Oregon’s strategy
ODOT’s strategy to reduce traffic fatalities is to continue to implement traffic safety programs and countermeasures based on the causes of fatal crashes in Oregon. For example, the Oregon Transportation Safety Performance Plan (HSP) and the ODOT Transportation Safety Action Plan (TSAP) outline safety activities directed at safe driving behaviors, DUII, safety belt use, speeding, motorcycle safety, child safety seats, equipment standards, and other areas. ODOT also seeks to combat traffic fatalities through strategic highway safety improvements, such as median cable barriers, rumble strips, and pedestrian crossings, as well as the DMV medically at-risk program.

About the target
Oregon’s goal is zero fatalities, but realistic targets are set based on the desire to reduce fatality rates gradually over time to achieve the longer-term goal of zero. Oregon’s 2016 rate was 1.35 fatalities per 100M vehicle miles traveled.

How Oregon is doing and how it compares
The rate of 1.35 for 2016 is above the target of 0.90 per 100 million VMT. There was a dramatic increase in the number of fatalities, in line with the rest of the nation, in Oregon starting in October 2014 which increased the rate per 100 million VMT. When comparing Oregon traffic fatality data with national data provided by the National Highway Traffic Safety Administration, Oregon’s rate in 2016 was higher than the U.S. national fatality rate of 1.18; ODOT set an aggressive long-term goal of reducing the traffic fatality rate to 0.87 per 100 million VMT by 2016. The targets are increasingly more challenging to meet, however the goal is important and should not change, as ‘zero’ is the goal for you and your family, every trip, every time. Until recently, Oregon's fatality rates have been consistently below the national average since 1999.

Fact
Fatal crashes involving alcohol; speed; or not wearing a safety belt are the most common causes of a fatality on Oregon roadways.
Factors affecting results and what needs to be done

Several factors affected the traffic fatality rate in 2016. Among those factors were continuing increases in crashes involving impairment, the number of available traffic law enforcement officers, and the response times of emergency medical services. Another factor is that it is harder to make changes when the fatality rate is already at such a low rate. Fatal crashes involving alcohol; speed; or not wearing a safety belt are the most common causes of a fatality on Oregon roadways. Over the last 16 years, Oregon experienced the lowest fatality count since the late 1940s. ODOT and its safety partners must continue efforts to reduce fatalities by reviewing the causes of fatalities, targeting safety activities accordingly, and allocating safety resources to the programs most effective at reducing fatal crashes.

About the data

Traffic fatality rates are reported on a calendar year basis. The data that ODOT uses to measure traffic fatality rates has several strengths. It is coded to national standards, which allows for state to state comparisons, and it is a comprehensive data set that includes medical information. Some weaknesses of the data are that it is sometimes difficult to get blood alcohol content reports and death certificates for coding purposes, and priority is placed on coding the data and not on creating localized reports for state, city, and county agencies and organizations.

Contact information
Traci Pearl
ODOT Transportation Safety Division
503-986-6718

Data source
Crash Analysis and Reporting, ODOT; Fatality Analysis Reporting System, National Highway Traffic Safety Administration, US DOT
Oregon’s strategy
Reducing the number of traffic crashes is the primary strategy to reduce serious traffic injuries, but when a crash does happen, reducing the injury severity becomes the secondary strategy. This is influenced in three primary ways: first, with safe use of safety equipment for infrastructure work and implementing design practices that mitigate structural safety risks on Oregon’s transportation system. Second, deploying safety information and education programs, and implementing the DMV driver improvement program in order to reduce crashes caused by driver behavior (poor choices). The final way is through timely emergency medical services at the scene and transport to trauma centers.

About the target
ODOT wants to eliminate serious injuries due to roadway crashes. Although trends for serious injuries and fatal crashes fluctuate up and down year to year, realistic targets are set with future reductions in mind. ODOT reset the targets for traffic injury rates in 2016 due to an increase in reported injuries in 2014 and 2015. The increased use of electronic crash reporting by law enforcement has increased the data submitted to the state’s crash file and in a timelier manner. More than 8,000 e-crash reports are now filed by law enforcement each year.

How Oregon is doing and how Oregon compares
The Oregon rate in 2016 was just under 5 serious injuries per 100 million vehicle miles traveled. Traffic injury rates are reported on a calendar year basis just like fatalities. However, unlike fatality data that allows state to state comparisons, injury data is not yet comparable. This is because the...
definitions of injury are not consistent across the country; any comparisons made to California, Washington or Idaho, for example, are not valid. However, some state-to-state data comparisons can be made against the national data which is useful for understanding state trends versus national trends.

Factors affecting results and what needs to be done
Several factors affected the serious injury rate in 2016. Significant positive factors affecting serious injury rates were high rates for the use of safety belts, child safety seats and booster seats. Drivers age 15 to 20 continued to be overrepresented in serious injury crashes however; representing approximately 14 percent of all serious injury crashes but only 6.3% of licensed drivers in Oregon.

About the data
The Crash Analysis and Reporting Unit (CARS) collect data and publish statistics for reported motor vehicle traffic crashes. A system change in 2011 resulted in an increase of over 15 percent for injury and property damage data available in the crash data file. Legally reportable motor vehicle traffic crashes are those involving death, bodily injury, or damage to personal property in excess of $2,500. Additional data comes from the Fatality Analysis Reporting System.

Contact information
Traci Pearl
ODOT Transportation Safety Division
503-986-6718

Data source
ODOT Crash Analysis and Reporting; Fatality Analysis Reporting System, National Highway Traffic Safety Administration, US DOT
Our strategy
A minority of large truck crashes are attributed to a mechanical problem, leading us to focus our efforts on the truck driver. Truck-at-fault crashes are usually linked to speeding, tailgating, changing lanes unsafely, failure to yield right of way and driver fatigue. Focusing on the causes of truck at-fault crashes requires law enforcement agencies to enforce unsafe driving behaviors. Our MCTD staff conducts inspections at weigh stations and performs safety compliance reviews at trucking company terminals. They also initiate enforcement operations and logbook checks along major freight routes where most truck-at-fault crashes occur. A key part of our Safety Action Plan is to conduct multi-day inspection exercises to find problem drivers. In 2017, enforcement exercises checked thousands of drivers and placed hundreds out of service for critical safety violations. Oregon ranks well above all states in this area because inspectors use realtime data to identify trucking companies with suspect safety records and then apply training, experience and other tools to find safety problems.

About the target
The truck-at-fault crash rate target is set to a fixed baseline and adjusted when the program has met or exceeded it for a number of years. In 2013, the target was readjusted upward (one standard deviation higher) at a constant level through 2016.

Fact
In 2017, Oregon ranked #1 in the nation, as inspectors placed 14.6 percent of drivers out of service for critical safety violations. The national rate is 5.5 percent.
How we are doing and how we compare
The truck at fault crash rate in Oregon increased in 2017 compared to 2016, moving up from 0.41 to 0.49 crashes per million miles traveled by trucks. Oregon’s truck-at-fault crashes continue to be below the national average. Trucks were involved in 181 more crashes in 2017 (1,693) as compared to 2016 (1,512). Oregon safety inspectors checked 34,401 trucks and/or drivers in 2017; inspectors placed 30.0 percent of trucks out of service for critical safety violations and 14.0 percent of drivers inspected were placed out-of-service. Oregon inspectors also conducted over 120 bus inspections in 2017.

