



Oregon

Tina Kotek, Governor

Oregon Transportation Commission

Office of the Director, MS 11

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Salem, OR 97301-3871

DATE: April 25, 2024
TO: Oregon Transportation Commission

FROM: Kristopher W. Strickler
Director

SUBJECT: **Consent Item 04** – Accept Internal Audit Report #24-01 *ODOT Priorities will Determine How Complete Bicycle and Pedestrian Facilities Become Across State Highways.*

Requested Action:

Accept the Oregon Department of Transportation's (ODOT) Internal Audit Report #24-01 on agency efforts to build bicycle and pedestrian facilities on state highways.

Background:

ODOT has a long history of striving to provide bicycle and sidewalk facilities across its roadways. Reported progress has been minimal over the last ten years. The 2024-27 Statewide Transportation Improvement Program (STIP) included a sizeable increase of dedicated funding to improve bicycle and pedestrian facilities. ODOT has also set an overarching priority to consider equity within agency programs and funding utilization.

This audit had four objectives built on this context. The first objective was to determine ODOT's progress in providing more complete bicycle and pedestrian facilities on the state highway system and identify barriers to progress. The second was to determine how ODOT incorporated equity in decisions to include bicycle and pedestrian facilities in the 2024-27 STIP projects. And the last two objectives looked at ODOT's methodologies for measuring and reporting on progress tied to funding bicycle and pedestrian facilities, respectively.

Audit results showed that construction projects often include some level of improvement for bicycle and pedestrian facilities; however, progress is slowed due to funding limitations and competing priorities for road space. Underlining these challenges is that the data supporting the agency's Key Performance Measure (KPM) on providing these facilities had multiple deficiencies. The data was not seen as a reliable representation of the system, which creates challenges when using it to demonstrate progress.

Each methodology for reporting on progress we reviewed needed refinements to improve accuracy. The first methodology is intended to determine if a Strategic Action Plan (SAP) goal to increase the percent of agency funding for bicycle, pedestrian, and transit programs was met or not. Including all funding programs in the calculation was not seen as appropriate based on the stated goal. The second

methodology is tied to calculating ODOT's effort to meeting statutory requirements for spending a certain amount of highway funds on bicycle and pedestrian improvements. Clarity is needed on what items to include in the calculation and to ensure accuracy when completed.

Outcomes:

ODOT Internal Audit will track ODOT's implementation of the recommendations until actions are completed. A follow-up audit may occur.

Attachments:

- Attachment 01 – Internal Audit Report 24-01



**ODOT Priorities will Determine How Complete
Bicycle and Pedestrian Facilities Become
Across State Highways**

Report 24-01
April 22, 2024

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April 22, 2024

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Dear Executive Strategy Team Members:

ODOT has a long history of striving to provide bicycle and pedestrian facilities across state highways. The 2024-27 Statewide Transportation Improvement Program (STIP) included a sizeable increase of dedicated funding in this area. The agency has also set an overarching priority to consider equity within agency programs and funding utilization. This audit looked at ODOT's efforts to provide more complete bicycle and pedestrian facilities and barriers to achievement.

Over the last ten years, reported progress has been minimal. Construction projects often include improvements for bicycle and pedestrian facilities; however, progress is slowed due to funding limitations and competing priorities for road space. Underlining these challenges is that the data supporting the agency's key performance measure on providing these facilities had multiple deficiencies. Each methodology for reporting on progress we reviewed needed refinements to improve accuracy.

It will be difficult for ODOT to make substantive progress providing bicycle and pedestrian facilities based on the limited funding and competing priorities for roadway space. Additionally, improvements to data quality are necessary for ODOT to be able to monitor and report on progress across the state. The report includes recommendations to address the report findings.

Sincerely,



Marlene V. Hartinger, MBA, CPA, CIA
Chief Auditor

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ODOT PRIORITIES WILL DETERMINE HOW COMPLETE BICYCLE AND PEDESTRIAN FACILITIES BECOME ACROSS STATE HIGHWAYS

EXECUTIVE SUMMARY

The Oregon Department of Transportation (ODOT) has a long history of striving to provide bicycle and sidewalk facilities across its roadways. Reported progress has been minimal over the last ten years as shown in the agency's Key Performance Measure (KPM).¹ Meanwhile, the 2024-27 Statewide Transportation Improvement Program (STIP) included a sizeable increase of dedicated funding to improve bicycle and pedestrian facilities. ODOT has also set an overarching priority to consider equity within agency programs and funding utilization.

This audit had four objectives built on this context. The first objective was to determine ODOT's progress in providing more complete bicycle and pedestrian facilities² on the state highway system and identify barriers to progress. The second was to determine how ODOT incorporated equity in decisions to include bicycle and pedestrian facilities in the 2024-27 STIP projects. And the last two objectives looked at ODOT's methodologies for measuring and reporting on progress tied to funding bicycle and pedestrian facilities, respectively.

Construction projects often include some level of improvement for bicycle and pedestrian facilities; however, progress gets slowed due to funding limitations and competing priorities for road space. Underlining these challenges is that the data supporting the agency's KPM on providing these facilities had multiple deficiencies. We did not find the data to be a reliable representation of the system, which creates challenges when using it to demonstrate progress.

We reviewed two methodologies for reporting on progress and each one needed refinement to improve data accuracy. The first methodology is intended to determine if a Strategic Action Plan (SAP) goal to increase the percent of agency funding for bicycle, pedestrian, and transit programs was met or not. We do not consider counting all dedicated funding for these programs as a reasonable method considering how funding is used.

¹ ODOT is transitioning to a new KPM for active transportation. A description of the new measure is included in Appendix B on page 39. The new KPM was not reviewed as part of this audit.

² Facilities can include sidewalks, bike lanes, bike lane striping, median island, flashing beacon, and shared use paths.

The second methodology is tied to calculating ODOT's effort to meet statutory requirements for spending a certain amount of highway funds on bicycle and pedestrian improvements. Clarity is needed on what items to include in the calculation and to ensure accuracy when completed.

Based on the constraints across construction projects, it will be difficult for ODOT to make substantive progress providing bicycle and pedestrian facilities across the state. A combination of constraints, including limited funding and competing priorities for roadway space, makes progress slow. Additionally, improvements to data quality are necessary for ODOT to be able to monitor and report on progress across the state.

BACKGROUND

ODOT has long included in its transportation plans the goal to build out and complete the bicycle and sidewalk facilities on the state highway system. Funding for bicycle and pedestrian facilities has historically been heavily influenced by ORS 366.514, or the *Bike Bill*. The legislation was passed in 1971 and it requires that ODOT spend at least 1% of State Highway Funds per fiscal year on projects that provide biking and walking within the right-of-way. Additionally, the Bike Bill requires the inclusion of bicycle and pedestrian facilities whenever a road is built, rebuilt, or relocated. The ODOT Highway Design Manual notes that performance-based practical design³ should be followed if the requirement is triggered.

There are three exemptions from having to provide facilities:

1. Scarcity of population or other factors indicate an absence of any need;
2. Costs are excessively disproportionate to need or probable use; or
3. Where public safety is compromised.

If any of these exemptions is considered applicable to the project, ODOT must demonstrate it through a design exception.

³ This design approach uses five values along with performance metrics established for project outcomes. The five values include **Safety**, **Corridor context**, **Optimize the system**, **Public support**, and **Efficient cost**.

In 2006, ODOT issued the Oregon Transportation Plan (OTP). Its purpose was to define long-range transportation policy for the movement of people and good across the state and set the framework for policies and strategies from the present to 2030. It included a strategy to fill in missing gaps in sidewalk and bikeway networks, especially to important community destinations such as schools, shopping areas, parks, medical facilities and transit facilities. ODOT completed an update to the OTP in 2023, which continues the goal. The 2023 OTP strives to balance the needs of system users within the constraints of limited funding to address all needs. Multiple observations about the state system are made in the 2023 OTP regarding walking and biking:

- *Successful biking and walking options support reducing vehicle miles traveled (VMT) and greenhouse gases (GHGs).*
- *Bicyclists and pedestrians face system gaps on key routes and are missing features designed to improve safety when traveling along Oregon roadways and crossing roads and streets.*
- *Bicyclists and pedestrians are particularly vulnerable users of the transportation system and experience disproportionate risk of being killed or seriously injured when using the system.*

One goal area from the 2023 OTP is to complete the most critical multimodal connections making it easier and safer for people to get around, especially near schools and commercial centers, giving Oregon a fully connected, efficient, and safe transportation network.

The 2016 Oregon Bicycle and Pedestrian Plan (OBPP) included a goal to provide a complete bicycling and pedestrian network that reliably and easily connects to destinations and other transportation modes. It set a vision that by 2040:

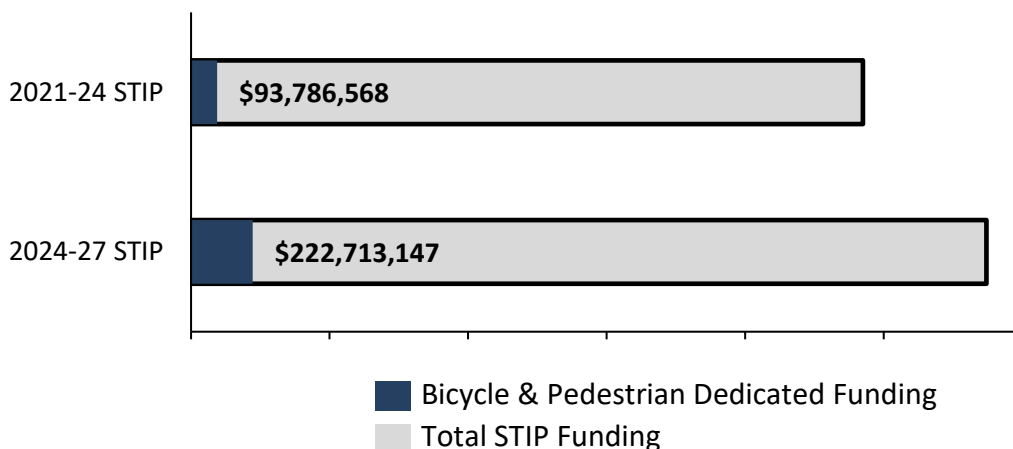
“In Oregon, people of all ages, incomes, and abilities can access destinations in urban and rural areas on comfortable, safe, well-connected biking and walking routes. People can enjoy Oregon’s scenic beauty by walking and biking on a transportation system that respects the needs of its users and their sense of safety. Bicycle and pedestrian networks are recognized as integral,

interconnected elements of the Oregon transportation system that contribute to our diverse and vibrant communities and the health and quality of life enjoyed by Oregonians.”

