Agenda
Salem-Keizer Area Transportation Study (SKATS)

Technical Advisory Committee (TAC)

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Meeting ID: 824 1482 2400
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If participation by phone or video conferencing is not an option, please contact our offices (503 588 6177) 24 hours in advance of the meeting. If you are having trouble connecting to the meeting, contact Theresa Whisenhunt (503 540 1630) twhisenhunt@mwvcog.org

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Date: **Tuesday, April 9, 2024**
Time: **1:30 p.m.**
Place: **Hybrid Meeting (100 High St SE, Suite 200 Salem or via Zoom)**
Phone: **(503) 588 6177**
E-mail: **mwvcog@mwvcog.org**
Website: **www.mwvcog.org**

A. Call to Order ..... Eunice Kim

B. Approval of TAC Minutes March 12, 2024 ..... Eunice Kim

C. Federal GHG Performance Measure..... Ray Jackson

Background: At the February 2024 SKATS Technical Advisory Committee (TAC) meeting staff presented an overview of the new Federal Greenhouse Gas (GHG) Performance Measure. On February 8, 2024, ODOT submitted their target for 2024 to the Federal Highway Administration (FHWA). A target for SKATS needs to be decided on by the Policy Committee by

their July 2024 meeting. The ***attached*** memorandum provides an overview of the options available. The TAC will discuss the options and recommend one to the Policy Committee, including if recommending the 'develop a SKATS-specific target' option, of the methodology to be used.

Action
Requested: Recommendation to the SKATS Policy Committee on Federal Greenhouse Gas (GHG) emissions Performance Measure target.

D. Congestion Management Process – Corridor Reports ..... Ray Jackson

Background: One task identified in the SKATS Congestion Management Process (CMP) is to produce yearly reports on vehicular congestion along the defined regional CMP corridors. In addition to the yearly reports now available online, an additional analysis of a subset of the corridors was performed, which is ***attached***.

Action
Requested: Informational.

E. Amendment to the FFY 2024-29 SKATS TIP ..... Steve Dobrinich

Background: The purpose of this amendment is to combine formula 5339 funds from Key #21907 and Key #21912 into Key #21917 and update the project purpose. Update project name and description to replace cash collection vault system and approximately 73 fareboxes that have exceeded their useful life.

Action
Requested: Recommendation to the Policy Committee to adopt the proposed amendment.

F. Other Business ..... SKATS Staff

- Psychology in Transportation Safety –Marion County
- Next Policy Committee Meeting – **April 23, 2024**
- Next TAC Meeting – **May 14, 2024**

G. Adjournment ..... Eunice Kim

DRAFT

Minutes

Salem-Keizer Area Transportation Study (SKATS)
Technical Advisory Committee (TAC)
March 12, 2024 @1:30pm
100 High St. SE, Suite 200
Salem, OR

This was a hybrid meeting: attendance was online via Zoom & in-person in the MWVCOG Conference room.

TAC Members in Attendance
Ashley Bryers, Federal Highway Administration (FHWA) (Zoom)
Austin McGuigan, Polk County Planning Dept.
Brandon Williams, ODOT Region 2 (Zoom)
Eunice Kim, Salem Community Development, 2024 Chair
Janelle Shanahan, Marion County Public Works
Julie Hanson, Salem Public Works,
Melissa Ahrens, DLCD (Zoom)
Scott McClure, City of Turner (Zoom)
Shofi Ull Azum, SAMTD/Cherriots, 2024 Vice-Chair
Victor Lippert, Salem-Keizer Schools (Zoom)

TAC Members Absent
Austin Barnes, Marion County Planning
Bill Lawyer, Keizer Public Works
ODOT Trans. Planning Analysis Unit, as needed
Todd Whitaker, Polk County Planning
Rachel Sakata DEQ, as needed
Shane Witham, Keizer Community Development

Others in Attendance
Carl Lund, Marion County Public Works
Kim Sapunar, MWVCOG-SKATS
Lani Radtke, Marion County Public Works (Zoom)
Matt Etzel, Aumsville Public Works
Mike Jaffe, MWVCOG-SKATS
Ray Jackson, MWVCOG-SKATS
Stephen Dobrinich, MWVCOG-SKATS

Agenda Item A. Call to Order

Chair Eunice Kim called the meeting to order at 1:31 p.m.

