and decision making at the local, regional, and state level.	Health	2
	Integrate public transportation agencies and personnel into emergency response and recovery planning and training activities to support resilience during and after natural disasters and other emergencies.	Safety and Security	6
	Support public transportation investments as a key approach to reducing greenhouse gas (GHG) emissions, as emphasized in state policy.	Environmental Sustainability	1
	Increase the use of public transportation by fully integrating public transportation with other community plans including transportation, land use, and economic development plans.	Land Use	1
	Invest strategically in maintenance, planning, transit service, and capital improvements to preserve and enhance public transportation.	Strategic Investment	1
	Foster creative investments and partnerships among public agencies and private organizations to improve the efficiency and effectiveness of public transportation services	Strategic Investment	2
	Pursue stable and consistent funding for public transportation operations and capital investments that maintain services and address identified needs.	Strategic Investment	3
	Coordinate communication and marketing to promote knowledge and understanding of available public transportation services.	Communication, Collaboration, and Coordination	1

Table B3. Oregon Transportation Plan

2021 TSMO Strategy Goals	OTP Policy	OTP Goal	Objective #
	Collaborate and share costs for resources, supplies, and services that can be used by multiple agencies.	Communication, Collaboration, and Coordination	2
	Identify and advance opportunities to share data resources and collection methods.	Communication, Collaboration, and Coordination	3
	Collaborate with various agencies, jurisdictions, and transportation providers in support of effective public transportation that is reliable and easy to use and helps meet state, regional, and community goals.	Communication, Collaboration, and Coordination	4
Eliminate the disparities in the transportation system experienced by black, indigenous, (and) people of color and low income individuals.	Enact fare policies that reflect the needs of the community served; ensure that public transportation fares are understandable and easy to pay	Mobility	3
	Enhance access to education and employment via public transportation.	Community Livability and Economic Vitality	1
	Promote the use of public transportation to foster greater community livability	Community Livability and Economic Vitality	3
	Engage populations recognized as transportation disadvantaged in public transportation service decision making.	Equity	1
	Understand and communicate how disparities, barriers, and needs affect the ability of people to access and use public transportation, especially those who are transportation disadvantaged.	Equity	2
	Identify disparities, barriers, and needs that impact people's ability to access and use public transportation.	Equity	3
	Address the disparities, barriers, and needs that impact people's ability to access and use public transportation.	Equity	4
	Integrate equity criteria into funding decisions.	Equity	5
Connect all people to the goods, services, and destinations they need through a variety of travel choices.	Increase the share of households in walkable, mixed-use areas served by current and planned frequent transit service.	Mobility	2
	Attract new businesses and family-wage jobs and retain those that are already located in the region while increasing the number and variety of jobs that households can reach within a reasonable travel time.	Accessibility and Connectivity	3
	Increase household and job access to current and planned frequent transit service.	Community Livability and Economic Vitality	3
	Increase household and job access to planned regional bike and walk networks.	Community Livability and Economic Vitality	4

Portland Metro Region

Table B3. Oregon Transportation Plan

2021 TSMO Strategy Goals	OTP Policy	OTP Goal	Objective #
	Implement policies, investments and actions identified in the adopted Climate Smart Strategy, including coordinating land use and transportation; making transit convenient, frequent, accessible and affordable; making biking and walking safe and convenient; and managing parking and travel demand.	Land Use	1
Provide a transportation system that is reliable for all users.	Increase access to industry and freight intermodal facilities by a reliable and seamless freight transportation system that includes air cargo, pipeline, trucking, rail, and marine services to facilitate efficient and competitive shipping choices for goods movement in, to and from the region.	Accessibility and Connectivity	2
	Maintain reasonable person-trip and freight mobility and reliable travel times for all modes in the region's mobility corridors, consistent with the designated modal functions of each facility and planned transit service within the corridor.	Equity	1
	Increase the use of real-time data and decision-making systems to actively manage transit, freight, arterial and throughway corridors.	Equity	2
	Increase the number of travelers, households and businesses with access to real-time comprehensive, integrated, and universally accessible travel information.	Equity	3
	Reduce incident clearance times on the region's transit, arterial and throughway networks through improved traffic incident detection and response.	Equity	4
	Expand the use of pricing strategies to manage vehicle congestion and encourage shared trips and use of transit.	Equity	6
	Manage the supply and price of parking in order to increase shared trips and use of travel options and to support efficient use of urban land.	Equity	7
Operate the system to be resilient to growth and disruptions.	Reduce the vulnerability of regional transportation infrastructure to natural disasters, climate change and hazardous incidents.	Health	3
	Protect fish and wildlife habitat and water resources from the negative impacts of transportation.	Safety and Security	1
	Integrate green infrastructure strategies in transportation planning and design to avoid, minimize and mitigate adverse environmental impacts.	Safety and Security	3
	Promote green infrastructure that benefits both climate and other environmental objectives, including improved stormwater management and wildlife habitat.	Land Use	6
	Reduce vehicle miles traveled per capita.	Land Use	3
	Support state efforts to transition Oregon to cleaner, low carbon fuels and increase the adoption of more fuel-efficient vehicles and alternative fuel vehicles, including electric and hydrogen vehicles.	Land Use	4
	Develop new revenue sources to prepare for increased demand for travel on the transportation system as our region grows.	Communication, Collaboration, and Coordination	2

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Appendix D

Performance Measures Memo

December 2021

Memorandum

Date: September 22, 2021

To: Caleb Winter, Metro and Scott Turnoy, ODOT

From: Briana Calhoun, Kara Hall, and Chris Grgich, Fehr & Peers

Subject: DRAFT Performance Measures for the 2021 Transportation Systems Management and Operations Strategy

PT20-0045 ODOT Key 21411

Introduction

Metro, the Oregon Department of Transportation (ODOT), and their partner agencies are collaborating to develop the 2021 Regional Transportation Systems Management and Operations Strategy (2021 TSMO Strategy).

The 2021 TSMO Strategy will be a key tool for implementing the Regional Transportation Plan and position the region to collaboratively manage the transportation system in a rapidly changing environment while advancing the RTP priorities for safety, equity, vibrant communities, shared prosperity, congestion management, and a healthy environment.

This memorandum introduces the performance measures developed for the six goals and 24 objectives for the 2021 TSMO Strategy. These performance measures make up the path the TSMO strategy will follow to achieve its vision, goals, and objectives. Development of the performance measures will be followed by the identification of targets to reach in ten years, and then discussions of supportive actions.

2021 TSMO Strategy Performance Measures

Seven performance measures were identified that will be used to measure progress toward the six goals and 24 objectives:

- VMT per Capita
- Number of Crashes by Severity
- Buffer Index
- Agency Collaboration and Communication Events

- System Connectivity
- Targeted TSMO Investments
- Timely Traveler Information

Rather than identifying a performance measure for each objective, these seven will help Metro to measure how well the TSMO strategy is advancing its goals without becoming a burden to track and report. Several of these measures are not restricted to TSMO planning but are broader indicators for the transportation system as a whole. The TSMO actions identified in the next steps of this process are ones that will be able to move the needle on these measures and indicate progress towards meeting the Strategy's goals.

The following section provides for each measure:

- A brief definition
- Which of the six TSMO goals the measure supports
- The key performance indicators (KPIs) that would be regularly tracked and reported by Metro.
- How these KPIs can be an indicator or proxy for other measures that will not be tracked or are outside of the scope of TSMO, and how they may relate to other measures in the document. Many measures are shown to correlate in a positive direction or negative direction to another measure. We refer to these as Direct (positive or upward) or Inverse (negative or downward)
- Related measures that are recommended for Metro and other agencies to consider tracking or do not have data available at this time.
- Whether the measure is already being used in other regional planning or monitoring efforts.

Portland Metro Region

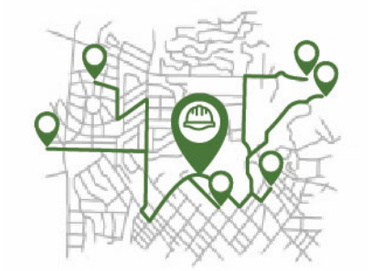
Vehicle Miles Traveled (VMT) per Capita

Vehicle Miles Traveled (VMT) per capita is a measure of the average number of auto miles driven per person within a given geography.

Key Performance Indicators

Regional VMT per Capita. Regional VMT measures how much travelers are driving in the region. The measure is related to air toxins and greenhouse gas emissions, but does not account for vehicle electrification. Historically, VMT responded to economic changes (as the economy grew, so did VMT). However, as gas prices rose in 2008, VMT and the economy began to separate. VMT is still related to economics, and can represent upward economic movement, but new technology, higher seat utilization, and greater mobility choices can help reduce overall VMT, reducing recurring and non-recurring congestion. VMT can also be measured by geography determining an area's VMT generation and exposure.

VMT Exposure per Capita by Census Block Group. Exposure to VMT can result in increased air toxin exposure and higher crash risk. Historically, major routes have been constructed in BIPOC and Low-Income neighborhoods, disproportionately exposing those communities. Measuring VMT exposure tracks these impacts.



VMT Generation per Capita by Census Block Group. VMT generation can show that an area has grown economically, is attracting more employment, or that households that were transit dependent have the ability to choose an auto. VMT generation maybe much higher in locations where households own multiple vehicles, or in central business districts. Measuring generation by area will help identify what improvements are needed where.

Relationships

- Directly related to economic activity.
- Inversely related to the use of non-auto modes such as walking, biking, and transit.
- Directly related to crash risk.
- Directly related to the volume of cut through traffic.
- Inversely related to seat utilization.
- Directly related to total tailpipe air toxins and greenhouse gases.

Regional Use

This measure is used by numerous agencies, including Metro and PBOT[1], with the long-term target to reduce VMT in the region.[2] The Oregon Transportation Planning Rule (TPR) establishes VMT reduction targets for Transportation System Plans and Metro's Regional Transportation Plan (RTP) established a target of 10% reduction in VMT by 2040. VMT is currently not being reported by Transportation Analysis Zone[3] or Census Block. Additional work is needed to determine exposure and generation by these metrics.

[1] Portland's TSP Policy 9.49.c aims to reduce the number of miles Portlanders travel by car to 11 miles per day or less, on average, by 2035.

[2] Greater Portland Area Daily VMT Per Capita 1990-2020: https://www.oregonmetro.gov/transportation-system-monitoring-daily-vehicle-miles-travel

[3] A Transportation Analysis Zone (TAZ) is a unit of geography used in transportation planning and transportation models for aggregating traffic related data.

Portland Metro Region

Number of Crashes by Severity

The number and rate of crashes by severity is a measure of transportation safety.

Key Performance Indicators

Total Crashes per Million Vehicle Miles Traveled (MVMT) and per 100,000 Capita. Metro's Safety Strategy aims to eliminate serious crashes (crashes with life-changing injuries or fatalities) by 2035. Crashes on the transportation network cause non-recurring congestion, and fatal and serious injury crashes result in longer incident response times with sustained impacts. The TSMO Strategy aims to reduce harm and reduce the non-recurring congestion created by crashes by improving the safety of the system overall. Therefore, tracking total crashes should be evaluated in the following subsets:

- Crash rate by severity (crashes/MVMT/per 100,000 capita)[4].
- Crash rate by mode (crashes/MVMT/per 100,000 capita).
- Crash frequency of fatal, pedestrian, and bicycle related crashes (number of crashes).
- Ratio of crashes that occur in equity focus areas to total regional crashes (percent) by severity.

Exploratory Metrics

Crash Demographics. Current crash demographics are not readily available.[5] Metro's Safety Strategy identifies that "Traffic deaths are increasing and are disproportionately impacting people of color, people with low incomes and people over age 65." This metric would improve the region's understanding of the disproportional impacts of crashes, and how to correct them.

Crash Risk. Crash analysis is currently conducted using historical data and is therefore reactive. Technology and data sources are available to identify locations of increased crash risk before crashes occur but can be costly and privately owned. ODOT has recently conducted research on crash risk factors[6] and these findings could be incorporated into future crash metrics. This metric would help the region be proactive in transportation safety improvements.

Secondary Crashes. Secondary crashes are those that occur at the scene of the original crash or in the queue, even in the opposite direction. Current crash reporting documents do distinguish between a primary and secondary crash. This metric would help Metro measure the region's ability to manage, clear, and reopen facilities following an incident.

Average Miles Biked or Walked. Pedestrian and Bicycle miles traveled are lower than the total vehicle miles traveled. Therefore, when evaluating pedestrian and bicycle crash rates per miles traveled data on the average trip length or total miles walked or biked, better correlates than the total miles traveled by vehicles in the region. A data source for this measurement needs to be researched and determined for this work. These could include traveler surveys or data from a third-party provider.

Relationships

- Inversely related to disproportional impacts of transportation on neighborhood safety.
- Directly related to the number BIPOC and people with lower incomes seriously injured or killed while using the transportation system.
- Directly related to the number of non-recurring congestion events related to crashes.
- Directly related to the amount of resources needed for incident management.

Regional Use

[4] Consistent with the Regional Transportation Safety Strategy's annual reporting (see Chapter 6 Measuring Progress).
[5] Demographics are not reported in ODOT crash reports. NHTSA Fatality Analysis Reporting System (FARS) include race and ethnicity, analyzed in ODOT's memo on Pedestrian Injury and Social Equity in Oregon: https://www.oregon.gov/odot/Safety/Documents/Pedestrian_Safety_and_Social_Equity.pdf
[6] NCHRP 20-44(13) Implementation of NCHRP Research Report 893: The Oregon DOT Statewide Pedestrian and Bicycle Plan. http://onlinepubs.trb.org/onlinepubs/nchrp/docs/NCHRP20-44-13FinalReport.pdf

Metro reports traffic fatalities and serious injuries regionally and by equity focus area in an annual safety performance report[7] and the Metro Regional Transportation Plan and Regional Transportation Safety Strategy targets eliminating all fatalities and serious injury crashes by 2035. The City of Portland's Transportation System Plan aims to eliminate deaths and serious injuries for all who share Portland streets by 2025[8]. While demographics are not reported in the existing DMV crash reports, the National Highway Traffic Safety Administration (NHTSA) Fatality Analysis Reporting System (FARS) includes race and ethnicity.

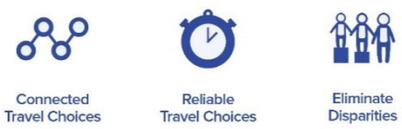
[7] https://www.oregonmetro.gov/sites/default/files/2021/03/04/Metro-safety-annual-performance-report-2015-2019.pdf

[8] TSP Policy 9.49.a https://www.portland.gov/sites/default/files/2020-05/chapter2.tsp_.03.06.2020.pdf

Portland Metro Region

Buffer Index

The extra time a traveler adds to their trip (buffer) to ensure on-time arrival.



Key Performance Indicators

Buffer Index. Travel time reliability is measured by taking the ratio of the longest to shortest duration trips for trips of the same distance on the network. Buffer index measures is the variability between 90th-percentile and 10th-percentile or run time for transit, or between the 95th percentile and average travel time for vehicles[9], as calculated by the following equation:

$$\frac{90th\text{-}Percentile - 10th\text{-}Percentile}{10th\text{-}Percentile} = Transit\ Buffer\ Index\ (\%)$$

$$\frac{95th\text{-}Percentile - 50th\text{-}Percentile}{50th\text{-}Percentile} = Vehicle\ Buffer\ Index\ (\%)$$

A higher percent value indicates a higher degree of variability during congested hours. Buffer index can measure by mode, and the TSMO strategy will report on changes to Transit Buffer Index and Vehicle Buffer Index:

- Transit Buffer Index for Frequent Bus Routes & Light Rail[10]
- Transit Buffer Index for BIPOC and Low-Income Service Routes
- Vehicle Buffer Index for Throughway Segments and Major Arterials[11]
- Freight Buffer Index for Regional Intermodal Connectors[12]

Relationships

- Directly related to the reliability of transit routes and on time performance.
- Directly related to congested areas that delay transit.
- Directly related to transit run time variability
- Directly related to the reliability of routes in a corridor.
- Inversely related to elapsed total time in which responders are able to clear incidents from roadways, railroads and transit tracks.

Regional Use

ODOT reports buffer time in their traffic performance report[13], with breakdowns by time of day and for major highway corridors designated as Throughwasy in the Metro Regional Transportation Plan. They also report the average and percentile travel times on key ODOT facilities as part of their TSMO performance measures[14].

TriMet reports on-time performance for their vehicles[15], and the Enhanced Transit Concept from PBOT includes peak delay and run time variability as key performance measures for enhanced transit. Metro reports excessive delay and travel time reliability in their regional barometer[16], and the City of Portland

[9] FHWA recommends a number of reliability metrics including the ones listed above. https://ops.fhwa.dot.gov/publications/tt_reliability/ttr_report.htm

[10] As defined by TriMet, Frequent Service bus lines and MAX Light Rail run every 15 minutes or less most of the day, every day. https://trimet.org/schedules/frequentservice.htm

[11] Throughways and Major Arterials are defined on the RTP Motor Vehicle Network Map: https://drcmetro.maps.arcgis.com/apps/MapSeries/index.html?appid=9057331682354a188ecec2688071239f

[12] As defined in Chapter 3 the Metro RTP (2018) and Metro Regional Freight Strategy (2018). https://www.oregonmetro.gov/sites/default/files/2019/09/20/Regional-Freight-Strategy-FINAL-091919.pdf

[13] https://www.oregon.gov/ODOT/Projects/Project%20Documents/2018TrafficPerformanceReport.pdf

[14] https://www.oregon.gov/odot/Maintenance/Documents/ITS%20Plans%20and%20Reports/ODOT-Operations%20Program%20Performance%20Management%20Plan-June%202021_r6.pdf

[15] TriMet's FY 2021-2025 Business Plan has a target of time performance of 85% for bus, 90% for Max, 93.5% for LIFT, and 95% for WES for FY2022. They also have a target that the on-time performance on minority and low-income lines is better than or within 5 percent of non-minority and non-low income lines https://trimet.org/about/dashboard/index.htm

[16] https://regionalbarometer.oregonmetro.gov/pages/transportation-reliability

reports truck minutes of delay and the ratio of congested speed to posted speed in the Freight Master Plan.

Agency Collaboration and Communication Events

How often agency staff are collaborating and communicating progress towards TSMO Goals.

Key Performance Indicators

Percent of Public Engagement Activities that Involved BIPOC, Low Income, and Historically Marginalized Communities. Metro and their agency partners develop transportation solutions that serve the entire community. The solutions aim to correct historically disproportional impacts to BIPOC and Low-Income neighborhoods. This relies on creating meaningful opportunities for these communities to participate in the decision making.

Percent of Agencies Reporting & Sharing Data Metrics Annually. Data sharing is vital to collaboration across jurisdictional boundaries. Data should easily be available and in stored a central system (like the PDX Data Portal) to public and agencies within the region.

Average number of agencies and community groups involved in completed TSMO projects. Agency involvement is defined as participation in a management team, stakeholder groups, and/or technical reviews.

Exploratory Metrics

Number of Coordination Events and Number of Agencies Involved. Coordination between agencies can take a variety of forms. Making connections across departments and agency boundaries deepens the level of knowledge and empathy for the work and challenges staff face across the region. Coordination events build relationships and communication paths that lead to information sharing that allow agencies to be more agile and responsive in a rapidly changing environment.

Relationships

- Directly related to documenting agreed upon data standards, data collection and active (i.e., time-based) data sharing
- Directly related to improved collaboration & coordination.
- Coordination events can be inter-agency, or intra-agency across department lines

Regional Use

No regional agencies use this metric at this time. Federal Highway Administration Operations offers Capability Maturity Frameworks[17] and supports collaboration through regional workshops. Several agencies have public involvement plans or policies, and TransPort is a regularly well attended meeting.

[17] FHWA Capability Maturity information and links: https://ops.fhwa.dot.gov/publications/fhwahop16031/index.htm

System Connectivity

How complete and connected the infrastructure system is for each travel mode.

Key Performance Indicators

Percent of Signals with Communications. Installing communications across signals allows for connection to a central signal system, improved data collection, and signal management and operations. These connections should be prioritized for signals on regional important routes, including:

- Frequent service bus lines
- Arterials serving equity focus areas[18]
- Throughway Segments and Major Arterials
- Regional IntermodalConnectors

Connectivity Index of Infrastructure. A connectivity index is the comparison of 30-minute travel shed on the existing network as compared to an ideal grid network. A high connectivity index represents redundancy in the transportation network that can reduce the impacts of unforeseen events and the non-recurring congestion those events can cause. For examples, a high connectivity index for bicycles represents an alternative route when trails are flooded, or bridges are raised. A high connectivity index for vehicles could present shorter trips through neighborhoods, or alternative routes in regions impacted by natural disasters such as forest fire or mudslides. Connectivity Index should be measured mode and geography, including:

- for active transportation modes (pedestrian, bicycle) by route level of stress;
- for vehicular modes; and
- measured by census block, breaking out equity focus areas, regional centers, and town centers.

Percent of Households and Employers within 10-minute Walk or Bike Travel Shed from Transit. This measurement determines how easily travelers can access and interface with transit by low-stress bicycle and walking routes. The 10-minute walk or bike travel shed shows how far from transit a traveler can live but still have reasonable access to the system. The walk and bike travel shed connectivity using the existing system, assuming travelers are only able to use identified low-stress and accessible bike and walking routes. The metrics should be measured by census block, and affordability breaking out equity focus areas, regional centers, and town centers.

Relationships

- Indirectly related to sidewalk and bicycle system gaps.
- Directly related to access to transit, jobs, and services.
- Directly related to miles of infrastructure by mode in Equity Focus Areas where field devices are connected to centers.
- Directly related to systems infrastructure such as bicycle, pedestrian, and transit signal priority or stop amenities.
- Directly related to walking and biking network completeness
- Directly related to geographic transit coverage

Regional Use

[18] https://www.oregonmetro.gov/sites/default/files/2019/03/13/Transportation-Equity-Evaluation-Final-3.12.19.pdf

The Metro RTP has specific targets for system completeness[19]. TriMet's Business Plan also has targets for the percent of housing and employment within walking distance of transit[20]. ODOT's Operations Program Performance Management Plan aims to connect all ODOT signals by 2026.

[19] The 2018 RTP target for system completeness is to complete 100 percent of the regional network of sidewalks, bikeways and trails by 2040.

[20] The FY2021-2025 target is that the percentage of housing development and employment within walking distance of MAX, Division Transit Project, and Frequent Service bus is greater than or equal to the previous year.

Portland Metro Region

Targeted TSMO Investments

How investments are distributed regionally and on key corridors for modal efficiency.

Key Performance Indicators

Percent of TSMO Investments benefiting key corridors. Where TSMO investments are made is an indication of who is benefiting from the efficiencies that result from this strategy. To ensure those efficiencies are realized in an equitable way, and to match the priorities and values of the region, the distribution of the investments should be measured through the life of the strategy. This strategy will track where investment benefit the following types of corridors as defined by other regional plans.

- Regional Emergency Transportation Routes[21]
- Enhanced Transit Corridors[22] & Frequent Bus Routes[23]
- Equity Focus Areas
- Regional Intermodal Connectors
- Throughway Segments and Major Arterials

Relationships

- Directly related to increasing reliability, access, and safety on intermodal connectors and other freight routes
- Directly related to economic gains from greater freight access
- Directly related to truck drivers finding places to park for required rest periods[24]
- Directly related to collaboration across jurisdictions as Mobility Corridors cross jurisdictional boundaries and connect cities and counties.
- Directly related to transportation operator's ability to integrate corridor management[25]
- Directly related to an equitable distribution of resources and ensuring that Equity Focus Areas are receiving equal or greater investment than the regional average.
- Directly related to resiliency of key facilities such as bridges
- Directly related to preparation for short- and long-term disruptions
- Directly related to improving reliability for high frequency transit
- Directly related to transit signal priority investments

Regional Use

No regional agencies use this metric at this time, though Metro's Regional Flexible Funding Allocation evaluates projects in part based on whether they develop specific arterial freight routes or make improvements on a travel corridor.

[21] https://rdpo.net/emergency-transportation-routes
[22] PBOT's Enhanced Transit Corridors documentation. https://www.portlandoregon.gov/transportation/73684
[23] The RTP Regional Transit Network concept is section 3.6.2
[24] Oregon Commercial Truck Parking Study in 2020: https://www.oregon.gov/odot/Projects/Pages/Commercial-Truck-Parking-Study.aspx
[25] An example is the I-84 Multimodal ICM study: https://www.oregonmetro.gov/multimodal-integrated-corridor-management

Portland Metro Region

Timely Traveler Information

How effectively information is being relayed to travelers to reduce delay associated with planned or unexpected events.

Key Performance Indicators

Percent of transit shelters with functional real-time arrival displays. Travelers without access to smart phones or on-line data sources at bus stop locations may not be aware of transit delays or missed buses. Shelters are installed at high frequency and high ridership locations as identified by the transit operators. Ensuring these locations have on-time arrival displays can provide travelers with needed information. Ensuring that these displays are functional and continue to operate is key to ensuring the maintenance of the system moving forward. These should be reported as a total for the region and for equity focus areas.

Number of Agencies with a Traveler Information System (TIS) plan. Metro and their partner agencies regularly provide information to the public around both planned and unexpected incidents. The creation of a TIS plan will help agencies to be prepared to rapidly distribute information to travelers about detours, closures, and hazardous conditions. The plan should at a minimum include standards for communication in a variety of languages and an equitable variety of communication channels.

Exploratory Metrics

Non-recurring delay associated with incidents. It is currently difficult to quantify and report non-recurring delay that is associated with specific incidents such as a crash. Exploring new data sources that can measure this delay would enable Metro to better understand whether their travel notifications are successful rerouting drivers and what share of delay is associated with recurring versus non-recurring congestion.

Data Sharing with Connected & Automated Vehicles (CAV), Smart Phones, and Mobility Devices. CAV technology enables a new level of traveler communication through in-vehicle data sharing. That data sharing also extends to specific Smart Phone apps, and other smart mobility devices. Applications include Mobility on Demand, Mobility as a Service, on-board notifications of traffic incidents, dangerous queues, or other roadway hazards. Mobility data can also be used to identify and report hard braking and other behaviors related to unexpected delays and non-recurring congestion. These data sources should be researched, with specific attention given to impacts to equity, safety, reliability, and cost.