In 2021, ODOT’s Strategic Action Plan (SAP) noted that nearly a third of Americans rely on walking, biking, and transit. The SAP included a strategic outcome of improving access to active and public transportation. Increasing funding was tied to driving ODOT’s ability to improve equitable access for walking, biking, and transit. Therefore, the outcome is to be measured by increasing the percentage of the agency budget dedicated for these areas.

The 2024-27 STIP included a significant increase to the amount of dedicated funding for bicycle and pedestrian programs across the state. An increase in federal funding from the Infrastructure Investment and Jobs Act (IIJA) was key in allowing ODOT to increase the dedicated funding. New programs were stood up to utilize this increased funding. The graph below shows a 137% increase in total funding for bicycle and pedestrian programs from 2021-24 STIP to the 2024-27 STIP.

The amount of dedicated funding for bicycle and pedestrian facilities increased in the 2024-27 STIP.



The increase in funding from IIJA may not carry forward to future STIP cycles unless federal action is taken to extend the funding. This may lead to a sizeable decrease in dedicated funding available for bicycle and pedestrian facilities.

The dedicated programs included in the 2024-27 STIP and their funding levels are listed in the table below.

Funding Program	Description	24-27 STIP Funding
Oregon Community Paths	Walkways and bikeways located outside of the Right of way.	\$49,213,147
Safe Routes to School (SRTS) – Education	Programs to help children bike or walk to school safely through education and encouragement programs.	\$4,000,000
ODOT SRTS Infrastructure	Address physical barriers for children biking or walking to school including adding sidewalks, bikeways, and safe crossings.	\$25,000,000
Bike/Ped Strategic	Address priority pedestrian and bicycle improvements on the state highways by providing leverage funding to construct preferred ped/bike facility designs identified in the Blueprint for Urban Design. ⁴	\$45,000,000
Sidewalk Improvement Program (SWIP)	State funding that improves bicycle and pedestrian facilities on the state highway including infrastructure, capital maintenance, safety enhancements, and state match.	\$25,500,000
HB 2017 SRTS Infrastructure	Address physical barriers for children biking or walking to school including adding sidewalks, bikeways, and safe crossings. Eligible recipients include cities, counties, Tribes, transit districts, and other road authorities. ⁵	\$45,000,000
Great Streets Program	Improve safety and multimodal access on state highway corridors that also act as community main streets.	\$25,000,000 ⁶
Recreational Trails Program ⁷	The Oregon Parks and Recreation Department administers the grant program intended to provide, expand, and improve public recreational trails.	\$4,000,000

Dedicated funding can be used for more than sidewalks or bike lanes. Other features such as rectangular rapid flashing beacons (RRFB), pedestrian refuge islands, lighting improvements, signage, and shared-use paths may utilize funding.

⁴ The Blueprint for Urban Design encompasses revised design criteria for urban roadways issued in 2019.

⁵ For the 2024-27 STIP, ODOT did not apply for these funds and only utilized the ODOT SRTS federal funding.

⁶ ODOT allocated \$15 million from this program to a single project that, once completed, will be jurisdictionally transferred to the City of Portland.

⁷ ODOT receives the funds from Federal Highway and passes them through to Parks for the grants.

The increased dedicated bicycle and pedestrian funding for the 2024-27 STIP won't be directly linked to improving sidewalks and bike facilities on the state highway system. Multiple funding programs are likely to make improvements away from state highways. The Safe Routes to School, Oregon Community Paths, and Recreational Trails Programs all fall into this category. Projects from these programs can be near or alongside a state highway, but ODOT's goal to provide sidewalks and bike infrastructure on the state highway system may not benefit from these programs. From the over \$222 million in the 2024-27 STIP, about a third of it (\$80.5 million) should bolster ODOT's progress on providing pedestrian and bicycle facilities on state highways. The rest of the funding is for programs that have a low likelihood, or none at all, to improve pedestrian and bicycle facilities on the state highway system.

ODOT has not made notable progress on its KPM related to bikeways and sidewalks. The agency is in process of revising the measure. Historically, this measure has reported what percentage of state highways had walkways and bikeways. Going back to 2012, the figure has hovered around 39%-42%.

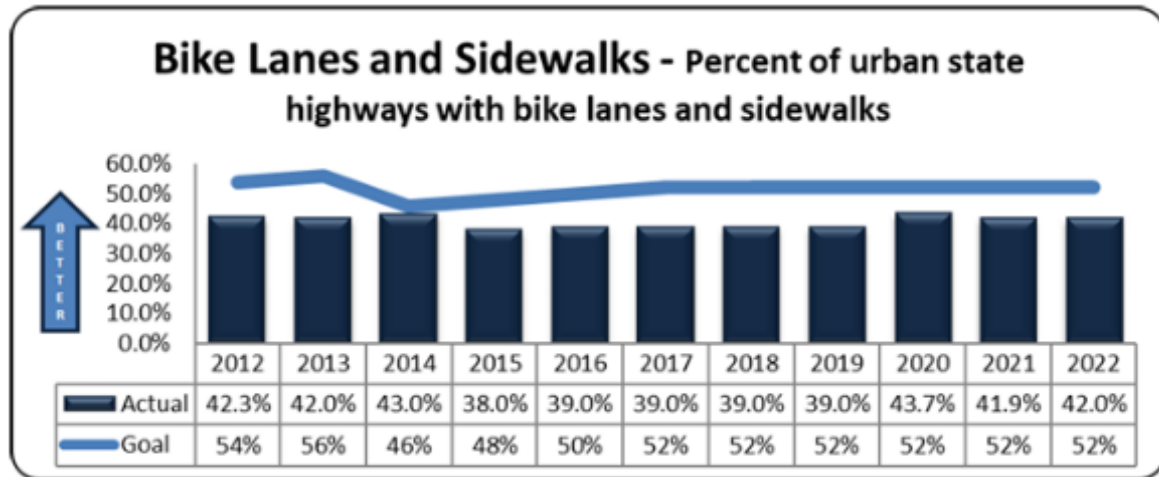


Chart taken from ODOT KPM Report April 2023.

AUDIT RESULTS

ODOT faces multiple barriers in its efforts to provide bicycle and pedestrian facilities across the state system. The agency's funding approach limits the ability to proactively address the highest needs. Agency funding and attempts to balance the use of this funding with other needs do not allow for providing facilities in all locations. Competing priorities for the limited roadway space also restrict ODOT's ability to construct or improve bicycle and pedestrian facilities. The methodologies employed to measure how funding targets are being met need refinement, specifically the SAP goal and 1% Bike Bill requirements. Lastly, measuring progress over time using the agency KPM and knowing what currently exists is hindered by data quality issues.

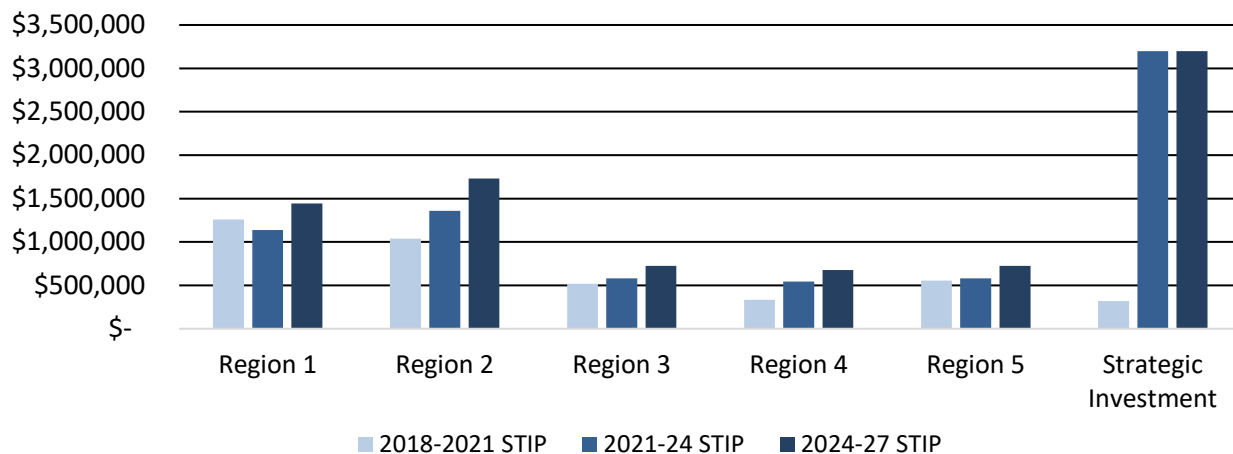
BICYCLE AND PEDESTRIAN IMPROVEMENTS HAVE CONSTRAINED ABILITY TO ADDRESS HIGHEST NEEDS DUE TO FUNDING LIMITATIONS.

ODOT's funding level for SWIP limits the ability to address priority needs on the state system. This results in improvements that may better the system, but don't always address the gaps and highest needs. The amount of funding allocated through SWIP for each region can be inadequate to complete projects focused on specific road segments with known gaps or deficiencies. Instead, regions often leverage the funding to projects prioritized by other programs like pavement or bridge that have larger funding availability. Leveraging on these projects can reduce the need to cover all components of a highway construction project, thereby allowing the funding to go farther in addressing bicycle and pedestrian facilities. Typically, when dedicated bicycle and pedestrian funding is leveraged, it is only for the construction component of the work. It is not very often that it is used for design engineering or right-of-way (ROW) on a project. Leveraging can also help reduce the burden by sharing costs for construction with other funding programs.