Agenda Item B. Approval of Minutes of February 13, 2024

Motion was made by Austin McGuigan, seconded by Julie Hanson, to approve the minutes of the February 13, 2024, meeting as presented. Those voting in favor of the motion were Ashley Bryers, Austin McGuigan, Brandon Williams, Eunice Kim, Janelle Shanahan, Julie Hanson, Matt Etzel, Melissa Ahrens, Scott McClure, Shofi Ull Azum, and Victor Lippert.[1] **The motion passed unanimously.**

Agenda Item C. Amendment to the FFY 2024-29 SKATS TIP

The purpose of this agenda item is to review three full amendments to the SKATS FFY 2024-2029 Transportation Improvement Program (TIP):

- Project Key # 21879: Pedestrian Safety Improvement Crossings (Salem): The City of Salem is requesting to add $500,000 in local overmatch to cover increased cost estimates. Project crossing locations are being updated to River Rd. N at Riviera Dr. NE; Lancaster Dr. NE at Weathers St. NE; and State St. at 21st St. SE.
- Project Key # 23029 Northwest Oregon 2024-2027 ADA Curb Ramp Design, Phase 2: ODOT is requesting to transfer $2,710,000 from the Preliminary Engineering phase of K23029 to the Preliminary Engineering phase of K22985. The two projects have the same name and description related to design for future construction of ADA curb ramps. This action is transferring funds from K23029 (phase 2) to 22985 (phase 1).
- Project Key # 21911 Transit Urban (5310) Formula Program 2023 SKT: SAMTD is requesting to increase the project allocation listed in the TIP by $153,698 ($122,958 Federal; $30,740 local match) to match the actual apportionment.

Mike Jaffe asked Julie Hanson to expand on the reasoning for the request to add funds to the crossings project (K21879). He wanted to know if it was due to adding crossings or if the basic cost had increased. Ms. Hanson stated that the scope of work has not expanded, and she did not have details. Carl Lund noted that he had heard about cost increases related to the precision in the slope of curb ramps and mentioned that the cost of concrete has increased, making rebuilds costly. Ms. Hanson added that there may be an increase due to needed archaeological work done; the cost may have been estimated as a single cost where in reality each site/ramp construction is a set cost, reducing any economy of scale. In the initial budget process, those costs were figured in percentages for each phase; those estimates likely need revision with the engineering of each individual location.

[1] Shofi Ull Azum asked to be referenced, in the body of the minutes, as Mr. Azum – moving forward.

Motion was made by Julie Hanson, seconded by Janelle Shanahan, that the TAC recommend to the Policy Committee to adopt the proposed amendments. Those voting in favor of the motion were Austin McGuigan, Brandon Williams, Eunice Kim, Janelle Shanahan, Julie Hanson, Melissa Ahrens, Scott McClure, Shofi Ull Azum, and Victor Lippert. **The motion passed unanimously.**

Agenda Item D. Project Roundtable

TAC members were encouraged to provide a brief overview and/or update of current ongoing or soon-to-start planning studies or projects.

Julie Hanson updated the committee on the Regional Scenario Planning being coordinated with the cities of Salem and Keizer along with Marion County and a consultant team under contract with ODOT. The first of four meetings of the advisory committee is scheduled for March 18, 2024. Consultants completed a draft reference scenario for 2050 showing the percent reduction in VMT (vehicle miles traveled) would be approximately 18 percent if we continue with current policies. This falls short of achieving the goal of a 30 percent reduction by 2050. The advisory committee[2] will be asked to support key messaging and what their perspectives are from their jurisdictions. The optimistic timeline would be finalizing the scenario by the end of December. The deadline for adoption is 2026.

Mr. Azum updated the committee on four projects for SAMTD:

- South Salem Transit Center: In preliminary phase; completed preliminary design and schematic design and have moved to the NEPA (National Environmental Policy Act) process – the goal is to complete NEPA in May. The next phase will be property acquisition with ongoing conversations for concurrence from FTA (Federal Transit Administration). Finalizing design and engineering is scheduled for March or April of 2025 with bidding and construction document preparation scheduled for completion in the summer of 2026. Funding has been secured for design activities and $500,000 is confirmed for construction. SAMTD will be applying for funding for facilities and the rest of the construction needs.
- Transit Signal Priority (TSP) Project: Currently in phase 1 of implementation on Lancaster Drive with a “go-live” goal of fall 2024. The project is on “hold” due to the city experiencing fiber connection and controller issues. Funding has been obtained. Once phase 1 is completed successfully, the scope of work will expand to other corridors.
- Micromobility/ Bike Share Feasibility Study: Scope of work has been drafted with the focus of study to be within the UGB (Salem, Keizer, and some unincorporated areas [of Marion County].) The goal is to find the best means and methods for providing a bicycle share in the determined area. The study will look at infrastructure, and policy recommendations or resolutions needed to be in place to have a successful program. If

[2] Marion County – 2 members, City of Salem – 3 members, City of Keizer – 2 members, and SAMTD – 1 member. Polk County and the City of Turner are exempt from the requirements.

the result of the feasibility study is to recommend going forward with the program, the next step would be implementation. The timeline is roughly for RFP release in May, issuing contracts in July, and study results first part of 2025.
- The bike map for Salem-Keizer is being updated, with the goal of a printed version this spring.