Number of Buildings in Town Centers and Regional Centers with Real Time Traveler Information. Several third-party vendors provide systems with real time traveler information that is often available through smart phone applications or other mobility devises. Not all travelers have access to smart phones or other personal mobility technology, therefore providing real time traveler information can help notify travelers of conditions of closures before they begin their journey.

Relationships

- Directly related to the non-recurring congestion associated with both planned and unexpected events.
- Directly related to traveler happiness and comfort using the system.

Regional Use

TriMet's Business Plan includes a key strategic action to "implement enhanced information to customers through technology advances and communications strategies", which includes expanding digital

information displays at stops and on-board transit vehicles[26]. ODOT reports four performance measures for traveler information: number of people visiting ODOT communication outlets, ATIS notification delay, major incidents with no message (ATIS), and critical station on-time report[27].

[26] https://trimet.org/businessplan/pdf/TriMet_BusinessPlan_FY21_FINAL.pdf
[27] https://www.oregon.gov/odot/Maintenance/Documents/ITS%20Plans%20and%20Reports/ODOT-Operations%20Program%20Performance%20Management%20Plan-June%202021_r6.pdf

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Appendix E

Actions Memo

Memorandum

Date: September 22, 2021

To: Caleb Winter, Metro and Scott Turnoy, ODOT

From: Briana Calhoun, Kara Hall, and Chris Grgich, Fehr & Peers

Subject: DRAFT Actions for the 2021 Transportation Systems Management and Operations Strategy

PT20-0045 ODOT Key 21411

Introduction

Metro, the Oregon Department of Transportation (ODOT), and their partner agencies are collaborating to develop the 2021 Regional Transportation Systems Management and Operations Strategy (2021 TSMO Strategy).

The 2021 TSMO Strategy will be a key tool for implementing the Regional Transportation Plan and position the region to collaboratively manage the transportation system in a rapidly changing environment while advancing the RTP priorities for safety, equity, vibrant communities, shared prosperity, congestion management, and a healthy environment.

This memorandum introduces the actions developed for the 2021 TSMO Strategy. These actions are the final step in the strategy creation and lay out practical, concrete steps for Metro and the regional partners to undertake during the ten year timeframe of the plan to meet the TSMO goals.

Development of the Actions

The project team worked with the stakeholders to develop and evaluate several actions related to the identified objectives for the project. To begin, a list of actions was developed to accomplish each of the strategy's objectives. This draft list of actions was refined by working with the stakeholder group. They stake holders were also given 3 votes actions related to each goal, in order to help the group determine the priority of actions given limited resources. The group also had the option to rewrite, remove, and or add to the actions initially drafted.

The process led to nearly 100 draft actions for the strategy. The stakeholder group noted that several of these actions were related, redundant, or supported each other. Following the stakeholder workshops, the project team them resorted the draft actions that were similar or redundant, to create a single overall action that included the aspects of the smaller more pointed actions. This was accomplished by physically cutting and pasting the actions into groups, listing what objectives each sub-action was meant to accomplish. Figure 1 shows some key points of the refinement process.

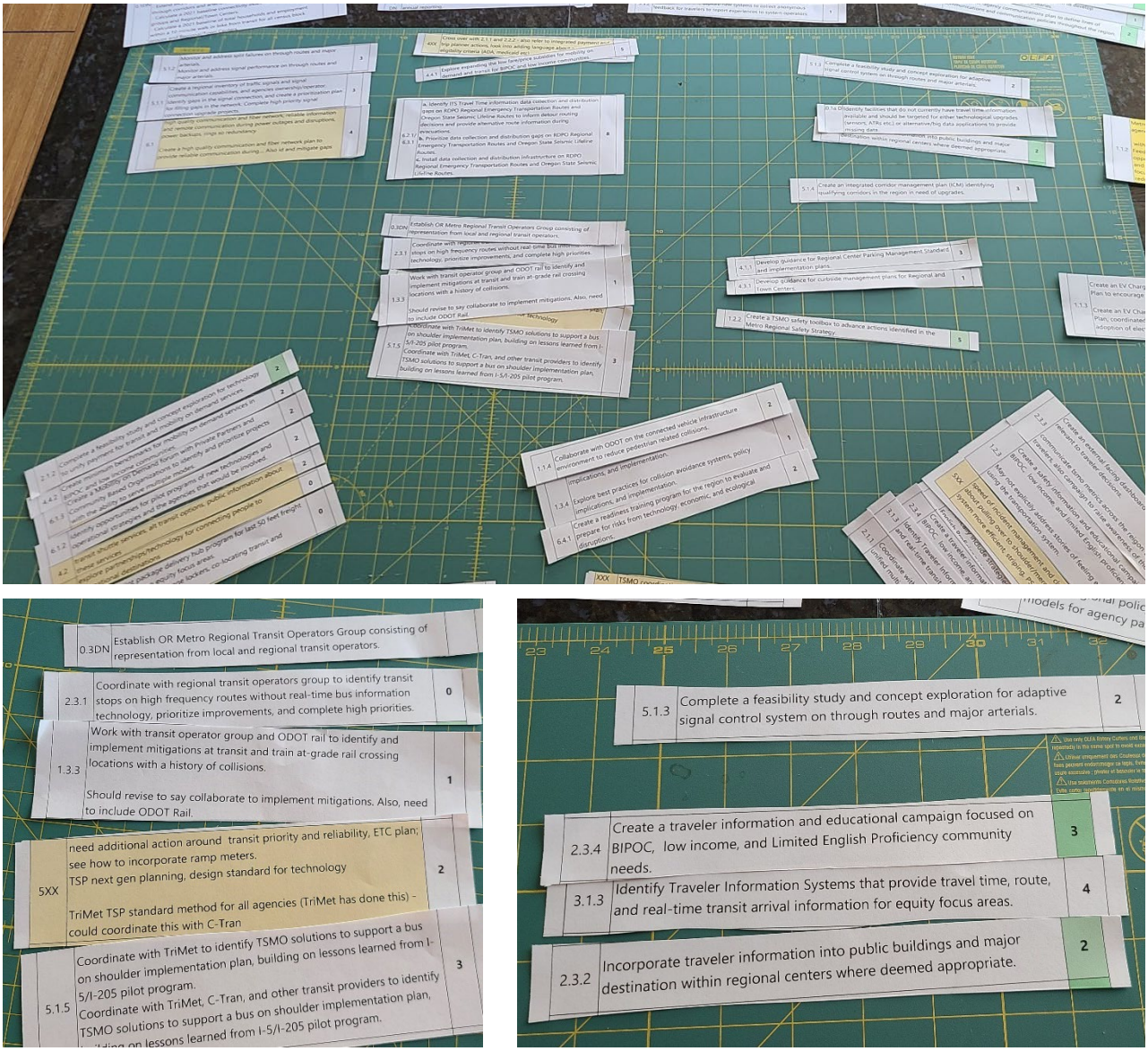

Figure 1: TSMO Action Development Process

These actions continued to be refined with input from TransPort, agency partners, and Metro staff.

2021 TSMO Strategy Actions

21 TSMO Actions were identified by the Regional TSMO Stakeholders. These actions were sorted into:

- Planning
- Concepts, Capabilities, & Infrastructure
- Listening & Accountability
- Data Needs

Each action was given a priority and completion timeline, as well as an agency that would track and report the action progress over the life of the plan.

These actions are meant to be a starting direction for the Regional TSMO Strategy. Over the course of the plan, if progress is not being measured on the strategy's objectives, the actions should be revised to better meet the region's needs.

The TSMO Strategy Actions are:

1. Establish TSMO performance measures baseline.
2. Inventory and manage regional signal and ITS communication infrastructure.
3. Develop a Mobility on Demand strategy and policy.
4. Manage transportation assets to secure the network.
5. Pilot Origin-Destination data to prioritize TSMO investments.
6. Track and prioritize TSMO Investments in BIPOC and low-income communities.
7. Continue freight technology and ITS deployment.
8. Facilitate Ground Truthing of Emerging Technologies.
9. Establish a Regional Transit Operators TSMO Group.
10. Unify and standardize fare subsidies for transit and MOD.
11. Develop an ITS travel time Information Data Collection and Distribution Plan for RDPO Regional Emergency Routes.
12. Explore new TSMO data sources.
13. Create a community listening program.
14. Create continuous improvement process for existing and new signal systems and related performance.
15. Deploy regional traveler information systems.
16. Implement Integrated Corridor Management and mainstream into corridor planning.
17. Create a TSMO Safety Toolbox.
18. Participate in regional public outreach to assist in guiding, listening, and learning through TSMO-focused conversations.
19. Improve TSMO data availability to aid in traveler decisions and behavior.
20. Plan for and use a TSMO Toolbox to connect gaps in bicycle and pedestrian infrastructure.
21. Update the Regional ITS Architecture.

Portland Metro Region

1. Establish TSMO performance measures baseline.

Planning

Action Description:

Create a baseline for measuring regional TSMO performance and advancement by:

- Mapping regionally significant routes as identified in other Metro planning documents where TSMO Metrics will be reported. These should include state routes, freight routes, transit routes, emergency transportation routes, and Mobility Corridors.
- Summarize findings from TSMO project before/after studies.
- Establish a standard calculation for VMT exposure and generation by census block and calculate a baseline for census blocks within the region.
- Extend bicycle and pedestrian Level of Traffic Stress (LTS) threshold and inventory existing LTS for through corridors and arterials.
- Calculate a 2021 baseline connectivity index for all census block groups, downtowns (Regional and Town Centers) and main streets, informed by community-identified barriers to connectivity.
- Calculate a 2021 baseline of total households and employment within a 10-minute walk or bike from transit for all census block groups and Regional/Town Centers.
- Identify gaps on routes where travel time information is needed for calculating reliability (e.g., buffer index).

Priority:

Low: required but not urgent
(SAC did not vote on this item)

Timeline:

Near: 2021-2023; in coordination with RTP update

Tracked by:

Metro and ODOT

Furthers Objectives:

This data is needed to track the identified TSMO performance metrics.

References to other Plans and Projects:

Subcontract: NCHRP 17-87 Enhancing Pedestrian Volume Estimation and Developing HCM Pedestrian Methodologies for Safe and Sustainable Communities

Portland Metro Region

2. Inventory and manage regional signal and ITS communication infrastructure.

Concepts, Capabilities, and Infrastructure

Action Description:

- Create a regional inventory of traffic signal capabilities by location and operator (e.g., connected to central signal system, utilizing Next Generation Transit Signal Priority, serving freight, sensing bike and ped movements).
- Using the inventory, plan for a high quality, reliable, and redundant signal communication network by identifying gaps and prioritizing projects.
- Upgrade traffic signals and communication networks on regionally significant corridors to meet the needs of advanced applications such as Next-Generation Transit Signal Priority (NextGen TSP) and Automated Traffic Signal Performance Measures (ATSPM) that require Advanced Transportation Controllers (ATCs) and fiber optic communication.
- Monitor and address signal performance on regionally significant corridors by identifying performance issues such as freight delay, transit delay, or high pedestrian and bicycle traffic stress.

Priority:

10 Stakeholder Advisory Committee (SAC)

High – to ensure the benefits of Next Generation Transit Signal Priority are extended region-wide

Timeline:

Ongoing

Milestone: September 2022 Division Transit Project

Tracked by:

PBOT (TransPort's Central Signal TransPort Subcommittee) – led by Chair

Furthers Objectives:

5.1) Manage recurring and non-recurring congestion to improve travel time reliability for all users, including active transportation, transit, and freight.

6.2) Manage projects and resources to be responsive to changes in land use planning and growth patterns.

References to other Plans and Projects:

Road User Understanding of Bicycle Signal Faces on Traffic Signals

Improved Safety and Efficiency of Protected/Permitted Right Turns in Oregon

Improving Walkability Through Control Strategies at Signalized Intersections

Addressing Bicycle-Vehicle Conflicts with Alternate Signal Control Strategies

Incorporating Pedestrian Considerations into Signal Timing

Operational Guidance for Bicycle-Specific Traffic Signals

Portland Metro Region

3. Develop a Mobility on Demand strategy and policy.

Planning

Action Description:

Create a Regional Mobility on Demand (MOD) Working Group consisting of agency staff, transportation demand management non-profits (e.g., Transportation Management Associations), private partners, university researchers, and community---based organizations to:

- Build on existing regional policy conversations in support of mobility partnerships, and technology solutions for last-mile connections.
- Participate in expanding access through micro-freight delivery (curb side delivery such as on-line purchases, food delivery apps, etc.).
- Coordinate with parking managers to improve operations particularly in downtowns and along main streets (e.g., Regional and Town Centers).
- Examine benchmarks set for shared mobility services (such as the PBOT Scooter Policy) by partner agencies and establish regional minimum level of service benchmarks for MOD service in equity focus areas connecting to opportunities, BIPOC, and low-income communities.
- Evaluate unified payment strategy and related policies, including congestion pricing, as they function to provide demand and system management through MOD, transit and connected travel options.
- Establish a strategy for connecting people to recreational destinations not well served by traditional transit during off-peak service hours.
- Identify opportunities for pilots to connect people to MOD and support them through programs with MOD service providers.
- Develop a pilot package delivery hub program for the "last 50 feet freight delivery", focusing on equity focus areas, incorporating guidance on siting package lockers, and the ability to co-locate with transit and other services.
- Develop communications with travelers to inform more travelers about these choices.
- Establish public-agency person-to-person lines of communication, formal agreements as necessary, pre-planned emergency needs, and information flows supportive of MOD operations.
- Use information flows with forecast models to optimize traveler's experience and MOD operator logistics.

Priority:

10 SAC Votes

High

Timeline:

Near: 2022-2024

Milestone: forming working group

Responsibility:

Metro convenes across planners and operators

Identify appropriate ODOT contacts for tasks to act in a supporting role.

Furthers Objectives:

2.1) Ensure historically marginalized communities and people of color benefit from safety improvements.

2.4) Improve inter-agency & intra-agency collaboration to ensure efficient operations by identifying and addressing barriers in communication when making decisions about network operation or expansion.

4.1) Connect decentralized travel options to facilitate viable destinations in Regional Centers, Town Centers, and employment areas outside downtown Portland.

4.2) Prioritize the completion and expansion of planned transit and active mode networks when investing discretionary revenues especially to destinations with limited travel choices.

Portland Metro Region

4.3) Connect goods and delivery services to people and businesses by providing for and managing last mile connections for goods delivery.

4.4) Increase availability and accessibility of low-cost transportation options in historically marginalized communities.

6.1) Plan and design a flexible transportation network that can adapt to new technology and travel choices that are consistent with the region's desired land use and transportation outcomes.

6.2) Manage projects and resources to be responsive to changes in land use planning and growth patterns.

6.4) Provide public agency staff with the data, tools, models, and training needed to assess long-term disruptive transportation trends.

References to other Plans and Projects:

Evaluation of Portland Shared E-Scooter Pilot Program Goals and Outcomes

Delivering Packages at Transit Stations: Considering Accessibility and Equity in Site Placement

New Mobility For All: Can Targeted Information and Incentives Help Underserved Communities Realize The Potential of Emerging Mobility Options?

Marginalized Populations' Access to Transit: Journeys from Home and Work to Transit

NSF Collaborative Research: RAPID: Maintain Mobility and Reduce Infection Through a Resilient Transit and Micromobility System

National Scan of Bike Share Equity Programs

Novel Approaches to Model Travel Behavior and Sustainability Impacts on E-Bike Use

The E-Bike Potential: How E-Bikes Can Improve Sustainable Transportation

How Technology Can Affect the Demand for Bicycle Transportation: The state of technology and projected applications of connected bicycles

ODOT TripCheck

Portland Metro Region

4. Manage transportation assets to secure the network.

Concepts, Capabilities, and Infrastructure

Action Description:

Secure the network from natural disasters and other disruptions by physically securing the infrastructure, identifying end of life equipment, and replacing it proactively.

Priority:

5 SAC Votes

High

Timeline:

Ongoing

Responsibility:

Individual Agency Responsibilities

(ITS-NMT group TransPort subcommittee), depending on assets included in this task

Furthers Objectives:

2.2) Collaborate with emergency management when prioritizing investments on key emergency response routes.

6.3) Minimize long term disruptions to the transportation system by creating resiliency to climate change and economic shifts.

References to other Plans and Projects:

Smart, Shared, and Social: Enhancing All-Hazards Transportation Recovery Plans with Demand Management Strategies and Technologies

Rapid Transportation Structure Evaluation Toolkit

Integrate Socioeconomic Vulnerability for Resilient Transportation Infrastructure Planning

Portland Metro Region

5. Pilot Origin-Destination data to prioritize TSMO investments.

Planning

Action Description:

- Identify data sources and obtain Origin-Destination (OD) data to determine the highest use trip pairs in the region, pairs with the greatest trip lengths, pairs with a trip end in an equity focus area, and pairs without existing transit connections for use in planning and project prioritization.
- Use the data to identify TSMO upgrades that benefit multiple modes and are adaptable to emerging technologies (i.e., charging stations for e-bikes and EVs, controller upgrades that allow for varying communication systems).
- Create an active system of OD collection, monitoring, and reporting.

Priority:

7 SAC Votes

Medium

Timeline:

Mid: 2023-2025

Responsibility:

Metro considers pilot with partners

Supportive role for ODOT

Furthers Objectives:

4.2) Prioritize the completion and expansion of planned transit and active mode networks when investing discretionary revenues especially to destinations with limited travel choices.

5.2) Expand travel time reliability improvements for people of color and historically marginalized communities burdened with long travel distances.

6.1) Plan and design a flexible transportation network that can adapt to new technology and travel choices that are consistent with the region's desired land use and transportation outcomes.

6.4) Provide public agency staff with the data, tools, models, and training needed to assess long-term disruptive transportation trends.

References to other Plans and Projects:

Reducing VMT, Encouraging Walk Trips, and Facilitating Efficient Trip Chains through Polycentric Development

Revisiting TODs: How Subsequent Development Affects the Travel Behavior of Residents in Existing Transit-Oriented Developments

Portland Metro Region

6. Track and prioritize TSMO Investments in BIPOC and low-income communities.

Listening & Accountability

Action Description:

- Create a priority process that listens for TSMO needs, projects, and guides funding allocation to prioritize investments for and/or in BIPOC and people with lower income.
- Review and update TSMO discretionary revenue prioritization to reflect the 2021 TSMO Strategy's updated goals and objectives.
- Evaluate TSMO prior investments from the last 10 years and identify disparities for BIPOC and low-income communities.
- Identify and multimodal connectivity disparities to target future TSMO investments.
- Track TSMO investments in equity focus areas and report bi-annually.

Priority:

6 SAC Votes

High

Timeline:

Near: 2021-2023

Milestone: RTP Update

Responsibility:

Metro, ODOT, and a third-party

Furthers Objectives:

1.4) Ensure people of color and historically marginalized communities can safely access multiple low stress mode choices and routes within the transportation system by improving access to transit stops, pedestrian, and bicycle facilities.

3.2) Identify and correct past disparities when planning, operating, and maintaining the transportation system (e.g., transit access, air toxins exposure, allocation of funds).

4.2) Prioritize the completion and expansion of planned transit and active mode networks when investing discretionary revenues especially to destinations with limited travel choices.

References to other Plans and Projects:

Addressing Changing Demographics in Environmental Justice Analysis, State of Practice

Portland Metro Region

7. Continue freight technology and ITS deployment.

Concepts, Capabilities, and Infrastructure

Action Description:

- Utilize existing and pilot new freight ITS technologies that identifies solutions to optimize freight operations and improve safety on critical corridors, such as optimizing progression for trucks, progress to pilot programs, freight dilemma zone detection and green extension.
- Share TSMO-generated data resources broadly with start-ups and established freight services.

Priority:

2 SAC Votes

Medium

Timeline:

Medium: 2021-2027

Responsibility:

All Agency Operators

Furthers Objectives:

4.3) Connect goods and delivery services to people and businesses by providing for and managing last mile connections for goods delivery.

5.3) Manage critical freight corridors to create reliable routes for freight movement between key destinations.

References to other Plans and Projects:

Delivering Packages at Transit Stations: Considering Accessibility and Equity in Site Placement

Application of Smart Phone Truck Data for Freight Performance Measures and Transportation Planning

Real-Time Stochastic Matching Models for Freight Electronic Marketplace

Metro convenes regional freight planning https://www.oregonmetro.gov/regional-freight-plan and City of Portland convenes a Freight Committee https://www.portlandoregon.gov/transportation/54899.

Safety measures for commercial vehicle drivers now include limitations that can cause issues including semi-trucks parking in undesignated areas. This was studied statewide with recommendations for the Portland region https://www.oregon.gov/odot/Projects/Pages/Commercial-Truck-Parking-Study.aspx

Portland Metro Region

8. Facilitate Ground Truthing of Emerging Technologies.

Concepts, Capabilities, and Infrastructure

Action Description:

Respond to community-voiced needs to initiate agency partnerships to test emerging technologies. Consider efforts in context provided by the forthcoming Metro Emerging Trends Study. Consider these as examples, recognizing that more pilots are needed to keep pace with technology advancements:

- Collaborate with ODOT on the connected vehicle infrastructure environment to reduce pedestrian related collisions.
- Explore best practices for collision avoidance systems, policy implications, and implementation.
- Create a readiness training program for the region to evaluate and prepare for risks from technology, economic, and ecological disruptions.
- Identify solutions to changes in growth patterns, travel behavior, and other non-emergency travel trends.
- Partner to increase mobility with electric vehicle (EV) adoption, including e-bikes, shared vehicles, and fleets. EVs relate to connectivity index in equity focused areas, downtowns (Regional and Town Centers), main streets and employment areas.
- Collect and evaluate safety and operational performance metrics for multimodal users (including pedestrians, bicyclists, and transit) through emerging detection technologies
- Partner with regional university transportation research centers in identifying and implementing projects exploring emerging technologies and data sources.

Priority:

7 SAC Votes

Medium

Timeline:

Ongoing

Milestone: Metro Emerging Trends Study

Responsibility:

Washington County, ODOT, PBOT, and Portland State University (PSU) Transportation Research & Education Center (TREC)

Furthers Objectives:

1.1) Manage the transportation system to reduce negative health impacts so that public health risk does not adversely affect people's mode choice.

1.3) Provide a transportation system where human error does not result in serious injury or loss of life.

4.4) Increase availability and accessibility of low-cost transportation options in historically marginalized communities.

6.1) Plan and design a flexible transportation network that can adapt to new technology and travel choices that are consistent with the region's desired land use and transportation outcomes.

6.4) Provide public agency staff with the data, tools, models, and training needed to assess long-term disruptive transportation trends.

Portland Metro Region

References to other Plans and Projects:

Exploring Data Fusion Techniques to Derive Bicycle Volumes on a Network

New Mobility For All: Can Targeted Information and Incentives Help Underserved Communities Realize The Potential of Emerging Mobility Options?

Integrate Socioeconomic Vulnerability for Resilient Transportation Infrastructure Planning

Exploring the Use of Crowdsourced Data Sources for Pedestrian Count Estimations

The Federal Highway Administration supports research and innovation at the national level https://highways.dot.gov/research and in partnership with FHWA's Oregon Division. This includes testing new devices in the context of the Manual on Uniform Traffic Control Devices (MUTCD). ODOT's Office of Innovation is also leading on connected vehicle technology, road usage charging and more. https://www.oregon.gov/odot/Programs/Pages/OfficeOfInnovation.aspx

Portland Metro Region

9. Establish a Regional Transit Operators TSMO Group.

Concepts, Capabilities, and Infrastructure

Action Description:

Establish a Metro Regional Transit Operators TSMO Group as a subcommittee of Transport consisting of representation from local and regional transit operators. Collaborate with the group to:

- Identify transit stops on high frequency routes without real-time bus information technology, prioritize improvements, and complete high priorities.
- Identify and implement mitigations at transit and train at- grade rail crossing locations with a history of collisions.
- Review and Regional NextGen Transit Signal Priority (TSP) projects and develop a coordination standard for deploying TSP throughout the region.
- Coordinate with TriMet to identify TSMO solutions to support a bus on shoulder implementation plan, building on lessons learned from I-5/I-205 pilot program.
- Inform and review speed and reliability project need and solutions.
- Create a standard for reviewing and deploying new technology.

Priority:

6 SAC Votes

High

Timeline:

Ongoing

Responsibility:

TriMet

ODOT has supporting role focused on rail crossings, passenger rail, signal prioritization

Furthers Objectives:

1.3) Provide a transportation system where human error does not result in serious injury or loss of life

2.3) Collaborate with emergency management when prioritizing investments on key emergency response routes.

5.1) Manage recurring and non-recurring congestion to improve travel time reliability for all users, including active transportation, transit, and freight.

5.2) Expand travel time reliability improvements for people of color and historically marginalized communities burdened with long travel distances.

5.4) Communicate expected changes in reliability so that travelers can make informed travel choices.

References to other Plans and Projects:

Evaluation of Road User Comprehension and Compliance with Red Colored Transit Priority Lanes

The Connection Between Investments in Bus Stops, Ridership, and ADA Accessibility

Portland Metro Region

10. Unify and standardize fare subsidies for transit and MOD.

Concepts, Capabilities, and Infrastructure

Action Description:

- Create a policy that includes standardized eligibility criteria with regard for ADA, Medicaid, and other assistance programs. Utilize existing efforts such as the General Transit Feed Specification for Eligibilities and Capabilities.
- Expand low fare/price subsidies to include MOD and transit for BIPOC and low-income communities.
- Evaluate feasibility of implementing City of Portland's Transportation Wallet pilot program for connecting affordable transportation options with people living in affordable housing.

Priority:

8 SAC Votes

High

Timeline:

Near

Responsibility:

TriMet

Furthers Objectives:

2.1) Collaborate to provide consistent travel experiences across jurisdictional boundaries through integrated payment and scheduling systems, integrated corridor management, and data sharing between agencies.