Factors affecting results and what needs to be done
Along with the increased number of truck-at-fault crashes, the number of deaths associated with truck crashes increased from 50 in 2016, to 52 in 2017. It should also be noted that a single incident can skew these numbers. Factors directly affecting this measure largely involve commercial vehicle driver fitness, qualifications and judgment. The rate of crashes is also affected by the volume of all vehicle miles traveled, not just commercial vehicle miles. It’s affected by traffic congestion, the level of road and bridge construction and maintenance work, and inclement weather. Further contributing to crash rates is the presence of law enforcement officers on the road. We are engaging many more law enforcement agencies in truck safety-related exercises to focus on making probable cause stops for speeding and other traffic violations along major freight routes where most truck-at-fault crashes happen. Because so few crashes are attributed to mechanical problems, checking the behavior and fitness of truck drivers continues to be the most effective way to reduce crashes. We continue to conduct frequent multi-day inspection exercises focusing on truck driver inspections and partner with police in exercises to stop unsafe car and truck drivers. We will continue our aggressive safety inspection efforts.

About the data
Crash data for this measure is based on the federal definition of a recordable incident – those which involve a fatality, injury or disabling damage. The ODOT Transportation Development Division’s Crash Analysis and Reporting Unit analyzes crash reports to determine which are truck-at-fault. States are rated on a quarterly basis – Good, Fair, or Poor – on completeness, timeliness, accuracy and consistency of both crash and roadside inspection data submitted to the Motor Carrier Management Information System. The Federal Motor Carrier Safety Administration rates Oregon “Good.” Mileage data for this measure is based on miles traveled in Oregon by trucks over 26,001 pounds, as determined by motor carriers’ highway-use tax reports and temporary passes purchased by short-term operators, following the national model. The truck-at-fault crash rate would be lower if it were based on miles traveled in Oregon by all trucks over 10,000 pounds and buses carrying more than 15 passengers, including the driver. Mileage figures used here are verified by MCTD auditors. The figures are also verified by financial analysts for use in Oregon’s periodic Highway Cost Allocation Study.

Contact information
David McKane
ODOT Motor Carrier Division
503-373-0884

Data source
ODOT Motor Carrier Division and ODOT Transportation Development Division, Crash Analysis and Reporting Unit
Our strategy
We want to have the safest infrastructure possible. **Safe infrastructure** mitigates structural safety risks on Oregon’s transportation system. Working with the Federal Railroad Administration, we use a combination of inspections, enforcement actions and industry education to improve railroad safety and reduce the incidence of derailments and the potential for release of hazardous materials.

About the target
Even with an increase of one incident in 2017, the number of derailments has steadily decreased to a level below the target. For 2014 through 2019, we’ve lowered the target to 25. Even as rail traffic decreases, this trend indicates significant improvement.

How we are doing and how we compare
In 2017, there were 16 derailment incidents, an increase from 14 derailments in 2016. From 2009 to 2017, derailments have increased and decreased from year to year with the average being 17. In 2014, we lowered the target to 25. The number of inspections, which is proportional to the number of qualified inspectors on staff, is a factor in the reduction of derailments. In 2017, ODOT completed 1,317 inspections and had 16 derailments, compared with 2016’s 1,199 inspections and 14 derailments.

According to FRA’s 2017 data for Oregon and its neighboring states, derailments increased in Oregon and California and decreased in Washington and Nevada. Idaho was unchanged. The rail systems differ among the states in terms of track miles and the number of carloads, e.g., California and Washington have larger systems than Oregon while Idaho and Nevada have

---

**Fact**

From 2009 to 2017, derailments have varied year to year with an average of 17.
smaller systems. A comparison of derailments per track mile (miles of track in each state) for 12 months ending December 31, 2017, shows Oregon with .0063 incidents per track mile, Washington with .0081, Nevada with .0008, Idaho with .0055 and California with .00132.

Factors affecting results and what needs to be done. From 2016 to 2017, Oregon derailments went from 14 to 16. An increase in rail traffic contributed to the rise while an increased number of inspections helped keep the number in check. Human error and track caused yard derailments are the most significant reasons for the derailment number remaining relatively flat. Increasing the number of inspections will help reduce both yard and human error derailments.

Operating Practices inspections, which directly affect human error caused derailments, went from 339 in 2016 to 430 in 2017. Track inspections, which directly affect yard derailments, stayed approximately the same with 193 in 2016 and 220 in 2017. In 2015, we hired four additional inspectors and replaced staff that had retired. It took more than a year to federally certify current staff with the newest employee on scheduled to be certified in April, 2018. We expect the previously demonstrated decline in derailments to continue into future years due to an increase in inspections and a full staff of certified inspectors. Except for the 2010, 2013 and 2014 spikes and an increase of one in 2017, the decline has steadily continued since 2008, with the hiring, training and certification of new inspectors to replace the turnover in staff. This supports the need for certified inspectors performing regular inspections. Recruitment and retention of qualified compliance (inspector) personnel is vital. Analysis of data from previous inspections (track conditions, operating issues, etc.) helps us identify areas on which to focus resources and inspections. ODOT’s Rail and Public Transit Division is dedicated to reducing derailment accidents. As rail inspectors identify areas of concern, they take holistic approaches by intensely focusing on those areas with multiple disciplines. The Rail Safety Section is currently performing inspections with Washington State to better develop relationships, ensure consistency in both states and reduce derailments on a broader geographic scale.

About the data
The reporting cycle is calendar year. The data is based upon reports submitted by the railroads to the FRA. Under federal regulations, railroads are required to report all derailments meeting federally mandated thresholds to the FRA.

Contact information
Joe Denhof
ODOT Rail and Public Transit Division
503-986-4169

Data source
ODOT Rail and Public Transit Division
Our strategy
A priority for ODOT is to have the safest infrastructure possible. Safe infrastructure is promoted by implementing design practices that mitigate structural safety risks on Oregon’s transportation system. There are several ODOT activities specific to the Rail Section associated with this general strategy. The Crossing Safety Unit manages crossing improvement projects and inspects crossings to ensure they are appropriately maintained. The Rail Section works with public and private entities, including the railroad companies, public road authorities and law enforcement to address crossing safety concerns and participate in transportation planning activities to improve the mobility of highway and rail traffic.

About the target
The Rail Section strives for a zero incident performance. The goal reflects the reality that some number of incidents is outside the control of the section and its transportation safety partners.

How we are doing and how we compare
In 2017, 22 rail crossing incidents occurred, which under-performed our goal of 10. The incident data in the table above for 2017 includes 14 incidents involving motor vehicles and eight incidents involving pedestrians. The motor vehicle incidents resulted in five injuries with four of those injured in one vehicle. In 2017, there were 22 rail crossing incidents, an increase from 18 incidents in 2016, 15 in 2015, 13 in 2014 and nine in 2013. There were no injuries or fatalities associated with the nine incidents in 2013. Since 2008, rail crossing incidents have varied between a high of 22 in 2017 and a low of 6 in 2009 with an overall increase from 2008 to 2017. This trend indicates a need for additional public awareness and education programs.

Fact
Crossing incidents have decreased significantly in the last two decades, from 28 in 1996 to 22 in 2017, but have increased each of the last four years.
highlighting causes of potential at-grade incidents.