Janelle Shanahan updated the committee that the Cordon-Kubler Corridor Plan is complete and moves into the process for county board adoption. The plan will be posted to the Marion County website and will become part of the rural Transportation System Plan (TSP)[3].

Brandon Williams updated the committee that he has been working with the city of Turner providing TSP (Transportation System Plan) grant administration (Turner received a Transportation Growth Management grant to update their TSP) and is the contract administrator. DKS (the project consultant) has completed an underserved populations report using census data to learn more about the community and its needs and completed future conditions analysis. Mr. Williams noted that they have begun to see some of the solutions suggested by the consultant team. City Manager Scott McClure spoke about the redesign of Third Street that will move from a bike lane and sidewalk to a 12-foot multi-use path; a similar design at Chicago Street into Turner Elementary School is planned.

Ms. Hanson informed the committee about a project she thought the committee would have interest in: Salem Transportation Assets Condition Needs and Finance Study (STACNAFS) – "… in an expedited time frame preparing a comprehensive evaluation of the existing condition of Salem's transportation assets, determine what preventative, corrective, and rehabilitative actions are needed to maintain them, identify lifecycle preventative and corrective maintenance costs, ongoing operational costs, and formulate recommended options for consideration by the city's revenue task force budget committee and city council."

Other project updates from Ms. Hanson:
- Safe Streets For All, Vision Zero Plan grant – working with Ashley Bryers on the agreement. The goal is to have the agreement in place by July 1, 2024.
- ODOT's Safe Routes to School's application window is open for Part 1.
- Mr. Jaffe added that SKATS staff has approached the city of Salem and SAMTD for letters of support on behalf of the Salem-Keizer Safe Routes to School Program for an education grant.
- A Salem city councilor adopted a motion to install leading pedestrian intervals in the downtown area. There will also be a study to look at adjusting the timing of the downtown traffic lights to lower driving speeds closer to 20 miles per hour.

[3] After the meeting the link to the document was shared: https://www.co.marion.or.us/PW/Engineering/rtsp/Documents/CordonCorridorPlan/CordonKueblerCorridorPlan_SummaryReport_February2024%20%281%29.pdf

Agenda Item E. MTSAP Update

A draft list of strategies for the Metropolitan Transportation Safety Action Plan (MTSAP) is being reviewed by the project management team. Mr. Jaffe shared a short outline of the timeline and work being done for the draft MTSAP. Kim Sapunar spoke about the collaborative efforts with the jurisdictions, and next month's work to prioritize strategies for the draft plan. The Steering Committee will also discuss the goal and vision text for the MTSAP in March and April.

Agenda Item F. MPO Structure Discussion

The Policy Committee had a lengthy discussion on this topic at their February meeting, but no decisions have been made. Mr. Jaffe gave an overview of the history of the issue, the discussions by the PC, and the work that has been done including outreach to FHWA for clarification on regulations. To add the city of Aumsville to the Policy Committee, the Cooperative Agreement and the Bylaws will need to be updated or amended and discussions have been focused on whether to add another voting position for the city of Salem to the Policy Committee.

Mr. Jaffe pointed out the distinctions between the Cooperative Agreement and the Bylaws noting that updating the Cooperative Agreement first, followed by the Bylaws is what is needed. Mr. Jaffe went on to note that amending the Bylaws requires five days of notice prior to the meeting.

TAC members suggested reviewing packet materials from when Turner was added to the MPO in 2002/2003 and discussed the expectation to prepare a motion for the Policy Committee. Having a suggested motion as a starting point would allow the Policy Committee to discuss options and make amendments during the March meeting. The committee discussed the process needed to assist the Policy Committee in making motions and the possible outcomes of the staff recommendations.

Amendment #1 to the Cooperative Agreement was prepared by the Policy Committee and circulated starting in November 2002. Signatures were obtained between May and October 2003. The SKATS Bylaws were updated in November 2003.

Agenda Item G. Other Business

- Next Policy Committee Meeting – **March 26, 2024**
- Next TAC Meeting – **April 9, 2024**

Chair Eunice Kim adjourned the meeting at 3:47 p.m.

Agenda Item C

Federal GHG Performance Measure

SKATS Technical Advisory Committee

April 9, 2024

Action Requested:	Recommendation to the SKATS Policy Committee on Federal Greenhouse Gas (GHG) emissions Performance Measure target.

SALEM-KEIZER AREA TRANSPORTATION STUDY

100 High St. SE, Suite 200 Salem, OR 97301 Phone (503) 588-6177 FAX (503) 588-6094

Memorandum

Date: March 20, 2024
To: SKATS Technical Advisory Committee
From: Ray Jackson, Senior Transportation Planner
Re: **Federal Greenhouse Gas Performance Measure**

Federal Greenhouse Gas Performance Measure – Metric and Target Options

Summary

- The Federal Highway Administration (FHWA) published the final rule for a federal Greenhouse Gas emissions performance measure on December 7, 2023, covering travel on the National Highway System (NHS). This applies to state Department of Transportations (DOTs) and Metropolitan Planning Organizations (MPOs)
- The adopted target *must* be declining, covering the period from 2022 to 2026 (with subsequent target setting every four years).
- ODOT submitted their target of **-5.8 percent** on February 8, 2024, starting the 180-day countdown for SKATS to set a target.
- Staff recommend supporting the ODOT target.