The graph below shows the distribution of SWIP funding over the last three STIP cycles. From the 2018-21 to 2024-27 STIP, total SWIP funding more than doubled going from \$4 to \$8.5 million.⁸ Most of the increase went to strategic investment which can be allocated statewide. Even with the increase, the amount of funding is minimal compared to the needs and project costs.

⁸ This does not include the \$45 million for the Bike/Ped Strategic from the 2024-27 STIP that was a one-time infusion of funding.

Annual SWIP Funding Distribution Over the Last Three STIP Cycles



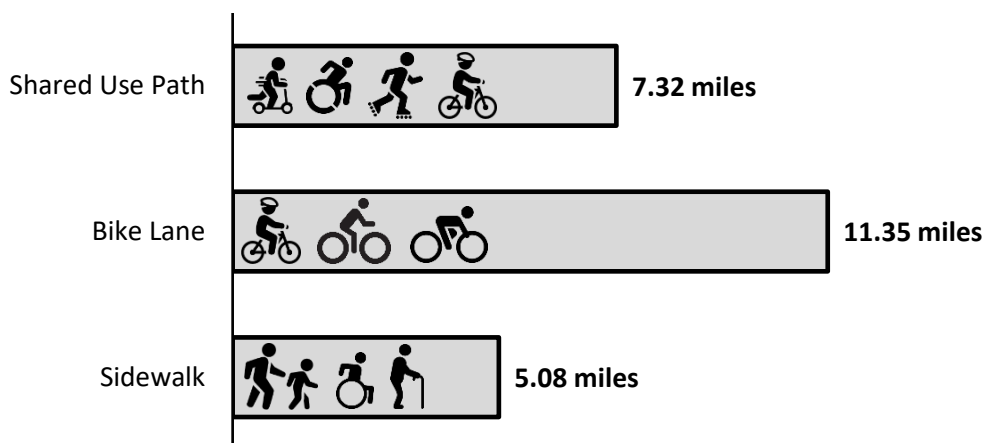
A project bid in July 2023 shows the limits of how far dedicated funding may go to making improvements. The project is limited to pedestrian improvements constructing an RRFB, crossing island, four curb ramps, and a small amount of sidewalk. The total project cost is \$1.2 million. Most of a region’s funding, if not all, would be allocated for this one project in a year. Another recent project shows how quickly dedicated funding can be depleted when making bicycle and pedestrian improvements. A Region 1 project included nearly a mile of sidewalk construction and 1.8 miles of new bike lanes in the Portland metro area with over \$5 million in dedicated funding. Again, this one project would utilize all the region’s SWIP allocation and the statewide strategic investment amount.

PROJECT IMPACTS RANGE FROM SIGNIFICANT TO VERY MINOR IMPROVEMENTS FOR BICYCLE AND PEDESTRIAN FACILITIES.

Construction projects had a wide range of impact for bicycle and pedestrian improvements across the 65 projects reviewed.⁹ Projects were able to add new sidewalk filling gaps within communities, add RRFB’s to provide safer pedestrian crossings, add curb bulb outs to narrow crossing distances at intersections, and provide dedicated bike lanes. Below is a breakdown of the new facilities added to the state system for each category from these projects. All sidewalks, bike paths, and shared use paths represent new additions to the system.

⁹ These construction projects were a subset of all projects bid during calendar years 2020-22 that had bicycle and pedestrian facilities included in the scope. Projects that only addressed curb ramps were not included in the subset.

Volume of new pedestrian and bicycle improvements added to the state system across construction contracts bid during 2020-2022.



These projects involved varying levels of improvements to the system. For example, bike lanes were added in lengths from a hundred feet to multiple miles. New sidewalk was added to projects spanning a single block up to projects reaching over a half mile. Three projects included new roundabouts that added new shared use paths within the intersections that were not counted in the total distance calculation. The sidewalks did not include any ADA improvements for new curb ramps. For context, the data used to support the agency KPM had 1,722 miles without bike lanes and 1,264 miles of missing or deficient sidewalk.

ADDITIONS OF BIKE LANES AND SIDEWALKS HEAVILY INFLUENCED BY AVAILABLE SPACE TO INCLUDE THEM.

Allocating space for bike lanes and sidewalks, while balancing competing space needs and allowing for existing space usage, is a regular challenge for projects. Deciding whether to widen the road for sidewalks and bike lanes is often tied to the context along the highway. Buildings and other physical barriers abutting the roadway can limit the space available to widen the road. In these situations, ODOT uses a mix of approaches to address whether bicycle and pedestrian facilities are included in the project. Below are examples of approaches taken across the projects reviewed for this audit.¹⁰

¹⁰ Included in the scope were ODOT administered projects bid during calendar years 2020-22, 2021-24 STIP projects, and 2024-27 STIP projects.

Projects with fewer barriers can more readily add bike lanes and sidewalks to the roadway. An example of this is improvements made in Dundee along Highway 99. The photos below show how on one side there was little to prevent widening the road to provide a bike lane and sidewalk. The project in Dundee was able to make sizeable pedestrian improvements to this segment of roadway.

Sidewalk and bike lanes were missing along the road in Dundee, OR before the project.



Improvements made to the roadway added a bike lane and sidewalk.



Images taken from ODOT Digital Video Log

In contrast, adding pedestrian improvements can be a challenge in urban areas with more roadside development. Roadway segments with limited space to widen the road was common in urban areas across the state. One option is to complete a road diet that generally allows the addition of new facilities within the existing roadway.¹¹ This approach typically involves reducing a four-lane road to two travel lanes and a center turn lane. Adjusting the layout to repurpose existing space for bike lanes has a lower ROW impact and can reduce costs. Below is a before and after of one project in Stanfield that made such a change.

Before and after on an ODOT project that completed a road diet to make space for a buffered bike lane in Stanfield, OR.



Images taken from ODOT Digital Video Log.

¹¹ A road diet involves the reallocation of roadway space. A common road diet entails reducing a four-lane roadway to a two through lanes with a center two-way left turn lane. The added space can be used for bike lanes and sidewalks.

Other projects with similar constraints did not add bicycle and pedestrian facilities or may have added incremental improvements.¹² An example of this occurred in Canby. A pavement rehabilitation project was done on a highway segment that lacked bike lanes and sidewalks. The existing highway had four lanes and a center turn lane. The project team determined that within the limited space, adding bike lanes was not cost effective for a one-mile section. Limited space alongside the roadway for widening was determined not practical by ODOT staff considering the cost to the project and impact to businesses. Additionally, there were buildings, one historic, very close to the roadway that would have been impacted by widening the road. Bike lanes were added within the project segments that had less constraints on space to maintain the existing traffic lane layout without widening the road.

Example highway section with limited space to widen the road for bike lanes in Canby, OR.



Image taken from ODOT Digital Video Log.

Bridges can present problems for addressing substandard bicycle and pedestrian facilities. Modifying a bridge to accommodate sidewalks and bike lanes may require significant structural changes, even including rebuilding the bridge. Limited funding may make it difficult for projects to do so. Even given these constraints, ODOT may still be able to partially meet standards. One project was able to make an incremental improvement within the constrained space.

¹² Depending on design standards being followed for the project, a design exception must be approved by the State Roadway Engineer approving a deviation from standards. Not including sidewalks or bike lanes and having a width below standards on a project may require a design exception.

The images below show a bridge project on the Oregon coast that widened the sidewalks from 3.5 feet to 5 feet. Although this doesn't meet the standard sidewalk width, it still provides improved access for pedestrians.

Example of incremental improvements for pedestrian access on a bridge along the Oregon Coast.



Images taken from the ODOT Digital Video Log

Local influence can play a role as a few projects did not include bike lanes in urban areas because the local community prioritized on-street parking. Again, within the constrained roadway and context along the highway, the ability to widen the road may not be feasible considering the costs. On two projects that the local priority did not include bike lanes, a road diet would not have been helpful since only two lanes were present. It would have required reprioritizing space for parked cars, or the center turn lane to accommodate bike lanes.

ODOT design standards are an underlying contributing factor in decisions to widen the road. Use of practical design guidelines direct staff to balance meeting standards against operating within constrained resources and space. Practical design is a strategy to *“efficiently deliver focused improvements to communities and the state transportation system with intent to maximize benefit and minimize cost on the roadway projects.”* The context for each project can shape and influence how closely a project meets design standards. Staff are to utilize *“a performance based, context sensitive, practical design approach to provide flexibility where warranted to produce appropriate designs to accommodate all modes of transportation affecting all urban roadway users.”*

Guidance notes that tradeoffs between different design elements are inevitable. Given this approach, it's to be expected that ODOT would not build all facilities, including bicycle and pedestrian, to standards on all projects.

Balancing these challenges makes it difficult to provide sidewalks and bike lanes across the state system. Overall, the greater the physical constraint alongside the roadway, the less likely is inclusion of bike lanes and sidewalks compared to areas without as much constrain. How ODOT chooses to manage the priority of sidewalks and bike lanes against funding limitations, roadway priority, and ROW impacts will dictate how much progress is made in the future.

BICYCLE AND PEDESTRIAN FACILITIES ARE BUILT ON PROJECTS WITHOUT DEDICATED FUNDING.

A number of projects included bicycle and pedestrian improvements without having dedicated bicycle and pedestrian funding. From calendar years 2020-22, we identified 29 projects that fell into this category.¹³ The type and magnitude of the improvements had a wide range. Below is a picture of the pedestrian bridge that was built on one of these projects. Other improvements included flashing beacons, shared use paths, new sidewalks, bike lane buffers, and new bike lanes. We observed the inclusion of bicycle and pedestrian facilities in other projects without dedicated funding scoped for the 2024-27 STIP.

Pedestrian bridge constructed in Kerby, OR along Highway 199.



Photo taken from the ODOT Digital Video Log.

¹³ Projects that only addressed ADA curb ramps were excluded from this count.

These improvements show that relying on the amount of dedicated bicycle and pedestrian funding may not capture the full extent of expenditures by ODOT to improve the system. Efforts to capture these improvements in reporting are addressed later in the report under the 1% Methodology on page 17.

EQUITY PLAYED A LIMITED ROLE IN PRIORITIZING BICYCLE AND PEDESTRIAN IMPROVEMENTS FOR THE 2024-27 STIP.