Factors affecting results and what needs to be done

Some incidents are caused by deliberate actions rather than lack of safety education or crossing safety devices. Of the 22 incidents in 2017, 19 occurred on the freight rail system and 3 were on TriMet light rail. 2 of the incidents involved passenger trains. The 22 incidents resulted in 6 fatalities and 7 injuries. All injuries and fatalities occurred at signalized crossing. 8 incidents involved pedestrians, and resulted in the 6 fatalities. 5 of the incidents involved vehicles stopped on the tracks and 15 incidents involved road users (pedestrian and vehicle) failing to stop for STOP signs or activated signals. 2 fatalities involved pedestrians purposely stepping into the path of the moving train. 2 incidents involved pedestrians stepping into the crossing after one MAX train had passed, and into the path of a second train. 5 incidents involved vehicles running into the side of a train. 4 injuries occurred in one incident where the driver went around lowered gates and was hit by the train.

Options to promote a decline in the number of incidents include maintaining inspection efforts, increasing funding for crossing investments and increasing education outreach on crossing safety to the driving public and pedestrians.

About the data

The reporting cycle is calendar year. The data is based upon incident reports submitted by the railroads to the Federal Railroad Administration (FRA). Under federal regulations, the railroads are required to complete and submit accurate reports to the FRA.

Contact information

Joe Denhof  
ODOT Rail and Public Transit Division  
503-986-4169

Data source  
ODOT Rail and Public Transit Division
Our strategy
Provide excellent customer service to customers.

About the target
The overall target for 2017-19 is 90 percent customer satisfaction with ODOT services. The actual performance in 2016 was 91 percent.

How we are doing and how we compare
We continue to achieve high overall customer service ratings. On the whole, we continue to provide customers with good to excellent service. Variations in results between 2006 and 2016 are not statistically significant and have been near the target of 90 percent. Data to compare with other state departments of transportation is not available. Specific to motor carrier regulation, Oregon is one of just a handful of states asking the trucking industry about satisfaction with motor carrier enforcement.

Factors affecting results and what needs to be done
The sampling of customers for the 2016 survey included major customer groups of DMV and Motor Carrier Transportation Division. In future surveys, additional customer groups may be added. We will continue to monitor customer satisfaction levels and take corrective action as needed.

About the data
Both DMV and Motor Carrier conduct surveys of customers that are based on the recommended Statewide Customer Service Performance Measure guidelines.

DMV received over 336 survey responses in 2016 from customers who visited DMV field offices. Customers were selected on a random, repetitive basis from the DMV.
computer system database of driver and motor vehicle transactions during the month of January. This survey is conducted every two years. DMV also collects customer satisfaction data separately using a cumulative average of the division’s monthly customer satisfaction surveys.

Motor Carrier surveys 11 customer groups. Survey groups include companies subject to safety compliance reviews, truck safety inspections, or audits. The surveys also cover drivers subject to driver safety inspections and persons calling for registration or over-dimension permits. Taken together, the 11 Motor Carrier surveys have a total of 583 responses.

The combined surveys are large enough to provide a 95 percent confidence level and a 4.03 percent margin of error.

Contact information
Andrea McCausland
ODOT Driver and Motor Vehicle Services
Division
503-945-5294

Data source
Biennial surveys of customers by Oregon Department of Transportation
Our strategy
DMV strives for high quality service in each of its 60 field offices, and a primary measure of quality is customer wait time. Customer satisfaction surveys include factors such as employee courtesy, efficiency and professionalism as equally important to how long a customer waits.

The primary strategy is to reduce in-person visits by completing transactions in the first visit. DMV also encourages use of alternative channels such as online services or the mail. Simple transactions such as vehicle registration renewals, address changes, and notice of vehicle sale can be done online instead of visiting an office. Also, many questions can be answered over the phone or by visiting the DMV website, rather than appearing in person at an office.

Other strategies to reduce wait time include express counters, information kiosks, relief help between offices, alternative work schedules, and other best practices. DMV offers third-party driver skills test services as an option for CDL, teen driver, and regular Class C licensing. Motorcycle drive skills tests are conducted by Team Oregon. This allows time for DMV staff to assist more lobby customers instead of being outside the office conducting driver skills testing.

About the target
The target is to serve at least 70% of field office customers within 20 minutes of entering the facility. Customer surveys indicate that people generally expect to wait 20 minutes or less, and their level of satisfaction decreases with longer delays in receiving service. The new Key Performance Measure approved by the Oregon Legislature in 2015 gives a better indicator of actual customer experience in DMV offices. The 70% target is a stretch goal considering forecasted customer visits and existing computer systems, business processes, and staffing levels.

Fact
In FY 2017, over 62% of DMV field office customers waited less than 20 minutes to be served by a DMV employee.
How we are doing and how we compare
The new measure and target were started informally during FY 2013. About half of the customer visits in FY 2013 and 2014 resulted in wait times under 20 minutes, which was below the 70% target. The results improved in FY 2015 to over 65% and dropped to 60% in FY 2016 despite efforts to try and keep pace with demand. We are not aware of other state motor vehicle agencies with a similar measure for comparison purposes.

Factors affecting results and what needs to be done
The number of customers visiting an office and the time of day, plus the mixture and complexity of transactions, play major factors in the customer wait time experience. Another factor is the number of approved positions, and the ability to keep positions filled and employees trained. Agency workforce rightsizing obligations in 2011-13 eliminated 11 field office positions just as the economy was improving (vehicle sales) and Oregon’s population began growing (increasing workload and demand of driver licensing, vehicle titling and registration).

Additional online services via the Service Transformation Program (STP) will reduce the need for in-person visits. Installing lobby management systems and self-service kiosks would improve the efficiency of offices, and continued exploration of business process improvements and staffing strategies should increase the throughput of existing offices.

About the data
Field office wait time data is collected daily from simple “pull-a-ticket” wait time machines in the 37 largest DMV field offices. Smaller offices with two employees or fewer do not have wait time machines, and are assumed to serve customers in less than 20 minutes. Likewise, express line customers are assumed to receive service in less than 20 minutes. Stopwatch timings are done periodically to confirm these assumptions. The data are routinely reported weekly and after each fiscal year. Managers also have on-demand access to the data, and customers now may view real-time wait times in 37 field offices via the DMV website.

Previous Measure
DMV’s previous measure calculated an average wait time for each office, and then compiled another average by summing the office wait times and dividing by the number of offices. Although the measure was used for decades as the indicator of customer wait time, it gave a skewed view of the overall customer experience at DMV field offices. Large and small offices were treated as equal, even though large offices served more people and tended to have longer wait times. The Legislature officially approved the new measure and target beginning with FY 2015.

Contact information
Tom McClellan, DMV Administrator
Oregon Department of Transportation
503-945-5100

Data source
Driver and Motor Vehicle Services Division
Construction Projects On-Budget

Construction Projects On-Budget: The percentage of state administered projects for which total construction expenditures do not exceed the original construction authorization by more than 10%

Our strategy
Our goal for any given construction project is to ensure that total construction costs do not exceed the project’s original construction authorization (i.e. budget) by more than 10%. We achieve this through accurate schedule and budget development and effective contract and risk management throughout the life of the project.

ODOT has redefined how we categorize contract change orders (CCO) that affect project expenditures, allowing us to determine which changes were avoidable, unavoidable, or elective. By doing so and reporting on the frequency of and reasons for different CCO types, ODOT can provide greater transparency of its change management practices and take actions to reduce the number of avoidable contract change orders that can negatively impact project expenses and schedules.

About the target
The target is set at 80% of projects. This was established for consistency with peer DOTs, but will be revised as our capability increases to reduce avoidable contract changes.

