



East Burnside Street Lane Reconfiguration

In October 2014, the Portland Bureau of Transportation (PBOT) reconfigured the lanes on East Burnside St, 15th to Laurelhurst Place. PBOT and community leaders worked together to design and implement this safety project with the following goals:

- Improve pedestrian safety and access
- Reduce number and severity of crashes
- Slow speeds
- Support the business district

The project includes the following components:

- Conversion of a westbound travel lane to a center turn lane
- Marked crosswalks with pedestrian islands and signage at 18th, 22nd, and 24th

These changes initially resulted in a decrease in crashes, particularly crashes involving people walking, and reduced speeds. Pre-project modeling predicted an increase in westbound morning commute times during the peak hour, which was realized after project implementation.

Goals	Project Outcomes
WALKING: Improve safety and access for people walking	Added three marked crosswalks and pedestrian islands. Reduced number of travel lanes people must walk across.
CRASHES: Reduce the number & severity of crashes	No reported crashes involving people walking, and no fatal or serious injury crashes. Slight overall crash reduction.
SPEEDING: Slow auto speeds (35 MPH posted speed)	ODOT approved 30 MPH posted speed, implemented 2015.

Speed

The pre-project posted speed on East Burnside St was 35 MPH. The Oregon Department of Transportation (ODOT) approved a speed reduction to 30 MPH along the entire length of E Burnside from the eastern city limit to 14th Avenue, which was installed spring 2016. ODOT approved a further speed limit reduction from 30 mph to 20 mph from 14th Avenue to 30th Avenue in 2021, but PBOT has not evaluated speed on Burnside since that change.

Before- and after-project speed counts were collected along the corridor. The operating speed after project construction only decreased slightly, but still has high compliance with the posted speed. The number of vehicles traveling faster than 35 MPH has decreased significantly.

Posted Speed

Pre-Project



Post-Project



85th Percentile Speed

Speed at which 85% of people are driving at or below; considered the route's operating speed

	Before (35 mph posted)	After (30 mph posted)	Change
Westbound	34 mph	32 mph	-5.8%
Eastbound	35 mph	35 mph	0%

Speeders

Percent of all people driving over 35 MPH

	Before (35 mph posted)	After (30 mph posted)	Change
Westbound	10.8%	1%	-9.8%
Eastbound	18.4%	11%	-7.4%

Data details:

Baseline data was collected at 16th and 24th Avenues.

Post-project data is from 16th, 24th and 30th Avenues.

Crashes

In the 10 years prior to project implementation there were 312 crashes on E Burnside from 15th to Laurelhurst Pl. Of those crashes, 10 people were seriously injured and one person was killed.

PBOT expects the lane reconfiguration will reduce all crashes by 15% since the cross-section remains unbalanced (two travel lanes eastbound and one westbound). The enhanced pedestrian crossings are expected to reduce crashes involving people walking by 46%.

One year post-project data show no fatal or serious injury crashes, and no reported pedestrian and bike crashes. Overall crashes are down slightly.

Burnside Traffic Volumes and Alternate Routes

One concern voiced by neighbors during this process was that motor vehicle drivers on East Burnside would seek alternate routes on neighborhood streets to avoid possible congestion. Average weekday volumes have remained constant on East Burnside, while AM peak volumes westbound have decreased by about 14%.

NE Couch was identified as the likely alternate neighborhood route. Traffic volume and speed counts on NE Couch have varied after project implementation. On some days, NE Couch does experience diversion from East Burnside but peak hour volumes and daily volumes are still considered low for a residential street.