Few projects showed that equity played a role in their prioritization based on the STIP as of August 2023.¹⁴ The projects reviewed included bicycle and pedestrian specific as well as those that included bicycle and pedestrian facilities in the scope. Less than half of the projects had a high equity score.

ODOT's 2021 SAP notes the importance of equity in project prioritization, stating, "A focus on equity ensures we [ODOT] look beyond merely improving the system... We must be mindful of the benefits and burdens created by our work and ensure they are distributed equitably." The SAP also called for working with local and regional partners to fund the highest priority projects first.

Incorporating equity in decision making for bicycle and pedestrian investments was also addressed in the 2016 OBPP. It included the following policy language on how equity should impact investment decisions: "Integrate equity criteria into decision making and prioritize walking and biking investments in underserved areas with transportation disadvantaged populations." Multiple strategies were included to accomplish the policy including:

- *Provide equal access to walking and biking opportunities across the state by prioritizing pedestrian and bicycle investments as "critical connections" in underserved transportation disadvantaged communities.*
- *Utilize inventory data on system needs and research on transportation disadvantaged communities to address existing equity issues and to assure equitable distribution in new projects.*

¹⁴ The 2024-27 STIP Projects selected for review were as of August 16th, 2023, and did not include Safe Routes to School or Community Paths projects.

Our review focused on projects with bicycle and pedestrian improvements beyond new curb ramps in the scope. Project scoping files were reviewed to determine if and how much equity played a role. One constraint, as mentioned before, is the limited funding dedicated to bicycle and pedestrian facilities. Since the funding is typically leveraged for projects prioritized by other programs, there was a limited focus on areas with a high equity component. However, not all funding dedicated for bicycle and pedestrian improvements for the 2024-27 STIP has been allocated at the time of this audit.

The main metric used by staff to support an equity component in projects was the Active Transportation Needs Inventory (ATNI). The ATNI tool inventories the entire state system at 1/10th of a mile segments. The ATNI score is calculated for each segment based on six factors that are weighted and combined to generate a priority score. The six factors and the evaluation criteria are listed in the table below. A segment has two ATNI scores: one score based on the conditions for bicycle facilities and one score for pedestrian facilities.

Factor	Evaluation Criterion
Safety	Bicycle or pedestrian crash frequency & risk factors associated with crashes
Connectivity	Bicycle level of stress & whether a gap is filled between segments
Demand	Access to essential destinations, transit, and bicycle tourism routes
Equity	Transportation disadvantaged communities and health
Community Input	Local plans and Transportation System Plans (TSP) ¹⁵ priorities
Existing Conditions	Presence of an existing facility

The resulting scores fall into percentile rankings on a scale from 99th, 95th, 90th, 80th, and so on down to the 30th percentile. Staff can see how segments within a project score on the scale and which segments have the highest scores across the state.

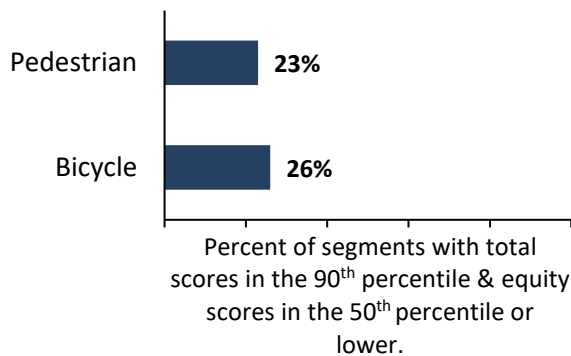
Projects had a mixed impact on areas with a high equity score within the ATNI using the percentile ranking. Of the 29 projects with bicycle and pedestrian facilities, 12 scored in top 10% for equity on a statewide level.

¹⁵ A TSP describes a transportation system and outlines projects, programs, and policies to meet its needs now and in the future based on the community’s aspirations.

We re-calculated the percentile ranking for projects to account for the region and project context (rural or urban). After making this adjustment, the number of projects drops to seven.¹⁶ In total, 10 projects scored at 50% or lower in the equity component but the figure increases to 15 adjusting for the region and project context.

Use of the total ATNI score can misrepresent the equity impact for the segment. Segments can have a total score in the 90th percentile or higher yet score low for equity. For example, five projects had scores in the 90th percentile or higher for bicycles or pedestrians, but the equity scores were in the 50th percentile or lower. The other five criterion contribute to a high score.

Top scoring ATNI segments may have a low equity score.



This pattern carries across the state. For bicycles, 26% of segments scored in the 90th percentile for the ATNI scores yet the equity scores were only in the 50th percentile or lower. For pedestrian scores, 23% had total scores in the 90th percentile and an equity score in the 50th percentile. Segments may score high on other factors considered in the ATNI which yields the high percentile ranking. These segments may still benefit from improvements, but the impact may not be targeted with an equity priority.

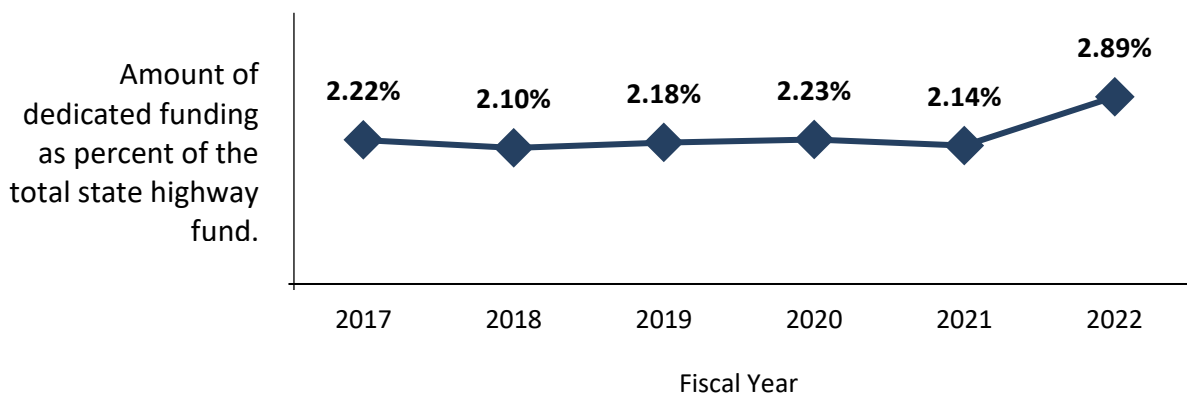
1% METHODOLOGY IS REASONABLE BUT NEEDS ADDED CLARITY TO ADDRESS INACCURATE RESULTS.

ODOT uses a methodology to calculate how much is spent in a fiscal year on bicycle and pedestrian facilities that count towards the 1% requirement from ORS 366.514. The approach counts spend two ways. The first includes funds from dedicated funding sources for bicycle and pedestrian facilities. Historically, this has been SWIP, Quick Fix, and SRTS. The second captures the spend on highway construction projects that don't have dedicated bicycle and pedestrian funding but includes improvements tied to these facilities. These can be minor items such as bike lane striping, a new pedestrian refuge island, or a small segment of sidewalk repair. Combining these two amounts together results in an estimate for how much ODOT spent towards the Bike Bill's 1% requirement.

¹⁶ Adjusted ATNI scores are discussed on page 16 of this report and are not currently included in the ATNI.

Below is a chart that compares only dedicated funding against the total amount of highway fund for each fiscal year. This comparison gives a baseline of how ODOT is meeting the 1% requirement. The calculation includes the dedicated funding programs¹⁷ for bicycle and pedestrian facilities as a percentage of the total state highway funds for ODOT each fiscal year.

Dedicated Bicycle and Pedestrian Funding Has Exceeded the 1% Requirement in Recent Years.



The methodology to capture expenditures to count towards the 1% requirement was found to be reasonable. However, clarity on how to handle nuanced circumstances is missing. If a project is 100% focused on bicycle and pedestrian facilities, all the project costs are counted towards the 1% requirement. If a project does not have dedicated bicycle and pedestrian funding, then the relevant bid items are pulled and counted towards the requirement. Relevant bid items include the contract amount for sidewalks, concrete islands, a portion of traffic signal modifications, and shared-use paths, among others.

After review of the construction contracts, a total amount is calculated for counting towards the 1%. The methodology also adds dedicated program funding and administrative costs. Expenditures counted towards the 1% are limited to state funds only. Calculations for fiscal years 2020 and 2021 were reviewed and found to be inaccurate in capturing relevant expenditures from construction projects. Multiple issues were observed in reviewing the calculations.

¹⁷ Programs included: SWIP, Active Transportation Leverage, Quick Fix, and Safe Routes to School.

Examples include:

- Inconsistently including bid items from project to project
- Double-counting project expenditures covered by dedicated funding
- Counting bid items not applicable to bicycle and pedestrian facilities
- Calculation errors within the spreadsheet
- Not capturing the correct population of contracts

One of the reasons for these issues was that the methodology addresses what should be included too broadly. Detailed direction on how to determine if project costs should be included is limited. For example, \$1.7 million in state funding for a project was counted towards the 1%. However, the project had dedicated state bicycle and pedestrian funding totaling \$678,000. It was considered a road diet project per the calculation sheet. Upon further review, the project was not a road diet and was heavily focused on widening the roadway to better accommodate freight and local vehicle travel. A shared use path was included in the scope to accommodate bicycles and pedestrians within the project area. Two errors occurred with the first being the double count of the \$678,000 and incorrectly including the remaining \$1.1 million for the rest of the project.

METHODOLOGY TO DETERMINE IF ODOT MET THE SAP STRATEGIC OUTCOME NEEDS TO BE REVISED.

The methodology used determine if ODOT met the SAP strategic outcome should not include all dedicated funding for transit, bicycle, and pedestrian projects because not all projects increase access. Additionally, equity does not play a direct role in prioritizing all funding. The intended SAP strategic outcome was to improve access to active and public transportation, “By the end of 2023, increase the percentage of agency funding dedicated to projects and programs that improve equitable access to walking, biking, and transit.”