Introduction

At the February 13, 2024, SKATS TAC meeting[1], an overview of the new Federal Greenhouse Gas (GHG) performance measure was provided. The discussion during the meeting included requesting more information on how ODOT set their target for the 2022-2026 performance reporting period, and whether a SKATS-specific target should be set or to support the ODOT target. Provided in this memo is more information on ODOT's target-setting process, and details on what the metric and target options are available to SKATS. This information

[1] Item D in the agenda packet available at: https://www.mwvcog.org/technical-advisory-committee-tac/meeting/skats-tac-monthly-meeting-6

should provide the TAC with the information needed to make a recommendation to the Policy Committee on how to proceed with target setting.

As a reminder, the metric used is the annual tailpipe CO_2 emissions on the National Highway System (NHS), and the performance measure is the percent change in tailpipe CO_2 emissions on the NHS compared to the reference year of 2022. See the memo in the February TAC packet for more details.

ODOT's Target Setting Process

The federal rule requires the target to show a ***decrease*** from the 2022 reference year to 2026 (the first reporting period)[2]. ODOT reports that the process used to set their 2026 target of -5.8 percent included examining a number of sources of data, covering both the base conditions and future year forecasts. This included the legislative GHG reduction goals, data from the Oregon Department of Environmental Quality's annual multi-sector GHG inventory, revenue forecasts prepared by ODOT for fuel taxes and highway cost allocation used in determining freight weight-mile taxes, ODOT's GHG Roadmap and progress reports[3], and AASHTO's (American Association of State Highway and Transportation Officials) GHG target calculator.

The State has a goal of reducing GHG emissions 80 percent by 2050 relative to the 1990 levels[4]. The target ODOT submitted to FHWA on February 8, 2024, is consistent with the State goal and reflects the progress likely by 2025 (the end of the performance reporting period).

MPO Metric and Target Options

It is recognized in the federal rule that there is less data available to MPOs for calculating the reference year value and that many MPOs do not have the staff capacity to forecast a value to aid in setting a target. To address these issues FHWA wrote the rule to allow MPOs four choices in calculating the metric (tailpipe CO_2 emissions on the NHS):

i. Use the MPO share of the State's Vehicle Miles Traveled (VMT) (Metric 1 below)
ii. Use VMT estimates along with MOVES emissions factors (Metric 2 below) [5]
iii. Use the FHWA's Energy and Emissions Reduction Policy Analysis Tool (EERPAT), or
iv. Develop a method that the MPO can demonstrate has valid and useful results for CO_2 measurement.

[2] 23 CFR 490.105 (e)(10) see: https://www.ecfr.gov/current/title-23/part-490/section-490.105#p-490.105(e)(10)
[3] See the Oregon Transportation Emissions website: https://www.oregontransportationemissions.com/
[4] See https://www.oregon.gov/bcd/Documents/eo-energy-20-04.pdf
[5] EPA's MOVES (MOtor Vehicle Emissions Simulator), details available at: https://www.epa.gov/moves

Discussion between ODOT and the MPOs in Oregon showed little interest in either choice (iii) or (iv), so the focus is on the first two choices. The rule states that MPOs must report a target *and* the method used to calculate the reference year value; this can be visualized in the graphic ODOT presented at a recent meeting (**Figure 1)**.

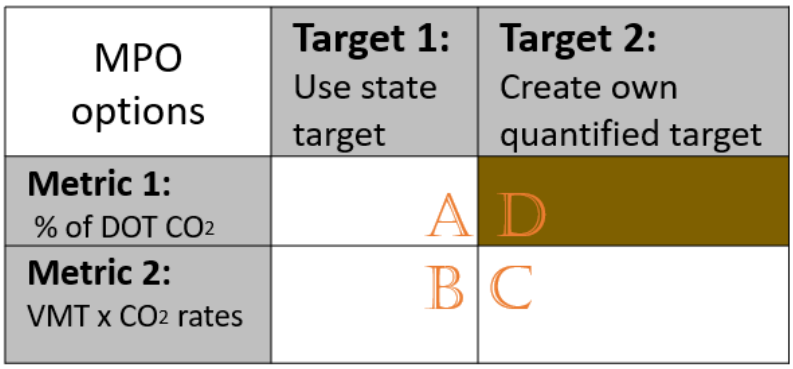

Figure 1: MPO Options (A, B, C, D) for Target and Metric Calculations (ODOT)

As with all the Federal performance measures, MPOs may either support the state DOT's target (Target 1) or set an MPO-specific quantifiable target (Target 2). The rows for the 'metric' options refer to how the amount of CO_2 emissions on the NHS within the MPO is calculated. The first, Metric 1, is calculating the percentage of travel on the NHS within the MPO compared to the statewide value. The second, Metric 2, calculates this value using an estimate of VMT multiplied by the CO_2 emission rates.