4.4) Increase availability and accessibility of low-cost transportation options in historically marginalized communities.

References to other Plans and Projects:

New Mobility For All: Can Targeted Information and Incentives Help Underserved Communities Realize The Potential of Emerging Mobility Options?

Portland's Transportation Wallet Increases Access to New Mobility Services

Applying an Equity Lens to Automated Payment Solutions for Public Transportation

Do Travel Costs Matter?: Using Psychological and Social Equity Perspectives to Evaluate the Effects of a Low-Income Transit Fare Program on Low-Income Riders

TriMet, Metro, ODOT and USDOT have supported grants for improved trip planning for demand responsive transit (DRT). In 2021, two new data specifications were introduced to handle eligibility and service provider capability. https://github.com/full-path/gtfs-eligibilities

BIKETOWN offers income based discounts including college students receiving financial aid. https://www.portland.gov/transportation/news/2021/9/16/biketown-expands-e-bike-service-portland-state-university-students

11. Develop an ITS travel time Information Data Collection and Distribution Plan for RDPO Regional Emergency Routes.

Concepts, Capabilities, and Infrastructure

Action Description:

- Coordinate with agency partners to identify bottlenecks on RDPO Regional Emergency Transportation Routes, Oregon State Seismic Lifeline Routes and routes lacking redundancy and develop TSMO solutions to address these.
- Model strategies to reduce emergency response times and evacuation scenarios through technology or other actions.
- Create an Emergency Route travel time data collection plan. The plan should:
  - Identify ITS travel time information data collection and distribution gaps on RDPO Regional Emergency Transportation Routes and Oregon State Seismic Lifeline Routes to inform detour routing decisions and provide alternative route information during evacuations.
  - Prioritize data collection and distribution gaps on RDPO Regional Emergency Transportation Routes and Oregon State Seismic Lifeline Routes.
  - Install data collection and distribution infrastructure on RDPO Regional Emergency Transportation Routes and Oregon State Seismic Lifeline Routes.

Priority:

8 SAC Votes

Medium

Timeline:

Mid: 2023-2028

Responsibility:

ODOT

Furthers Objectives:

6.2) Manage projects and resources to be responsive to changes in land use planning and growth patterns.

6.3) Minimize long term disruptions to the transportation system by creating resiliency to climate change and economic shifts.

References to other Plans and Projects:

Integrate Socioeconomic Vulnerability for Resilient Transportation Infrastructure Planning

Rapid Transportation Structure Evaluation Toolkit

Smart, Shared, and Social: Enhancing All-Hazards Transportation Recovery Plans with Demand Management Strategies and Technologies

Emergency Routes Planning work (Metro)PORTAL Archive https://portal.its.pdx.edu/home

Regional Emergency Transportation Route (RETR) Phase 1 https://rdpo.net/emergency-transportation-routes will be followed by Phase 2.

Portland Metro Region

12. Explore new TSMO data sources.

Planning

Action Description:

- Explore new sources to measure identified exploratory TSMO performance measures. Exploratory metrics include:
  - Average miles walked and biked
  - Frequency of secondary crashes
  - Collision risk
  - Transportation cost burden for BIPOC and low-income communities
  - Non-recurring delay associated with incidents
  - Freight travel time and movement data
- Develop a NHTSA FARS data reporting policy and incorporate into annual reporting.

Priority:

SAC did not vote on this

Low

Timeline:

Ongoing

Responsibility:

PSU TREC

Furthers Objectives:

1.2) Ensure historically marginalized communities and people of color benefit from safety improvements.

1.3) Provide a transportation system where human error does not result in serious injury or loss of life.

1.4) Ensure people of color and historically marginalized communities can safely access multiple low stress mode choices and routes within the transportation system by improving access to transit stops, pedestrian, and bicycle facilities.

3.2) Identify and correct past disparities when planning, operating, and maintaining the transportation system (e.g., transit access, air toxins exposure, allocation of funds).

5.1) Manage recurring and non-recurring congestion to improve travel time reliability for all users, including active transportation, transit, and freight.

5.3) Manage critical freight corridors to create reliable routes for freight movement between key destinations.

References to other Plans and Projects:

PORTAL

BikePed Portal

Portland Metro Region

13. Create a community listening program.

Listening & Accountability

Action Description:

Build capacity for a community listening program to reduce barriers for travelers to report experiences related to TSMO. Tactics may involve but are not limited to partnering with large-scale public outreach to facilitate a breakout group specific to TSMO, supporting equity-focused consultants and Community Based Organizations to share input, initiating a study of agency customer feedback (including social media), piloting an anonymous feedback system generated by and for BIPOC and people with lower income to report travel experiences related to operations.

As part of the listening program, create a pilot where BIPOC and low-income travelers are paid to provide feedback and share their traveler experiences/stories with agency staff.

Support efforts with service providers to add capacity. Participate to listen for TSMO-related issues and follow up on previous efforts, identifying TSMO-related solutions.

Priority:

7 SAC Votes

High

Timeline:

Near: 2021-2024

Responsibility:

ODOT, Metro and PSU TREC

Furthers Objectives:

3.1) Prioritize reaching underrepresented groups when providing traveler information and community outreach and ensure that modal access and traveler information is free from technological and financial barriers.

3.3) Identify and increase awareness of the unique travel experiences of people of color and historically marginalized communities.

References to other Plans and Projects:

TriMet Reimagine Transportation
ODOT Office of Social Equity
Metro Regional Travel Options Program.
Equity outcomes and potential for a better bike share

Developing strategies to enhance mobility and accessibility for a community-dwelling older adults

New mobility for all: Can targeted information and incentives help underserved communities realize the potential of emerging mobility options?

Seamless wayfinding by individuals with functional disability in indoor and outdoor spaces: An investigation into lived experiences, data needs, and technology requirements

App-based data collection to characterize latent transportation demand within marginalized and underserved populations

How can enter disciplinary teams leverage emerging technologies to respond to transportation infrastructure needs? Mixed-methods evaluation of civil engineers urban planning and social workers' perspectives

Marginalized populations' access to transit: Journeys from home and work to transit

Do travel costs matter?: Using psychological and social equity perspective to evaluate the effects of a low income transit fare program on low income riders

Portland Metro Region

- Applying an equity lens to automated payment solutions for public transportation
- Developing data, models, and tools to enhance transportation equity
- A comprehensive examination of electronic wayfinding technology for visually impaired travelers in an urban environment
- Defining and measuring equitable access to Washington Park in Portland, Oregon
- Addressing changing demographics and environmental justice analysis, state of the practice
- Life-space mobility and aging in place
- Evaluating and enhancing public transit systems for operational efficiency, service quality and access equity
- Racial bias in drivers' yielding behavior or at crosswalks: Understanding the effect
- Evaluating efforts to improve the equity of bike share systems

Portland Metro Region

14. Create continuous improvement process for existing and new signal systems and related performance.

Concepts, Capabilities, and Infrastructure

Action Description:

Outline and begin continuous improvement process for signal systems and new concepts that serve major arterials and high-injury corridors. The continuous improvement process will utilize systems engineering from concept of operations through retirement of legacy systems.

In coordination with asset managers, inventory automatic traffic recorder stations, ATC controllers, and detection sensors (location, status, age, and operability). Identify through corridors and major arterials that do not currently have travel time information collection by mode to identify gaps in the existing system. Create a plan to mitigate identified gaps by completing high priority projects targeted for either technological upgrades (sensors, ATRs etc.) or crowd sourced data.

Priority:

2 SAC Votes

Low

Timeline:

Ongoing

Responsibility:

Agencies participating in TransPort's Central Signal System Users Group and PBOT

Furthers Objectives:

2.1) Collaborate to provide consistent travel experiences across jurisdictional boundaries through integrated payment and scheduling systems, integrated corridor management, and data sharing between agencies.

5.1) Manage recurring and non-recurring congestion to improve travel time reliability for all users, including active transportation, transit, and freight.

6.1) Plan and design a flexible transportation network that can adapt to new technology and travel choices that are consistent with the region's desired land use and transportation outcomes.

6.4) Provide public agency staff with the data, tools, models, and training needed to assess long-term disruptive transportation trends.

References to other Plans and Projects:

ODOT ITS Master Communication Plan

Data-driven mobility strategies for multimodal transportation

Understanding factors affecting arterial reliability performance metrics

Portland Metro Region

15. Deploy regional traveler information systems.

Concepts, Capabilities, and Infrastructure

Action Description:

Create a traveler information and educational campaign with BIPOC, low- income, and limited English proficiency community needs. The campaign should also start deploying traveler information systems where community-voiced need and multiple transportation options are present, building into a methodology Traveler Information Systems (TIS) priorities that may involve transit stops, public buildings, major destinations within regional centers. and on-vehicle displays. The TIS should incorporate a broad cross section of traveler needs which may include travel time, route, real-time transit, and real-time shared-use mobility information.

Priority:

9 SAC Votes

High

Timeline:

Ongoing

Responsibility:

Metro for convening and scoping

Furthers Objectives:

2.3) Collaborate with and educate travelers.

3.1) Prioritize reaching underrepresented groups when providing traveler information and community outreach and ensure that modal access and traveler information is free from technological and financial barriers.

References to other Plans and Projects:

Overcoming barriers for a wide-scale adoption of standardized real time transit information

Developing data, models, and tools to enhance transportation equity

ODOT TripCheck offers a Beta TripCheckTV for internet-connected displays. https://www.tripcheck.com/tv/

TriMet lists developers including some who tailor information to dedicated monitors. https://trimet.org/apps [] F&P will reference Ron's learning from CA

Portland Metro Region

16. Implement Integrated Corridor Management and mainstream into corridor planning.

Concepts, Capabilities, and Infrastructure:

Action Description:

Provide tools for regional partners based on I-84 Multimodal ICM Deployment Plan including:

- Establish a multimodal detour policy across agencies. Define lines of communication and pre-plan emergency needs by rehearsing scenarios for a variety of events impacting operations. Provide job-shadow and training experiences.
- Create a data sharing policy and inter-agency(s) agreement with agency partners to incorporate data into PORTAL or another identified internal sharing system. Share construction schedules across agencies. Implement a decision support system, employing forecast models as useful.

Beginning with the next RTP update, consider corridor needs that can be met through ICM based on regional efforts and FHWA guidance and local operators.

Priority:

3 SAC Votes

Low

Timeline:

2021-2023

Milestone: RTP Update

Responsibility:

Metro and ODOT

Furthers Objectives:

2.1) Collaborate to provide consistent travel experiences across jurisdictional boundaries through integrated payment and scheduling systems, integrated corridor management, and data sharing between agencies.

2.2) Collaborate with emergency management when prioritizing investments on key emergency response routes.

2.4) Improve inter-agency & intra-agency collaboration to ensure efficient operations by identifying and addressing barriers in communication when making decisions about network operation or expansion.

5.1) Manage recurring and non-recurring congestion to improve travel time reliability for all users, including active transportation, transit, and freight.

6.4) Provide public agency staff with the data, tools, models, and training needed to assess long-term disruptive transportation trends.

References to other Plans and Projects:

Understanding factors affecting arterial reliability performance metrics

Statistical inference for multimodal travel time reliability

17. Create a TSMO Safety Toolbox.

Concepts, Capabilities, and Infrastructure:

Action Description:

Create a TSMO Safety Toolbox to advance actions identified in the Metro Regional Safety Strategy. The toolbox should include guidance for the deployment of new technologies and create policy for evaluating their effectiveness.

Create a Speed Management Plan, in coordination with Statewide Policy, and collaborate with local agencies to provide guidance and implementation program for active speed management and feedback including, automated speed feedback signs, changeable speed limits, automated enforcement, and traffic calming solutions. Evaluate speed limits and identify opportunities to apply a safe systems approach to speeds in regional and town centers, high pedestrian, and bicycle corridors, and in equity focus areas. Apply Automated Traffic Signal Performance Measures (ATSPMs), including speeds,

The toolbox should respond to emerging research related to speed reduction through signal timing strategies context and point out where overlapping road functions or classifications have potential for creating risk and/or preventing implementation of TSMO safety tools.

Priority:

5 SAC Votes

High

Timeline:

Near: 2022-2024

Responsibility:

All Agencies

Furthers Objectives:

1.2) Ensure historically marginalized communities and people of color benefit from safety improvements.

1.3) Provide a transportation system where human error does not result in serious injury or loss of life.

References to other Plans and Projects:

Data-driven mobility strategies for multimodal transportation

Improving walk ability through control strategies at signalized intersection

Subcontract: NCHRP 17-87 Enhancing Pedestrian Volume Estimation and Developing HCM Pedestrian Methodologies for Safe and Sustainable Communities

Pedestrian behavior study to advance pedestrian safety in smart transportation systems using innovative LiDAR sensors

Effect of residential street speed limit reduction from 25 to 20 mph on driving speeds in Portland, Oregon

Road user understanding of bicycle signal faces on traffic signals

Improving integration of transit operations and bicycle infrastructure at the stop level

Contextual guidance at intersections for protected bicycle lanes

The TSMO Safety Toolbox should utilize the Safe Systems Approach. Safe Routes to School efforts work with the traffic patterns, facilities, and education to improve safety for children and families on the way to and from school. In 2021, the Oregon Legislature approved emergency speed changes for Cities/Counties.

Portland Metro Region

18. Participate in regional public outreach to assist in guiding, listening, and learning through TSMO-focused conversations.

Listening & Accountability

Action Description:

TSMO-focused public outreach should include traveler safety information and be created with BIPOC, low-income, and limited English proficiency communities. Work with local agencies to create/update public outreach that specifically include equity-focused TSMO that include BIPOC, low income and limited English proficiency communities.

Priority:

8 SAC votes

Medium

Timeline:

Near

Responsibility:

Metro, ODOT and Third Party

Furthers Objectives:

1.2) Ensure historically marginalized communities and people of color benefit from safety improvements.

2.3) Collaborate with and educate travelers.

3.1) Prioritize reaching underrepresented groups when providing traveler information and community outreach and ensure that modal access and traveler information is free from technological and financial barriers.

5.4) Communicate expected changes in reliability so that travelers can make informed travel choices.

References to other Plans and Projects:

Developing data, models, and tools to enhance transportation equity

New mobility for all: can targeted information and incentive help underserved communities realize the potential of emerging mobility options?

Do travel costs matter?: Using psychological and social equity perspectives to evaluate the effects of a low-income transit fare program and low-income riders

Implementing a community transportation academy

Portland Metro Region

19. Improve TSMO data availability to aid in traveler decisions and behavior.

Listening & Accountability

Action Description:

- Unify multimodal trip planning by coordinating among transit service providers' and riders' needs, creating opportunities for TriMet and other Open Trip Planner partners.
- Create an external facing dashboard for TSMO metrics accountability connecting each metrics' relevance to travelers.
- Communicate TSMO to raise awareness in the need for travelers to participate to improve transportation system outcomes and metrics. For example, signage about moving over for emergency vehicles, merging, or moving property-damage-only crashes out of the travel lane will help with overall system management and clearance metrics.
- Increase communication about how the system could operate safer and more efficiently using signage and coordinating agency Public Service Announcements (PSAs.)

Priority:

7 SAC Votes

Medium

Timeline:

Mid

Responsibility:

Metro, TriMet and ODOT

Furthers Objectives:

2.1) Collaborate to provide consistent travel experiences across jurisdictional boundaries through integrated payment and scheduling systems, integrated corridor management, and data sharing between agencies.

2.3) Collaborate with and educate travelers.

5.4) Communicate expected changes in reliability so that travelers can make informed travel choices.

References to other Plans and Projects:

Overcoming barriers for the wide-scale adoption of standardized real-time transit information

Social transportation analytics toolbox (STAT) for transit networks

Portland Metro Region

20. Build and use a TSMO Toolbox to connect gaps in bicycle and pedestrian infrastructure.

Concepts, Capabilities, and Infrastructure:

Action Description:

Create a connected bicycle and pedestrian infrastructure with TSMO tools. Start with a Connectivity Index of existing pedestrian and bicycle infrastructure that includes community-voiced barriers, inventories of low stress facilities, and other identified gaps in the system. The toolbox should consider how pedestrian and bicycle modes interact with signals, illumination, and transit connections, while also the disparities experienced by BIPOC and people with lower income-. Investments made using the toolbox should afford complete treatment to address these disparities.

Priority:

23 SAC Votes

High

Timeline:

Ongoing

Milestone: ODOT Pedestrian and Bicycle Priority Routes

Responsibility:

All Agencies and PSU TREC

Furthers Objectives:

1.4) Ensure people of color and historically marginalized communities can safely access multiple low stress mode choices and routes within the transportation system by improving access to transit stops, pedestrian, and bicycle facilities.

4.1) Connect decentralized travel options to facilitate viable destinations in Regional Centers, Town Centers, and employment areas outside downtown Portland.

4.2) Prioritize the completion and expansion of planned transit and active mode networks when investing discretionary revenues especially to destinations with limited travel choices.

References to other Plans and Projects:

Equity in bike share research

Understanding economic and business impacts of street improvements for bicycle and pedestrian mobility - A multi-city multi-approach exploration [phase 2]

Reducing VMT, encouraging walk trips, and facilitating efficient trip chains through polycentric development

Bikeway design research

Improving integration of transit operations and bicycle infrastructure at the stop level

ODOT Active Transportation Needs Inventory (ATNI)

Portland Metro Region

21. Update the Regional ITS Architecture.

Planning

Action Description:

Collaborate on updates to the Regional ITS Architecture by reviewing changes on a quarterly basis and adjusting every two years to include innovations in the national and statewide architecture.

Priority:

4 SAC Votes

Low

Timeline:

Near: 2022-2024

Responsibility:

Metro

(ITS Architecture Group should be integral to this action)

Furthers Objectives:

2.4) Improve inter-agency & intra-agency collaboration to ensure efficient operations by identifying and addressing barriers in communication when making decisions about network operation or expansion.

6.1) Plan and design a flexible transportation network that can adapt to new technology and travel choices that are consistent with the region's desired land use and transportation outcomes.

References to other Plans and Projects:

Applying data driven multi model speed management strategies for safe, efficient transportation

Deploying electric buses to improve air quality in low-income areas

Can incentivizing E bikes support GHG goals? Launching the new EV incentive cost and impact tool

Connected vehicle system design for signalized arterials

Modeling and analyzing the impact of advanced technologies on livability and multimodal transportation performance measures in arterial corridors

The regional ITS Architecture was updated in 2016 and posted here on Metro's site https://www.oregonmetro.gov/public-projects/regional-tsmo-strategy/2010-2020-tsmo

Exhibit C to Resolution No. 21-5220
2021 Transportation System Management and Operations (TSMO) Strategy
Summary of Comments Received and Recommended Actions
Comments received September 24 through October 25, 2021

Metro respects civil rights
Metro fully complies with Title VI of the Civil Rights Act of 1964 and related statutes that ban discrimination. If any person believes they have been discriminated against regarding the receipt of benefits or services because of race, color, national origin, sex, age or disability, they have the right to file a complaint with Metro. For information on Metro's civil rights program, or to obtain a discrimination complaint form, visit www.oregonmetro.gov/civilrights or call 503-797-1536. Metro provides services or accommodations upon request to persons with disabilities and people who need an interpreter at public meetings. If you need a sign language interpreter, communication aid or language assistance, call 503-797-1700 or TDD/TTY 503-797-1804 (8 a.m. to 5 p.m. weekdays) 5 business days before the meeting. All Metro meetings are wheelchair accessible. For up-to-date public transportation information, visit TriMet's website at www.trimet.org.

Metro is the federally mandated metropolitan planning organization (MPO) designated by the governor to develop an overall transportation plan and to allocate federal funds for the region.

The Joint Policy Advisory Committee on Transportation (JPACT) is a 17-member committee that provides a forum for elected officials and representatives of agencies involved in transportation to evaluate transportation needs in the region and to make recommendations to the Metro Council. The established decision-making process strives for a well-balanced regional transportation system and involves local elected officials directly in decisions that help the Metro Council develop regional transportation policies, including allocating transportation funds. JPACT serves as the MPO board for the region in a unique partnership that requires joint action with the Metro Council on all MPO decisions.

Project web site: www.oregonmetro.gov/tsmo

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2021 Transportation System Management and Operations (TSMO) Strategy Public Comment Report

The 2021 TSMO Strategy Draft was released for public review from September 24 through October 25, 2021. Comments were received during the public comment period and through the public meetings of the Transportation Policy Alternatives Committee (TPAC) on November 5, 2021 and Joint Policy Advisory Committee on Transportation (JPACT) on November 18, 2021. Stakeholders were encouraged to review the draft document and comment:

- in writing to Metro Planning, 600 NE Grand Ave., Portland, OR 97232 or transportation@oregonmetro.gov
- by phone at 503-797-1750 or TDD 503-797-1804
- Through an online comment survey

Public agencies, advocacy groups and members of the public submitted comments through email, the online comment survey and one video conference call. In total, eight people provided comments. Eleven people participated in the online comment survey and four of those respondents provided substantive comments. Three people submitted comments through email and one community organization representative provided comments on a video conference call with project staff. No comments were received by mail or phone. All comments received are attached to this report.

Notice of the public comment period was provided through Metro News and distributed to members of the Metro transportation committees interested persons list and Metro's Transportation Policy Alternatives Committee (TPAC) interested parties list and TransPort, a subcommittee of TPAC.

Online comment survey summary

The survey participants' answers to the open-ended questions are included in the comment log with responses.

The online comment survey included a multiple choice question that asked:
"Which actions should be emphasized? Select your top three. Please comment on your selections."
Out of 21 actions include in the 2021 TSMO Strategy, the following actions were selected by survey participants as ones that should be emphasized: Facilitate ground truthing of emerging technologies. (3 respondents), Develop a Mobility on Demand strategy and policy (2 respondents), Manage transportation assets to secure the network (1 respondent), Pilot Origin-Destination data to prioritize TSMO investments (1 respondent), Explore new TSMO data sources (1 respondent), Create a TSMO safety toolbox (1 respondent), and Improve TSMO data availability to aid in traveler decisions and behavior (1 respondent).

Comment log

The following comment log summarizes recommended changes to respond to all substantive comments received during the comment period. New wording is shown in underline; deleted words are crossed out in strikeout. Recommended changes will be made to the 2021 TSMO Strategy upon adoption of this Exhibit C by JPACT and Metro Council.

All items in this Exhibit C are recommended for approval by JPACT and the Metro Council.

The first 12 entries in the following comment log were from four people who made substantive

comments using the online comment form. They included optional demographic information that they were comfortable sharing. Two people responded from Portland, one from Beaverton and one from Washougal, Washington (based on Zip Code). Two respondents shared perspectives as "Community member/traveler" and two shared "Transportation professional" perspectives. Age ranges selected included 35-44 and 65-74. Three respondents selected white as their racial or ethnic identity and one preferred not to answer. Household income ranges before taxes were $50,000 to $74,999, $100,000 to $149,999 or preferred not to answer.

Comment	**Chapter or Appendix**	**Name/Commentator**	**Affiliation**	**Date**	**Method**
1	Chapter 3	Survey respondent 1	n/a	10/2/21	Survey
Comment			Response and/or recommended change (changes shown in ~~strikeout~~ and underline)		
Goal "1) Create a transit system that is free to all riders (without regressive taxation)."			Change Chapter 5, Action 10, sub-action 2 to read "Expand low or free fare, or price subsidies, to include MOD and transit for Black, Indigenous, people of color, and people with low incomes."		

Comment	**Chapter or Appendix**	**Name/Commentator**	**Affiliation**	**Date**	**Method**
2	Chapter 3	Survey respondent 1	n/a	10/2/21	Survey
Proposed change identified in comment(changes shown in ~~strikeout~~ and underline)			JPACT recommendations(changes shown in ~~strikeout~~ and underline)		
Add objective "The statistics are CLEAR if you are poor you can't afford to travel. My family takes the train and walks 20-30 min to avoid the cost. This study clearly avoids the issue that the lower incomes peoples earn IN PORTLAND CENTRAL do not cost of provide money to ride even with the 50% off cards. Do the math. If the rides where free we would have more white ridership and loads more short trips made by bus. It would only be a couple years until we saw all the cars off the roads and ridership reflect the population....less people of color killed by cars because they could afford monitored ticket travel. Seriously...rent and food eat more than a low income salary...you can't make it without cheating presently. This report doesn't make that abundantly clear. Free to all cuts cost of all that administration and would create lower skill level jobs that these same people could do cleaning regularly, handing security, etc."			No change recommended. In Chapter 3, Goal 3, Eliminate Disparities" includes objective 3.4 "Reduce the transportation cost burden experienced by Black, Indigenous, people of color and, people with low incomes."		

Comment	**Chapter or**	**Name/Commentator**	**Affiliation**	**Date**	**Method**

3	**Appendix** Chapter 2	Survey respondent 1	n/a	10/2/21	Survey

Comment	Response and/or recommended change (changes shown in ~~strikeout~~ and underline)
Comment related to additional TSMO considerations for transportation agencies and decision-makers: "Stop the investment in tech and support the investment in the people."	No change recommended. The Strategy calls for use of the Equity Tree to assess the solution steps to achieving equitable outcomes, evaluating outcomes and being accountable.

Comment	**Chapter or Appendix**	**Name/Commentator**	**Affiliation**	**Date**	**Method**
4	Chapter 3	Survey respondent 1	n/a	10/2/21	Survey

Proposed change identified in comment(changes shown in ~~strikeout~~ and underline)	JPACT recommendations(changes shown in ~~strikeout~~ and underline)
Comment related to bias: "The bias is thinking that the workers with kids and earning minimum wage can afford the train...so more money put into tech means they continue to be left behind with no sign, no trains at night when there is work (MORE AND MORE WORK NIGHTS AND YOU EARN LESS THAN A 10 MIN UBER RIDE!!!!)....seriously make the train free for all and then add more drivers and trains...we don't need the tech."	The Strategy Chapter 3, Goal 4, Objective 4.4 is to "Increase availability and accessibility of low-cost transportation options for low income individuals and people of color." Recommend change to Chapter 5, Action to Unify and standardize fare subsidies for transit and MOD, sub-action 2 to read "Expand low or free fare, or price subsidies, to include MOD and transit for Black, Indigenous, people of color, and people with low incomes."