The methodology employed to calculate the metric used all dedicated funding for transit, bicycle, and pedestrian programs. Fiscal year 2021 was the baseline year and fiscal year 2024 was the goal year to determine if an increase had occurred. We do not consider counting all dedicated funding for these programs as a reasonable method considering how funding is used.

For transit, one of the main funding sources is the Statewide Transportation Improvement Fund (STIF) Formula Fund that distributes funds to transit providers. Each provider must develop a STIF Plan that includes how the funds will be used. A subset of STIF Plans from the 2021-23 and 2023-25 biennium showed that a large portion of STIF funds are not used to improve access. Between both biennia, ODOT awarded approximately \$502 million in funding. We did not consider projects such as maintaining an existing bus line, replacing a bus, and holding program reserves as improving equitable access to transit.

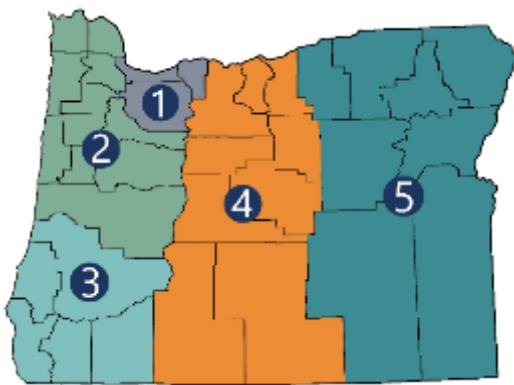
Across five STIF Plans, we determined that \$158 of the \$233 million was not being used to expand access to transit. Our review did not assess how equity was being considered by the provider.

Similar observations were made on the dedicated funding for bicycle and pedestrian funding. One funding source included ODOT funding for the Recreation Trail Program that is administered by the Oregon Parks and Recreation Department (OPRD). The trails program funds are intended to provide, expand, and improve public recreational trails for both motorized and non-motorized trails. The grant program manual calls for at least 30% of the funds in a fiscal year go towards motorized recreation. Annually, the Recreation Trail Program is a small portion of the total bicycle and pedestrian funding (\$1.4 million), but it does not fit with the SAP strategic outcome.

INCLUDING THE ENTIRE STATE SYSTEM WITHIN THE ATNI DATA CAN MISPRESENT THE PRIORITY LEVEL FOR A ROAD SEGMENT.

ATNI scores based on combining the entire state system into one dataset can lead to misleading priorities. The ATNI methodology generates higher scores for highway sections in urban context compared to rural context. Additionally, a large portion of the state system does not lend to having sidewalks or bike lanes. Combining these two pieces together results in an inflated number of segments that may be considered high priority – being in the ATNI’s 90th percentile or higher. Adjusting the ATNI data to account for both the region and whether the road is in an urban or rural context shows how segment scores can shift from high percentile to a much lower ranking.

On average, the urban segments had higher percentile scores than the statewide scores, while the rural segments fell below statewide scores. Considering how the ATNI scores a segment, this is as expected. Areas in urban settings are likely to score higher based on demand to connect with schools, parks, and employment centers. Urban segments had an average score of 4.4 compared to rural segments averaging 0.35 on this factor. Another factor that raises urban scores is having a community input score¹⁸ which is a binary rating (0 if not in a plan, 10 if in a plan). Urban segments scored a 10 much more often than rural segments, 41% compared to 9%.



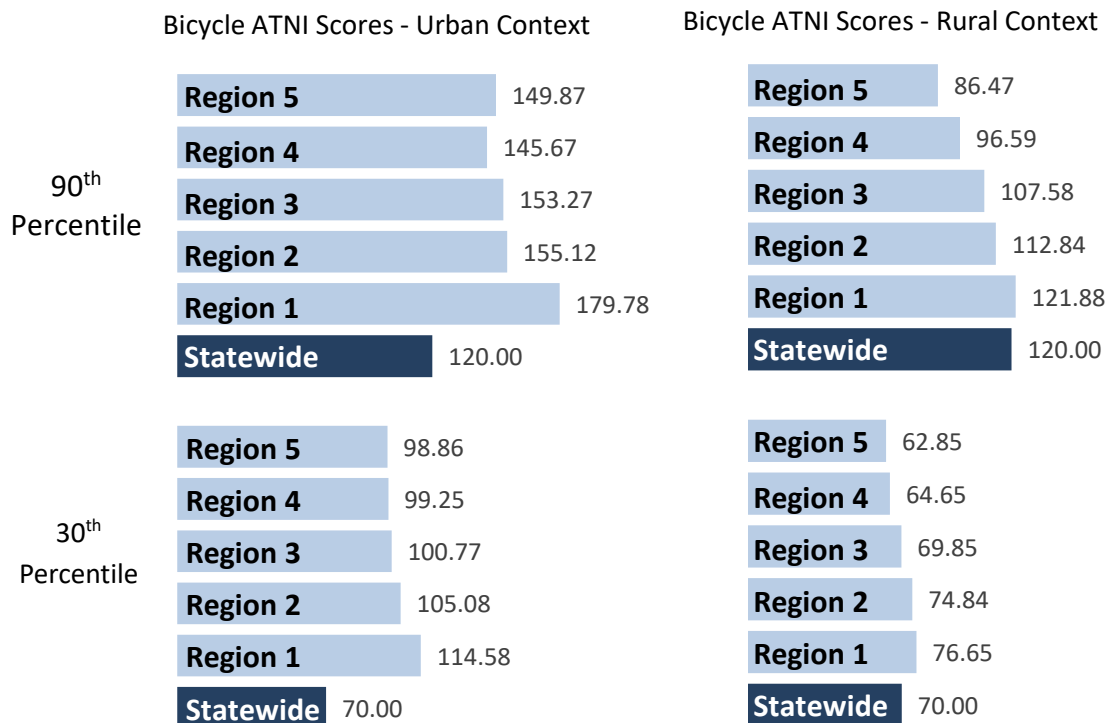
ODOT Region Map

A similar shift occurred when adjusting for the region. Region 1 segments score much higher compared to Region 5. Again, based on how the ATNI scores a segment, a sizeable difference is not unexpected based on the characteristics of each region. Regions 1 and 2 have the highest scores because they include more urban areas as compared to the other three regions. The map to the left shows the region breakdown for ODOT.

The charts below show how these adjustments impact the bicycle ATNI scores at the 90th and 30th percentile when compared to the statewide scores. We found similar differences for the pedestrian ATNI scores which can be seen in Appendix A on page 38.

¹⁸ The score is based on local plans and Transportation System Plans (TSP).

Adjusting ATNI Scores to Factor the Region and Roadway Context Can Significantly Shift Percentile Scores Compared to the Statewide Average.



Using the projects with Strategic Bike/Ped funding demonstrates how this can play out. About half of the funding had been allocated to 12 projects. Using the average of statewide ATNI scores across the projects showed all 12 were in the 90th percentile or higher for pedestrians and 11 projects for bicycles. When these projects use the adjusted ATNI percentiles, five projects stay in the 90th percentile or higher for pedestrians and four for bicycles. The result is the impact on the highest priority needs is reduced.

DATA USED TO CALCULATE THE BICYCLE AND PEDESTRIAN KPM HAS MULTIPLE ISSUES LEADING TO INACCURATE REPRESENTATION OF ODOT’S PROGRESS.

Multiple factors contribute to making the KPM data an inaccurate representation of ODOT’s progress on providing bicycle and pedestrian facilities on the state highway system. The KPM does not adequately consider roadway context, uses misleading terminology, has an inconsistent methodology, and has errors in underlying data. Below is a description of how the KPM calculation is done. ODOT’s transition to the new active transportation KPM may address some of these issues.

Calculation for the bikeway and sidewalk KPM:

$$\frac{\text{Sidewalk Miles Fair or Better} + \text{Total Miles of Bike Facilities}}{\text{Roadside Sidewalk Inventory} + \text{Roadside Miles of Bike Facility Need}} = \text{KPM \%}$$

The KPM measures the percentage of Oregon highways that have sidewalks and bike lanes in fair or better condition. In the 2021 inventory update, the number of highway miles included in the calculation increased significantly as the urban boundaries were expanded.

Data supporting the ODOT KPM includes large segments of highway that may not be context appropriate to having sidewalks or bike lanes.

KPM data included a large number of highway miles that were not contextually conducive to sidewalks or bike lanes. These segments may be unsafe for a sidewalk or bike lane. An example of an area marked as needing sidewalks contrary to the roadway context was in the Portland metro area. Highway 26, or the Sunset Highway, had a sizeable segment as shown in the map below with the red line.

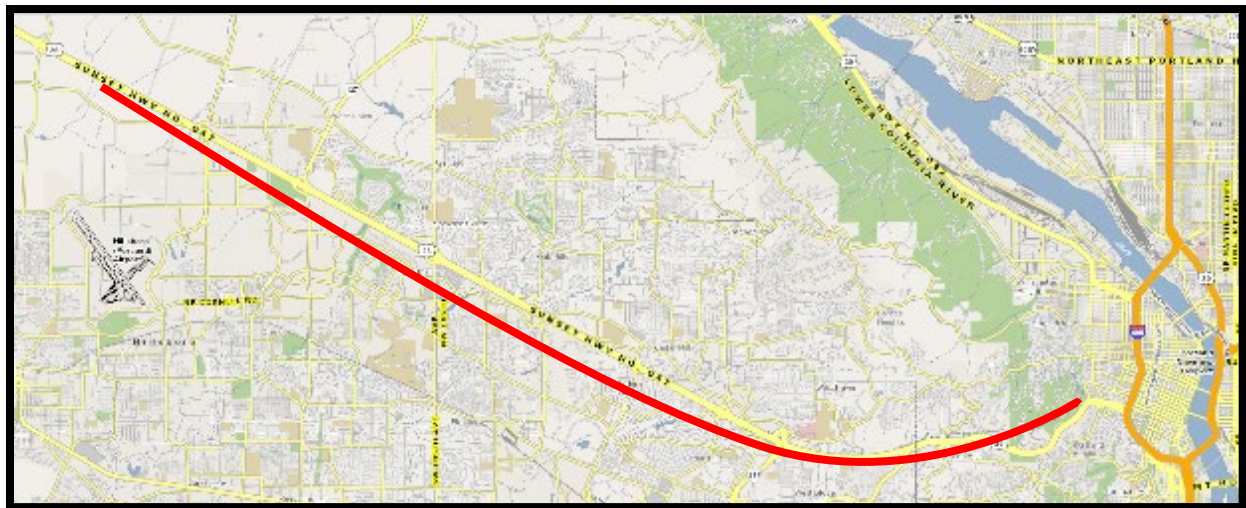


Image taken from ODOT's FACS-STIP Tool (Features, Attributes, and Conditions Survey – Statewide Transportation Improvement Program)

The highway has two to three lanes in each direction, a center median dividing the highway, and speeds of 55 miles per hour (MPH). There is no direct access to commercial businesses or residential housing along the highway. Below is a screen shot from one location on the highway that represents what the segment looks like.