How we are doing and how we compare?

For state fiscal year 2018, on-time performance, based on ODOT’s modified measurement definition, is at 90% of projects on-budget. No projects were re-baselined in state fiscal year 2018.

In response to an ODOT management assessment (McKinsey & Co. 2017), ODOT revised its construction on-budget measure to be more consistent with peer DOTs and to also account for the appropriate cost accounting of CCOs for on-budget measurement.

Any project on-budget measure must have a final expense figure to compare to a

---

Construction Projects on Budget - Percentage of state administered projects for which total construction expenditures are within 10% of its baselined construction authorization

<table>
<thead>
<tr>
<th>Year</th>
<th>Actual</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>79%</td>
<td>80%</td>
</tr>
<tr>
<td>2011</td>
<td>87%</td>
<td>80%</td>
</tr>
<tr>
<td>2012</td>
<td>89%</td>
<td>80%</td>
</tr>
<tr>
<td>2013</td>
<td>88%</td>
<td>80%</td>
</tr>
<tr>
<td>2014</td>
<td>85%</td>
<td>80%</td>
</tr>
<tr>
<td>2015</td>
<td>90%</td>
<td>80%</td>
</tr>
<tr>
<td>2016</td>
<td>85%</td>
<td>80%</td>
</tr>
<tr>
<td>2017</td>
<td>82%</td>
<td>80%</td>
</tr>
<tr>
<td>2018</td>
<td>90%</td>
<td>80%</td>
</tr>
<tr>
<td>2019</td>
<td>82%</td>
<td>80%</td>
</tr>
</tbody>
</table>

Performance has remained in the range of 82% - 90% for the last five fiscal years.
Construction Projects on Budget, cont.

For Construction Projects On-Budget, this baselined budget is the Net Construction Authorization set at contract award. For most projects total construction expenses are used to determine on-budget performance; however, there are circumstances, described below, where ODOT would adjust this figure based on the type of expenses incurred.

Factors affecting results and what needs to be done

Final construction costs can incorporate a number of components not included in the original authorization amount. These cost components can include variance between actual and planned quantities, contract change orders, extra work orders, force accounts, pay factors, escalation/de-escalation, and anticipated items. These components can result in positive or negative cost adjustments in the contract.

While such components are estimated when project budgets are established, uncertainties are inherent in any complex construction project. For example, market trends such as higher than expected inflation and rises in steel, oil, and asphalt prices can contribute to cost increases. Unanticipated geological features, archeological finds, or environmental impacts can also lead to unanticipated costs.

Not all unanticipated costs are a bad thing, however. The expansion of a project’s scope in construction, for example, can meet agency goals and regional needs despite increasing overall project costs. ODOT’s new on-budget measure accounts for this by adjusting the final expense figure in the case of elective actions and unavoidable contract changes.

For this on-budget measure, circumstances allowing for the adjustment of the final expense figure include:

- Elective expansion of project scope by ODOT
- New requirements or interpretations from regulatory agencies, including FHWA, affecting the construction contract
- Unavoidable budget impacts due to natural events

Circumstances that would not result in adjusting the final expense figure include:

- Errors in plans, specifications, and/or design
- Unacceptable traffic impacts
- Construction engineering errors

About the measure

When determining projects on budget, all state administered projects that have issued final payment are considered. Total construction expenses (adjusted to account for elective and unavoidable change orders) for each project are compared to the project’s original authorization (also known as the net construction authorization). If the adjusted total expense figure does not exceed the original authorization by more than 10%, the project is considered on-budget. Performance is reported as a percentage of projects that are on budget in any given state fiscal year.

Data source

ODOT Contractor Payment System (CPS) – internal reporting system within ODOT

Contact information

ODOT Highway Division, Strategic Business Services | 503-986-5875
Construction Projects On-Time: The percentage of state administered projects that have satisfactorily completed all on-site work within 90 days of the last baselined contract completion date

Our strategy
ODOT’s goal is that construction projects satisfactorily complete all on-site work within 90 days of the final completion date listed in their contracts. We achieve this through accurate schedule development and effective contract and risk management throughout the life of the project.

ODOT has redefined how we categorize contract change orders that affect project schedules, allowing us to tell if a given change was avoidable, unavoidable, or elective. By doing so and reporting on the frequency of and reasons for different CCO types, ODOT can provide greater transparency of its change management practices, and take actions to reduce the number of avoidable construction change orders, which is the primary reason for late projects.

About the target
The target is set at 80% of projects. This was established for consistency with peer DOTs, but will be revised as our capability increases to reduce avoidable contract changes.

How we are doing and how we compare
For state fiscal year 2018, on-time performance, based on ODOT’s modified measurement definition, is at 66% of projects on-time. Only one project was re-baselined (1 of 68 projects), with an elective change order that raised overall performance from 65% to 66%. While below target, performance is within the natural variation of this performance measure.

In response to an ODOT management assessment (McKinsey & Co. 2017), ODOT revised its construction on-time measure to be more consistent with peer DOTs and to also account for the appropriate re-baselining of contract completion dates for on-time measurement.

Any project on-time measure must have an end date to compare the actual completion date against; this is referred to here as the

Fact
No trends in performance are evident at this aggregated level view.
Construction Projects On-Time, cont.

baseline contract completion date. For ODOT construction projects there are two options for a baseline end date: the original contract completion date or a modified contract completion date reflecting changes to the construction contract.

For most projects the original contract completion date is used to determine on-time performance; however, there are circumstances, described below, where ODOT would use a re-baselined end date.

Factors affecting results and what needs to be done
There are many factors that can affect the on-time performance of construction projects. There are elective actions taken by ODOT that can extend or compress project schedules as well as unavoidable events, beyond the control of project managers, that can occur and to which we must react. There are also avoidable issues—such as errors or defects in a project’s design—that can impact the schedule.

For this on-time measure, circumstances allowing the contract completion date to be re-baselined include:

- Elective expansion of project scope by ODOT
- New requirements or interpretations from regulatory agencies, including FHWA, affecting project schedules
- Unavoidable delays due to natural events

Circumstances that would not allow for re-baselining the schedule include:

- Errors in plans, specifications, and/or design
- Unacceptable traffic impacts
- Construction engineering errors

About the measure
When projects are awarded to a contractor, the construction contract may specify more than one contract completion date for different phases of the project. The last original contract completion date is the default baseline contract completion date used in this measure. This date may be re-baselined if specific elective or unavoidable contract change orders allow for it.

Operationally, this measure reports on-time performance by calculating the percentage of projects reaching the project milestone of 2nd Notification (all on-site work is satisfactorily completed) within 90 days of the baselined contract completion date.

The measure considers state administered projects only; locally administered projects are excluded.

Data source
Contractor Payment System for baselined contract completion date, actual completion date, and any contract change orders that may affect the baselined completion date.

Contact information
ODOT Highway Division, Strategic Business Services | 503-986-5875
Our strategy

ODOT tracks and reports on awards made to firms that are certified by the Certification Office for Business Inclusion and Diversity (COBID); this includes disadvantaged business enterprise, minority- and woman-owned and emerging small business certifications, or collectively reported as “certified firms.” Since 2016, we have also tracked and reported on businesses that are owned by service-disabled veterans.

Reporting on all certified firms winning contracts as prime contractors and those certified firms working as subcontractors is a more accurate and complete representation of how ODOT uses these firms. The agency also sets internal targets for payments to these certified firms and implements programs and supportive services to encourage participation.