As shown in the figure, the option (D) to use Metric 1 and Target 2 is considered to not be a valid option[6]. The other three (shown as A, B, and C in the figure) could be used by SKATS to develop a target and are discussed below.

Option A: Metric 1 and Target 1

This is the easiest method, calculating the percentage of CO_2 emissions on the NHS based on the state value and using the state target.

Metric 1 is the percent of MPO VMT to State VMT multiplied by the statewide CO_2 emissions. ODOT calculated the emissions for all roads in the state in 2022 as 17.5 MMT and statewide on the NHS as 10.15 MMT. Using these values along with the values shown in **Table 1** for the percent of VMT in SKATS on All Roads and the NHS, an estimate of the amount of CO_2 emissions for All Roads and on the NHS within SKATS can be calculated (last two columns in **Table 1**). For All Roads within SKATS in 2022, the estimated CO_2 emissions in 0.82 MMT and 0.52 MMT on the NHS within SKATS.

[6] The reasoning is that a SKATS-specific target should also be based on SKATS-specific metric for emissions.

The target for this option is the one set by ODOT at -5.8 percent.

Table 1: Metric 1 - Percent of MPO VMT and Annual Tailpipe CO2 Emissions for 2022 (ODOT)

	All Roads in SKATS VMT % of All Roads in the State VMT	NHS in SKATS VMT % of State NHS	All Roads in SKATS (MMT)	NHS in SKATS (MMT)
SKATS	4.7 %	5.1 %	0.82	0.52

Option B: Metric 2 and Target 1

Shown in **Table 2** is the calculation using the estimated VMT and emissions factors by vehicle class. This is slightly more involved as the VMT is multiplied by the percent of each vehicle class (to estimate VMT by vehicle class), that value is multiplied by the emissions rates for the vehicle class and then summing the three values provides an estimate of the annual tailpipe CO_2 emissions for all roads and on the NHS. The results are shown in **Table 2**.

The target for this option is the one set by ODOT at -5.8 percent.

Table 2: Metric 2 - Annual Tailpipe CO2 Emissions by Vehicle Class for 2022 (ODOT)

SKATS	Annual VMT	Pct Light Duty	Pct Medium Duty	Pct Heavy Duty	All Roads in SKATS (MMT)	NHS in SKATS (MMT)
All Roads	1,707,482,840	90 %	5 %	5 %	0.79	0.50
NHS	1,087,208,349	89 %	4 %	7 %		

Option C: Metric 2 and Target 2

This option uses the second metric methodology, as described above, combined with setting a SKATS-specific target. The reference year value could use the value calculated as in Option B, but really should be based on the VMT from the regional travel demand forecasting model for the year 2022. Results for 2025 would be needed for determining a target. As the model is only run for the base year (2021) and the horizon year (2050) of the current Metropolitan Transportation Plan, the VMT would need to be estimated from linear interpolation between these two years. The other option would be to create a model for 2025, which would include estimating the population, employment, other land use changes, and including only those road projects and changes in transit service that will be complete by 2025. Both of the model runs would need emission factors, which would need to come from

ODOT (or DEQ) as SKATS does not have a MOVES model in service. It is not recommended to use this option.

Table 3: Annual Total Tailpipe CO2 Emissions on the NHS within SKATS for 2022 from Metric 1 and Metric 2 (ODOT)

	Metric 1	Metric 2
SKATS	0.52 MMT	0.50 MMT

Discussion of the Options

The two metrics result in slightly different estimates of annual total tailpipe CO_2 emissions (**Table 3**). Given that Metric 1 is easier to calculate, SKATS staff recommends the use of this process for reporting the reference year tailpipe emissions. If this is the metric process selected to be reported, then according to **Figure 1** the target setting option would be "Use State Target". As with the other federal performance measures where SKATS has elected to support the State target, this will require discussion to be added to the SKATS TIP on how the projects and programs being funded are helping to achieve the target of a 5.8 percent reduction in annual tailpipe emissions of CO_2 by 2025 relative to 2022.

Recommendation to the Policy Committee

The SKATS TAC is asked to provide a recommendation to the SKATS Policy Committee on both the metric used for the reference year and a target for the reporting period. The Policy Committee needs to make a decision by their July 23, 2024, meeting.

Agenda Item D

Congestion Management Process – Corridor Reports

SKATS Technical Advisory Committee

April 9, 2024

Action Requested: Informational.