Image taken from the ODOT Digital Video Log (ODOT Video Log/Hwy 047, MP 61.7, 2023)

KPM data included 57 miles from this segment as needing sidewalks counting both the outside and inside of the highway. This made up over 16% of the total sidewalk need in the Portland-metro area.

Similar circumstances were found in other urban areas across the state. The KPM data showed a need for over 11 miles of sidewalks within the City of Stayton. However, the state highway does not run through Stayton in a way that would warrant the need for sidewalks. The Klamath Falls area similarly had almost 80 miles of highway counted towards the sidewalk need calculation. We completed a context review of the 80 miles, and it appeared the need could be reduced to about 16 miles.

Including too much roadway in the calculation can over-state need and hinder an ability to show progress. Recent KPM reporting and the SAP each stated that it will take up 150 years to close gaps and complete the system. This timeline may be inaccurate if the volume of need is overstated on how many miles need sidewalks or bike lanes.

KPM terminology used in reporting is misleading when compared to the methodology.

The calculation may not align to common uses of the terms and can create confusion about what is being communicated. The use of “bikeway” and “bike lane” represent two different things and may confuse what the KPM has historically calculated compared to what is understood on the measure. Different terminology can represent different bike facilities.



Image from ODOT Flickr Page

ORS 366.514 defines the term bicycle trail as a publicly owned and maintained lane or way designated and signed for use as a bicycle route. ODOT lists a bicycle trail as synonymous with bikeway. The ODOT Highway Design Manual defines a bike lane as the part of the highway, adjacent to the roadway, designated by official signs or markings for use by persons riding bicycles.

A bike lane has more narrow parameters compared to a bikeway. The main difference being that a bike lane has striping parameters and is designated for bicycle use only. In contrast, a bikeway has no striping parameters, is not limited to bicycle use only, and is not designated as being separate from the vehicle travel lane. The image above captures an example of a bike lane on the roadway. ODOT reporting on the KPM does not clearly delineate how each term is being used and their differences. Below are excerpts from a KPM report issued in April 2023 that show how bikeways and bike lanes can be used interchangeably in reporting.

Walkways and Bikeways

Walkways and bikeways: Percent of urban state highway miles with walkways and bikeways in "fair" or better condition

Despite constructing miles of walkways and bikeways every year, the percent of urban highways with complete walkways and bikeways in "fair" or better condition has declined or remained relatively flat over the last decade. This is due, in part, to

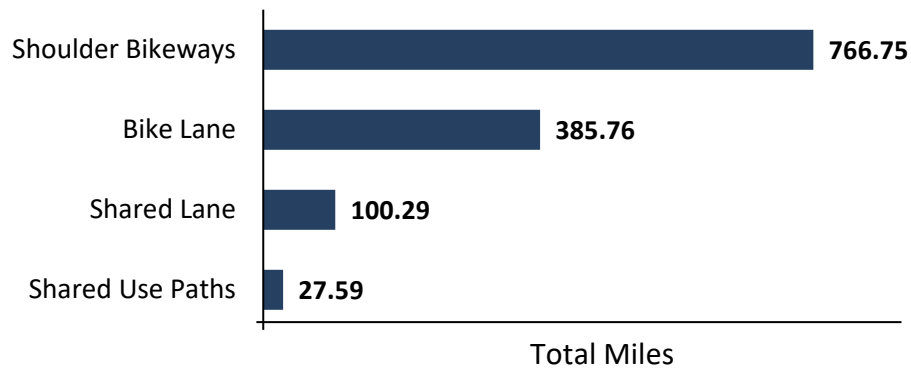
Fact

It will take over 150 years to close gaps in sidewalks and bike lanes along urban state highways at current levels of investment. Maintenance is an additional unfunded need.

Bike Lanes and Sidewalks - Percent of urban state highways with bike lanes and sidewalks

The ODOT bikeway calculation includes bike lanes, shared lanes, shoulder bikeways, and shared use paths. This approach can be misleading when compared to the reporting terminology. It may also hinder ODOT’s ability to demonstrate progress on providing bicycle facilities. Of the total 1,280 miles of bikeways counted in the KPM, 60% comes from shoulder bikeways. A bike lane only makes up 30% of the total. The chart below shows how much of the total fell into each category.

Shoulder Bikeways are the Largest Portion of Bikeways on ODOT Highways.



The KPM won’t show progress if a project moves a road segment from one facility type to another. For example, a road segment may have a shoulder bikeway (defined as a 5 foot or wider shoulder) that is upgraded to a bike lane. The change provides an improved facility, but the KPM would not show progress because both are counted in the calculation. The same outcome would occur when a shared-lane segment moves to a bike lane. Each are counted as meeting the goal in the KPM, but the KPM does not reflect the improvements. We observed these types of change in projects reviewed for the audit.

KPM calculation methodology was inconsistent in how it counted facilities.

The methodology counted bike facilities and sidewalks in two different ways that were not consistent with each other. All sidewalks that are at least 5 feet wide and in fair or good condition¹⁹ are counted in the numerator. In the denominator, all roadside sidewalk miles are included. However, each bikeway type has criteria on whether it is counted.

¹⁹ Sidewalks and bike facilities are rated as good, fair, poor, and blank.

- Bike Lane – Width of 5 feet or greater
- Shared Lane – Speed limit of 25 miles per hour or less
- Shoulder Bikeway – Width of 5 feet or greater
- Shared Use Path – All paths are counted

The condition of bicycle facilities is not considered in the calculation and only segments with the need marked as “yes” are included in the denominator. If the bikeway conditions were considered the same as they are for sidewalks, 26.8 miles (2% of the total) would be excluded since the segments are rated as being in poor condition.

An additional limitation for bikeways is that shared use paths are not being captured in data gathering. Any additional shared use paths ODOT adds to the system are not being counted. During calendar years 2020-22, ODOT projects built approximately 7.3 miles of shared use paths across the state.

Regarding sidewalks, supporting data had 2,380 miles of total roadside sidewalk in the inventory with 1,866 miles identified as needing them. But the calculation uses the total inventory instead of only the segments with a marked need. This adds 514 miles that marked as not needing a sidewalk. Without considering the potential deficiencies in the need indication, the percent of highways with sidewalks would improve from 25% to 32%.

Inaccurate asset management data supporting the KPM hinders reporting accuracy.

We found errors in asset management data that hinder ODOT’s ability to accurately determine and report progress on building sidewalks and bike facilities. The types of errors found included bicycle and pedestrian facilities incorrectly recorded as being present, incorrect width measurements, and gaps in data. No documented quality control process exists for the bicycle and pedestrian asset management data gathering process.

ODOT inventories sidewalks and bike facilities about every five years with alternating approaches. One cycle is done by reviewing the ODOT Video Log to assess the presence and condition of pedestrian facilities along the highway. The next cycle is an in-person assessment done by staff driving the entire state highway system. Additionally, data can be updated from reviews of as-built plans and data corrections between cycles.

We did not establish an error rate from the data reviewed which included 2017-2022 and two cycles of data gathering. Data from year to year was compared to identify changes to sidewalks and bicycle facilities on segments that measured the same length year to year. Measured segments varied in length from 0.01 miles up to 12.2 miles, with the majority being 0.5 mile or less. Segment length changes may occur if the conditions for part of it have been impacted. For example, a half mile segment may be changed to two quarter mile segments because sidewalk was installed for half of the segment. Corrections to the conditions may also warrant a change to a segment length. Segment length changes made it difficult to compare year over year on whether improvements occurred across the state system.²⁰

We reviewed changes to the presence of facilities or their condition on the segments that could be compared. Consistent errors were identified in the data. An example is shown from the image below of a segment having a 5-foot sidewalk recorded in the data that did not actually exist. Review over prior years records also gave no indication that sidewalk had been there.



Sidewalk was incorrectly recorded as being present along the highway in Drain, OR.

Image taken from the ODOT Digital Video Log

²⁰ In 2017, bicycle facilities had 5,864 segments totaling 1,640 miles and in 2021 it increased to 6,900 segments totaling 2,324 miles. For sidewalks, there were 8,949 segments totaling 1,206 miles in 2017. For 2021, it increased to 7,149 segments and 2,354 miles.

Additional errors included a sidewalk or bike lane not being as wide as recorded or having an inaccurate condition rating. The sidewalk or bike lane condition ratings were not always in alignment with what was seen at the location. The width recorded also did not always match what was observed. These differences can give a false impression that a road segment has a facility that meets ODOT's standards. It may also make an opposite impact such as when a segment doesn't get counted as meeting standards but should.

Another accuracy issue was double-counting bicycle facilities. This was identified in nine different cities across Oregon for a total of 13.95 miles of roadway.²¹ These locations are mostly one-way roads that only had a bicycle facility on one side. However, both sides were counted in the data. The images below capture an example of this in Albany where a one-way segment has bicycle need recorded on both sides. The dashed line on the map below captures a road segment that indicates a bicycle facility need on both sides. The yellow line signifies that a shared lane bicycle facility is there, and the blue shows a need but no facility. The street view shows the shared lane is there on a one-way street.



Images taken from FACS-STIP and the ODOT Digital Video Log.

²¹ Not all cities were reviewed for this issue.