About the target

The certified firms’ aspirational targets are set on state-funded-only projects over $100,000. The aspirational targets are not a condition of contract award; rather the target represents the level of certified small business participation ODOT has determined is reasonably achievable in the scope of work, availability of certified firms, and the logistics of the project; such as duration and location.

How we are doing and how we compare

ODOT is committed to programs that encourage the participation of small businesses, including minority- and women-owned firms, in contracting opportunities with the Department across divisions and business lines. To that end, we implement

Certified Firms- Percent of Contracts Awarded to Certified Small Businesses (Prime and Subcontracts)

<table>
<thead>
<tr>
<th>Year</th>
<th>Actual</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>10.90%</td>
<td>12.0%</td>
</tr>
<tr>
<td>2014</td>
<td>12.70%</td>
<td>12.0%</td>
</tr>
<tr>
<td>2015</td>
<td>15.20%</td>
<td>12.0%</td>
</tr>
<tr>
<td>2016</td>
<td>12.85%</td>
<td>12.0%</td>
</tr>
<tr>
<td>2017</td>
<td>21.62%</td>
<td>12.0%</td>
</tr>
<tr>
<td>2018</td>
<td>11.59%</td>
<td>15.0%</td>
</tr>
</tbody>
</table>

Fact

We provide statewide training for project management and field staff and reach out to certified firms to let them know about opportunities and resources for working on ODOT projects.
the state Emerging Small Business (ESB) Program and ODOT Small Contracting Program (SCP), facilitate numerous small business supportive services including mentoring and training opportunities, and sponsor outreach events to communicate contracting and business development opportunities to certified firm communities.

These programs and initiatives are intended to ensure ODOT and our contractors comply with state and federal non-discrimination laws; create a level playing field for small businesses to compete fairly for contracts; ensure only eligible firms benefit from the programs; help develop firms to compete successfully in the marketplace outside the programs; and assist small businesses in overcoming barriers to participation in ODOT’s procurement and contracting processes.

We provide statewide training for project management and field staff and we reach out to certified firms to let them know about opportunities and resources for working on ODOT projects. Due to the wide variation in metrics, it is not statistically feasible to compare our overall goals on a state-to-state basis.

Factors affecting results and what needs to be done

ODOT Information Systems completed a project recently to integrate all data systems to provide comprehensive information. This system will provide an enterprise approach to data collection and reporting.

Contact information
Angela Crain
Office of Civil Rights
503-986-4353

Data sources
Trns*port which is downloaded to the Civil Rights Compliance Tracking system, Purchasing & Contract Management System (PCMS), and Local Agencies
**Bridge Condition**

**Bridge Condition: Percent of state highway bridges that are “not distressed”**

Our strategy

The ODOT bridge management strategy was originally developed when the Bridge Program began repaying OTIA III bonds in response to reduced funding, but also in recognition of the significant number of bridges reaching the end of their service life over the next several decades. ODOT developed a unique measure only used in Oregon to reflect the aging bridge population and the specific types of bridges constructed here over time. Bridges “not distressed” means the bridges have not been identified by the Oregon Bridge Management System as having freight mobility, deterioration, safety or serviceability needs and have not been rated as Structurally Deficient based on the Federal Highway Administration criteria. The Bridge Program strategies include: protecting high-value coastal, historic, major river crossings and border structures; using practical design and funding only basic bridge rehabilitation projects and replacing high risk bridges; giving priority to maintaining the highest priority freight corridors; using preventive maintenance to extend the useful life of good and fair condition bridges; developing triage approaches to mitigate the lack of seismic resilience; addressing significant structural problems on all bridges to protect public safety; and monitoring the health of selected bridges to safely extend their useful life.

About the target

The target for “not distressed” bridges is established by assessing the impact of program funding targets approved by the Oregon Transportation Commission, deterioration rates of our aging structures and considering the historic performance of the Bridge Program in addressing needs in twelve categories.

How we are doing and projected conditions

The improvement in the percent “not distressed” measure since 2007 is largely due to the OTIA III State Bridge Delivery Program. While we have been able to meet and maintain the bridge performance measure for the last five years at the State Bridge Program funding level, as shown, the 2017 performance measure dropped one percent from 2016 to 2017.

A recently completed analysis shows that over the next ten years the new HB 2017 funding is expected to slow the decline of the % not distressed bridges but not stop the decline. The result is primarily due to the

**Fact**

New funding as a result of HB 2017 is expected to slow the decline of the % not distressed bridges; but not stop the decline.
aging bridge inventory and a long history of underfunding in the Bridge Program that precluded systematic replacement of deteriorated bridges. This is captured in the performance measure as Low Service Life and more bridges projected to become structurally deficient.

New Federal measures are being tracked and reported as required in MAP-21 including percentage of NHS bridges in poor condition and percentage of NHS bridges in good condition. ODOT has a low percentage of NHS poor bridges, but also a low percentage of NHS good bridges. In the last twenty years, the percentage of good bridges has dropped by more than 40% resulting in a large population of fair bridges. The continued decline in the percentage of NHS good bridges over the last five years is shown in the figure. This trend is expected to continue in part due to a recent recognition of poor quality materials and construction used in cast-in-place concrete bridge decks and due to good bridges aging and few new bridge replacements.

Factors affecting results and what needs to be done
A sustainable bridge program includes bridges in various conditions with planned maintenance, preservation, and replacements. The large population of fair bridges will continue to challenge the Bridge Program to address major rehabilitation and maintenance needs while also funding timely preservation treatments to optimize structure service life. With a disproportionate number of aging bridges in fair condition, available funding will only be able to address the most critical needs with few bridge replacements.

Although Oregon bridges are considered safe (if load restrictions signs are obeyed), there are a large number of bridges whose service lives have been extended beyond a normal time period because of inadequate funding. Those bridges demand vigilance and dedication by inspectors and maintenance personnel to maintain safe conditions. However, there is a serious concern that those critical and near-critical conditions will grow at an increasing rate until a point in the near future that current staff will not be able to keep on top of these serious issues. At that point unpredictable failures are possible that will result in delays, detours and unplanned high cost emergency repairs.

About the data
Each state reports bridge condition for bridges included in the National Bridge Inventory, using standard criteria which are established by FHWA. The FHWA does not report data based on ownership, but does report deficient bridge data for all National Highway System bridges within states.

Contact information
Bruce Johnson
Bridge Engineering Section
ODOT Highway Division
503-986-3344

Data source
A snapshot of the bridge inventory is taken each April. Data in the snapshot is consistent with the annual NBI submittal required by FHWA. The snapshot provides a convenient and consistent reference point each year.
Our strategy
The goal of the ODOT pavement preservation program is to keep highways in the best condition possible, for the lowest cost, by taking a life-cycle cost approach to preservation and maintenance. The most cost-effective strategy is to apply preservation treatments to keep highways out of “poor” condition, which extends pavement life at a reduced resurfacing cost.

About the target
A higher percentage of miles in good condition translates to smoother roads and lower pavement and vehicle repair costs. Prior to 2014, the long term target was set at 78 percent “fair” or better. The legislature increased the target to 87 percent for 2014 and 2015 and subsequently reduced the target to 85 percent for 2016 and 2017. Pavement conditions are measured every two years and the 2018 data will be available in February 2019.

How we are doing and how we compare
Thanks to ODOT’s asset management and investment strategies, pavement condition over the last few years has ranged between 85 and 88 percent “fair” or better. Pavement conditions are currently above target. ODOT’s pavement strategy is focused on preserving the interstate first, and a full 96% of Oregon’s interstate highway miles are in fair or better condition.