SALEM-KEIZER AREA TRANSPORTATION STUDY

100 High St. SE, Suite 200 Salem, OR 97301 Phone (503) 588-6177 FAX (503) 588-6094

Memorandum

Date: April 1, 2024
To: SKATS Technical Advisory Committee
From: Ray Jackson, Senior Transportation Planner
Re: **DRAFT Corridor Analysis: 2023**

DRAFT Corridor Analysis: 2023

Summary

- The SKATS Congestion Management Process (CMP), last adopted in 2022, defines 15 regionally significant road corridors for study and observation.
- Annual reports are prepared for each of the corridors, covering the period from 2016 to 2023, and posted to the SKATS Transportation Hub.
- Analysis of changes between 2019 and 2023 is reported.
- In 2023 the analysis suggests that while vehicular congestion is still present, the reliability of travel on the corridors has improved compared to 2019.

Introduction

The SKATS Congestion Management Process (CMP) defines a set of 15 regionally significant corridors to be monitored for the presence and extent of vehicular congestion. The CMP identifies a set of measures to be used, and the need for yearly reports to be prepared and published showing the change over time. The report for each corridor is available via the Congestion Management page at the MWVCOG website[1] showing a set of metrics for the years 2016 to 2023. For this year, a subset of the CMP corridors was examined in more detail to elucidate the level of vehicular congestion in 2023 compared to 2019, the possible causes, and whether the programs and/or projects addressing congestion had any effect. As with the corridor reports, two measures are reported, the Travel Time Index (TTI) and the Planning Time Index (PTI). The TTI and PTI are calculated for travel on all weekdays during a year using RITIS.

[1] Available at: https://skats-mwvcog.hub.arcgis.com/pages/congestion-management

Travel Time Index

The Travel Time Index (TTI) is a measure of vehicular congestion, providing information on the extra amount of time it takes to travel along a corridor due to vehicular congestion, particularly recurrent types of congestion (e.g., caused by bottlenecks)[2]. The TTI calculation is the average travel time divided by the 'free flow' travel time (often measured in the early hours of the day). A TTI value of 1.0 represents that the travel time in the study period is the same as during 'free flow'. A TTI value of 1.5 means a trip that takes 10 minutes in 'free flow' conditions, would take 15 minutes in the study period. TTI values under 1.0 mean that the trip is *faster* than in 'free flow' conditions (typically from exceeding the posted speed limit). Values over 1.0 represent increasing travel time and increasing vehicular congestion. There are many ways to define when vehicular congestion 'starts' based on the TTI value; one such categorization is shown in **Table 1** from ODOT's *2022 Statewide Congestion Overview*[3]. While the categorization is for freeways, we will use it for arterials as well.

Table 1: TTI Classification - Freeways (from ODOT's 2022 Statewide Congestion Overview, p. 30)

Congestion Level	TTI	Average Travel Speed
None	Less than 1.2	No less than 10% below posted speed limit
Moderate	Between 1.2 and less than 1.5	Between 10 to 30 % below posted speed limit
Heavy	Between 1.5 and less than 2.0	Between 30 to 50 % below posted speed
Severe	2.0 and above	Below half the posted speed limit

TTI results are shown in the corridor reports for an AM Peak (7:00 a.m. – 8:00 a.m.) and a PM peak (5:00 p.m. – 7:00 p.m.). For this report, an additional period for midday (11:00 a.m. – 1:30 p.m.) was included. The midday period was added to investigate whether post-COVID people are traveling more in the non-peak periods (a hypothesis as the number of people telecommuting increases, they are still traveling for errands, lunch, etc. during the day). Also investigated is whether, and by how much, the vehicular congestion has changed on the corridors between 2019 and 2023[4]. For the weekdays, presented in **Table 2** are the number of corridor directions that have improved, worsened, or not changed.

[2] For a complete discussion on the types of vehicular congestion, see the SKATS Congestion Management Process document via the link above.

[3] Available at: https://www.oregon.gov/odot/Planning/Documents/2022_Congestion_Overview.pdf

[4] The data for the years 2020 to 2022 were not examined due to the effects of COVID, including reduced transit service. Travel in 2023 is thought to represent the 'new normal'.

Table 2: Number of Corridor Directions that Changed between 2019 and 2023 (INRIX, RITIS)

	Better	Worse	No Change
AM Peak	12	11	5
Midday	13	14	1
PM Peak	22	4	2

Shown in **Table 3** are the corridor directions that have had an increase in the TTI value since 2019 in the AM or PM Peak.