Comment	**Chapter or Appendix**	**Name/Commentator**	**Affiliation**	**Date**	**Method**
5	Chapter 3	Survey respondent 2	n/a	10/5/21	Survey

Comment	Response and/or recommended change (changes shown in ~~strikeout~~ and underline)
Comment related to Vision, Goals and values: "Single occupant vehicles (SOVs) are extremely inefficient in the use of terrestrial space. The more land devoted to accommodate SOVs, the farther apart we push the points of origin and destination for which travel is required - community sprawl. As the distance between points of origin and destination increases, the more miles needed for travel. Traffic congestion is a predictable and expected outcome when the focus on transportation is placed on SOVs to meet travel needs. This focus must be changed. Traffic engineers are primarily trained in designing roadways to maximize traffic flow. All too often their focus is on providing more space, more lanes, to	No change recommended. In Chapter 3, Goal 4, Connected Travel Choices, includes objective 4.1 to "Connect decentralized travel options to facilitate viable destinations in Regional Centers, Town Centers, and employment areas outside downtown Portland." This goal and objective connects TSMO with efficient land use through regional growth policy. Objective 4.2 "Prioritize the completion and expansion of planned transit and active mode networks when investing discretionary revenues especially to destinations with limited travel choices." A performance measure on "system connectivity" will provide a measurement basis with equity context to Goal 4 and related objectives.

accommodate more traffic. This, along with the points listed above, contributes toward induced demand. Our Department of Transportation insists that they have insufficient funds to maintain existing pavement, and at the same time, they continue to increase lanes and lane widths. Increasing space (lane width, shoulders, medians) for SOVs in order 'improve safety' often results in faster traffic, decreased efficiency in use of space, higher speed accidents and increased fatalities. Traffic congestion in urban areas is not a 'problem to be solved,' but the expected result of over-dependence on SOVs to meet transportation needs. Traffic congestion is a tool that must be used to modify human behavior and realize increased mobility. Increased reliance upon frequent, interconnected, reliable public transportation must be our primary response."	The Strategy also includes an Action to "Create a TSMO Safety Toolbox" to utilize a Safe Systems Approach, actively manage speed, provide guidance and implement technologies to improve safety. TransPort, Subcommittee of TPAC, will continue to meet regularly, providing an open forum among traffic engineers, planners, researchers, consultants, community members and all are welcome.

Comment	**Chapter or Appendix**	**Name/Commentator**	**Affiliation**	**Date**	**Method**
6	Chapter 3	Survey respondent 2	n/a	10/5/21	Survey
Comment			Response and/or recommended change (changes shown in ~~strikeout~~ and underline)		
Comment related to Objectives: "Need to acknowledge that a significant percentage of our population does not have access to, or should not have access to, an automobile. A significant percentage of the population does not have the ability (age/physical/mental/financial/legal limitations) to drive safely - many cannot drive at all. This likely includes over 30% - 40% of the population. To realize "EQUITY," we must acknowledge these points, and reduce focus on accommodating SOVs."			Recommend change to Chapter 3, Goal 4, Objective 4.4 "Increase availability and accessibility of low-cost transportation options for ~~l~~low income individuals and people of color, and in acknowledgement that a significant percentage of people will not have access to an automobile."		

Comment	**Chapter or Appendix**	**Name/Commentator**	**Affiliation**	**Date**	**Method**
7	Chapter 5	Survey respondent 2	n/a	10/5/21	Survey
Comment			Response and/or recommended change (changes shown in ~~strikeout~~ and underline)		
Comment related to current work and urgent need in respondent's community: "The objective of 'intelligent transportation systems' is to provide improved guidance and traffic control of transportation vehicles. (We do not			Goal 6, Objective 6.1 is to "Plan and design a flexible transportation network that can adapt to new technology and travel choices that are consistent with the region's desired land use and transportation outcomes."		

need 'emerging technologies,' we need to better utilize, and improve upon, the technologies we already have. Safe, efficient systems have existed for many decades, utilizing hybrid technology and electrical power for energy of motion, and highly efficient, and automated traffic control. We call this technology 'railways.' High capacity railways rely on flanged steel wheels rolling effortlessly on steel rails, greatly minimizing energy use, landuse, and a wide range of environmental and health related issues. Rubber tires on pavement require TEN TIMES more energy to overcome rolling friction on level ground. Japan's Shinkansen demonstrates that railway technology can be virtually fail-safe, cost-effective, environmentally sound and efficient. ZERO injury accidents after over 56 years of operation at speeds up to 200 mph."	Chapter 5 Action, to Facilitate Ground Truthing of Emerging Technologies, starts with a description to "Respond to community-voiced needs to initiate agency partnerships to test emerging technologies." Recommended change to this action is to add an example to the list: "<u>Collaborate with ODOT Public Transit Division, transit agencies and rail operators to identify technologies for safe, efficient and reliable operations.</u>"

Comment	**Chapter or Appendix**	**Name/Commentator**	**Affiliation**	**Date**	**Method**
8	Chapter 5	Survey respondent 2	n/a	10/5/21	Survey

Comment	Response and/or recommended change (changes shown in ~~strikeout~~ and <u>underline</u>)
Comment related to additional TSMO considerations for transportation agencies and decision-makers: "We need congestion-pricing, NOT tolling. Congestion pricing can help reduce traffic congestion and make the road system operate more efficiently for everyone. Consider program like Vancouver WA is doing - allowing C-Tran buses to drive on shoulder. Congestion pricing revenue could be designed to allow funding for meaningful transportation solutions (not subject to Constitutional restriction). Tolling merely adds more money to the fund used to expand road structure. Current Constitutional limitations on gas tax and registration fees would allow 'operation' of the roadways - this could and should include operation of public transportation (buses) - this would also help to address 'congestion,' safety, equity and environmental concerns."	Chapter 5, Action to Develop a Mobility on Demand strategy and policy includes a sub-action to "Evaluate unified payment strategy and related policies, including congestion pricing, as they function to provide demand and system management through MOD, transit and connected travel options." Under the Action to "Establish a Regional Transit Operators TSMO Group," recommend change to the sub-action: "Coordinate with ~~TriMet~~ <u>transit operators</u> to identify TSMO solutions to support a bus on shoulder implementation plan, building on lessons learned from I-5/I-205 pilot program."

Comment	**Chapter or**	**Name/Commentator**	**Affiliation**	**Date**	**Method**

9	**Appendix** Chapter 3	Survey respondent 3	Southwest Washington Regional Transportation Council	10/13/21	Survey

Comment	Response and/or recommended change (changes shown in ~~strikeout~~ and underline)
Change Goal 1 from "free from harm" to "safe."	No change recommended. Goal 1 is to "Create a transportation system where all users are free from harm." This goal was crafted by the Stakeholder Advisory Committee along with objectives that include safety.

Comment	**Chapter or Appendix**	**Name/Commentator**	**Affiliation**	**Date**	**Method**
10	Chapter 3	Survey respondent 4	City of Portland	10/22/21	Survey

Proposed change identified in comment(changes shown in ~~strikeout~~ and underline)	JPACT recommendations(changes shown in ~~strikeout~~ and underline)
Commenting on Goals: "There isn't much in the way of specifics in these goals. High level words are difficult to translate into traffic signal timing parameters and technology choices."	No change recommended. Metro staff acknowledge that Vision and Goals are at a high level, reflecting regional policies.

Comment	**Chapter or Appendix**	**Name/Commentator**	**Affiliation**	**Date**	**Method**
11	Chapter 3	Survey respondent 4	City of Portland	10/22/21	Survey

Comment	Response and/or recommended change (changes shown in ~~strikeout~~ and underline)
Commenting on Objectives: "Traffic signal timing updates and changes for people walking. Traffic signal priority for buses. Improved accessibility for people walking."	Recommend change to Chapter 3, Goal 1 Free From Harm, Objective 1.4 "Ensure people of color and low income individuals can safely access multiple low stress mode choices and routes within the transportation system by improving access to, and accessibility of transit stops, pedestrian, and bicycle facilities." Recommend change to Goal 2 Regional Partnerships & Collaboration Objective 2.1 "Collaborate to provide consistent travel experiences across jurisdictional boundaries through knowledge-sharing on best approaches to multimodal traffic signal timing, integrated payment and scheduling systems, integrated corridor management, and data sharing between agencies."

	Recommend change to Chapter 5 Action "Inventory and manage regional signal and ITS Communication infrastructure" sub-action "Create a regional inventory of traffic signal capabilities by location and operator (e.g., connected to central signal system <u>for traffic signal timing updates</u>, utilizing Next Generation Transit Signal Priority, serving freight, sensing bike and pedestrian movements)."

The Online Comment form invited survey respondents to select their top 3 Actions. Selections were made as follows:

Survey Respondent 1: Improve TSMO data availability to aide in traveler decisions and behavior.
Survey Respondent 2: (none selected)
Survey Respondent 3:
- Develop a Mobility on Demand strategy and policy.
- Facilitate ground truthing of emerging technologies.
- Explore new TSMO data sources.

Survey Respondent 4:
- Manage transportation assets to secure the network.
- Facilitate ground truthing of emerging technologies.
- Create a TSMO safety toolbox.

Comment	**Chapter or Appendix**	**Name/Commentator**	**Affiliation**	**Date**	**Method**
12	Chapter 3	Paul Edgar	n/a	9/29/21	Email
Comment			Response and/or recommended change (changes shown in ~~strikeout~~ and <u>underline</u>)		
Email excerpts: "Portland/Metro Transportation and Transit Systems that were built and justified for high levels of commuters and those needs are now collapsing." … "What so many business entities have learned in this pandemic, is a lesson coming from this high level of disruption and loss of revenue, is that they have to change their business model."			No change recommended. Goal 6, Prepare for Change, Objective 6.1 is to "Plan and design a flexible transportation network that can adapt to new technology and travel choices that are consistent with the region's desired land use and transportation outcomes." This and other Objectives of the Strategy respond to disruptions and trends.		

Comment	**Chapter or Appendix**	**Name/Commentator**	**Affiliation**	**Date**	**Method**
13	Chapter 5	Paul Edgar	n/a	9/29/21	Email

Comment	Response and/or recommended change (changes shown in ~~strikeout~~ and underline)
Email excerpt: "Option #1, Climate Change and the Marketplace can be addressed by creating a whole new Transit Paradigm, by emulating Uber and Lyft with all new electric mini-buses, picking up and delivering transit riders where they need to go, within a totally automated and flexible Route Management Transit System.."	No change recommended. Chapter 5 includes an action to Develop a Mobility on Demand strategy and policy with a subtask to "Build on existing regional policy conversations in support of mobility partnerships, and technology solutions for last-mile connections." Mobility on Demand includes connections to transit, taxi and transit network companies (e.g., Uber, Lyft, GoGirlRide), among other services. Metro will assist by convening discussions.

Comment	**Chapter or Appendix**	**Name/Commentator**	**Affiliation**	**Date**	**Method**
14	Chapter 5	Paul Edgar	n/a	9/29/21	Email
Comment			Response and/or recommended change (changes shown in ~~strikeout~~ and underline)		
Email excerpt: "Option #2, Major Interstate Highway System, I-5, I-205, and I-84 are essential and require the highest priority to address capacity needs, with the elimination of bottlenecks or impediments that impede the flow of traffic."			No change recommended. Chapter 5 includes an action to Implement Integrated Corridor Management and mainstream into corridor planning." Reliability on interstates and highways will be part of the discussion of capacity across a travel shed, along capacity on other facilities and modes.		

Comment	**Chapter or Appendix**	**Name/Commentator**	**Affiliation**	**Date**	**Method**
15	Chapter 5	Paul Edgar	n/a	9/29/21	Email
Comment			Response and/or recommended change (changes shown in ~~strikeout~~ and underline)		
Email excerpt: "Option #3, Create more nimble Demand Management Planning of providing the transportation capabilities and capacity where it is needed and justified by the Marketplace."			No change recommended. Chapter 5 includes an action to Develop a Mobility on Demand strategy and policy including a subtask "Evaluate unified payment strategy and related policies, including congestion pricing, as they function to provide demand and system management through MOD, transit and connected travel options."		

Comment	**Chapter or Appendix**	**Name/Commentator**	**Affiliation**	**Date**	**Method**
16	Chapter 3	Paul Edgar	n/a	9/29/21	Email
Comment			Response and/or recommended change (changes shown in ~~strikeout~~ and underline)		
Email excerpt: "Option #4, Justification and			No change recommended. Chapter 3 includes		

Priority of Transportation Systems and Investments, needs 'Public By-In', and that requires Voter Approval of Congestion Pricing/Tolling!"	Goal 2, Regional Partnerships & Collaboration, including Objective 2.3 "Collaborate with and educate travelers."

Comment	**Chapter or Appendix**	**Name/Commentator**	**Affiliation**	**Date**	**Method**
17	Chapters 3 and 4	Elizabeth Graser-Lindsey	n/a	10/25/21	Email

Comment	Response and/or recommended change (changes shown in ~~strikeout~~ and underline)
Email excerpt: "…SDCs would be a strong congestion-reduction/demand management tool and they would help with encouraging infill and with discouraging sprawl and its exorbitant costs. Tolls are a poor congestion-reduction/demand management tool because they penalize people for unavoidably using the regional inefficient system of roads connecting sprawling and incomplete communities (e.g. they tax people going to work or not using transit because of last mile considerations and they push some traffic on to surface streets causing more problems) rather than giving them positive options – like compact urban forms -- so they don't need to congest the roads."	No change recommended. In Chapter 3, the Strategy includes a Goal 4 to "Connect all people to the goods, services, and destinations they need through a variety of travel choices." Goal 4, Objective 4.1 is to "Connect decentralized travel options to facilitate viable destinations in regional Centers, Town Centers, and employment areas outside downtown Portland." In Chapter 4, the Strategy includes a performance measure for "How complete and connected the infrastructure system is for each travel mode." These parts of the strategy relate to land use, transportation options and connectivity. Additional elements of the strategy incorporate aspects of costs, affordability and pricing that will be important through the regional policy development on pricing and revenue that is outside the scope of this Strategy.

Comment	**Chapter or Appendix**	**Name/ Commentator**	**Affiliation**	**Date**	**Method**
18	Chapters 5	Duncan Hwang	Asian Pacific American Network of Oregon	10/18/21	Video Call

Comment	Response and/or recommended change (changes shown in ~~strikeout~~ and underline)
Paraphrased comment: The Action to Establish TSMO performance measures baseline is important. Also important but missing from Actions are the benchmarks or price tags that will establish TSMO Program accountability.	Recommend change to the Action to Establish TSMO performance measures baseline, adding a subtask: "Establish benchmarks, milestones and/or estimate costs for Actions. Complete this as early as possible in the scoping of each Action and communicate this information throughout the life of this Strategy."

Comment	**Chapter or Appendix**	**Name/ Commentator**	**Affiliation**	**Date**	**Method**
19	Chapters 5	Duncan Hwang	Asian Pacific	10/18/21	Video Call

			American Network of Oregon		

Comment	Response and/or recommended change (changes shown in ~~strikeout~~ and underline)
Paraphrased comment: The community represented by, and served by Asian Pacific American Network of Oregon asks several key questions about the transportation system: Am I going to be safe? Can I use and access the transportation service? When changes are made, how will you help people and businesses adapt to new modes, new patterns and new facilities? For example, Division Transit Project serves long-range policies but impacts local businesses during construction and in the configuration that limits turns, removes parking and presents painful changes that would be best supported with recognition and proactive assistance to make the adjustment. This includes identifying solutions for businesses for which a reconfigured right of way disrupts the last 50+ feet of deliveries, creating an ongoing burden.	Recommend change to the Action to Implement Integrated Corridor Management and mainstream into corridor planning, adding a sub-action to "Participate in all phases of a corridor project listening for needs voiced by communities, considering disruptions and proposing TSMO-related solutions where applicable. Keep communication lines open post-project to recognize ongoing burdens and participate in adjustments."

Comment	**Chapter or Appendix**	**Name/ Commentator**	**Affiliation**	**Date**	**Method**
20	Chapters 5	Duncan Hwang	Asian Pacific American Network of Oregon	10/18/21	Video Call

Comment	Response and/or recommended change (changes shown in ~~strikeout~~ and underline)
Paraphrased comment: The Action to Develop a Mobility on Demand strategy and policy should include more specifics about how communities can be engaged. The Action currently risks not addressing several key areas of transportation accessibility: digital, banked and linguistic divide (apps and other online services that require devices, data, bank account, English). How does work in this area of TSMO Strategy intersect with regulations?	Recommend change to Develop a Mobility on Demand strategy and policy Action description "Create a Regional Mobility on Demand (MOD) Working Group consisting of agency staff, transportation demand management non-profits (e.g., Transportation Management Associations), private partners, ~~and~~ community based organizations and stakeholders representing and helping to solve accessibility issues common to online services, to:" Recommend change to the fourth sub-action: "Examine regulations for shared mobility. Examine benchmarks set for shared mobility services (such as the PBOT Scooter Policy) by partner agencies and establish regional minimum level of service benchmarks for MOD service in equity focus areas connecting to

	opportunities, to Black, Indigenous, people of color, and people with low incomes." Recommend change to the ninth sub-action: "Develop communications with travelers, <u>inclusive of people with app or online-services accessibility needs,</u> to inform more travelers about these choices"

Comment	**Chapter or Appendix**	**Name/ Commentator**	**Affiliation**	**Date**	**Method**
21	Chapters 5	Duncan Hwang	Asian Pacific American Network of Oregon	10/18/21	Video Call

Comment	Response and/or recommended change (changes shown in ~~strikeout~~ and <u>underline</u>)
Paraphrased comment: The Action to Create a community listening program faces an immediate issue of a lack of capacity in most communities to partner on areas of this Strategy and this Action.	Recommend change to Action to Create a community listening program, adding to the Action description: "<u>Build capacity at CBOs to share an understanding of this Strategy and to guide partnership.</u> Collaborate with CBOs using a culturally specific model and approach to reach out to non-English speakers or limited-English-proficiency groups."

Comment	**Chapter or Appendix**	**Name/ Commentator**	**Affiliation**	**Date**	**Method**
22	Chapter 3	John A. Charles, Jr.	Cascade Policy Institute	10/25/21	Email

Comment	Response and/or recommended change (changes shown in ~~strikeout~~ and <u>underline</u>)
Email excerpts related to growth policy: "Many jurisdictions own and operate transportation facilities with long lists of capital improvement projects that can't be funded. What is the added value of the TSMO plan?" … "I'm not aware of any other special service district that takes a no-growth approach to planning." … "Municipal water districts plan for adequate supply in response to increased demand; and sewage agencies build costly treatment plants." …	No change recommended. The Strategy follows the planning process to implement the 2018 Regional Transportation Plan with supportive strategies such as TSMO. The Strategy updates 2010-2020 TSMO Plan by incorporating the 2018 RTP's community-prioritized policies on equity, climate, safety and reliability for congestion relief. TSMO is part of Climate Smart Strategy policies at the regional and state level and is part of the Congestion Management Process required at the federal level. The precursor to TSMO were ad-hoc efforts in the 1990s among road and transit operators. Their collaborations grew around shared capabilities to actively manage roads and formalized through agreements and a shared

"Transportation appears to be the one infrastructure service operating with a no-growth strategy. Under the direction of JPACT, the region has failed to add significant new highway capacity since I-205 opened in 1982. This is not a sustainable vision for a growing region where most daily trips are made in motorized vehicles. While there is nothing wrong with using existing facilities more efficiently, as TSMO aspires to do, the region cannot depend on demand management as the primary response to economic growth." … "Since TSMO is likely to add no value to the region, I suggest that the plan be euthanized and given a proper burial."	Intelligent Transportation Systems Architecture. This approach is supported by FHWA Operations for both optimizing operations of roads as well as supporting multimodal approaches such as managing demand during major incidents and events. FHWA also supports approaches to incorporate mobility choice for people to access and share bikes, e-scooters and cars. Transportation demand management followed the model of electric utilities that recognized benefits of a management approach before expanding capacity. Water and sewer systems likely follows a similar approach through conservation.

Comment	**Chapter or Appendix**	**Name/ Commentator**	**Affiliation**	**Date**	**Method**
23	Chapters 3	John A. Charles, Jr.	Cascade Policy Institute	10/25/21	Email
Comment			Response and/or recommended change (changes shown in ~~strikeout~~ and underline)		
Email excerpts related to safety: "'Free from harm' in a policy context has no meaning because governments cannot promise freedom from harm. Everything in life has risks, especially in transportation. Governments cannot stop people from driving under the influence of intoxicants, bicycling at night in dark clothing, texting while jaywalking, or simply losing concentration at the wrong moments. The level of surveillance that would be necessary to actually make us all free from harm would itself create harm through the loss of civil liberties." … "The proposed measure of showing 'progress toward meeting the 2035 Vision Zero Goal' is another meaningless feel-good statement. Reducing the number of crashes is desirable, but Metro's own reporting shows that 'Vision Zero' is unrealistic. In 2019, the five year moving average for the region was 83 deaths. The actual number of deaths was 95, and Vision Zero called for a reduction to 55 deaths." … "Given that both the City of Portland and Metro			No change recommended. The goal to "Create a transportation system where all users are free from harm" was the desired goal of the Stakeholder Advisory Committee for TSMO to both work toward zero deaths and to look for opportunities to design and operate a system that is responsive to reducing racially motivated assaults.		

are seeing Vision Zero trends moving in the wrong direction, assuming compliance by 2035 is an unreasonable metric. It should be modified or eliminated."	

Comment 24	**Chapter or Appendix** Chapters 3&5	**Name/ Commentator** John A. Charles, Jr.	**Affiliation** Cascade Policy Institute	**Date** 10/25/21	**Method** Email
Comment			Response and/or recommended change (changes shown in ~~strikeout~~ and underline)		
Email excerpts related to Connected Travel Choices Goal: "'Connected travel choices' is vaguely relevant, although in the absence of any governmental planning the travel connections would be made anyway by private parties (if transportation markets were allowed to function)." … Email excerpts related to Reliable Travel Choices Goal: "'Reliable travel choices' should be the primary objective of this plan, but JPACT has already demonstrated over a long period of time that it has no interest in reliability. That's why Metro has never implemented congestion pricing despite studying it for nearly 30 years." … "Metro could also consider market-based road pricing, such as a revenue-neutral feebate system in which peak hour motorists would be tolled and off-peak drivers would receive rebates. But to my knowledge, of the three congestion pricing studies that are now in public discussion (sponsored by Metro, ODOT and Portland, respectively), none anticipate using tolling for this purpose. All three appear to be arbitrary and punitive." …			No change recommended. The Action in Chapter 5, to Develop a Mobility on Demand policy and strategy, includes the sub-action to "Evaluate unified payment strategy and related policies, including congestion pricing, as they function to provide demand and system management through MOD, transit and connected travel options."		

Comment 25	**Chapter or Appendix** Chapter 4	**Name/ Commentator** John A. Charles, Jr.	**Affiliation** Cascade Policy Institute	**Date** 10/25/21	**Method** Email
Comment			Response and/or recommended change (changes shown in ~~strikeout~~ and underline)		
Email excerpts related to VMT Performance			No change recommended. The Strategy		

Measure: "The VMT goal seeks to 'reduce average vehicle miles traveled per person by 10 percent from 2021.'" … "Even if a VMT reduction goal was achievable through government intervention, there is no reason for Metro to adopt it. VMT adds value to the regional economy, because there is an economic purpose for every trip."	includes a VMT performance measure, not a VMT goal.

Comment 26	**Chapter or Appendix** Chapters 3	**Name/ Commentator** John A. Charles, Jr.	**Affiliation** Cascade Policy Institute	**Date** 10/25/21	**Method** Email
Comment			Response and/or recommended change (changes shown in ~~strikeout~~ and underline)		
Email excerpts related to Eliminate Disparities Goal: "Claims of disproportionate impacts: On page 9, it states that the 2021 TSMO plan seeks 'to address the disproportionate impacts of the transportation system on Black, Indigenous, people of color, and people with low incomes.' There is no definition of 'disproportionate impacts" here or elsewhere. On pp. 12-13 the plan discusses 'equity in TSMO', but relies on some simple descriptive statistics rather than trying to analytically demonstrate that the regional transportation system is inequitable. The 'TSMO Equity Tree', on page 14, is complete jibberish and serves no purpose. … "'Eliminate disparities' is another phrase that has no meaning." … "Disproportionate impacts: Metro is obsessed with alleged disproportionate impacts, but sees them as only affecting certain classes of people." … "'Disproportionate impacts' is a very complex topic, with cross-subsidies flowing in many directions. If Metro feels compelled to include it as a feature element of the TSMO plan, then the agency should commit to a thorough study of the subject."			No change recommended. Metro staff will continue to study disparities and follow the community-prioritized equity policy adopted in the 2018 RTP.		

Comment	**Chapter or**	**Name/**	**Affiliation**	**Date**	**Method**

27	**Appendix** Chapter 1 & Appendix A	**Commentator** John A. Charles, Jr.	Cascade Policy Institute	10/25/21	Email

Comment	Response and/or recommended change (changes shown in ~~strikeout~~ and underline)
Comment on Chapter 1 "…the plan states, 'This approach is the core goal of TSMO.'" Comment on Appendix A list of 2010 projects: "What is the reader supposed to infer from this list?"	Recommend change to Chapter 1.3 "This approach is ~~the~~ core ~~goal of~~ to TSMO." Recommend change to Appendix A table title "2010 TSMO ~~Strategy~~ Planned Projects"

From:	Summer Blackhorse
To:	Molly Cooney-Mesker; Caleb Winter
Subject:	FW: [External sender]Portland/Metro Changing Transportation Paradigm, Please enter my comments into the record for the update to TMSO Strategy
Date:	Thursday, September 30, 2021 10:39:41 AM

See below for TSMO comment.

Summer Blackhorse

503-329-8407
Hours: 7:30 a.m. to 4:00 p.m., Monday through Friday

Metro, Program Assistant III
Metropolitan Transportation Improvement Program
Regional Travel Options
Get There, Portland Metro Regional Network Administrator
TransPort & Emerging Technology program support

Due to the impact of COVID-19 I am working remotely. I will respond to your email as soon as possible.