Each state uses their own procedures for classifying pavement defects and assessing structural and functional pavement conditions. Currently, the only national standard available for comparing highway pavement conditions nationwide is pavement smoothness, which is one indicator of pavement condition. A smoothness comparison between Oregon and our neighboring states of California, Idaho, Washington, and Nevada based on 2016 Highway Statistics data https://www.fhwa.dot.gov/policyinformatio n/statistics/2016/hm64.cfm

Pavement Condition - Percent of miles rated 'fair' or better out of total miles on ODOT highway system

<table>
<thead>
<tr>
<th>Year</th>
<th>Actual</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>87%</td>
<td>78%</td>
</tr>
<tr>
<td>2007</td>
<td>85%</td>
<td>78%</td>
</tr>
<tr>
<td>2008</td>
<td>86%</td>
<td>78%</td>
</tr>
<tr>
<td>2009</td>
<td>87%</td>
<td>78%</td>
</tr>
<tr>
<td>2010</td>
<td>87%</td>
<td>78%</td>
</tr>
<tr>
<td>2011</td>
<td>87%</td>
<td>78%</td>
</tr>
<tr>
<td>2012</td>
<td>87%</td>
<td>78%</td>
</tr>
<tr>
<td>2013</td>
<td>87%</td>
<td>78%</td>
</tr>
<tr>
<td>2014</td>
<td>87%</td>
<td>87%</td>
</tr>
<tr>
<td>2015</td>
<td>88%</td>
<td>85%</td>
</tr>
<tr>
<td>2016</td>
<td>88%</td>
<td>85%</td>
</tr>
<tr>
<td>2017</td>
<td>85%</td>
<td>85%</td>
</tr>
</tbody>
</table>

Fact
Pavement funding levels provide little more than one-half of the actual need for pavement preservation and major repairs.
shows that Oregon’s pavement is on par with Idaho and Nevada and better than California and Washington and also better than the nationwide average. Recent federal legislation implemented new pavement performance measures for interstate and national highway system (NHS) highways using cracking, rutting, and faulting in addition to smoothness. States are just beginning to report using these measures and comparative data are not yet available.

Factors affecting results and what needs to be done
Pavement conditions increased for 2016 due to a temporary uptick of pavement funding thanks to federal funding increases from the Fixing America’s Surface Transportation (FAST) Act passed by Congress in 2015. Approximately $110 million of paving work was added to the program in 2015-2018 on top of what was previously funded. HB 2017 Keep Oregon Moving added another $150 million of additional pavement preservation projects through 2021. These investments will improve pavement conditions over the next two to four years.

Over the long term, our pavement programs are underfunded, which will lead to a decline in conditions. An estimated $200 million per year is needed to repair the backlog of high cost poor and very poor highways, while keeping the remaining state highways in “fair or better” condition. This funding level would support major repairs needed on routes with the worst pavement conditions, while providing for timely preventive preservation and maintenance on roads in fair to good condition. Proposed pavement preservation funding levels for 2022 and beyond are about $115 million per year. This pavement funding level provides little more than one-half of the actual need for pavement preservation and major repairs.

Pavement resurfacing treatments typically last 10 to 20 years, but pavement funding will only be able to pave each section of road on average only once every 35 years or longer—far beyond the optimal timeframe. Over time, pavement conditions will drop well below the target. This will result in diminished safety, as well as higher vehicle repair costs as Oregonians travel on rutted and deteriorated roads. As road conditions deteriorate, thicker paving and/or complete replacement will become necessary at a higher cost than what would be required to simply maintain them in fair or better condition. In the long run, Oregonians will pay more to rehabilitate this failed pavement than it would have cost to keep it in good condition.

About the data
Pavement conditions are measured via a combination of automated equipment and visual assessment. Rigorous checks are made on the data to ensure integrity. Conditions are measured and reported every two years on even numbered years. Our Pavement Condition Report provides detailed pavement condition data and statistical summaries across various parts of the highway system and is available online at http://www.oregon.gov/ODOT/Construction/Pages/Pavement-Condition-Reports.aspx

Contact information
Justin Moderie
ODOT Highway Division, Construction Section, Pavement Services Unit
503-986-3115

Data source
ODOT Highway Division, Pavement Services Unit
Public Transit Vehicle Condition

Percent of Public Transit buses that meet replacement standards

Our strategy
ODOT’s Rail and Public Transit Division (RPTD) partners with local agencies to provide buses that help communities offer safe, cost-effective public transportation. There are approximately 1,000 active transit buses purchased with ODOT investment currently operating in Oregon communities. An additional 1,000 large buses in Portland, Eugene and Salem are excluded from this inventory, since larger transit districts receive federal funding for large bus purchases directly, and receive relatively little state investment. ODOT’s performance goal is to keep transit buses in a “State of Good Repair” based on federal standards for expected age, mileage and condition. ODOT’s funding priority is for a vehicle replacement schedule that replaces vehicles before increased maintenance costs become a poor investment. Utilizing the most cost effective investment strategy requires planning replacement purchases while vehicles are still within a year of high maintenance or rebuild costs.

About the target
New federal requirements mandate setting a target for replacing vehicles to keep them in a continuous state of good repair through efficient investment prioritization. RPTD is working with stakeholders to determine the appropriate target for Oregon. Staff has proposed an initial target of no more than 40 percent of vehicles statewide exceeding their useful life standard for each category.

How we are doing and how we compare
ODOT annually spends approximately $6 million in federal revenues to replace vehicles. This is about $5 million short of what is needed to improve the current fleet condition.

The Oregon Transportation Commission has added $5 million, each year, for 2019, 2020 and 2021, which will bring the fleet closer to the desired goal of less than 40 percent of the fleet exceeding useful life through 2020.
Additional funding will be needed to maintain this level in 2021 and beyond due to an increasing number of vehicles projected to exceed useful life by 2021.

Data is not currently available to compare Oregon with other states. The new federal requirement for state targets and reporting will allow comparisons within the next five years.

Factors affecting results and what needs to be done
Local governments and providers own and operate the buses that ODOT holds security interest in. Providers decide when to request vehicle replacements based upon vehicle condition and their ability to meet requirements for local match. Oregon transit providers often have difficulty raising the required local funds to maintain an optimum replacement schedule, and rely on the state Special Transportation Fund (STF) for local match.

The STF has been declining since 2015, making it increasingly difficult for local providers to meet local match requirements. Ongoing STF funding stability will be essential in meeting this goal.

About the data
ODOT RPTD maintains a registry of vehicles and providers are required to report condition and mileage. Transit providers in Oregon report on their federally funded ODOT RPTD assets through the Oregon Public Transit Information System database.

This new key performance measure provides a better understanding of the state’s vehicle assets used in public transit and will help the state to prioritize resources to keep vehicles in a state of good repair.

Contact information
Christine West
ODOT Rail & Public Transit Division
503-986-3410

Data sources
ODOT Rail and Public Transit Division, Policy Unit
Oregon Public Transit Information System
National Transit Database
Passenger rail ridership: Number of state-supported rail service passengers

Our strategy
Promoting transportation options: ODOT seeks to increase the use of transportation modes other than Single Occupant Vehicles (SOV’s) by improving existing facilities and creating new transportation opportunities. Alternative modes of transportation help reduce travel delay, congestion, and stress on the highway system while providing multiple options for Oregonians.