Table 3: Corridor Directions that are worse in 2023 compared to 2019, Weekdays AM, Midday, PM (INRIX, RITIS)

AM Peak	Change	Midday	Change	PM Peak	Change
Portland Rd SB	12.5%	Commercial SB	9.4%	Commercial St SB	7.9%
Commercial St NB	8.5%	Portland SB	5.8%	Commercial St NB	3.3%
Commercial St SB	8.5%	Kuebler EB	5.5%	I-5 NB	2.1%
Mission St EB	6.9%	Kuebler WB	4.7%	Marion-Wallace EB	1.7%
Center St WB	3.8%	Commercial NB	4.1%		
Wallace-Marion WB	3.1%	Portland NB	3.8%		
River Rd via Bdwy SB	2.9%	Wallace-Marion EB	3.5%		
Lancaster Dr NB	1.9%	OR22W EB	2.9%		
12th St NB	1.0%	Lancaster NB	1.8%		
Cordon Rd SB	0.9%	Wallace-Marion WB	1.0%		
Mission WB	0.9%	I-5 NB	1.0%		
		Cordon NB	0.9%		
		Cordon SB	0.9%		
		River via Bdwy SB	0.9%		

Planning Time Index

Complementing the Travel Time Index is the Planning Time Index (PTI). Whereas the TTI uses the average travel time, PTI is calculated using the 95th percentile travel time along the corridor segment. As a measure of reliability, PTI reflects the uncertainty in travel and accounts for both the average travel time plus the unexpected delay (from non-recurrent vehicular congestion). The 95th percentile is usually interpreted as the worst day in a month for travel. As with TTI, the PTI is a numeric value that can be used to calculate how long a

trip would take under these conditions. A PTI of 1.33 means a trip that takes 10 minutes in periods of 'free flow' travel will take 13.3 minutes.

Shown in **Table 4** are the values of PTI and ODOT's definition of whether travel on a road would be considered reliable or unreliable. Between 2019 and 2023 only a few corridors have PTI values that indicate less reliable travel. These are shown in **Table 5**. The majority of corridor directions (24 in the AM and Midday and 26 in the PM were better, with one in the Midday as unchanged).

Table 4: Reliability Level and PTI (ODOT 2022 Statewide Congestion Overview, p. 34)

Reliability Level	PTI	Words
Reliable	Less than 1.33	Average travel speed is no less than 25 % below posted speed
Moderately Unreliable	From 1.33 to less than 2.0	25 – 50 % below posted speed
Highly or Extremely Unreliable	2.0 and above	At least 50 % below posted speed

Table 5: Corridor Directions with PTI Values that are Worse in 2023 vs. 2019 [Weekdays] (INRIX, RITIS)

AM Peak	Change	Midday	Change	PM Peak	Change
Portland Rd SB	23.1%	I-5 NB	2.0%	I-5 SB	3.6%
I-5 NB	2.9%	I-5 SB	2.0%	I-5 NB	1.9%
I-5 SB	1.9%	Kuebler WB	1.5%		
OR 22W WB	0.9%				

The number of corridor directions that are moderately unreliable or worse has decreased since 2019, as shown in **Table 6**. Also, the maximum PTI value is less in 2023, with none over 2.0.

Table 6: Count of Corridor Directions 1.33 and higher with Max PTI by Year and Period (INRIX, RITIS)

	AM Peak Corridor Directions	Max PTI	Midday Corridor Directions	Max PTI	PM Peak Corridor Directions	Max PTI
2019	21	1.93	22	1.95	26	2.93
2023	5	1.54	17	1.58	23	1.79

Discussion of TTI and PTI Results

The calculation of TTI and PTI use data collected by INRIX[5] from vehicles using the roads across the country. These are an assortment of vehicles, from truck fleets to personal automobiles with GPS that send their location and timestamps. This data is compiled to estimate the speed a vehicle is going along a particular road and then produce an average value with all the other available vehicles on that stretch of road at that particular time. It is important to remember that these estimates are based on a sample of the vehicles that are on a segment. The percentage of vehicles sampled will vary based on time of day, location, number of vehicles with the suitable equipment, etc. The calculation of the data provided by INRIX into TTI, PTI, and other metrics is performed by the RITIS platform[6]. Data from 2016 onward is available for analysis[7].

TTI and PTI are complementary measures, with PTI encompassing the average delay reflected in the TTI value. Subtracting the PTI from TTI yields the buffer index – the time to ensure an on-time arrival for 95 percent of travels. For most corridors between 2019 to 2023 there was a decrease of the buffer index with the exceptions of I-5 (both directions and all time periods) and OR 22W WB in the AM. These results can be explained by a TTI value of under 1.0 for both corridors and a PTI over 1.0. This suggests that on average travel on these corridors is *above* the posted speed limit (thus the TTI under 1.0)[8], but there are still events during the analysis period that cause slowdowns (reflected by the PTI over 1.0).

The TTI and PTI results show that while vehicular congestion is still present on the corridors within SKATS, the reliability of travel on the roads improved between 2019 and 2023 and thus decreasing the worst delays.