From: Trans System Accounts
Sent: Thursday, September 30, 2021 10:30 AM
To: Malu Wilkinson <Malu.Wilkinson@oregonmetro.gov>; Tom Kloster <Tom.Kloster@oregonmetro.gov>; Ted Leybold <Ted.Leybold@oregonmetro.gov>
Cc: Summer Blackhorse <Summer.Blackhorse@oregonmetro.gov>; Yuliya Lee <Yuliya.Lee@oregonmetro.gov>
Subject: FW: [External sender]Portland/Metro Changing Transportation Paradigm, Please enter my comments into the record for the update to TMSO Strategy

Hello all,
Let me know if comments on this subject need to be forwarded to any other specific persons.
Laura

From: Paul Edgar [mailto:pauloedgar@q.com]
Sent: Wednesday, September 29, 2021 12:24 PM
To: Trans System Accounts <transportation@oregonmetro.gov>
Subject: [External sender]Portland/Metro Changing Transportation Paradigm, Please enter my comments into the record for the update to TMSO Strategy

Paul O. Edgar, Comments to the Portland Metro, Transportation Management System and Operation Strategy

Subject: **Portland/Metro's Changing Transportation Paradigm, commuters are not going into inter-city Portland. The future as it plays out, will reflect only half of**

commuters same month, commuting into intercity Portland. This is a permanent Paradigm Shift.

The world of old of Estimated Transportation Needs, from before the COVID Pandemic have changed and the "Virtual Office" has become the new norm. Portland/Metro Transportation and Transit Systems that were built and justified for high levels of commuters and those needs are now collapsing.

The most frighting example is TriMet's MAX Light Rail Transit System that has little ridership and this has resulted into staggering reductions in ridership revenues and at the same time ever increasing high operating costs with little use and NO future. The "Transportation Paradigm Change" is happening all over the United States and it is well documented.

A recent review of the needs of the Regional Legal Community for office space in SW Portland, reflects that these entities are entering into a major shift of where their employees will work. What so many business entities have learned in this pandemic, is a lesson coming from this high level of disruption and loss of revenue, is that they have to change their business model. One of the first things is they have had to do is get their Balance Sheets in back into balance. They realize that a majority of the employees that they did not layoff and worked virtually and want to continue working virtually. Decisions have been made, they are relocating staff and moving out of their expensive office towers, to regional and less expensive locations that adapt to what their staff's wants as part of the new Virtual Office World.

In these private discussions, it was stated that these Portland Office Foot-Prints over the next few years, will be pared down to what will be only 10% to 30% of what they were previously. This will of course be dictated by their needs and realities of their clientele. This is happening across the board with large and small businesses and firms and they will no longer have the majority of their employees commute into Portland offices and work spaces in near SW, NW, NE, and SE Portland, unless that is a requirement of their conditions of their employment.

What we are seeing is reflected in commuting ridership on TriMet's Light Rail Transit Systems, which might now only represent only 5% to 8% of Pre-Pandemic ridership, same month to current month from before the Pandemic. Regional outline areas are seeing office space getting snapped up in areas close to where people live and an example that was provided, was Kruse Way.

Roads, Highways and Bridges however are experiencing a return to levels of incidents of travel, close to what was occurring from before the COVID Pandemic.

This brings about real questions on ODOT and Portland/Metro's ability to respond to these "Paradigm Shifts on our Transportation Systems Needs and Priorities and Where to Invest".

1. The Marketplace is telling us that the great, great majority will no long having the need for the proposed SW Corridor TriMet Light Rail Transit Line to Tigard and Tualatin! (

2. The cost to provide "Fixed" TriMet's Light Rail Transit capabilities with limited all sources revenues can no longer justified and sustained.

3. The "Essential Transportation Needs have changed and now need to be Identified" as part of this Major Paradigm Shift in the Marketplace of whats it wants, needs, and will use.

A. Option #1, Climate Change and the Marketplace can be addressed by creating a whole new Transit Paradigm, by **emulating Uber and Lyft with all new electric mini-buses,** picking up and delivering transit riders where they need to go, within a totally automated and flexible Route Management Transit System.

B. Option #2, Major Interstate Highway System, I-5, I-205, and I-84 are essential and require the highest priority to address capacity needs, with the elimination of bottlenecks or impediments that impede the flow of traffic.

C. Option #3, Create more nimble Demand Management Planning of providing the transportation capabilities and capacity where it is needed and justified by the Marketplace.

D. Option #4, Justification and Priority of Transportation Systems and Investments, needs "Public By-In", and that requires Voter Approval of Congestion Pricing/Tolling!

October 25, 2021

Dear Decision Makers on I205 Tolling Project:

The I-205 Tolling Project update for public comment states in its Purpose, "The I-205 Toll Project will use variable-rate tolls on the Abernethy and Tualatin River Bridges to raise revenue to complete the I-205 Improvements Project and manage congestion."

The lack of revenue to complete I-205 Improvement Projects and to prevent regional congestion is an open acknowledgement that the lack of System Development Charges (SDCs) for regional transportation -- highways and freeways -- charged for new regional development is causing harm to the region.

- This harm takes the form of congestion that impacts each trip that residents take such as slowing the trip and making it inefficient wasting residents' time and fuel and likely reducing roadway safety.
- This harm also takes the form of development not covering its costs to the region nor factoring in the cost of transportation into development decision.
- It turns out that **SDCs for regional transportation <u>are</u> a congestion-reduction/demand management tool** (despite AskODOT's assertion to the contrary[1]). Therefore **they naturally would encourage compact urban forms, discourage driving and would benefit climate**. When an organization or individual bears the actual cost of their (new development) impacts, they factor

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1

Elizabeth Lindsey <eaglsing@gmail.com> Jun 11, 2018, 11:34 AM

Good morning Elizabeth –

Thanks for reaching out to Ask ODOT with your questions about system development charges (SDCs). As you probably know, the funding decisions and mechanisms involved with transportation projects are complex. ODOT is funded in large part by fuel taxes (both state and federal) and often works in partnership with local jurisdictions to complete projects.

You specifically asked whether ODOT has considered funding projects through System Development Charges. The short answer is yes. However, SDCs can only be assessed on new development and the revenues from those charges are only invested in related projects. As SDCs cannot be assessed at a high enough rate to cover 100% of project costs, this leaves a funding gap. Often, if these projects are not included in investment plans (either by the state or another jurisdiction) then these projects (and the SDC funds already generated/committed) sit awaiting additional funding. For myriad reasons, ODOT does not currently assess SDCs or rely on revenues generated therein to maintain our transportation system. In the past, some state facilities have been included in local government SDCs revenues.

You also asked about value pricing as a revenue generation mechanism. As you may know, the Oregon Legislature passed HB 2017, *Keep Oregon Moving*, during the 2017 legislative session. In that funding package, the Legislature directed ODOT to evaluate different value pricing options both as a congestion-reduction/demand management tool and a revenue generation tool. Consistent with the legislative direction, ODOT is in the process of evaluating all available options, with input from the Policy Advisory Committee and members of the public. If tolls are ever placed on Oregon roadways, it will be after engagement with the public, the legislature, and the Oregon Transportation Commission.

As a final note, value pricing focuses on demand management *and* revenue generation, whereas SDCs aren't an effective roadway management tool.

If you're interested in specific projects in your area or specific details about the value pricing options I'd be happy to talk in more detail, or direct you to the right person. Hope this helps. Please let me know if you have additional questions. Thanks.

Lindsay

Lindsay Baker
Government Relations Manager
Oregon Department of Transportation
355 Capitol St. NE
Salem, OR 97301
(503) 877-7019 (cell)

those costs into their decision making -- such as whether to develop (or live) close in e.g. near transportation hubs and transit or whether to develop in remote sprawling locations. **System Development Charges for regional transportation could be quite complementary to enacting Vehicle Miles Travelled charges and Vehicle Miles Reduction programs**, that are under consideration. It they were implemented in that way, SDCs would be a strong congestion-reduction/demand management tool and they would help with encouraging infill and with discouraging sprawl and its exorbitant costs.

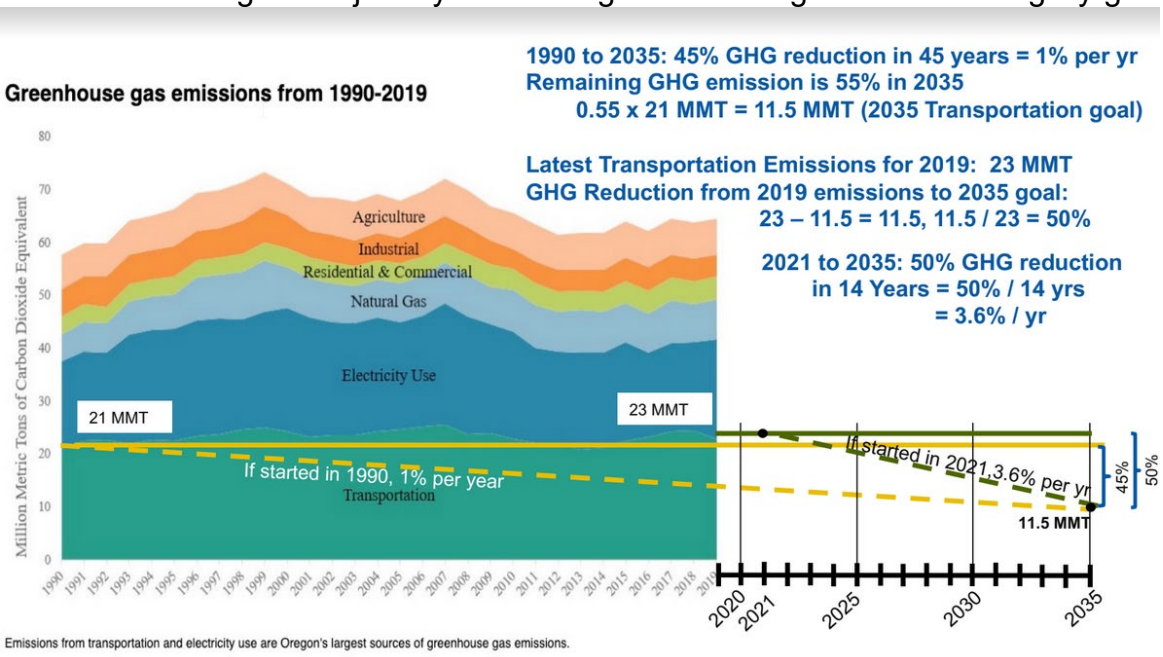
Tolls are a poor congestion-reduction/demand management tool because they penalize people for unavoidably using the regional inefficient system of roads connecting sprawling and incomplete communities (e.g. they tax people going to work or not using transit because of last mile considerations and they push some traffic on to surface streets causing more problems) rather than giving them positive options – like compact urban forms -- so they don't need to congest the roads.

- ODOT's failure to charge SDCs for regional transportation is the main cause of regional congestion which has built up over many years when regional-transportation SDCs were a potential, but untapped, funding source. While SDCs can't be charged for congestion that predates new development, new development can pay for the congestion it generates as soon as you implement the SDCs. And, as soon as you implement the SDCs, the "funding gap" to correct congestion will stop growing.
- It is much more sensible to penalize the public in such a way that there is an incentive for them to live close to work (through a regional-transportation SDC that the developer would tend to pass on to the home buyer) than to enable the public to cheaply live far from work and service and urban centers (through no ODOT SDC) and then penalize the entire public (through new tolls) for the sprawling transportation needed to service the sprawling development.
- It is unreasonable for the long-time transportation system users to have to subsidize new development that overcrowded the roadway system in recent years/decades. Tolls are essentially a new development subsidy paid by the general public. Development should pay its own way, not pass its costs on to the general public.
- Using tolls to do what SDCs should have done and still could do causes cynicism in much of the public and damages the good will that we need to solve serious problems such as climate change.
- Furthermore, **subsidizing new development through tolls puts ODOT further from decreasing transportation greenhouse gas emissions**,

https://www.youtube.com/watch?v=JwV6SevgC3k&feature=youtu.be 6:00/57:57)

The GAP is the failure to meet the emission reduction target.

because we see (elsewhere in ODOT data) that per capita emissions have leveled off or reduced and it's the encouraging of population growth (new development) that keeps Oregon's transportation greenhouse gas emissions from taking the trajectory that the legislature and governor have legally-given.



Datasource:https://www.oregon.gov/deq/aq/programs/Pages/GHG-Inventory.aspx

- And subsidizing new development through tolls puts ODOT further from complying with Statewide Planning Goals 12[2] and 14[3] that direct transportation plans and development to stay within the carrying capacity of the air which the GHG emission goals indicate has been surpassed.

Please responsibly address Oregon's transportation funding gap and failure to reach GHG emission goals through System Development Charges rather than tolls.

Sincerely,

Elizabeth Graser-Lindsey
Beavercreek, OR 97004

[2] Statewide Planning Goal 12 – Transportation A6. "Plans providing for a transportation system should consider as a major determinant the carrying capacity of the air, land and water resources of the planning area. The land conservation and development actions provided for by such plans should not exceed the carrying capacity of such resources."

[3] Statewide Planning Goal 14 -- Urbanization A3. "Plans providing for the transition from rural to urban land use should take into consideration as to a major determinant the carrying capacity of the air, land and water resources of the planning area. The land conservation and development actions provided for by such plans should not exceed the carrying capacity of such resources."

TO: Metro Transportation Planning Department
FM: John A. Charles, Jr.
RE: Comments on Metro's draft TSMO Plan
DT: October 25, 2021

My name is John A. Charles, Jr., and I am President and CEO of Cascade Policy Institute, a non-partisan policy research organization. I have been involved in regional transportation planning for over 40 years, and have served on many advisory groups related to transportation and air quality, including:

- Portland Air Quality Advisory Committee, DEQ;
- Traffic Relief Options Study CAC, Metro;
- Oregon Road User Fee Task Force, ODOT;
- Portland Future Focus Steering Committee, Portland;
- Central City Transportation Management Plan CAC, Portland; and
- HB 2179 Task Force to Reduce Air Pollution in the Portland Region (Gov. Roberts).

I have reviewed the draft TSMO plan and offer the following comments:

Purpose: It's not clear why this plan is necessary. Every jurisdiction in the region is already burdened with transportation planning regulations, programs, and projects. Many jurisdictions own and operate transportation facilities with long lists of capital improvement projects that can't be funded. What is the added value of the TSMO plan?

Definition: On page 5, the narrative includes the following phrase: "TSMO strategies provide alternatives to chasing capacity growth…" This is reinforced in more direct language on page 6, under the subheading of **Transportation Planning Rule (TPR)**. In that section, the plan states, "This approach is the core goal of TSMO."

The clear implication of these statements is that adding capacity is a mindless and wasteful endeavor that provides no net benefits to the region. This is incorrect. Healthy regions grow, and it's the responsibility of government to provide related infrastructure including roads, bridges, schools, parks, waste disposal and drinking water.

I'm not aware of any other special service district that takes a no-growth approach to planning. School districts construct and operate new facilities to accommodate growing student populations; they don't simply reject students or encourage parents to stop having children. Municipal water districts plan for adequate supply in response to increased demand; and sewage agencies build costly treatment plants.

Metro itself has sought and received close to a billion dollars of bonding authority to pay for undeveloped land perceived to be necessary for the park needs of a growing metropolitan region. While the execution of that program has been poor, with most Metro parklands not accessible to the public or even located within the Metro borders, the Metro Council has been aggressive in seeking public funding to "chase capacity growth" for future nature parks.

Transportation appears to be the one infrastructure service operating with a no-growth strategy. Under the direction of JPACT, the region has failed to add significant new highway capacity since I-205 opened in 1982. This is not a sustainable vision for a growing region where most daily trips are made in motorized vehicles.

While there is nothing wrong with using existing facilities more efficiently, as TSMO aspires to do, the region cannot depend on demand management as the primary response to economic growth.

Claims of disproportionate impacts: On page 9, it states that the 2021 TSMO plan seeks "to address the disproportionate impacts of the transportation system on Black, Indigenous, people of color, and people with low incomes." There is no definition of "disproportionate impacts" here or elsewhere. On pp. 12-13 the plan discusses "equity in TSMO", but relies on some simple descriptive statistics rather than trying to analytically demonstrate that the regional transportation system is inequitable.

The "TSMO Equity Tree", on page 14, is complete jibberish and serves no purpose.

Objectives: At least four of the six objectives are useless. ***"Free from harm"*** in a policy context has no meaning because governments cannot promise freedom from harm. Everything in life has risks, especially in transportation. Governments cannot stop people from driving under the influence of intoxicants, bicycling at night in dark clothing, texting while jaywalking, or simply losing concentration at the wrong moments. The level of surveillance that would be necessary to actually make us all free from harm would itself create harm through the loss of civil liberties.

"Regional partnerships" is a redundant objective because everything in the region is already taking place through multiple partnerships. ***"Eliminate disparities"*** is another phrase that has no meaning. Disparities exist everywhere for many reasons. Policies and programs such as the TriMet payroll tax, transportation SDCs, urban renewal construction, and road diets create cross-subsidies and disparate outcomes. Metro is not in a position to ensure equal outcomes for everyone under all circumstances.

"Connected travel choices" is vaguely relevant, although in the absence of any governmental planning the travel connections would be made anyway by private parties (if transportation markets were allowed to function).

"Reliable travel choices" should be the primary objective of this plan, but JPACT has already demonstrated over a long period of time that it has no interest in reliability. That's why Metro has never implemented congestion pricing despite studying it for nearly 30 years. It's also why Metro prohibited any new Willamette River Bridge capacity south of the Sellwood Bridge, despite finding a need for it in 1999. And it's why we still have only two interstate bridge crossings over the Columbia River, despite a clear need for at least four.

From Metro's standpoint, lack of reliability is ***a feature, not a bug***, so including it in the TSMO plan is gratuitous.

"Prepare for change" is something that every service provider should assume, but again Metro has spent decades using regulation and taxation to lock in the current infrastructure while avoiding important new investments – aside from the buildout of the 19th century regional rail system, which is the opposite of "planning for change."

Performance measures: In the event that anyone ever tries to measure the success of this TSMO plan – as unlikely as that sounds – the performance measures will be unhelpful. The VMT goal seeks to ***"reduce average vehicle miles traveled per person by 10 percent from 2021."*** How could Metro possibly propose this goal, when the entire point of the TPR was to reduce VMT per capita and it failed miserably?

Specifically, the TPR mandated for Metro and other MPOs that VMT per capita be reduced by 10% over 20 years, and 20% over 30 years. It was adopted in 1991. Here we are 30 years later, the TPR accomplished nothing at great cost, and now Metro wants to try it again without even stating a proposed time period for completion.

Even if a VMT reduction goal was achievable through government intervention, there is no reason for Metro to adopt it. VMT ***adds value*** to the regional economy, because there is an economic purpose for every trip. People don't just randomly drive around for no reason, with the possible exception of teenagers on a Saturday night. If elected officials were to succeed in suppressing VMT through taxation or regulation, the economy would suffer and people would consider themselves worse off.

VMT may drop for other reasons, such as a permanent increase in remote working as a result of the pandemic. In that case, it would not harm the regional economy.

Metro could also consider market-based road pricing, such as a revenue-neutral feebate system in which peak hour motorists would be tolled and off-peak drivers would receive rebates. But to my knowledge, of the three congestion pricing studies that are now in public discussion (sponsored by Metro, ODOT and Portland, respectively), none anticipate using tolling for this purpose. All three appear to be arbitrary and punitive.

The proposed measure of showing ***"progress toward meeting the 2035 Vision Zero Goal"*** is another meaningless feel-good statement. Reducing the number of crashes is desirable, but

Metro's own reporting shows that "Vision Zero" is unrealistic. In 2019, the five year moving average for the region was 83 deaths. The actual number of deaths was 95, and Vision Zero called for a reduction to 55 deaths.

As local economist Joe Cortright wrote in a May 2021 critique of Vision Zero:

> Metro tracks 25 separate measures of system safety…Metro's annual report shows that the region is on-track to make exactly none of these 25 objectives…

Given that both the City of Portland and Metro are seeing Vision Zero trends moving in the wrong direction, assuming compliance by 2035 is an unreasonable metric. It should be modified or eliminated.

Appendix A: "TSMO strategy projects": The first page includes phantom projects, such as "Congestion pricing/HOT lanes" and "rideshare services and employer services", at a total cost of $148 million. The second page lists 23 projects at total cost of $437 million. This appendix is useless for analytical purposes. Is everything in the region TSMO? Were these projects evaluated for effectiveness? What is the reader supposed to infer from this list?

General comments

Disproportionate impacts: Metro is obsessed with alleged disproportionate impacts, but sees them as only affecting certain classes of people. A more nuanced assessment would consider other types of equity concerns, including:

- The fairness of TriMet's regional payroll tax, which taxes many people for the benefit of the few, in a transit system that has been losing ridership since 2012 despite a vast increase in taxpayer funding.

- The adverse effects of eminent domain used to seize private property in areas other than North Portland, including all light rail projects (built or planned), and interstate highways throughout the region.

- Costs imposed on property owners through LID assessments in neighborhoods along the Portland streetcar.

- Construction of the aerial tram, which imposed both real and intangible costs on affluent property owners in the Corbett-Terwilliger-Lair Hill neighborhood.

- Distributional effects of the STFF employee transit tax enacted by the legislature in 2017.

- Distributional effects of the many road diets and traffic calming projects that have been imposed on the region over the past 25 years.

"Disproportionate impacts" is a very complex topic, with cross-subsidies flowing in many directions. If Metro feels compelled to include it as a feature element of the TSMO plan, then the agency should commit to a thorough study of the subject.

Learning from history: Earlier in these comments, I criticized Metro for ignoring the TPR experience. Note that comments of this nature have been made many times before, by people with far more knowledge of Metro programs than I have. In particular, the Metro Auditor has been a relentless critic of Metro Transportation Planning for more than a decade. Relevant excerpts from Auditor Reports are listed below.

August 2008: Transit-Oriented Development Program: Improve Transparency and Oversight

- *"The Program had **no system for regularly monitoring project results** in terms of increased density, reduction in vehicle miles traveled or new private development stimulated by its efforts. Consequently, it is difficult for the Program to demonstrate its effectiveness."*

February 2010: Tracking Transportation Project Outcomes

- *"We found that Metro's processes to plan transportation projects in the region were linear when they should have been circular. After a plan was adopted, the update process began anew with **little or no reflection about the effectiveness of the previous plan** or the results of the performance measures they contained."*

- *"Systems to collect data and measure progress towards these outcomes were **not in place."***

- *"Metro relied almost entirely on **modeled data to estimate the impact of the regional transportation plan rather than on actual data.**"*

November 2010: Transit-Oriented Development Program: Audit Follow-up

- *"Three **recommendations [from 2008] were not implemented**: Develop a regular report that shows a comparison of projects in terms of the results they achieve; develop a method for tracking and reporting complete project costs by project; and develop procedures to monitor projects after they are completed."*

June 2013: Tracking Transportation Project Outcomes

- *"We found that **recommendations made in a 2010 audit had not been implemented.**"*

- *"The audit found the Planning Department was not organized or equipped to measure progress toward those outcomes."*

- *"The Planning Department should adjust plans and programs as needed **based on actual quantitative and qualitative data.**"*

These critiques should be considered in refining the TSMO plan.

Conclusion

Local governments and private transportation operators already have dozens of federal, state, and regional mandates, taxes, programs and projects to consider and/or manage. The draft TSMO plan is long on words and short on value. The "equity tree" perfectly symbolizes the circular reasoning associated with this plan.

Since TSMO is likely to add no value to the region, I suggest that the plan be euthanized and given a proper burial.

STAFF REPORT

IN CONSIDERATION OF RESOLUTION NO. 21-5220, FOR THE PURPOSE OF ADOPTING THE 2021 REGIONAL TRANSPORTATION SYSTEM MANAGEMENT AND OPERATIONS STRATEGY, REPLACING THE 2010 REGIONAL 2010-2020 TRANSPORTATION SYSTEMS MANAGEMENT AND OPERATIONS ACTION PLAN

Date: October 29, 2021
Department: Planning, Development and Research
Meeting Date: Jan. 6, 2022

Prepared by: Caleb Winter, 503-797-1758, caleb.winter@oregonmetro.gov
Length: 138 pages

ISSUE STATEMENT
Metro's 2018 Regional Transportation Plan (RTP) identifies four overarching policies for improving our regional transportation system – equity, safety, climate and congestion relief. Adopting the 2021 Regional Transportation System Management and Operations (TSMO) Strategy will incorporate the four priority policy outcomes and guide the region's TSMO Program to meet needs over the next ten years.

ACTION REQUESTED
The requested action is to adopt as a component of the 2018 RTP the 2021TSMO Strategy, as shown in the attached Exhibit A and amended by the "Summary of Comments Received and Recommended Actions" in Exhibit C, replacing the 2010 Regional TSMO Action Plan and to inform development of the 2023 RTP.

Metro and ODOT started the 2021 TSMO Strategy process in 2019. In 2020, a consultant team was brought on to support the Metro and ODOT project team and a Stakeholder Advisory Committee convened and met through 2021. Additionally, the project team engaged stakeholders via workshops and surveys throughout the process. Next steps involve a work plan that starts in 2022 to implement the TSMO Strategy through Metro's TSMO Program and partnerships, a TransPort (Subcommittee of TPAC) work plan and a TSMO Program Project Solicitation for sub-allocation of Regional Flexible Funds (previously allocated to the TSMO Program).

IDENTIFIED POLICY OUTCOMES
Policy outcomes relate to Goal 4 of the 2018 RTP: "The transportation system is managed and optimized to ease congestion, and people and businesses are able to safely, reliably and efficiently reach their destinations by a variety of travel options."

In 2010 the Metro Council adopted Ordinance No. 10-1241B, which adopted the 2010 RTP and included the region's first TSMO Action Plan as a component of the RTP.

In 2018 the Metro Council adopted Ordinance No. 18-1421 which adopted the 2018 RTP, including Goal 4. The 2021 TSMO Strategy provides a regional approach to implementation.