About the target
The target projections are based on historical increases in state-supported Cascades trains and affiliated POINT Buses. An increase in rail ridership is desirable and could be an indication that use of transportation alternatives in Oregon have expanded. (NOTE: POINT Bus ridership numbers are actually part of Passenger Rail program ridership and are represented in this graph.) POINT Buses serve to connect the passenger rail system to communities that lack passenger rail service.

How we are doing and how we compare
Ridership reached its highest level of 215,096 rides in 2013. In 2014 and 2015, ridership decreased likely due to rail-line construction resulting in poor on-time performance and a modified schedule and lower gas prices. Ridership has remained flat from 2015 through 2017 averaging 193,823 riders per year. The probable causes of ridership decrease are schedule changes which did not have the desired outcome, a reduction in gas prices which encourages the use of SOV’s and new, privately owned bus service on the Eugene-Portland corridor. Some Washington schedule changes caused Oregon to alter schedules to provide a continuous trip through the entire corridor.

Fact
Since 2008, passenger rail ridership has averaged 197,528 exceeding the average goal for that period by 1,428.
as opposed to a layover in Portland. Oregon made other well intended schedule changes that, unfortunately, had a reverse effect on ridership. The 2016 Goal was adjusted downward to better reflect anticipated ridership. The Goals for 2017, 2018 and 2019 are based on the 2016 Goal, increased by 3% per year. The 2020 and 2021 goals are based on the 194,014 three year actual average increased by 2% per year. The program aspires to increase goals and actual ridership numbers by 3% in the future. Actual ridership has not kept pace with yearly goals. Oregon continues to search for ways to improve service and increase ridership. The Passenger Rail program closely tracks ridership on a per train basis to determine which trains and, consequently, which time slots carry the most passengers. Gathering this data will ultimately allow the program to fine tune train schedules. The program also works with host railroads regarding track maintenance and improvement projects which can effect on time performance and reliability. Both parties attempt to minimize interference with the Passenger Rail program when at all possible.

Oregon’s passenger rail program is modest compared to Washington’s and California’s programs. These states have aggressive investment programs for passenger rail resulting in corresponding benefits for passenger and freight rail.

Factors affecting results and what needs to be done
In general, increases in ridership result from reduced travel time, more train/bus options and on-time reliability. These conditions are largely dependent upon sufficient capital investment. Washington and California have spent $800 million and $3.5 billion respectively over the past six years to improve travel time, frequency and on-time reliability. Washington intended to increase daily round trips between Portland and Seattle in 2017. Washington has postponed the additional round trips until Positive Train Control (PTC) is activated. When the additional trips begin, Oregon anticipates a reduction in overall operating costs and increased ridership due to increased connection efficiency. Oregon updated its schedules to offer better connections for Willamette Valley passenger rail users. This is but one step in supporting the continued growth in passenger rail ridership. ODOT Rail is seeking additional, dedicated funding to continue with current service levels and, more importantly, increase ridership by improving frequency, on-time performance and reliability.

About the data
The reporting cycle is calendar year. The data is provided by Amtrak, Oregon’s passenger rail service provider. It represents the total number of rail passengers each year and does not indicate how this number relates to changes in the population of Oregon. As the population of Oregon grows and gas prices increase, the number of rail users is likely to rise, but a large number of users do not necessarily correlate to an increased proportion of the population using rail service.

Contact information
Joe Denhof
ODOT Rail and Public Transit Division
503-986-4169

Data source
ODOT Rail and Public Transit Division
Our strategy
Oregon’s transportation system supports the state’s quality of life and economy across a diversity of geographies, economy and people. Public transportation is a key piece of the transportation system for those who cannot or choose not to drive. The demand for public transportation in Oregon is anticipated to increase as population grows.

Starting in 2019, an influx of funds from the Statewide Transportation Improvement Fund (STIF), created as part of the 2017 transportation funding package, Keep Oregon Moving, will fund new and expanded public transportation service, resulting in increased ridership throughout Oregon. This Key Performance Measure will assist ODOT in assessing the impact of the new funds.

With more money, transit providers will:
- Increase service levels in urban and rural areas
- Offer more intercity and regional route service
- Improve transit supports such as increasing the number of improved passenger facilities, and expanding use of technologies such as electronic fare and other integrated fare systems.
- Procure low- and no-emission vehicles.
- Expand services to better serve low income Oregonians.

About the target
The target is an annual goal of 32 rides per Oregonian. The goal will need to be re-evaluated in three to five years. The target is set by evaluating transit ridership trends and population growth over a five year period: 2011 to 2016.

How we are doing
The average number of reported rides per

<table>
<thead>
<tr>
<th>Year</th>
<th>Actual</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>33.17</td>
<td>32</td>
</tr>
<tr>
<td>2012</td>
<td>33.61</td>
<td>32</td>
</tr>
<tr>
<td>2013</td>
<td>32.79</td>
<td>32</td>
</tr>
<tr>
<td>2014</td>
<td>32.62</td>
<td>32</td>
</tr>
<tr>
<td>2015</td>
<td>32.61</td>
<td>32</td>
</tr>
<tr>
<td>2016</td>
<td>31.95</td>
<td>32</td>
</tr>
<tr>
<td>2017</td>
<td>32</td>
<td>32</td>
</tr>
</tbody>
</table>
capita during the 2011 to 2016 period was 32.79 rides per Oregonian. Ridership growth from year to year averaged 0.36% and population growth averaged 1.11%, resulting in a 0.75% average annual decline of rides per capita between 2011 to 2016. The goal is to increase ridership and then maintain the rate of rides at 32 per capita even as the population grows.

Factors affecting results and what needs to be done
The Oregon Public Transportation Plan, to be adopted by the Oregon Transportation Commission in 2018, will encourage ridership increases due to policies that encourage improved transit education, comprehensive planning for transit and better transit facilities among many transit-supportive policies.

STIF will begin to be distributed in 2019, which will initiate improvements in transit. It usually takes one or more years to develop ridership sufficient to determine effectiveness of the investment in new services.

About 90 percent of all trips in Oregon are provided by Lane Transit District, Salem Area Mass Transit District and TriMet. Although all public transit providers in Oregon will be investing in improved services and will show increase in rides, the biggest gains are expected to result from these three agencies.

The cost of providing transit service is going up. Much of the increase of new funds, over time, will be invested in sustaining service levels and other improvements, potentially affecting future ridership increases by limiting the amount of funds available for transit expansion.

ODOT funds have historically contributed an average of 11 percent of the state’s available transit funding. With new funding approved in 2017, ODOT is projected to provide 20 percent of statewide transit funding by 2020. Local government decisions may impact ridership, for example, in some communities there is a need for transit support infrastructure such as stable workforce, secure bus parking, technology, and passenger shelters, resulting in less investment in direct service.

About the data
The data is gathered by the Rail and Public Transit Division using reports from the Portland State University Population Research Center and transit providers.

Contact information
Andrew O’Keefe
ODOT Rail and Public Transit Division
503-986-3267

Data source
ODOT Rail and Public Transit Division;
National Transit Database;
Oregon Public Transit Information System;
Portland State University Oregon Population Report;
Oregon Travel and Activity Survey
Our strategy
Safe and efficient mobility is foundational to the economic opportunity and livability of all Oregonians. By tracking mobility, we consider the perspective of connecting people and goods to the markets they wish to reach. As Oregon grows, more people and freight are squeezed onto a transportation system that cannot expand to keep pace. In other words, as long as the economy continues to grow we can expect total congestion to increase.