It is too early to determine whether the same patterns will show in 2024, or if vehicular traffic will increase toward the 2019 values. The snow/ice event in mid-January had a discernable impact to travel which will likely be less noticeable once the data for the year is available. A partial explanation for the changes in vehicular congestion and reliability between 2019 and 2023 can be attributed to changes in travel (mode, location and frequency) to work due to post-COVID-19 choices at the business and household levels, as well as other factors.

[5] See: https://inrix.com/

[6] RITIS: Regional Integrated Transportation Information System developed and maintained by the Center for Advanced Transportation Technology Laboratory (CATT Lab) at the University of Maryland: https://ritis.org/

[7] Note that INRIX is continually working on increasing the number of vehicles sampled.

[8] Keep in mind that the TTI in this report is based on 'free-flow' travel and **not** the posted speed limit.

Agenda Item E

Amendment to the FFY 2024-29 SKATS TIP

SKATS Technical Advisory Committee

April 9, 2024

Action Requested: Recommendation to the Policy Committee to adopt the proposed amendment.

SKATS Transportation Improvement Program (TIP)

Public Notification of Pending Amendment

Proposed TIP Amendment

Project Name: Farebox System Replacement (5339) Formula 2022, 2023, 2024 SAMTD

The public review period for this project is April 9, 2024 to noon April 23, 2024.

As a Formal Amendment to the TIP, additional details about the project will be presented to the SKATS Policy Committee for approval at noon on **April 23, 2024,** at 100 High Street SE, Suite 200, Salem, OR ***(hybrid meeting with virtual option available).***

Comments or concerns about this amendment should be submitted to Steve Dobrinich, via email at sdobrinich@mwvcog.org

This amendment may be revised to address input received during the public comment period. The most recently amended TIP is available at the MWVCOG website at: https://www.mwvcog.org/transportation/page/transportation-improvement-program

Project Amendment Details

Amendment No.	**24-9**				
Project KN:	**21917**	**Project Sponsor:**	**SAMTD**	**Total Project Cost:**	**$2,297,311**
Project Name:	**Farebox System Replacement (5339) Formula 2022, 2023, 2024 SAMTD**				
Purpose of amendment: Combine formula 5339 funds from K21907 and K21912 into K21917 and update project purpose. Update project name and description to replace cash collection vault system and vehicle fareboxes.					
Project Description: Replace cash collection vault system and approximately 73 vehicle fareboxes that have exceeded their useful life.					

SKATS Transportation Improvement Program (TIP)

Public Notification of Pending Amendment

Project information before amendment:

Name:	**Transit Urban (5339) Formula Program 2024 SKT**			Key:	**21917**
Description	**Allocation used for bus and bus facilities to provide alternative forms of transportation.**				Region: **2**
MPO:	**Salem/Keizer Area MPO**	Air Quality Status:	Work Type:	**TRANST**	
Applicant:	**SALEM-KEIZER TRANSIT DISTRICT**	**Exempt**	Status:	**NON-CONSTRUCTION PROJECT**	

Location(s)-

Mileposts	Length	Route	Highway	ACT	County(s)
				MID-WILLAMETTE VALLEY ACT	**MARION**

Current Project Estimate

	Planning	Prelim. Engineering	Right of Way	Utility Relocation	Construction	Other	Project Total
Year						**2024**	
Total						**$1,110,000**	**$1,110,000**
Fund 1						5339 $888,000	$888,000
Match						$222,000	$222,000

Footnote:

Most Recent Approved Amendment

Amendment No:		MTIP Approval Date:		STIP Approval Date:
Requested Action:				

Project information after amendment:

Name:	**Farebox System Replacement (5339) Formula 2022, 2023, 2024 SAMTD**			Key:	**21917**
Description	**Replace cash collection vault system and approximately 73 vehicle fareboxes that have exceeded their useful life.**				Region: **2**
MPO:	**Salem/Keizer Area MPO**	Air Quality Status:	Work Type:	**TRANST**	
Applicant:	**SALEM-KEIZER TRANSIT DISTRICT**	**Exempt**	Status:	**NON-CONSTRUCTION PROJECT**	

Location(s)-

Mileposts	Length	Route	Highway	ACT	County(s)
				MID-WILLAMETTE VALLEY ACT	**MARION**

Current Project Estimate

	Planning	Prelim. Engineering	Right of Way	Utility Relocation	Construction	Other	Project Total
Year						**2024**	
Total						**$2,297,311**	**$2,297,311**
Fund 1						5339 $1,837,849	$1,837,849
Match						$459,462	$459,462

Footnote:

Most Recent Approved Amendment

Amendment No:	**24-9**	MTIP Approval Date:		STIP Approval Date:
Requested Action:	**Combine formula 5339 funds from K21907 and K21912 into K21917 and update project purpose. Update project name and description to replace cash collection vault system and vehicle fareboxes.**			