POLICY QUESTION(S)
How shall the region get the most value from capital and operations investments in the transportation system?

POLICY OPTIONS FOR COUNCIL TO CONSIDER
Options for managing and operating our regional transportation system as efficiently and effectively as possible include implementing TSMO to: "Collaborate to provide reliable, agile, and connected travel choices so that all users are free from harm, and to eliminate the disparities experienced by Black, Indigenous, people of color and people with low incomes."

TSMO approaches include managing demand, improving business practices and collaboration across jurisdictional boundaries and using technology to measure and manage transportation operations and track progress towards regional goals. While some of these strategies will be implemented through interagency agreements, other strategies such as congestion pricing, transportation options, and broadband will occur through collaborations between road, transit and other mobility service operators.

STAFF RECOMMENDATIONS
Metro and ODOT planning staff recommend adoption of the 2021 TSMO Strategy.

STRATEGIC CONTEXT & FRAMING COUNCIL DISCUSSION
In addition to the policies referenced above, the strategic context for the 2021 TSMO Strategy includes:

- Renewed involvement from regional stakeholders around Metro's core work to plan for regional growth through land use and transportation policy and strategy.
- Advancement of Metro's racial equity goals by beginning the TSMO Strategy update with an equity focus; applying a TSMO Equity Tree to all subsequent tasks and discussions; establishing a TSMO vision that integrates equity "...so that all users are free from harm, and to eliminate the disparities experienced by Black, Indigenous, people of color and people with low incomes;" with new goals, objectives, performance measures and actions that will guide implementation in a strategic way to respond to community-voiced needs.
- Support for reducing vehicle miles traveled, thereby reducing greenhouse gas emissions harmful to the climate; support for sustainable transportation options including Mobility on Demand; support for incident management and real-time demand management to reduce idling and provide congestion relief; support modernization of the traffic signal system to reduce idling and improve transit operations and improved operations for bicycling and walking; and, an objective to

"Minimize long term disruptions to the transportation system by creating resiliency to climate change and economic shifts."

- Recognition of opposition to the TSMO Strategy from the Cascade Policy Institute regarding the investment of public resources that do not add capacity to respond to growth; community support from online comment participants who selected the following TSMO Actions to be emphasized: Facilitate ground truthing of emerging technologies. (3 respondents), Develop a Mobility on Demand strategy and policy (2 respondents), Manage transportation assets to secure the network (1 respondent), Pilot Origin-Destination data to prioritize TSMO investments (1 respondent), Explore new TSMO data sources (1 respondent), Create a TSMO safety toolbox (1 respondent), and Improve TSMO data availability to aid in traveler decisions and behavior (1 respondent); Community based organizations involved in key pieces of the Strategy include Asian Pacific American Network of Oregon, Verde and Division Midway Alliance. Community feedback is reflected in Exhibit C, the public comment report.

The 2021 TSMO Strategy Stakeholder Advisory Committee included:

Margi Bradway, Metro's Deputy Director of Planning, Development and Research
Kate Freitag, ODOT's Region 1 Traffic Engineer, TransPort Chair
Millicent Williams, former Portland Bureau of Transportation's Deputy Director
Wendy Cawley, Portland Bureau of Transportation's City Engineer
Joe Marek, Clackamas County's Transportation Safety Program Manager
Lisha Shrestha, Division Midway Alliance's Executive Director
Debra Dunn, Synergy Resources Group's President and Founder, Oregon Environmental Council Board Member
Avi Unnikrishnan, Ph.D., Portland State University's Professor, Dept. of Civil and Environmental Engineering
Matt Ransom, Southwest Washington Regional Transportation Council's Executive Director
Geoff Bowyer, ODOT's Region 1 Traffic Management Operations Center
Jon Santana, TriMet's Interim Executive Director of Transportation

In addition to six Stakeholder Advisory Committee meetings, the project management team met monthly, received input from TransPort at four meetings, TPAC at two meetings, JPACT at two meetings, held a workshop, conducted a stakeholder survey, held focus groups and conducted interviews.

Legal Antecedents

- Ordinance No. 10-1241B, For the Purpose of Amending the 2035 Regional Transportation Plan (Federal Component) and the 2004 Regional Transportation Plan to Comply with Federal and State Law; to Add the Regional Transportation Systems Management and Operations Action Plan, the Regional Freight Plan and the

High Capacity Transit System Plan; to Amend the Regional Transportation Functional Plan and to Add it to the Metro Code; to Amend the Regional Framework Plan; and to Amend the Urban Growth Management Functional Plan, adopted on June 10, 2020.

- Ordinance No. 18-1421, For the Purpose of Amending the 2014 Regional Transportation to Comply with Federal and State Law and Amending the Regional Framework Plan, adopted on December 6, 2018.

Budget and Financial Implications

Coordination for the regional TSMO Program is part of Metro's budget, dependent on Regional Flexible Fund decisions and TransPort sub-allocation recommendations for those funds. The purpose of a regional TSMO strategy includes planning for operations and forming partnerships that require economical use of all agencies' operations and maintenance budgets. Regional collaboration and partnership often take the form of interagency agreements where no funds are transferred between agencies. A best practice for capital projects is to include TSMO to utilize Intelligent Transportation Systems and expand regional operator capabilities in the process. This is a project-by-project budget need that should not be overlooked. TSMO projects and TSMO project elements are included in RFFA and STIP funding cycles, for example Freight Intelligent Transportation Systems in Clackamas County and Active Corridor Management with real-time signage on regional throughways. As mentioned above, Regional Flexible Fund decisions to support the TSMO Program support the Actions and related projects through a sub-allocation process where stakeholders and technical experts recommend projects for funding. Agencies who receive funding do so with the prerequisite that they will cover a portion of the cost from their local budget. Last but not least, regional TSMO coordination has strengthened successful applications to national competitive funding programs such as Transportation Investment Generating Economic Recovery (TIGER) and Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD). Financial implications may be ahead depending on federal legislation on transportation infrastructure funding.

Anticipated Effects

- Application of a holistic, systems approach to multimodal transportation, for example regional coordination for traffic signalization and related transit operations.
- Innovative, cost-effective solutions that include the continuation of data collection and enhanced use of data collected on the public right-of-way.
- Building on 10 years of TSMO progress, for example increasingly sophisticated traveler information through Trip Check that innovated both ways to communicate systems operations information to travelers and enhanced partner-agency tools to add incident and construction information to one, statewide platform.
- Incorporation of four key regional policies for equity, climate, safety and congestion relief with improved reliability.

BACKGROUND
Since adoption of the 2018 Regional Transportation Plan, Metro and ODOT planning staff worked with stakeholders to scope and update the 2010-2020 TSMO Action Plan. The timeline for the planning process began at Metro and ODOT in 2019 with consultant support starting in 2020 and the formation of a Stakeholder Advisory Committee who met through 2021 in addition to broad stakeholder engagement through workshops and surveys throughout the year. This work resulted in the attached 2021 TSMO Strategy Final Draft.

ATTACHMENTS
Exhibit A – 2021 TSMO Strategy Final Draft
Exhibit B – 2021 TSMO Strategy Appendices Final Draft
Exhibit C – 2021 TSMO Public Comment Report draft
Metro Resolution 21-5220 draft

Agenda Item No. 4.2

Resolution No. 21-5206, For the Purpose of Adopting the Final I-5 Bridge Replacement Program: Values, Outcomes, and Actions

Resolutions

Metro Council Meeting
Thursday, January 6, 2022

BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF ADOPTING METRO COUNCIL'S VALUES, OUTCOMES, AND ACTIONS FOR THE I-5 BRIDGE REPLACEMENT PROGRAM	)))))	RESOLUTION NO. 21-5206 Introduced by Chief Operating Officer Marissa Madrigal in concurrence with Council President Lynn Peterson

WHEREAS, the Interstate Bridge is part of a critical trade route for regional, national, and international commerce; and

WHEREAS, the existing structures were not designed to support the needs of today's transportation system; and

WHEREAS, congestion and bridge lifts slow auto, transit, and freight movement along Interstate 5; and

WHEREAS, existing roadway design contributes to safety issues; and

WHEREAS, the current bridge's narrow shared-use paths, low railings, and lack of dedicated pathways impede safe travel for pedestrians and cyclists; and

WHEREAS, there are limited transit options across the bridge; and

WHEREAS, the current bridge could be significantly damaged in a major earthquake; and

WHEREAS, the states of Oregon and Washington are working together to replace the aging bridge with a modern, seismically resilient, multimodal structure that provides improved mobility for people, goods and services; and

WHEREAS, the I-5 Interstate Bridge Replacement Program (IBRP) is a collaboration between the Oregon and Washington Departments of Transportation, Metro, TriMet, C-TRAN, the Southwest Washington Regional Transportation Council, the Cities of Portland and Vancouver, and the Ports of Portland and Vancouver; and

WHEREAS, Metro is a Participating Agency in the NEPA planning process; and

WHEREAS, Metro Council and staff participate in the IBRP Executive Steering Group, Equity Advisory Group, and staff level group, and

WHEREAS, the Metro Council adopted the 2018 Regional Transportation Plan with four primary priorities: Equity, Safety, Climate, and Congestion Relief; and

WHEREAS, the Metro Council strives for policies that promote climate resiliency, sustainability, economic prosperity, community engagement, and creating or preserving livable spaces; and

WHEREAS, the Metro Council's Values, Outcomes, and Actions for the I-5 Bridge Replacement Program reflects and documents the goals, objectives, and principles in the Regional Transportation Plan, Strategic Plan to Advance Racial Equity, and Climate Smart Strategy and input from Council on previous Discussion Drafts, and

WHEREAS, Metro Council adoption of the Values, Outcomes, and Actions for the I-5 Bridge Replacement Program provides clear direction to Metro project participants when considering project elements and will shape input from Metro staff to the IBRP throughout the process to reflect the Council's priorities, now, therefore:

BE IT RESOLVED THAT:

The Metro Council hereby adopts the Values, Outcomes, and Actions for the I-5 Bridge Replacement Program, as shown in the attached Exhibit A.

ADOPTED by the Metro Council this 6th day of January, 2022.

Lynn Peterson, Council President

Approved as to Form:

Carrie MacLaren, Metro Attorney

Metro Council's Values, Outcomes, and Actions for the I-5 Bridge Replacement Program

Metro Council's support for the I-5 Bridge Replacement Program (IBRP) in the National Environmental Policy Act (NEPA) process is contingent on a clear commitment to the outcomes listed below from the Bi-state Legislative Committee, the Executive Steering Group, Community Advisory Group, Equity Workgroup, and technical committees. Specifically, Metro Council expects the IBRP Project Team to assure that bolded Actions below are addressed and shared with project partners as options before the Project Team presents or recommends a potential revised Locally Preferred Alternative (LPA).

IBRP is jointly led by the Oregon and Washington Departments of Transportation with input from a Bi-State Legislative Committee. In order to build a new multimodal bridge, IBRP must successfully move through a NEPA process and receive support from the Federal Highway Administration and the Federal Transit Administration.

Metro is one of eight local participating agencies in the NEPA process along with the City of Portland, the City of Vancouver, the Southwest Regional Transportation Council (RTC), TriMet, C-Tran, the Port of Portland and the Port of Vancouver. These agencies were invited to participate in the process to develop and analyze the range of alternatives, the methods of analysis, identification of potential impacts and to provide input on how to resolve issues.

Metro embraces ongoing engagement and input from the public on the project, and especially from BIPOC communities who may benefit or be impacted by this project. Metro recognizes Indigenous communities and tribal governments as important partners in this process.

Metro as an organization is grounded in our values that inform the outcomes we strive for in policies, projects and programs. When it comes to transportation, Metro Council adopted the 2018 Regional Transportation Plan with four primary priorities: Equity, Safety, Climate and Congestion Relief. In addition, our Council strives for policies that promote climate resiliency, sustainability, economic prosperity, community engagement, and creating or preserving livable spaces. Many of these values, but not all, are reflected below as outcomes that Metro Council and Metro staff are striving for as part of the IBRP.

This document reflects the project outcomes that Metro Council expects from the project and the actions Metro Council is requesting from the IBRP team in order to achieve those outcomes.

Value: Advancing racial equity

OUTCOMES

- Institutional leadership demonstrates and implements an explicit commitment to improve lives of BIPOC and other equity priority communities.

- Equity starts with co-creation with community, continues with project implementation and includes equitable outcomes for communities that are impacted.
- Recognize and account for the history of construction impacts on communities surrounding the I-5 bridge area, support community cohesion, and avoid neighborhood disruption.
- Connectivity to jobs and key community places (such as medical, grocery, social and community services) is improved within the study area especially for marginalized communities.
- Best practices for anti-displacement are integrated into the project design and implementation.
- BIPOC and underrepresented Oregonians and SW Washingtonians have access to family sustaining construction careers and training in apprenticeship programs as a result of concrete recruitment and retention strategies and investment in workforce development.
- Disadvantaged Business Enterprise (DBE) opportunities are maximized at every phase of the construction project through programs that provide technical assistance.

ACTIONS

- ***Before a revised LPA is selected, conduct and present the findings of in-depth analysis of the benefits and impacts to BIPOC, low income, and other transportation disadvantaged groups for design options and develop performance measures and screening criteria to reveal the anticipated benefits and impacts to these groups.***
- *Evaluate equitable outcomes using the performance measures developed by the IBRP Equity Advisory Group to measure benefits and impacts to equity priority communities (including BIPOC).*
- *Set design and contracting practices for local minority-owned contractors and small businesses that incorporate prime-contractor development programs, workforce development opportunities and anti-displacement community building investment.*
- *Give the IBRP Equity Advisory Group purview over the implementation of contracting and workforce equity strategies.*
- *Develop concrete strategies that align with and build on Construction Career Pathways to promote the recruitment and retention of women, BIPOC and other underrepresented workers into family sustaining careers.*
- *Fully incorporate the Equity Framework developed by the IBRP Equity Advisory Group into every stage of the decision making process.*
- *Clearly demonstrate how any changes to the project alternative better address equity than the original Locally Preferred Alternative.*
- *Meaningfully engage equity priority communities throughout the IBRP to inform decision making and achieve equity outcomes.*
- *Engage the Committee on Racial Equity (CORE) in its advisory role to Metro Council as it makes decisions regarding the IBRP.*

Value: Resiliency and economic prosperity

OUTCOMES

- The bridge is designed to withstand a Cascadia Subduction Zone Earthquake.

- Right-sizing the project to assure that the revised LPA and all subsequent refinements of the Project Plans deliver cost-effectiveness, including consideration of life cycle costs and resiliency, while also achieving specific performance objectives covered in this document.
- Enhanced economic growth by improving mobility of goods and people, creating more reliable options for transportation within the bi-state and regional network.
- Improved Hayden Island access and safety with better transit, bike, and pedestrian connections on and off the island.
- Creation of opportunities for meeting existing and future residential and employment needs with infrastructure investments within the project area.

ACTIONS

- ***As the part of the finance plan, engage professionals with expertise in financing massive complex transportation infrastructure construction projects to conduct and deliver the results of an investment-grade traffic and revenue study of the design options.***
- *Analyze and report on how design options effect seismic resiliency of the bridge.*
- *Develop a financial plan that includes variable rate tolling and innovative financing to leverage federal and state funds.*
- *Coordinate and include the assumptions of the IBRP work with the State of Oregon's Congestion Pricing program in accordance with HB 3055 (2021).*
- *Work with the City of Portland to develop opportunities to improve local connectivity to Hayden Island and minimize the size of the footprint of I5 overall but especially on Hayden Island.*
- *Implement affordable and reliable high capacity transit connections to jobs and key destinations.*
- *Analyze and report on life cycle costs of bridge infrastructure.*

Value: Reducing greenhouse gas emissions and improving air quality

OUTCOMES

- High capacity transit (HCT) (i.e., light rail or bus rapid transit in its own guideway) provides frequent, reliable, and high-quality connections between the two largest regional centers in the Portland region: downtown Portland and downtown Vancouver and to key employment centers along that route.
- The design for the bridge clearly contributes to the State's goal of reducing GHG emissions to 75% below 1990 levels by 2050.
- Reduced transportation demand by drive alone trips during peak travel periods.
- Variable rate tolling on the bridge contributes to transportation demand management.
- HCT provides infrastructure to enable compact urban development and efficient use of infrastructure in support of the Oregon Metro Climate Smart Strategy.
- A more efficient transportation system overall that improves traffic flow of the highway and improves and increases multi-modal mobility and safety in the project area.
- Improved bicycle and pedestrian access and safety, making these modes real

options for traveling and to improve access to transit.

- Improved air quality and minimize impacts to human health in the project area, particularly for communities of color disproportionally impacted by air toxins.
- Reduced greenhouse gas emissions through operations and construction of the bridge, using low- carbon equipment, construction materials and other innovative construction methods.

ACTIONS

- ***Develop and evaluate at least one option that will achieve a modal split for morning and evening peak periods that substantially increases transit ridership and active transportation throughout the project area.***
- *Plan a project that assumes variable rate tolling that is coordinated with the Oregon congestion pricing in the corridor to manage transportation demand, aim to improve traffic flow to 30-35 mph or better, and minimize the number of lanes needed on the bridge.*
- *Implement variable rate tolling as soon as possible and prior to completing the project.*
- *Implement high capacity transit improvements as soon as possible to improve mobility and reduce emissions.*
- *Analyze alternative HCT modes and alignments for increased ridership and effects on demand.*
- *Analyze alternative bridge designs that minimize the number of lanes (including auxiliary lanes)*
- *Incorporate Oregon congestion pricing and other I-5 planning efforts in analysis of traffic and greenhouse gas emissions.*
- *Implement a plan with current best practices to reduce GHG during the construction of the bridge, including adoption of Clean Air Construction Program requirements (already used by Metro, the City of Portland, Port of Portland, Multnomah County, Washington County, and TriMet).*
- *Demonstrate how the IBRP scenarios implement Metro's state-mandated Climate Smart Strategies Plan policies:*
    - *Adopted local and regional land use plans.*
    - *Making transit more convenient, frequent, accessible and affordable.*
    - *Making biking and walking safe and convenient.*
    - *Make streets and highways safe, reliable and connected.*
    - *Use technology to manage the transportation system.*
    - *Provide information and incentive to expand the use of travel options.*
    - *Make efficient use of vehicle parking and lane dedicated to parking.*
    - *Support transition to cleaner, low carbon fuels and more fuel-efficient vehicles.*
    - *Secure adequate funding for transportation investments.*
    - *Incorporate best practices to reduce GHG emissions and improve the safe and efficient movement of goods and people.*

Value: Engaging stakeholders through a transparent and inclusionary decision-making process

OUTCOMES

- Communication and collaboration with interagency partners is clear, complete, candid, consistent, and predictable, and there is demonstrated alignment regarding

accountability for project outcomes.

- IBRP partners are included in developing screening criteria to evaluate project design and any considerations around changes or reaffirmation of the Locally Preferred Alternative.
- Equity considerations are an integral part of project decision-making and evaluation.
- People with diverse backgrounds and expertise are engaged early enough for meaningful input. This includes engagement prior to decision-making; a more robust effort than a typical NEPA analysis.

ACTIONS

- ***As part of the evaluation framework for considering options, apply the screening criteria developed by the Equity Advisory Group, the Climate Advisory Work group, Community Advisory Group, Metro staff, and other participating agencies. The screening criteria should be objective and measurable.***
- *Provide technical analysis that demonstrates how IBRP design options can perform relative to Metro Council's values as listed in this document in order to inform policy choices. Specifically, modeling scenarios that include:*
    - *Robust transit options to understand potential for increasing transit ridership to reduce greenhouse gas emissions and provide reliable access to jobs;*
    - *Pricing at different toll rates on the bridge to understand the potential to reduce travel demand, to shift trips from cars to transit, and to reduce greenhouse gas emissions; and*
    - *Bridge designs to demonstrate transportation performance with fewer lanes than were included in the CRC.*
- *Develop policy packages demonstrating performance of options relative to the Metro Council's values.*
- *Develop a robust public engagement process for public input to inform the Supplemental Environmental Impact Statement.*
- *Authentically engage the Community Advisory Committee (CAG), Equity Advisory Group (EAG) and Executive Steering Group (ESG), and demonstrate how committee feedback is incorporated into project efforts, timelines, and milestones.*
- *Clearly define how feedback mechanisms will function between the CAG, EAG, ESG, participating agencies, ODOT staff, and the Oregon Transportation Commission.*

STAFF REPORT

IN CONSIDERATION OF RESOLUTION NO. 21-5206, FOR THE PURPOSE OF ADOPTING METRO COUNCIL'S VALUES, OUTCOMES, AND ACTIONS STATEMENT FOR THE I-5 BRIDGE REPLACEMENT PROGRAM

Date: November 15, 2021
Department: Planning, Development, and Research
Meeting Date: January 6, 2021
Prepared by: Elizabeth Mros-O'Hara, Elizabeth.mros-ohara@oregonmetro.gov,

Presenter(s): Malu Wilkinson, Investment Areas Manager, Elizabeth Mros-O'Hara, Investment Areas Project Manager
Length: 30 minutes

ISSUE STATEMENT

The I-5 Bridge Replacement Program (IBRP) is a bi-state effort to advance the Interstate 5 Bridge replacement over the Columbia River. The project is a regional priority as identified in the 2018 Regional Transportation Plan and the current effort is building on the previous work undertaken as part of the Columbia River Crossing project. The Columbia River Crossing project received National Environmental Policy Act (NEPA) approval for the Final Environmental Impact Statement (FEIS) in the form of a Record of Decision (ROD) in 2011. IBRP is a restart of that effort that must address the current needs and values of the region. Current project work is focused on reevaluating the project components to account for changes since the ROD in the region's physical, regulatory and policy realms. This work includes reevaluating the project scope, schedule, and budget; reevaluating permits, updating the finance plan, and reengaging key stakeholders and the public.

Metro is participating in the IBRP as a Participating Agency in the NEPA planning process. Metro Council and Metro staff participate in the IBRP Executive Steering Group, Equity Advisory Group, and staff level groups. Metro Council's statement on desired values and outcomes will provide clear direction to Metro project participants. Staff prepared a statement on Metro Council's Values, Outcomes and Actions (VOA) for the IBRP with direction from the Metro Council. The document outcomes and values are intended to provide guidance and shape input from Metro staff to the IBRP throughout the process. The VOA document clearly lays out Metro Council's desires for the IBRP.

The proposed resolution would adopt **Exhibit B: Metro Council's Values, Outcomes, and Actions for the I-5 Bridge Replacement Program.** This document was previously discussed by Metro Council in January, May, and October 2021 and reflects Council feedback from each of those discussions. In addition, the current VOA draft includes minor edits to reflect the Equity Framework developed by the IBRP Equity Advisory Committee. These edits clarify outcomes to improve equity for BIPOC and other equity priority communities through concrete strategies around workforce equity and meaningful engagement as well as a call for engaging the Committee on Racial Equity (CORE) in its advisory role to the Metro Council.

IDENTIFIED POLICY OUTCOMES

The Metro Council identified a number of policy outcomes in the VOA document. The outcomes are listed in the attached document and reflect four key values:

- Advancing racial equity
- Affordability and economic prosperity
- Reducing greenhouse gas emissions and improving air quality

- Engaging stakeholders through transparent and inclusionary decision making process

ACTIONS REQUESTED

Approve Resolution No. 21-5206 For the Purpose of Adopting the Final I-5 Bridge Replacement Program Values, Outcomes and Actions.

PUBLIC INPUT

The VOA document reflects public input into the 2018 Regional Transportation Plan that prioritized racial equity, climate, congestion, and safety for the region as well as recent input to the IBRP from the IBRP Equity Advisory Group.

The City of Vancouver laid out its priorities by formally adopting a resolution in support of replacing the Interstate 5 bridge in July 2021. The resolution discusses Vancouver's values around climate and equity goals, seismic resiliency, high capacity transit, urban design and livability, and mobility including tolling.

KNOWN SUPPORT & OPPOSITION

None.

ANTICIPATED EFFECTS

The VOA document will clarify Metro Council's values and desired outcomes and actions, provide guidance to Metro staff as it participates in the IBRP, and clearly articulate to the IBR Program what the Metro Council needs to support the program as it moves forward.