While there is no single solution to eliminate congestion, there are different methods available to manage the rate congestion increases. This mobility indicator will help Oregon monitor the level and extent of congestion over time. This information will be used to apply different techniques designed to manage and optimize system performance.

About the Target
Most people are aware traffic congestion causes slower speeds and longer trip times. However, congestion also causes other problems, such as reducing system reliability, fuel efficiency and air quality. Tracking this information reveals whether the duration and intensity of congested periods are rising or falling over time.

How we are doing
There are two types of delay caused by traffic congestion: 1) recurring congestion caused by more trips (demand) than the

The Ratio of Annual Average Daily Traffic to Hourly Capacity (AADT/C) best suits the need to monitor highway mobility in Oregon. AADT/C measures both the extent and duration of congestion, and also highlights where congestion has spread beyond one hour of the day. AADT/C values range from 0 to 14+. Table 1 illustrates the range of values for this metric. The “Number of Congested Lane Miles” represents locations where the AADT/C is a value of 9 or higher.

The goal is to manage state highway system performance in a manner that keeps this measure from exceeding the targeted values.
system is designed to carry, and 2) non-recurring congestion due to activity such as traffic incidents, weather, and construction work zones. Much of the demand for transportation is influenced by economic activity, which is beyond the control of the public sector. However, there are ways in which recurring congestion may be reduced, such as making changes to increase pedestrian and bike use, increasing vehicle occupancy rates (carpools, mass transit, parking fees), reducing trips (affordable housing located near work sites, services and shopping; road pricing), roadway operations (ramp meters, variable speeds), and adding road capacity (new lanes). Non-recurring congestion may be reduced by safety-enhancement projects (reduces crashes), incident response programs (reduces incident clearing times) and roadway operations aimed at enhancing safety or smoothing traffic flow.

<table>
<thead>
<tr>
<th>Table 1. AADT/C Values for Congestion Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
</tr>
<tr>
<td>Uncongested traffic flow</td>
</tr>
<tr>
<td>Transitioning to moderate congestion</td>
</tr>
<tr>
<td>Moderate congestion to congested conditions</td>
</tr>
<tr>
<td>Congested and transitioning to very congested</td>
</tr>
<tr>
<td>Very congested and transitioning to extremely congested</td>
</tr>
</tbody>
</table>

Factors affecting results and what needs to be done
We have a three-part approach aimed at providing mobility:
- Optimize use of infrastructure,
- Manage the traffic network, and
- Support transportation options.

We optimize the use of infrastructure by leveraging new technology and construction techniques to improve performance and safety. We invest in safety projects to decrease crash-induced congestion and construction projects designed to relieve bottlenecks. Through traffic network management we employ new technology to provide timely information to travelers. These systems help travelers choose alternative modes and routes to avoid congestion caused by crashes and other disruptions. Finally, Oregon ranks among the top states for numbers of walk, bike, ride-transit, telecommute and shared-rides. Oregon’s strategies to provide transportation options reduce single-vehicle occupancy use, while improving the health and wellness of Oregonians, promoting environmental benefits and providing access to jobs, goods and services.

About the data
The data used to calculate this measure comes from the annual Highway Performance Monitoring System (HPMS) data submittal to FHWA. The HPMS was developed to measure the scope, condition, performance, use and operating characteristics of the Nation’s highways. This data is also used to determine the apportionment of Federal-aid Highway Program funds to states as well as serves as the primary data source for the biennial “Conditions and Performance Report” to U.S. Congress, which supports the development and evaluation of the FHWA’s legislative, program and budget planning activities.

Contact information
Rich Arnold
ODOT Transportation Development Division
503-986-4218

Data source
Highway Performance Monitoring System
Walkways and Bikeways

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

Our strategy
With our local partners, ODOT is working to create safe, walkable and bikeable communities in Oregon. To further that goal, Oregon law requires walkways and bikeways be provided when roads are constructed or rebuilt, and mandates that at least one percent of the state highway fund be used for walking and biking facilities. This performance measure reports our progress in adding walkways and bikeways to the state system.

About the target
This target addresses the percentage of total highway roadside miles in urban areas that have complete walkways and bikeways. Urban areas are defined as those areas with populations over 5,000 where the population density meets federal definitions in the area bordering the highway. Small incorporated cities with populations under 5,000 are also included. Walkways must be present, five feet or more in width, and in fair or better physical condition. Bikeways are defined as a marked and striped bike lane five or more feet in width, a paved shoulder five feet or more in width, a travel lane shared by people biking and people driving where the posted speed is 25 MPH or less, or a multi-use path within the highway right-of-way. As walkways are not needed in undeveloped urban fringe areas, ODOT has set the target of providing walkways on 65% of highway roadside mileage in urban areas. The Oregon Transportation Plan seeks to meet this target by 2030, in order to provide Oregonians with good transportation options that include biking and walking.

Factors affecting results
Each year, ODOT builds new and enhances existing bicycle and pedestrian facilities. However, our progress in meeting this target isn’t just determined by how many miles we build each year. As the chart shows, the percent of urban highways with complete walkways and bikeways has trended down in recent years. Why is this happening? Recent
adjustments to the federally defined urban areas brought many new roadway miles into Oregon’s expanding urban areas. As former rural roads, these highways are unlikely to have walkways and bikeways. We also see occasional declines due to jurisdictional transfers, where a local government assumes ownership of a state highway. When such transfers take place, they are typically preceded by significant improvements to the highway, including adding walkways and bikeways, because it is less burdensome for a local government to take responsibility for a road if it is already complete and in good repair. So ODOT may build walkways and bikeways on a highway one year, increasing our progress toward our goals, only to transfer the road into local ownership the next year, causing our percent completed to drop.

How we are doing and how we compare nationally
ODOT is making strategic investments in walking and biking improvements where Oregon communities have identified the greatest need. We collaborate with local governments to fund programs and improvements that support biking and walking, and provide them with technical assistance so that they can ensure local systems are bikeable and walkable as well. As a result, the number of people who walk and bike in Oregon continues to increase. On an average weekday, Oregonians make 8% of their trips on foot and 2% by bicycle. One in five households meets a daily travel need by walking and one in twenty does so by biking.¹ When it comes to commuting by active modes of travel, Oregon is one of the top-ranked states in the nation. We’re #1 for biking to work (2.4% of commute trips), and #7 for walking to work (4.2%). We also saw the highest increase in the use of these modes between 2007 and 2016 of any state.²

Next steps to reach our goals
ODOT completed the Oregon Bicycle and Pedestrian Mode Plan, which defined new policies and strategies meant to make biking and walking safe, comfortable options that provide good connections for Oregonians and their communities. The plan identifies multiple ways to measure our progress in meeting that goal. ODOT will review this performance measure and may recommend changes based on the direction set by the plan.

About the data
This performance measure was revised in 2006 to better reflect the goals of the program and to establish clear targets. In 2008, ODOT completed a two year effort to physically inventory and assess all walkways and bikeways on highways in urban areas and small cities across the state. Since then, the inventory has been updated each federal fiscal year, based on site visits, construction contract review, and highway video logs.

Contact information
Susan Peithman
ODOT Active Transportation Policy Lead
susan.peithman@odot.state.or.us

Data source
ODOT Highway Division:
Bicycle/Pedestrian Program,
Road Inventory & Class Services Unit