Along with double counting, we found gaps in the data across urban areas. This can occur when sidewalk or bike facility records show only on one side of the road. We found no contextual reason for why this would occur. The gaps can lead to an under counting of need and potentially presence of facilities on the system. The size of gaps varied across different urban areas. One of the larger segment missing was over five miles of bicycle facilities. In total, gaps totaling 37.3 miles across 18 different urban areas were identified.

CONCLUSION

A number of ODOT construction projects included incremental improvements to sidewalks and bike facilities across the state. However, existing constraints will make it difficult for substantive progress to be made in the future. The combination of limited funding and competing priorities for limited roadway space makes progress slow. ODOT's willingness to make changes to funding allocations and providing more roadway space for bicycles and pedestrians will dictate success. Improvements to data quality are necessary for ODOT to be able to monitor and report on progress across the state.

RECOMMENDATIONS

Delivery and Operations Division should:

1. Ensure agency priority for addressing deficient bicycle and pedestrian facilities aligns with funding and prioritization in construction projects.
2. Improve the consideration and prioritization of equity in bicycle and pedestrian projects.
3. Ensure the roadway context is appropriately considered when determining whether a segment needs a sidewalk or bikeway when completing the asset inventory.
4. Develop a written quality control process for asset management data gathering for sidewalks and bicycle facilities.
5. Revise the data gathering process to improve accuracy and retain field records to inform potential causes for data errors.

Public Transportation Division should:

6. Revise the 1% methodology for clarity to better capture applicable project costs for bicycle and pedestrian facilities.
7. Update the SAP goal calculation to account for whether the funding is being utilized in alignment with the stated metric of improving equitable access to walking, biking, and transit.
8. Update the ATNI to incorporate region and roadway context in identifying the highest priority segments.
9. Ensure appropriate usage of bike lane and bikeway terminology when reporting on the agency bicycle and pedestrian KPM.
10. Ensure the new KPM methodology accounts for bikeway facility condition.

**OBJECTIVES, SCOPE AND
METHODOLOGY**

The audit had four objectives:

1. Determine if the 1% methodology is reasonable in calculating ODOT's spend on bicycle and pedestrian facilities.
2. Determine if the methodology to calculate ODOT's efforts to meet the Strategic Action Plan goal, *"by the end of 2023, increase the percentage of agency funding dedicated to projects and programs that improve equitable access to walking, biking, and transit"* is reasonable.
3. Determine ODOT's progress in providing more complete bicycle and pedestrian facilities on the state highway system and identify barriers to progress.
4. Determine how ODOT incorporated equity in decisions to include bicycle and pedestrian facilities in projects on the state highway system for the 2024-27 STIP.

The audit scope is based on the corresponding audit objective listed above.

1. The methodology in place as of September 2022 and the calculations done for fiscal years 2020 and 2021.
2. The draft methodology provided by staff to calculate the SAP metric.
3. A subset of 152 projects administered by ODOT from the 2021-24 STIP and 2024-27 STIP.
4. All 29 projects included in the 2024-27 STIP as of August 1, 2023, with bicycle and pedestrian facilities included in the project scope.

The methodology included the following:

- Reviewed of highway construction project files, design plans, and contracts to identify projects with bicycle and pedestrian facilities included in scope.
- Completed interviews with agency staff.
- Reviewed applicable requirements from the Oregon Revised Statutes, Oregon Administrative Rule, and the ODOT Highway Design Manual.
- Reviewed agency reporting related to the bicycle and pedestrian program.
- Reviewed internal agency budget reports and Legislative Adopted Budgets.
- Reviewed project design exceptions approved during calendar years 2020-2022 that were tied to a bicycle or pedestrian facility.
- Reviewed data from the ATNI, agency KPM, and asset management program.
- Reviewed three 2021-23 and two 2023-25 STIF Plans for four different providers.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

MANAGEMENT RESPONSE



Oregon

Tina Kotek, Governor

Department of Transportation
Office of the Director
355 Capitol St NE
Salem, OR 97301

April 18, 2024

Marlene Hartinger
ODOT Chief Auditor
355 Capitol Street NE
Salem, Oregon 97301

Ms. Hartinger,

Thank you for the opportunity to comment on the audit and findings. We appreciate the collaborative nature of your staff as they conducted this audit of ODOT's pedestrian and bicycle programs.

We agree with the recommendations in the audit. Below you will find responses to each of the ten recommendations, as the audit identified, between the Delivery and Operations Division and the Public Transportation Division. While not identified in the audit specifically, we recognize that the delivery of our pedestrian and bicycle efforts relies heavily on these two divisions and the staff within them. This audit has helped us solidify that ODOT would benefit from formal internal partnership and better standing coordination between these two divisions, which we will work to implement as well as the recommendations identified in this audit.

The following are responses to each of the individual audit recommendations:

Delivery and Operations Division should:

Ensure agency priority for addressing deficient bicycle and pedestrian facilities aligns with funding and prioritization in construction projects.

Response #1: We agree the agency must prioritize addressing deficient bicycle and pedestrian facilities, along with the other needs of the transportation system and with the funding available. ODOT's 2024-2028 Strategic Action Plan (SAP), published April 2024, highlights our commitment to serve Oregonians equitably. The SAP builds on those commitments, guides ODOT to secure reliable funding, requires ODOT to incorporate the Safe System Approach more fully into ODOT means and methods, and sets implementing actions for ODOT, including:

Continue to improve accessibility for people experiencing disabilities within the pedestrian network, fulfilling ADA commitments focused on curb ramps.

By 2025, evaluate investments made and refine and streamline grants and programs to prioritize investments that advance climate, vehicle miles traveled reduction, equity and safety outcomes (focusing on vulnerable users).

By 2026 enhance trip planning tools to better connect travelers from origin to destination using multiple modes and integrate payment systems where feasible.

By 2028, define the multimodal network and establish priority corridors as part of the Oregon Highway Plan, to increase connectivity and access to key destinations, and integrate these corridors into investment decisions.

In the Strategic Action Plan, the metric set to measure our success is:

By 2028, achieve mobility targets for public transportation, passenger rail ridership and pedestrian and bicycle network connectivity completeness.

There will always be limits to the available funding. The 2024-2027 Statewide Transportation Improvement Program (STIP) saw a significant increase in active transportation focused funding for projects to improve the multi-modal transportation system in Oregon. As those projects are designed and delivered, the 2027-2030 STIP is also in the early stages of development with project scoping occurring in 2024-2025.

We are committed to making progress toward our goals to address gaps and completeness of the active transportation network.

Improve the consideration and prioritization of equity in bicycle and pedestrian projects.

Response #2: We agree consideration and prioritization of equity in bicycle and pedestrian projects is an important goal and we know we can continue to improve in this area. ODOT's 2024-2028 Strategic Action Plan (SAP), published April 2024, highlights the importance of active transportation in Oregon, recognizes transportation challenges across demographics and across contexts of the built infrastructure. The SAP acknowledges that completing the bicycling and walking network and filling transit gaps is also a key component; however, funding is a challenge. To build on these goals ODOT has created the Social Equity Index Map, and as this audit identified, the Active Transportation Needs Inventory (ATNI), to assist in project prioritization. Both of these tools continue to be updated and serve as foundational information as projects for the 2027-2032 STIP are prioritized, scoped, and selected for funding.

Ensure the roadway context is appropriately considered when determining whether a segment needs a sidewalk or bikeway when completing the asset inventory.

Response #3: We agree roadway context is pivotal in determining whether a segment needs a sidewalk or bikeway. Inventory efforts collect the data about an asset, existing features, and missing features. Layered over that asset inventory is an evaluation of the missing or needed features and priority.

ODOT developed an Active Transportation Needs Inventory [ATNI] in 2017-2018 and has been updating it. ODOT will update the ATNI to include and appropriately weigh urban and rural

context using the categories as defined in the Blueprint for Urban Design (BUD) and applying them appropriately.

To ensure all projects consider and identify contexts consistently, the blueprint for urban design initiative (BUD) has been incorporated into the Highway Design manual (HDM), which was updated and published in March 2024, making the considerations mandatory.

Improving the consistency and content of the asset inventory data, from collection guidelines to data stewardship, will support evaluation outcomes using that data. The ATNI is one such evaluation and as the ATNI is updated, appropriate consideration using revised evaluation criteria will ensure rural and urban contexts are more equitably assigned.

ODOT is currently pursuing an updated data system, which presents an opportunity to streamline the asset inventories, review and update data collect method, data needs and quality control guidelines. The new data system is expected to be available in 2026 or 2027, depending on funding availability.

Develop a written quality control process for asset management data gathering for sidewalks and bicycle facilities.

Response #4: We agree that following a quality control process in data collection and data management is imperative to having a reliable data set. ODOT has a draft manual for collection of pedestrian and bicycle features and will bring subject matter experts together in 2024-2025 to ensure the guidance is clear and comprehensive. As this audit points out, we are learning from our past experiences in how robust the guidance and training needs to be, given the various staff that are involved in the data collection.

The companion to well collected data is a quality control process to assess the data and the incorporation of the data into the inventory system. ODOT has quality control (QC) processes for other asset areas that will be evaluated and adjusted for oversight of pedestrian and bicycle data. ODOT will be able to do this assessment of the Q/C process and revise the guidance as the new data system is implemented in 2026 or 2027, depending on funding availability.

Revise the data gathering process to improve accuracy and retain field records to inform potential causes for data errors.

Response #5: We agree, accuracy of any data set is critical. ODOT has extensive experience in data gathering and retention of field records from other asset areas. Taking that experience and applying it to pedestrian and bicycle data, ODOT is evaluating the field guidelines and retention methods to determine which are most appropriate for this asset area. These changes will be included in the implementation of the new data system in 2026 or 2027, depending on funding availability.

Public Transportation Division should:

Revise the 1% methodology for clarity to better capture applicable project costs for bicycle and pedestrian facilities.

Response #6: We agree with this recommendation. The Public Transportation Division is in the process of updating how the 1% is calculated. Staff included auditors' early suggestions as the update was drafted. Staff will analyze the updated 1% methodology and ensure that the audit recommendations are addressed before the next annual report.

Update the SAP goal calculation to account for whether the funding is being utilized in alignment with the stated metric of improving equitable access to walking, biking, and transit.