Attachments

Exhibit A – Resolution No. 21-5206
Exhibit B – Metro Council's Values, Outcomes, and Actions for the I-5 Bridge Replacement Program

Agenda Item No. 4.3

Resolution No. 21-5217, For the Purpose of Amending the 2021-26 Metropolitan Transportation Improvement Program (MTIP) to Add the Preliminary Engineering Phase and Partial Funding of $71 Million Dollars for Oregon Department of Transportation (ODOT) and Washington State Department of Transportation's (WSDOT) Interstate 5- Interstate Bridge Replacement Project (NV22-03-NOV2)

Resolutions

Metro Council Meeting
Thursday, January 6, 2022

BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF AMENDING THE 2021- 24 METROPOLITAN TRANSPORTATION IMPROVEMENT PROGRAM (MTIP) TO ADD THE PRELIMINARY ENGINEERING PHASE AND PARTIAL FUNDING OF $71 MILLION DOLLARS FOR ODOT AND WSDOT'S INTERSTATE 5 – INTERSTATE BRIDGE REPLACEMENT PROJECT (NV22-03-NOV2)	))))))))	RESOLUTION NO. 21-5217 Introduced by: Chief Operating Officer Marissa Madrigal in concurrence with Council President Lynn Peterson

WHEREAS, the Metropolitan Transportation Improvement Program (MTIP) prioritizes projects from the Regional Transportation Plan (RTP) to receive transportation related funding; and

WHEREAS, the Joint Policy Advisory Committee on Transportation (JPACT) and the Metro Council approved the 2021-24 MTIP via Resolution 20-5110 on July 23, 2020; and

WHEREAS, JPACT and the Metro Council must approve any subsequent amendments to add new projects or substantially modify existing projects in the MTIP; and

WHEREAS, the U.S. Department of Transportation has issued clarified MTIP amendment submission rules and definitions for MTIP formal amendments and administrative modifications that both the Oregon Department of Transportation (ODOT) and all Oregon MPOs must adhere to which includes that all new projects added to the MTIP must complete the formal amendment process; and

WHEREAS, the Oregon Transportation Commission (OTC) previously approved $9 million dollars in Federal Fiscal Year 2020 for pre-National Environmental Policy Act (NEPA) and design activities to determine the feasibility for the I-5 Interstate Bridge Replacement Project (IBRP); and

WHEREAS, the OTC now has approved a total of $36 million dollars in support of required Preliminary Engineering (PE) activities in support of the IBRP, and

WHEREAS, the Washington Department of Transportation (WSDOT) has approved $35 million dollars to support required PE work for the IBRP; and

WHEREAS, completion of the PE phase will be a combined bi-state effort between ODOT and WSDOT; and

WHEREAS, the key objectives of the PE phase are to complete the federal environmental review process, obtain necessary state and federal permits, finalize project design, develop a finance plan, secure adequate funding, address public questions and concerns, and prepare the project to move forward into right-of-way and construction phases; and

WHEREAS, a review of the proposed MTIP amendment has been completed against the current RTP to ensure the MTIP remains consistent with the goals and strategies identified in the RTP; and

WHEREAS, RTP consistency check areas included financial constraint verification, eligibility and proper use of committed funds, and confirming that the MTIP's financial constraint finding is maintained by the MTIP amendment; and

WHEREAS, staff for the IBRP prepared an analysis of the project describing how the proposed amendment is consistent with relevant provisions of the Oregon Highway Plan, the RTP, and the Regional Transportation Functional Plan, which analysis is included in Attachment 1 and Attachment 3 to the staff report dated November 18, 2021; and

WHEREAS, the IBRP staff analysis includes a performance evaluation against the RTP's four priority investment goals of congestion relief, climate, equity, and safety, which is also included in Attachment 1 and Attachment 3 to the staff report dated November 18, 2021; and

WHEREAS, Metro's Transportation Policy and Alternatives Committee received their notification plus amendment summary overview, and recommended approval to Metro's Joint Policy Advisory Committee on Transportation (JPACT) on November 5, 2021; and

WHEREAS, on November 18, 2021 JPACT voted to recommend approval of Resolution 21-5217 and adoption of the November #2 2021 Formal MTIP Amendment by the Metro Council; now therefore

BE IT RESOLVED that the Metro Council hereby adopts the recommendation of JPACT to amend the 2021-24 MTIP to include the preliminary engineering phase of the I-5 Interstate Bridge Replacement Project as described in Exhibit A, attached and incorporated into this Resolution.

ADOPTED by the Metro Council this 6th day of January 2022.

_____
Lynn Peterson, Council President

Approved as to Form:

_____
Carrie MacLaren, Metro Attorney

Proposed November #2 2021 (FFY 2022) Formal Transition Amendment Bundle
Amendment Type: **Formal/Full**
Amendment #: **NV22-03-NOV2**
Total Number of Projects: 1

Key Number & MTIP ID	Lead Agency	Project Name	Project Description	Amendment Action
Project #1 Key **21570**	ODOT	**I-5: Columbia River (Interstate) Bridge**	Planning and design activities for the replacement of the I-5 Interstate Bridge between Oregon and Washington.	**RE-ADD NEW PROJECT:** The formal amendment adds the PE phase and $71 million dollars for this bi-state effort to implement NEPA, design, and cost development actions for a possible future replacement of the I-5 bridges across the Columbia River

Metro

Metro
2021-24 Metropolitan Transportation Improvement Program (MTIP)
PROJECT AMENDMENT DETAIL WORKSHEET

Formal Amendment
ADD NEW PROJECT
Add the New I-5 Columbia River Bridge Replacement PE phase

Lead Agency: ODOT		Project Type:	Planning	**ODOT Key:**	**21570**
Project Name:		ODOT Type		**MTIP ID:**	**71083**
I-5: Columbia River (Interstate) Bridge	**1**	Performance Meas:	No	**Status:**	**2**
		Capacity Enhancing:	No	**Comp Date:**	**9/30/2025**
Project Status: 2 = Pre-design/project development activities (pre-NEPA) (ITS = ConOps.)		Conformity Exempt:	Yes	RTP ID:	10893
		On State Hwy Sys:	I-5	RFFA ID:	N/A
Short Description: ~~Planning and design activities for the replacement of the I-5 Interstate Bridge between Oregon and Washington. Replacing the bridge will improve traffic and mobility for freight and the public traveling across the river.~~ **Planning and design activities for the replacement of the I-5 Interstate Bridge between Oregon and Washington. Replacing the bridge is anticipated to improve traffic and mobility for freight and the public traveling across the river.** (Adjust description per ODOT/WSDOT 11-2-2021 submitted comment change request.)		Mile Post Begin:	306.70	RFFA Cycle:	N/A
		Mile Post End:	308.72	UPWP:	No
		Length:	2.02	UPWP Cycle:	No
		Flex Transfer to FTA	No	Transfer Code	N/A
		1st Year Program'd:	2022	Past Amend:	0
		Years Active:	0	OTC Approval:	Yes
		STIP Amend #: 21-24-1433		MTIP Amnd# NV22-03-NOV2	

Detailed Description: **On I-5 across the Columbia River between Washington and Oregon impacting bridges 01377A and 07333 from MP 306.70 to MP 308.72, initiate and complete Preliminary Engineering activities including NEPA and design to determine alternatives for the replacement of the two bridges in a cooperative action with WSDOT to improve mobility, safety, and travel for motorists and goods movements between the two states**

STIP Description: Planning and design activities for the replacement of the I-5 Interstate Bridge between Oregon and Washington. Replacing the bridge will improve traffic and mobility for freight and the public traveling across the river.

Last Amendment of Modification: None. This amendment reflects the initial programming for the project.

PROJECT FUNDING DETAILS

Fund Type	Fund Code	Year	Planning	Preliminary Engineering	Right of Way	Other (Utility Relocation)	Construction	**Total**
Federal Funds								
NHPP	Z001	2020	$ 8,299,800					$ 8,299,800
ADVCON	**ACP0**	**2022**		**$ 33,199,200**				**$ 33,199,200**
								$ -
								$ -
							Federal Totals:	**$ 41,499,000**
Federal Fund Obligations $:			$ 8,299,800					Federal Aid ID
EA Number:			C0265207					
Initial Obligation Date:			2/6/2020					
EA End Date:			3/31/2024					
Known Expenditures:			$ 5,950,419					
State Funds								
State	Match	2020	$ 700,200					$ 700,200
State	**Match**	**2022**		**$ 2,800,800**				**$ 2,800,800**
								$ -
								$ -
							State Total:	**$ 3,501,000**
Local Funds								
Other	**OTH0**	**2022**		**$ 35,000,000**				**$ 35,000,000**
								$ -
								$ -
							Local Total	**$ 35,000,000**
Phase Totals Before Amend:			$ 9,000,000	$ -	$ -	$ -	$ -	~~$ 9,000,000~~
Phase Totals After Amend:			$ 9,000,000	**$ 71,000,000**	**$ -**	**$ -**	**$ -**	**$ 80,000,000**

Year of Expenditure Cost (PE Phase only): PE Phase = $205,000,000

WSDOT Preliminary Full Project Cost Estimate: $3,320,000,000 to $4,810,000,000

Project Glossary Notes and Summary of Changes:

> Red font = prior amended funding or project details. Blue font = amended changes to funding or project details. Black font indicates no change has occurred.
> The amendment re-activates Key 21570 to add partial funding for the PE phase
> Main Support Materials: (1) Project Information Worksheet, (2) OTC item, (3) Amendment Performance Evaluation
> Status notes: Since only funding is being added for the project, the MTIP classifies the project as a planning project. Transportation and air conformity analysis modeling are not required for the project to begin Preliminary Engineering. The project is considered exempt at this stage, but clearly full transportation modeling is required for later implementation phases to be programmed in the MTIP and to meet all RTP consistency requirements. Updated transportation and air conformity analysis modeling will occur as part of the next RTP Update to ensure the RTP reflects the correct and final selected improvement alternative.

Amendment Summary:

The formal amendment re-activates Key 21570 and adds partial funding supporting the PE phase for the I-5 Interstate Bridge Replacement project.
> Will Performance Measurements Apply: Yes. Once the project moves forward into implementation areas. A separate Amendment Performance Evaluation has been completed to initially assess how the project supports Metro's RTP four goals: Climate, Congestions Reduction, Equity, and Safety. Staff anticipates additional Performance Assessment Evaluations will be completed as the project progresses and additional phases and funding are added to the project

RTP References:

> RTP ID: 10893 - I-5 Columbia River Bridge
> RTP Description: Replace I-5/Columbia River bridges and improve interchanges on I-5. Project adds protected/buffered bikeways, cycle tracks and a new rail/multiuse path or extension.
> Exemption status: (PE phase only) Exempt project per 93 CFR 126, Table 2 - Other - .Planning and Technical Studies
> UPWP amendment: No
> RTP Goals: An Amendment Assessment Evaluation is being completed to address how well the project meets the RTP goals of Congestion Reduction, Safety, Equity, and Climate

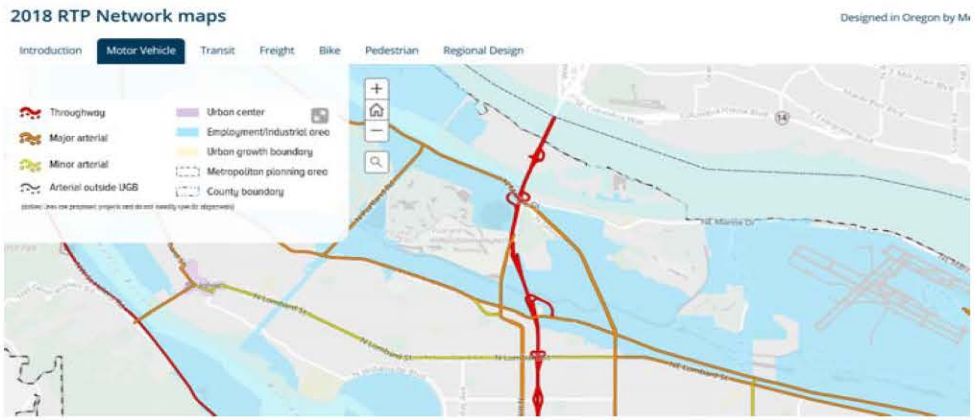
Fund Codes:

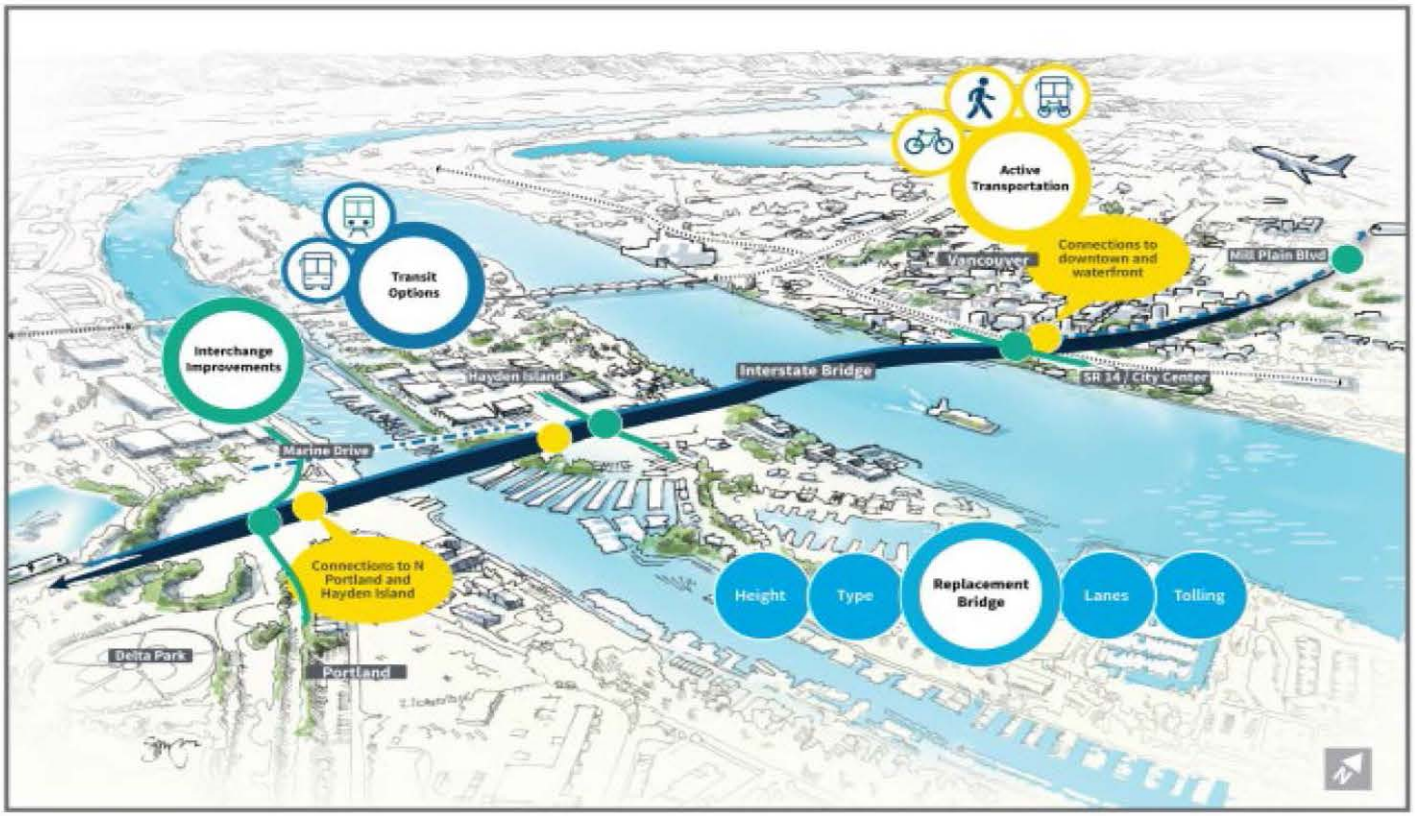
> NHPP = Federal National Highway Performance Program funds appropriated to the states and then applied by the DOT to eligible projects
> ADVCON = Federal Advance Construction also referred to as "AC funds". AC funds are used by ODOT as a placeholder until the actual federal fund type code is known.
> State = General state funds provided by the lead agency as part of the required match to the federal funds.
> Other = Additional funds (normally local) committed to the project above the required match. For this project, the Other funds represent Washington DOT contribution to the PE phase.

Other

> On NHS: Yes. I-5 is identified as part of the Eisenhower Interstate System on the National Highway System
> Is the project located on the Metro Modeling Network? - Yes, Motor Vehicle Modeling network
> Model category and type: I-5 is identified as a "Throughway" in the Motor Vehicle Network
> TCM project: No
> Is the route located in the Congestion Management Program (CMP): Yes

Project Location





Materials following this page were distributed at the meeting.

Portland Metro Region

Resolution No. 21-5220
For the Purpose of Adopting the 2021 Transportation System Management & Operations (TSMO) Strategy

Metro Council Presentation
January 6, 2022

Margi Bradway, Metro
Caleb Winter, Metro
Kate Freitag, ODOT
Scott Turnoy, ODOT
Chris Grgich, Fehr&Peers

Metro

Introductions

Kate Freitag, P.E. (she/her)

Oregon Department of Transportation
Region 1 Traffic Engineer
TransPort Chair
Operations Academy 2019 Graduate

Scott Turnoy (he/him)

Oregon Department of Transportation
Region 1 Major Projects
Principal Planner for Active Traffic Management Systems
Project Manager of Data Sharing Policy for Integrated Corridor Management

Caleb Winter (he/him)

Metro Senior Transportation Planner
TSMO Program Manager
Regional Travel Options Grant Manager
Transportation Research Board Participant

Chris Grgich, PE, PTOE (he/him)

Fehr & Peers
Associate Traffic Engineer
2021 TSMO Strategy Project Manager
ITS Washington, Past President

What are we asking today?

Following the adoption of the 2018 Regional Transportation Plan with polices for safety, equity, climate and congestion management:

Consider TPAC and JPACT recommendations for adoption of the 2021 Transportation System Management & Operations (TSMO) Strategy.

What is TSMO?

Implementing 2018 Regional Transportation Plan Goal 4: Reliability and Efficiency

TSMO is…

A holistic systems approach

A broad set of strategies

Innovative, cost-effective solutions

TSMO is not…

Building our way out of congestion

What's new?

Progress

Build on 10 years of TSMO progress.

Diversity

Develop a strategy with a broader and more diverse set of voices.

Equity

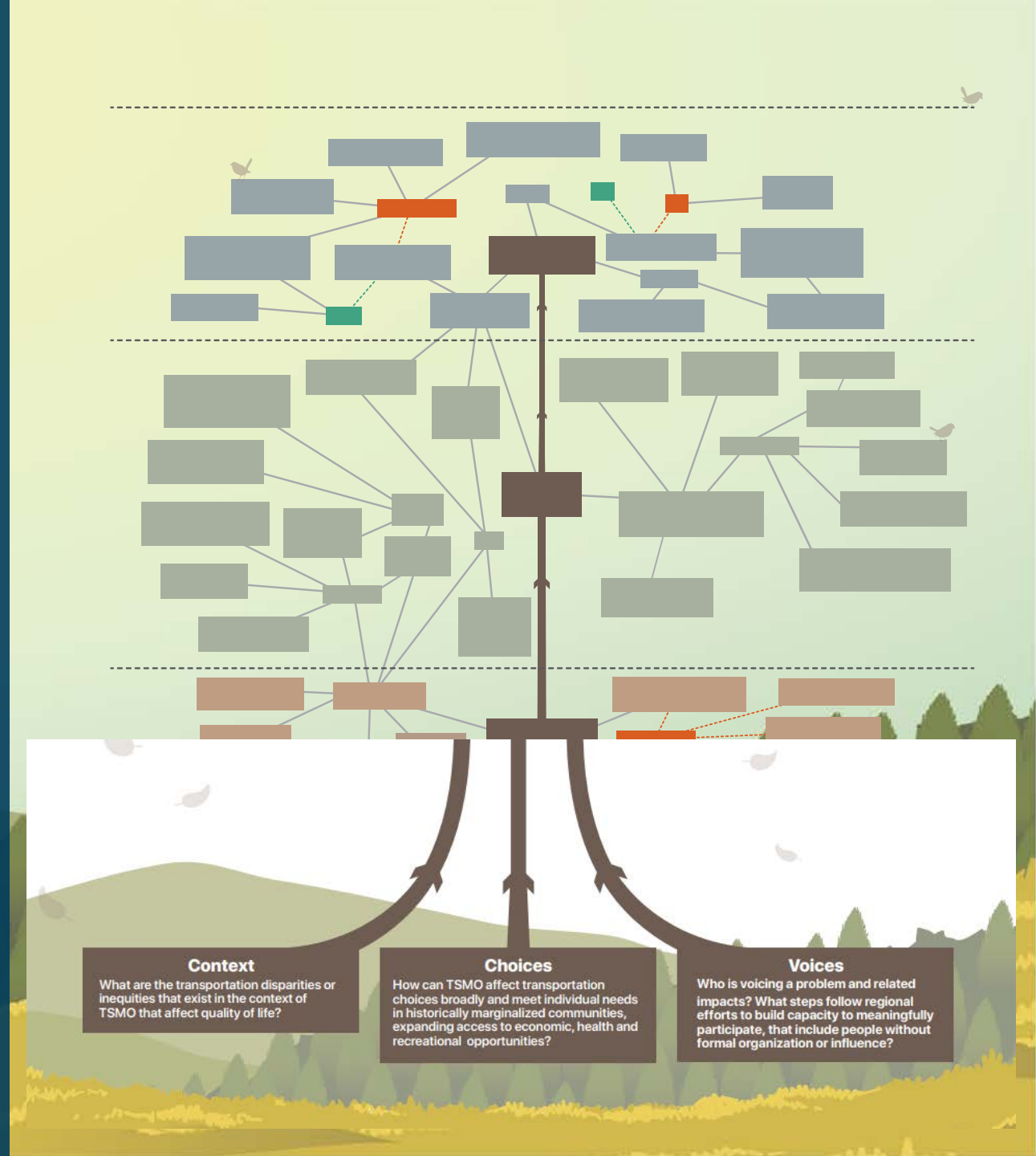
Approach TSMO with an equity focus.

What's new?

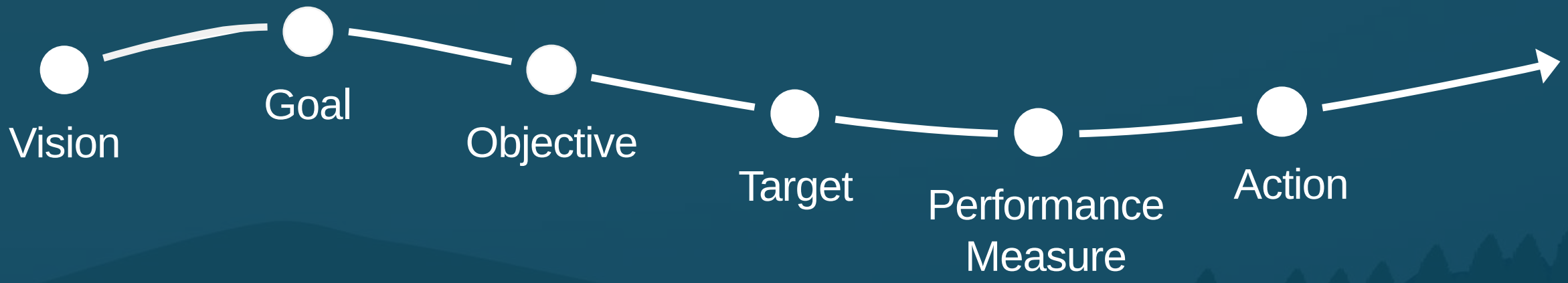
TSMO Equity Tree

"By addressing the barrier experienced by people of color, we will effectively also identify solutions and remove barriers to other disadvantaged groups."

Excerpt from Metro's 2016 Strategy Plan to Advance Racial Equity, Diversity, and Inclusion



The TSMO process



Stakeholders leading the TSMO Strategy update

Stakeholder Advisory Committee

Margi Bradway, Metro's Deputy Director of Planning & Development

Kate Freitag, ODOT's Region 1 Traffic Engineer, TransPort Chair

Millicent Williams, former Portland Bureau of Transportation's Deputy Director

Wendy Cawley, Portland Bureau of Transportation's City Engineer

Joe Marek, Clackamas County's Transportation Safety Program Manager

Lisha Shrestha, Division Midway Alliance's Executive Director

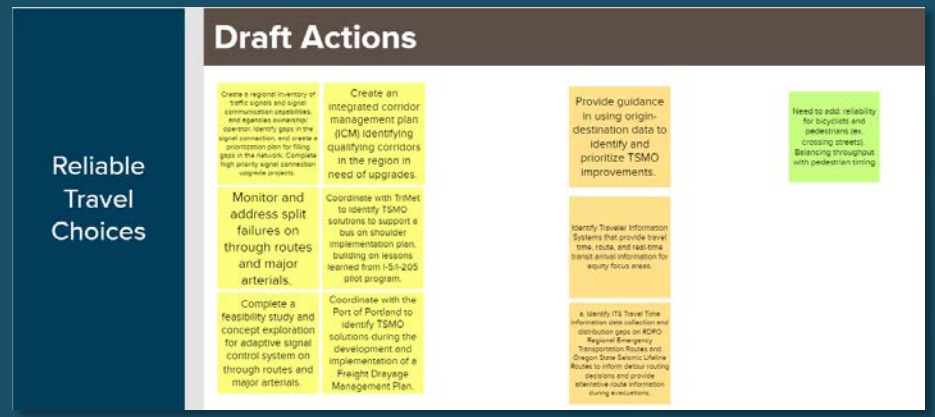
Debra Dunn, Synergy Resources Group's President and Founder, Oregon Environmental Council Board Member

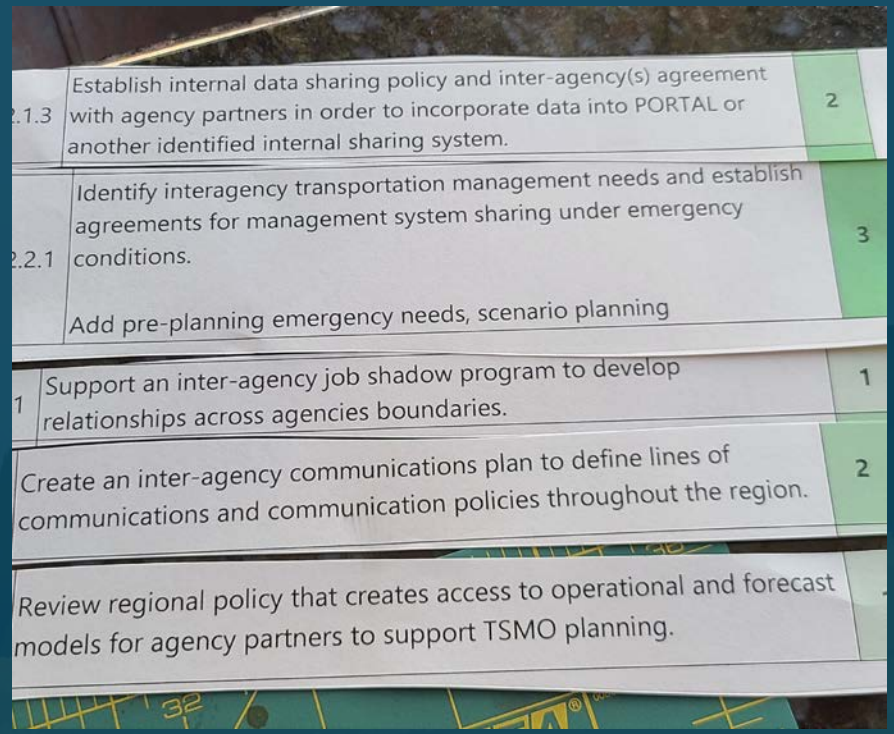
Avi Unnikrishnan, Ph.D., Portland State University's Professor, Dept. of Civil and Environmental Engineering

Matt Ransom, Southwest Washington Regional Transportation Council's Executive Director

Geoff Bowyer, ODOT's Region 1 Traffic Management Operations Center

Jon Santana, TriMet's Interim Executive Director of Transportation





TSMO Strategy stakeholder participation

TPAC

July 12, 2019	Kick-off with draft work plan
May 7, 2021	Vision and Goals
Oct. 1, 2021	Draft TSMO Strategy
Nov. 5, 2021	Recommend TSMO Strategy

TransPort

March 13, 2019	Kick-off
July 14, 2021	Performance Measures
August 11, 2021	Incident Management Team
September 8, 2021	Draft Actions

Project Management Team

August 26, 2020	Kick-Off Meeting
Monthly (2020-2021)	13 Progress Meetings

Public Comments

Sept. 24-Oct. 25	30-day Comment Period

JPACT

Sept. 19, 2019	Kick-off with draft work plan
June 17, 2021	Vision, Goals and Objectives
Nov. 18, 2021	Strategy Adoption

Stakeholder Advisory Committee

January 22, 2021	Vision & Goals Workshop
March 15, 2021	Objectives Workshop #1
March 30, 2021	Objectives Workshop #2
August 19, 2021	Actions Workshop
August 23-27, 2021	Actions Breakout Groups
August 31, 2021	Actions Wrap-Up

More Stakeholder Engagement

Sept. 2020	Emerging Technology Partnerships
Jan. 2021	Stakeholder Survey
April 1, 6, & 7, 2021	FHWA Emerging Tech & TSMO Workshop
July 2021	Stakeholder One-on-One Interviews and Focus Groups
Oct 2021	Clackamas C4 Metro Subcommittee

TSMO vision statement

“Collaborate to provide reliable, agile, and connected travel choices so that all users are free from harm, and to eliminate the disparities experienced by Black, Indigenous, people of color and people with low incomes.

TSMO goals to align strategy and actions

Keep everyone free from harm.

Create a transportation system where all users are free from harm.

Collaborate and partner regionally.

Collaborate as effective stewards of the transportation system.

Ensure reliable travel choices.

Provide a transportation system that is reliable for all users.

Eliminate disparities.

Eliminate transportation system disparities experienced by Black, Indigenous, people of color and people with low incomes.

Prepare for change.

Manage the system to be agile in the face of growth, disruptions, and changing technology.

Connect travel choices.

Connect all people to the goods, services, and destinations they need through a variety of travel choices.

Climate Smart Strategy

Agency	2014 Climate Smart Strategy Toolbox	2021 TSMO Strategy
ODOT	Integrate TSMO in project development	✓ Action 16
ODOT	Expand deployment of ITS, incident management and traveler info	✓ Actions 7, 11, 15
ODOT	Partner with cities, counties and TriMet to expand transit signal priority	✓ Action 9
ODOT/Metro	Pursue opportunities and funding for pilot projects	✓ Actions 3, 8, 14
Metro	Continue implementing TSMO Action Plan	✓ 2021 TSMO Strategy
Metro	Seek Metro Council/JPACT Commitment to invest more in TSMO	✓ RFFA
Metro	Advocate for more investment in TSMO projects using state funds	✓ STIP Enhance
Metro	Build capacity and strengthen interagency coordination	✓ Actions 1, 2, 4, 9, 10, 17, 20, 21
Metro	Provide technical assistance	✓ Actions 1, 2, 4, 5, 6, 12, 13, 17, 18, 20, 21
Metro	Update regional TSMO Strategy	✓ 2021 TSMO Strategy

Implementation

Action 15. Deploy regional traveler information systems.

Action Description

Create a traveler information and educational campaign with Black, Indigenous, people of color, people with low incomes, and people with limited English proficiency.

The campaign should also start deploying traveler information systems where community-voiced need and multiple transportation options are present, building into a methodology Traveler Information System (TIS) priorities that may involve transit stops, public buildings, major destinations within regional centers and on-vehicle displays.

The TIS should incorporate a broad cross section of traveler needs which may include travel time, route, and real-time transit and shared-use mobility information.

Advancing TSMO Objectives

2.3 Collaborate with and educate travelers

3.1 Prioritize reaching underrepresented groups when providing traveler information and community outreach and ensure that modal access and traveler information is free from technological and financial barriers.

Implementation

Action 16. Implement integrated corridor management and mainstream into corridor planning.

Action Description	Advancing TSMO Objectives
Provide tools for regional partners based on I-84 Multimodal ICM Deployment Plan including • Establish a multimodal detour policy across agencies. Define lines of communication and pre-plan emergency needs by rehearsing scenarios for a variety of events impacting operations. • Provide job shadow and training experiences. • Create a data sharing policy and inter-agency(s) agreement with agency partners to incorporate data into PORTAL or another identified internal sharing system. Share construction schedules across agencies. • Implement a decision support system, employing forecast models as useful. Beginning with the next RTP update, consider corridor needs that can be met through ICM based on regional efforts and FHWA guidance and local operators.	1.1 Collaborate to provide consistent travel experiences across jurisdictional boundaries through integrated payment and scheduling systems, integrated corridor management, and data sharing between agencies. 2.2 Collaborate with emergency management when prioritizing investments on key emergency response routes. 2.4 Improve inter-agency & intra-agency collaboration to ensure efficient operations by identifying and addressing barriers in communication when making decisions about network operation or expansion. 5.1 Manage recurring and non-recurring congestion to improve travel time reliability for all users, including active transportation, transit, and freight. 6.4 Provide public agency staff with the data, tools, models, and training needed to assess long-term disruptive transportation trends.

Implementation

Action 18. Participate in regional public outreach to assist in guiding, listening and learning through TSMO-focused conversations.

Action Description	Advancing TSMO Objectives
TSMO-focused public outreach should include traveler safety information and be focused on Black, Indigenous, people of color, people with low incomes, and people with limited English proficiency. Work with local agencies to create/update public outreach that specifically include equity focused TSMO that include Black, Indigenous, people of color, people with low incomes, and people with limited English proficiency.	1.2 Ensure Black, Indigenous, people of color, and people with low incomes benefit from safety improvements. 2.3 Collaborate with and educate travelers. 3.1 Prioritize reaching underrepresented groups when providing traveler information and community outreach and ensure that modal access and traveler information is free from technological and financial barriers. 5.4 Communicate expected changes in reliability so that travelers can make informed travel choices.

Implementation

Action 3. Develop a Mobility on Demand strategy and policy

Action Description	Advancing TSMO Objectives
• Create a working group, build on existing partnerships and technologies. • Participate in expanding access through micro freight delivery • Coordinate with parking managers to improve operations particularly in downtowns and along mainstreets • Examine regulations and benchmarks for equitable distribution of shared use mobility. • Evaluate unified payment and related strategies including congestion pricing, as they function to provide demand and system management through MOD, transit and connected travel options. … • Identify opportunities for pilots to connect people to MOD and support them through programs with MOD service providers. …	2.1 Ensure Black, Indigenous, people of color and people with low incomes benefit from safety improvements. 2.4 Improve inter-agency & intra-agency collaboration to ensure efficient operations by identifying and addressing barriers in communication when making decisions about network operation or expansion. 4.1 Connect decentralized travel options to facilitate viable destinations in Regional Centers, Town Centers, and employment areas outside downtown Portland. … 6.1 Plan and design a flexible transportation network that can adapt to new technology and travel choices that are consistent with the region's desired land use and transportation outcomes …

Adoption recommended by TPAC Nov. 5, 2021, JPACT Nov. 18, 2021

Metro Council consideration to adopt the 2021 Transportation System Management & Operations Strategy, replacing the 2010-2020 TSMO Action Plan.

- Resolution 21-5220
- Exhibit A 2021 TSMO Strategy
- Exhibit B Appendices
- Exhibit C Public Comment Summary Report
- Staff Report

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TSMO Action overview

Planning

3. Develop a Mobility on Demand strategy and policy.
5. Pilot Origin-Destination data to prioritize TSMO investments.
18. Participate in regional public outreach to assist in guiding, listening and learning through TSMO-focused conversations.
21. Update the regional ITS Architecture.

Listening & Accountability

6. Track and prioritize TSMO Investments for and with Black, Indigenous, people of color, and people with low incomes.
13. Create a community listening program.
19. Improve TSMO data availability to aid in traveler decisions and behavior.

Data Needs

1. Establish TSMO performance measures baseline.
12. Explore new TSMO data sources.

TSMO Action overview

Concepts, Capabilities, and Infrastructure.

2. Inventory and manage regional signal and ITS Communication infrastructure.
4. Manage transportation assets to secure the network.
7. Continue freight technology and ITS deployment.
8. Facilitate ground truthing of emerging technologies.
9. Establish a Regional Transit Operators TSMO Group.
10. Unify and standardize fare subsidies for transit and MOD.
11. Develop an ITS travel time information data collection and distribution plan for RDPO regional emergency routes.
14. Create continuous improvement process for existing and new signal systems and related performance.
15. Deploy regional traveler information systems.
16. Implement integrated corridor management and mainstream into corridor planning.
17. Create a TSMO safety toolbox.
20. Build and use a TSMO Toolbox to connect gaps in bicycle and pedestrian infrastructure.

Interstate 5 Bridge Replacement Program

Metro Council Meeting

January 6, 2022

I-5 Bridge Replacement Program

Our purpose today:

- Discuss Metro's participation and input into the IBR project
- Review the IBRP Values, Outcomes, and Actions as updated to reflect Council feedback and Equity Advisory Group progress
- Discuss a resolution to formally accept the Values, Outcomes, and Actions
- Provide and update on the IBR Program and timeline

Metro's Role on the IBRP

- Participating agency on the NEPA process
- Executive Steering Group - President Peterson/Councilor Nolan
- Project Management Group – Margi Bradway/Malu Wilkinson
- Staff Level Group –Margi Bradway, Malu Wilkinson, Elizabeth Mros-O'Hara
- Equity Advisory Group - Sebrina Owens-Wilson
- *Staff are also working with the IBR technical team – modeling, planning, engineering.*

Metro’s Role on the IBRP

- Participate in the process with regard to developing and reviewing the range of alternatives considered and methodologies
- Identify issues of concern regarding the project’s potential environmental or socioeconomic impact and participate in resolution process.

Interstate Bridge Replacement Program Decision Development Framework

KEY

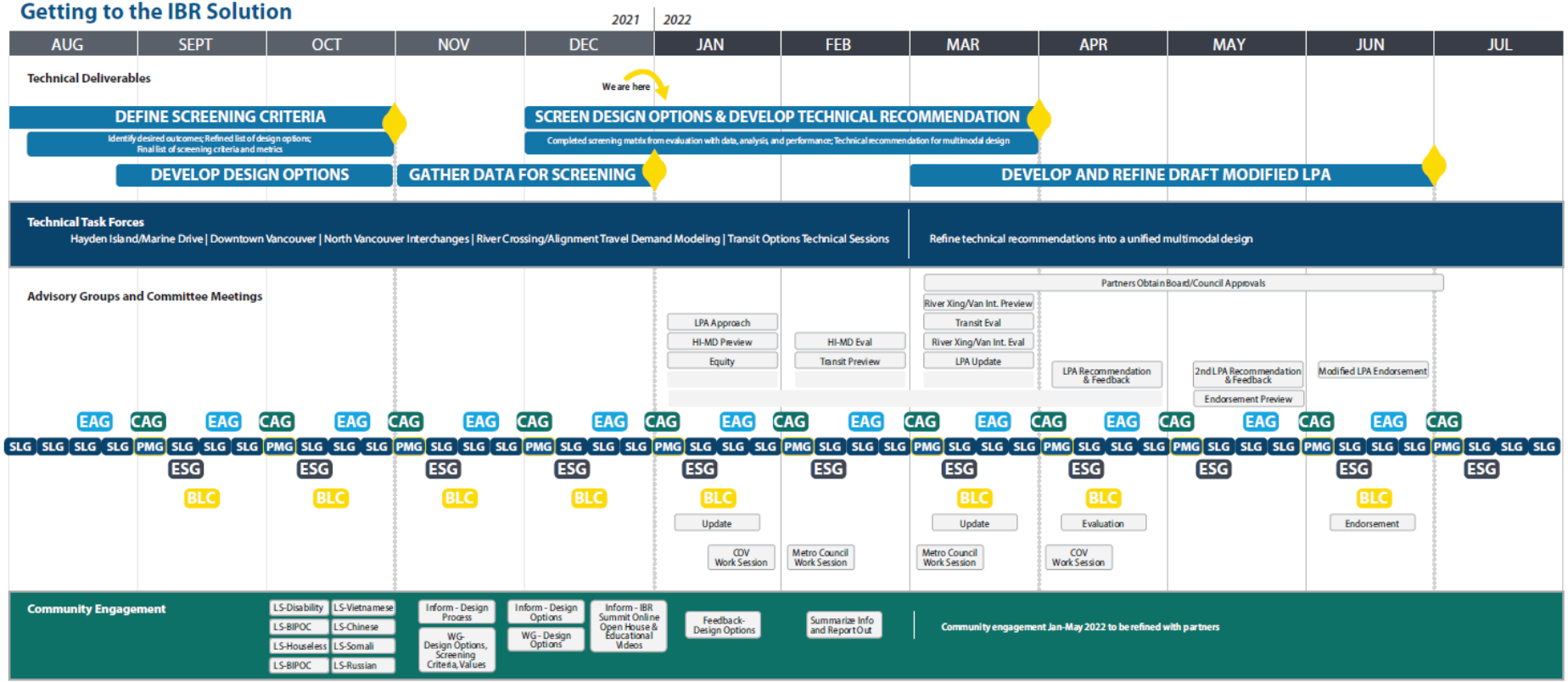
Recommendations

Oversight/Guidance

Regular briefings on program work and advisory group recommendations

NOTE: Location on graphic does not indicate hierarchy. This diagram is intended as a high-level overview and does not show all engagement points.

Getting to the IBR Solution



North Star Targets

- One integrated program: the IBR Solution
- Advance IBR solution to NEPA by June 2022
- NEPA/ goal to follow a Supplemental EIS
- Evaluate HCT options
- Replace N. Portland Harbor I-5 Bridge
- Begin construction no later than 2025

Legend

- CAG Community Advisory Group
- EAG Equity Advisory Group
- ESG Executive Steering Group
- PMG Program Managers Group
- SLG Staff Level Group
- BLC Bi-state Legislative Committee
- LS Listening Session
- WG Working Groups
- AIP Agreement in Principle

For more information about advisory groups, please visit our website.

IBR Work Program

Screening Design Options & Developing Technical Recommendations --December 2021 to March 2022

- Metro Council will be provided updates on performance of options and screening.

Developing and Getting Endorsement of the Modified LPA --- March to July 2022

- ESG, EAG, CAG all provide input on the IBR Refined LPA- March to June 2022
- **The Local Participating Agencies will be asked to endorse the Modified LPA by June 2022 (Metro, Portland, POP, TriMet, RTC, Vancouver, POV, and C-Tran)**
- Bi-State Legislative Committee will be asked to endorse the Modified LPA-- July 2022

- Metro Council will have regular updates Feb through June on the project and discussion of LPA.

Metro Council's Values, Outcomes, and Actions for the I-5 Bridge Replacement Program

- Clarifies how technical analysis is tailored to demonstrate performance on equity, reducing GHG and improving air quality, resiliency and economic prosperity, and inclusive decision-making
- Updated to reflect councilors comments and EAG work since we last met.

I-5 Bridge Replacement Program

Metro Council IBRP Values, Outcomes, and Actions

- Reflects agreement across Council
- Provides guidance to staff on direction and further steps to advance Council's priorities
- Demonstrates what Metro Council cares about to the IBR Program

Metro Council's Values, Outcomes, and Actions for the I-5 Bridge Replacement Program

Four Values - ***See Packet for VOA document***

- Advancing racial equity
- Resiliency and economic prosperity
- Reducing greenhouse gas emissions and improving air quality
- Engaging stakeholders through a transparent and inclusionary decision-making process

Advancing Racial Equity

ACTIONS

Before a revised LPA is selected, conduct and present the findings of in-depth analysis of the benefits and impacts to BIPOC, low income, and other transportation disadvantaged groups for design options and develop performance measures and screening criteria to reveal the anticipated benefits and impacts to these groups.

Evaluate equitable outcomes using the performance measures developed by the IBRP Equity Advisory Group to measure benefits and impacts to equity priority communities (including BIPOC).

Resiliency and Economic Prosperity

ACTIONS

As the part of the finance plan, engage professionals with expertise in financing massive complex transportation infrastructure construction projects to conduct and deliver the results of an investment-grade traffic and revenue study of the design options.

Analyze and report on how design options effect seismic resiliency of the bridge.

Reducing GHG Emissions and Improving Air Quality

ACTIONS

Develop and evaluate at least one option that will achieve a modal split for morning and evening peak periods that substantially increases transit ridership and active transportation throughout the project area.

Plan a project that assumes variable rate tolling that is coordinated with the Oregon congestion pricing in the corridor to manage transportation demand, aim to improve traffic flow to 30-35 mph or better, and minimize the number of lanes needed on the bridge.

Implement variable rate tolling as soon as possible and prior to completing the project.

Implement high capacity transit improvements as soon as possible to improve mobility and reduce emissions.

Engaging stakeholders through a transparent and inclusionary decision-making process

ACTIONS

As part of the evaluation framework for considering options, apply the screening criteria developed by the Equity Advisory Group, the Climate Advisory Work group, Community Advisory Group, Metro staff, and other participating agencies. The screening criteria should be objective and measurable.

Provide technical analysis that demonstrates how IBRP design options can perform relative to Metro Council's values as listed in this document in order to inform policy choices. Specifically, modeling scenarios that include:

- *Robust transit options to understand potential for increasing transit ridership to reduce greenhouse gas emissions and provide reliable access to jobs;*
- *Pricing at different toll rates on the bridge to understand the potential to reduce travel demand, to shift trips from cars to transit, and to reduce greenhouse gas emissions; and*
- *Bridge designs to demonstrate transportation performance with fewer lanes than were included in the CRC.*

Discussion Draft Values, Outcomes, and Actions

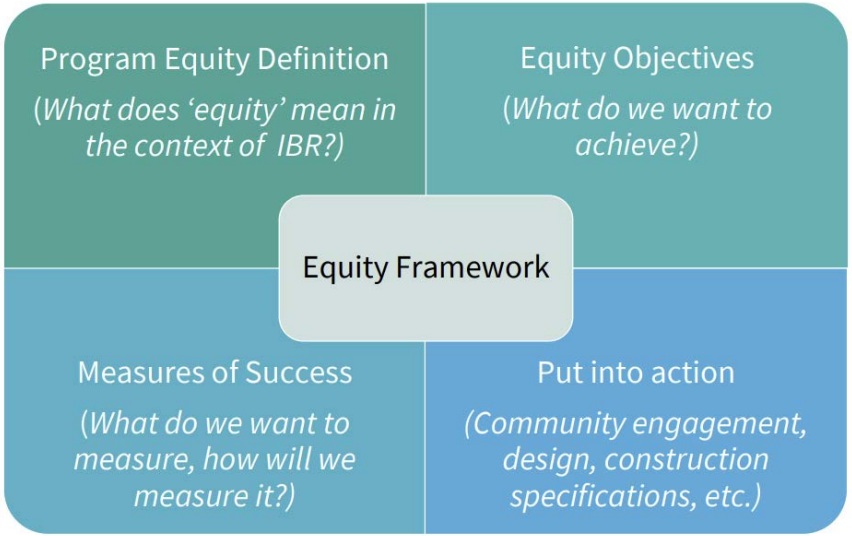
Does Council have questions/thoughts about the Values, Outcomes, and Actions?

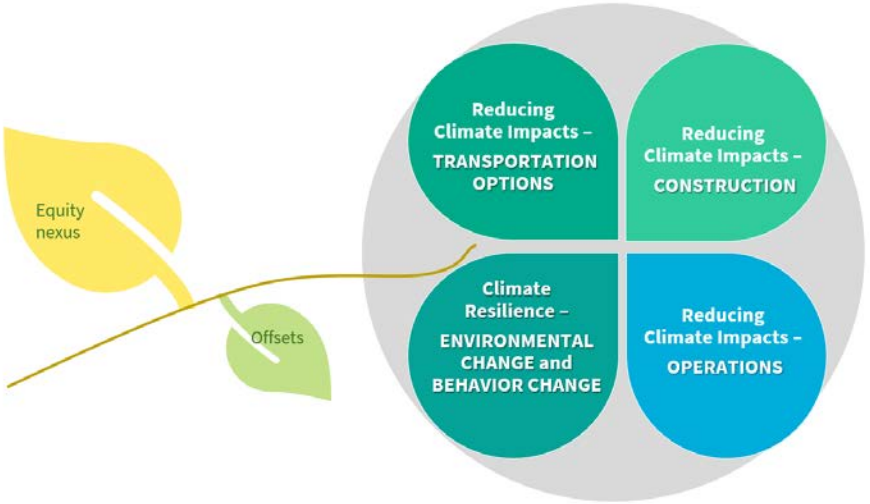
Next Steps

- Today- Resolution Adopting Values, Outcomes, and Actions
  - February 8th Metro Council Work Session –
    - *Clarify IBR schedule, technical findings and screening discussion*
  - March 2022 – May 2022 Metro Council Work Sessions and Briefings
    - *Technical findings & screening, LPA discussions with Metro Council and all partners*
    - *Executive Steering Group, CAG, EAG feedback on the Modified LPA*
- June/July 2022- All 8 local participating agencies asked to endorse Modified LPA
  - **Metro Council will be asked to endorse modified LPA**
- June/July 2022- Bi-State Legislative Committee asked to endorse Modified LPA

Thank you

Climate Framework and Early Equity Frameworks





Climate Framework

Interstate BRIDGE Replacement Program

Equity Objectives

Mobility & Accessibility	Physical Design	Community Benefits	Economic opportunity	Decision-making processes	Avoiding further harm
Improve mobility, accessibility, and connectivity in the program area, with a particular focus on the needs of lower income travelers, people with disabilities, and communities who experience transportation barriers related to the location of affordable housing options.	Integrate equity into the physical design elements of the program.	Find opportunities for and implement local community improvements, in addition to required mitigations.	Ensure that economic opportunities generated by the program, including contracting and workforce development, substantially benefit minority and women owned firms, workers of color, workers with disabilities, and young people.	Meaningfully share access, participation, influence, and decision-making power with historically marginalized communities throughout the course of the program.	Avoid disproportionate impacts on communities of concern while implementing substantial mitigations for any unavoidable, but proportional, impacts.

Interstate BRIDGE Replacement Program

Climate Objectives

- Reducing climate impacts
- Reducing construction-based emissions
- Reduce emissions associated with maintenance and operations
- Offset unavoidable emissions
- Design for climate resiliency

Interstate BRIDGE Replacement Program

Community Engagement By the Numbers

28,500

Total People Engaged!

Via online meetings, community briefings, listening sessions, surveys, newsletters, and social media.

Advisory Groups

Three advisory groups and working groups, reflective of our community, inform, shape the program, and build consensus.

Community Values

Established community values and priorities with the Community Advisory Group and community feedback.

Equity Framework

Developed with the Equity Advisory Group to outline the program's approach and the resources it will use to advance equity.

79 Virtual public meetings and events.

18,700 Responses collected from two community surveys.

Interstate BRIDGE Replacement Program

Engagement + Outreach Tactics

- Online Open House
- Community Briefings
- Fall Online Community Survey
- Listening Sessions
- Community Working Groups
- Youth Press Conference
- Freight Workshop
- Elevating Equity Listening Sessions
- Visual Storytelling
  - Case for IBR
  - Bridge Stories
- Ongoing, proactive outreach to media outlets, including print, radio and television
- Social media engagement
- Community Advisory Groups
- Equity Advisory Groups
- CBO Mini Grant Program

Interstate BRIDGE Replacement Program

Interstate Bridge Replacement Project
Proposed MTIP Amendment

- Creates Preliminary Engineering (PE) project phase
- Programs $36 million of new funding, added to $35 million of funding from Washington DOT, and $9 million of existing planning phase funding ($80 million total)
- Assessment included in staff report
  - Project included in 2018 RTP
  - Funding availability and eligibility
  - Amendment impacts to MTIP reflecting RTP investment priorities
  - Public comment summary provided in supplemental materials

Program Timeline

Work Funded by this Amendment

In collaboration with local, state, federal and tribal partners, and the community, the IBR program will:

- Conduct inclusive, equitable and transparent community engagement process to inform program activities and outcomes
- Identify, develop, and screen design options
- Identify transportation and environmental impacts associated with the program
- Develop an alternative from screened options
- Complete a supplemental Environmental Impact Study (EIS) with FTA and FHWA
- Develop more refined and accurate cost estimates and funding plan
- Work on securing needed funding
- Develop a refined project delivery schedule
- Determine right-of way (ROW) needs and possible issues
- Complete final design

The IBR program will continue to build equity and climate considerations into all aspects of work.

Public Engagement

- Advisory Groups
  - Community Advisory Group
  - Equity Advisory Group
  - Executive Steering Group
  - Opportunities for public comment
- 4 Community Working Groups
  - Provide feedback to the program around specific topics
  - Multimodal Commuter, Active Transportation, Downtown Vancouver, Hayden Island/Marine Drive
- 4 Community Briefings
  - Virtual events to learn about the program, provide feedback, and ask questions
- 4 Listening Sessions
  - Gather insights from equity priority communities in collaboration with low-barrier CBO mini grant recipients
- Online Open House and Community Survey
  - Sharing program updates, details about design options, upcoming milestones, solicit input through survey
- MTIP Amendment public comment period – summary of comments provided in supplemental materials

Interstate Bridge Replacement Project
Proposed MTIP Amendment

IBR Team Requests Metro Council action on Resolution No. 21-5217

- If approved, submission of amendment to ODOT for inclusion in State Transportation Improvement Program and to the Federal Highway Administration for approval

- IBR project team will return to TPAC and JPACT to provide periodic program updates