Response #7: We agree with this recommendation; however, the Strategic Action Plan goal calculation is not relevant in the recently updated Strategic Action Plan. If the metric from the 2021 Strategic Action Plan is used in the future, staff will incorporate these recommendations into the calculation. In 2024 the Public Transportation Division updated the Strategic Action Plan key deliverables and focused future strategic actions on aligning with the metric of improving equitable access to active and public transportation. PTD's new actions are: 1) Continue to improve accessibility for people experiencing disabilities within the pedestrian network, fulfilling ADA commitments focused on curb ramps. 2) Evaluate investments made and refine and streamline grants and programs to prioritize investments that advance climate, vehicle miles traveled reduction, equity and safety outcomes (focusing on vulnerable users). 3) Enhance trip planning tools to better connect travelers from origin to destination using multiple modes and integrate payment systems where feasible. 4) Define the multimodal network and establish priority corridors as part of the Oregon Highway Plan, to increase connectivity and access to key destinations, and integrate these corridors into investment decisions

Update the ATNI to incorporate region and roadway context in identifying the highest priority segments.

Response #8: The Active Transportation Needs Inventory (ATNI) was created in 2021 to provide a new, innovative, and data-driven approach to identifying statewide priorities, and staff appreciates the audit recommendations to help this new tool mature and evolve over time. The Public Transportation Division will update the ATNI, pending staff capacity and funding. During the update, staff will include and appropriately weigh urban and rural context as defined in the Blueprint for Urban Design, now incorporated in the Highway Design Manual. In regard to the recommendation to provide region context in the ATNI, staff currently includes this perspective by meeting with region staff prior to finalizing any project lists. Discussions with region staff change and update the project lists to include additional information that the ATNI does not track, like region priorities, leverage opportunities, funding source considerations, project readiness, and local community support. Staff will gather information from ODOT regions to determine what to include in a future ATNI update that will better incorporate region context.

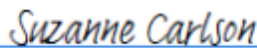
Ensure appropriate usage of bike lane and bikeway terminology when reporting on the agency bicycle and pedestrian KPM.

Response #9: In 2024, the Public Transportation Division updated the Pedestrian and Bicycle Key Performance Measure. This update was not reviewed as part of the audit. In the updated Key Performance Measure, "bike lane" is rarely used and "bikeways" are defined as: 1) a marked and striped bike lane five or more feet in width, 2) a paved shoulder five feet or more in width, 3) a travel lane shared by people biking and people driving where the posted speed is 25 MPH or less, or 4) a multi-use path within the highway right-of-way. In the 2025 Key Performance Measure report and all future reports, staff will ensure that "bike lane" and "bikeway" terminology is defined and clear.

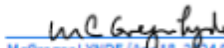
Ensure the new KPM methodology accounts for bikeway facility condition.

Response #10: In 2024 the Public Transportation Division updated the Pedestrian and Bicycle Key Performance Measure for a more comprehensive review of ODOT's pedestrian and bicycle system. This update was not reviewed as part of the audit. In the audit report, "condition" means sub-standard facilities that do not meet the needs of people riding bikes. The updated Key Performance Measure accounts for bikeway facility condition and focuses on completing and enhancing the walking and biking network on priority corridors. These corridors are selected for key properties like crash history, crash risk, access to transit, essential destinations, social equity, existing facilities, and context following the guidance in the Blueprint for Urban Design. Priority corridors includes 134 miles (206 miles including couplets) or about 1.6% of ODOT's state highway system. On the identified priority corridors there are currently 154.7 miles of existing bikeway facilities in poor condition (do not meet current design standards) that will be tracked as improvements are made.

Every audit is an opportunity to improve. We appreciate the diligence and professionalism of the audit team and look forward to working with you as we implement the improvements based on the audit recommendations.



Suzanne Carlson (Apr 22, 2024 09:07 PDT)

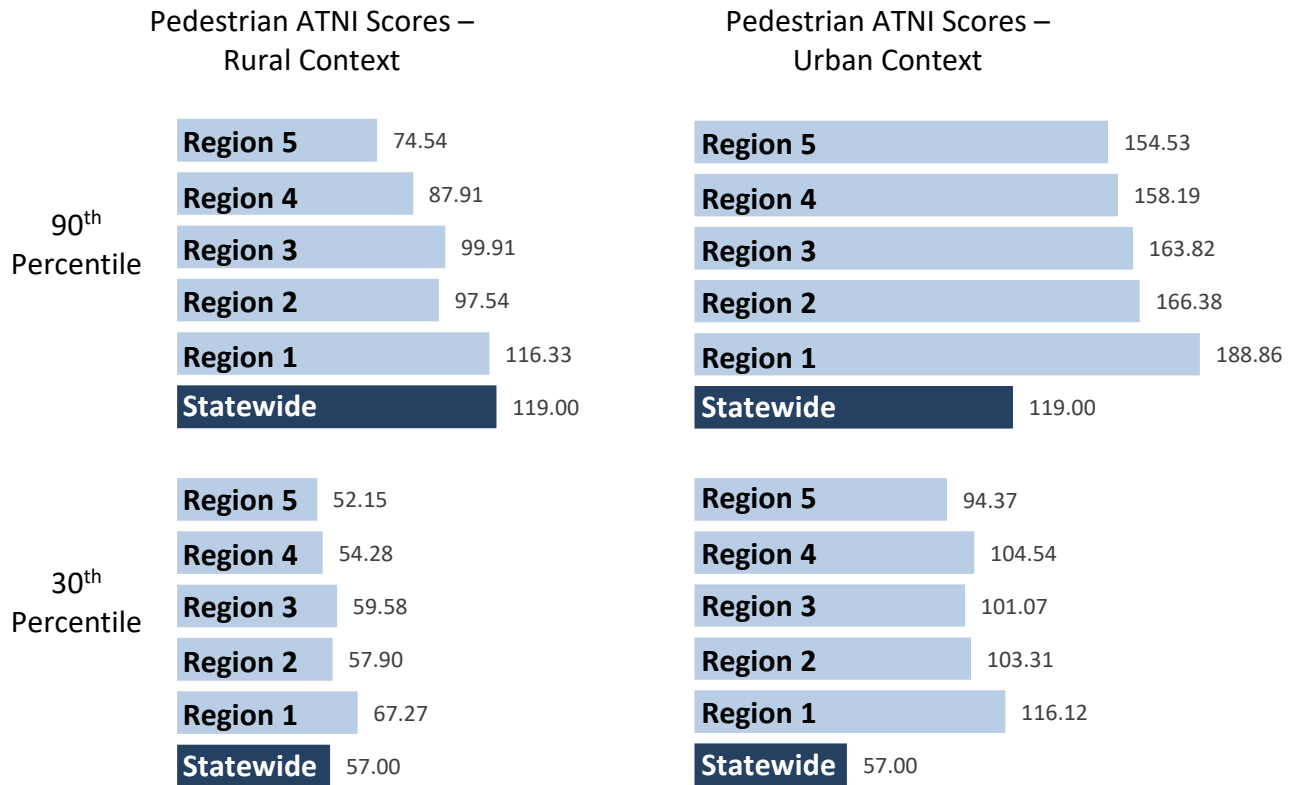


McGregor LYNDE (Apr 18, 2024 09:12 PDT)

Suzanne Carlson,
Transportation Division Administrator

McGregor "Mac" Lynde,
Delivery & Operations Division Administrator

APPENDIX A – ADJUSTED PEDESTRIAN ATNI SCORES



APPENDIX B – NEW ODOT ACTIVE TRANSPORTATION KPM

Agency Key Performance Measure: Walkways & Bikeways: Capturing our true progress



Walking and biking are critical forms of transportation that help improve the health, sustainability, economic vitality, and overall livability of Oregon communities. Providing safe, comfortable walking and biking facilities, especially in areas where people are more likely to walk and bike, is key to enabling these modes, and supports the Oregon Department of Transportation (ODOT) Strategic Action Plan, which targets the outcome of improved access to walking, biking, and transit.

ODOT's current Key Performance Measure (KPM) for walkways and bikeways calculates the percent of urban state highway miles with walkways and bikeways in "fair" or better condition. This KPM faces a number of challenges and does not accurately reflect the progress ODOT is making to improve transportation infrastructure that supports more people walking and biking. ODOT is in the process of updating the current KPM with a new measure that will tell a more accurate story of the progress being made on ODOT's network.

ODOT collaborated with MPO and university partners and pedestrian and bicycle research and data experts to identify and evaluate this measure. While it is anticipated to still track the condition and presence of walkways and bikeways on the ODOT highway network, the changed measure will focus on priority pedestrian and bicycle corridors and consider crossing spacing. The priority corridors will be identified based on land use characteristics, equity considerations, and crash history and risk. Having priority corridors will help ODOT better focus our investments on the highest-need locations. An emphasis on crossing spacing will improve safety outcomes and better support a local walking and biking network by improving access across the state system.

Why are we making changes? To enhance ODOT's ability to track improvement.



We'll be comparing apples to apples, not apples to oranges.

The current KPM measures progress by assessing a constantly-changing system, because as urban areas expand, the number of urban state highways also increases. Jurisdictional transfers have also discounted ODOT's progress, negatively affecting the KPM calculation. The new performance measure will count upgraded facilities transferred to local jurisdictions and always measure the same priority locations, giving a more accurate year-by-year picture of progress.



The proposed KPM will focus on places with higher demand or greater need.

Although it is still important to provide walkways and bikeways in all urban areas, the new measure will focus on the most critical areas, based on an analysis of past pedestrian and bicycle crashes, crash risk factors, access to essential destinations, access to transit, transportation disadvantaged communities, public health, and local priorities documented in transportation system plans. Focusing on the priority corridors will help ODOT track progress being made in high-impact areas.



Being able to easily cross roadways is a key piece of walk- and bikeability.

Currently, many walking and biking fatalities and serious injuries occur when people are crossing our highways. Crossings are key pieces of infrastructure that create permeability across our highways, which otherwise can be a barrier to people walking and biking. Our current KPM does not consider crossing spacing. The proposed measure would account for this vital piece of infrastructure.



PEDESTRIAN & BICYCLE PERFORMANCE MEASURES