Number of Crashes			
<i>Number of motor vehicle, bicyclist, and pedestrian crashes</i>			
	10-Year Annual Average <i>1/1/04 - 12/31/13</i>	1-Year Post-Project <i>1/1/15 - 12/31/15</i>	Change (%)
Fatal & serious injury crashes	1.1	0	NA
Ped & bike	2.1	0	NA
All severities, all modes	31.2	30	-3.8

East Burnside Traffic Volume			
<i>Number of motor vehicles on E Burnside St in project area</i>			
	Before <i>6/2013</i>	After <i>10/2015</i>	Change (%)
2-HR Peak (WB)	2154	1860	- 14
Westbound ADT	8300	8194	- 1.2
Total ADT	16,997	17,359	+ 2.1

NE Couch Traffic Volumes			
<i>Average of volumes and speeds taken near Floral</i>			
	Before	After	Change (%)
7-9 AM WB Volumes	23	50	+ 117
Daily ADT	429	391	- 8.9
Speeds	20.5	23.25	+ 13.4

Travel Time

Bluetooth data shows that the time required to drive westbound during the morning commute between Chavez and 14th increased by more than one minute after the project was implemented. This increase matches what the City predicted with modeling prior to the project.

TriMet also collected travel time data along East Burnside from Chavez to the Burnside Bridge and reported no increase in travel time after the project was implemented. This may be due to the fact that the more stable travel times are realized west of 14th Avenue along the couplet due to people driving experiencing increased congestion east of the couplet.

Westbound Travel Time (average)			
	Before	After	Time Change
Chavez to 28th			
Average	2:07	2:59	+ 0:52
Light Volume Days	1:44	2:00	+ 0:16
Heavy Volume Days	2:34	4:55	+ 2:21
Chavez to 14th			
Average	4:00	5:21	+ 1:21
Light Volume Days	3:14	4:06	+ 0:52
Heavy Volume Days	6:00	8:00	+ 2:00

Conclusion

The East Burnside Street Lane Reconfiguration, from 15th to Laurelhurst, was intended to:

- Improve pedestrian safety and access
- Reduce number and severity of crashes
- Slow speeds

In the year following the lane reconfiguration:

- Three enhanced pedestrian crossings, including marked crosswalks and pedestrian median islands, were installed on East Burnside at 18th, 22nd and 24th. Walking across East Burnside is easier as there is only one westbound travel lane to cross and a median island to pause at before crossing two eastbound travel lanes. Anecdotal evidence indicates that more people are walking across East Burnside at the marked crosswalks.
- No people were seriously injured or killed on this segment of East Burnside, and there were no reported pedestrian or bicyclist collisions.
- Compliance with the lowered speed limit is high, and traffic volumes have remained about the same.

Phase two of this East Burnside safety project is underway, with ADA compliant curb ramps, curb extensions, a wider pedestrian island at 24th Ave, a new marked crossing and pedestrian island at Floral, new paving from 20th to 32nd, and improved signal timing for the morning commute.

The City will continue to monitor this project and update this report as additional data is available.

Updated Crash Analysis (2023)

PBOT crews constructed the East Burnside Lane Reconfiguration project in 2014. This updated crash analysis (2023) includes pre-project data from 2009 - 2013 and post-project data from 2015 - 2019.

The data shows an increase in all crash types that were evaluated. Pedestrian and bicycle crashes increased most markedly. To better evaluate the effects of this project on crashes, staff compared the percentage change of different crash types with the change citywide and in a 1-mile radius around the project area (a square that included Martin Luther King Jr Boulevard, 60th Avenue, SE Lincoln and Harrison streets, and NE Tillamook Street). Pedestrian crashes and fatal and serious injury crashes of all modes increased in the comparison area in the same time period, but even with those changes factored in, all crash types increased on E Burnside Street.

In response to the increase in crashes following the safety project, staff looked through the crash data to identify patterns and opportunities for fixes and interventions, presented on the next page. There are also some systemic changes that likely impacted the trend. This segment of East Burnside Street became much more active with new apartment buildings and businesses during the post-project period. While PBOT aims to build projects that are responsive to future growth, the large increases in activity on the corridor increased the risk of conflicts between people travelling using all modes. This section of East Burnside Street also functioned as a business district during the post-project period, but the 20 mph business district speed wasn't implemented until 2021.

For better statistical accuracy, PBOT strives to do crash analysis that includes five years of post-project data, which is only available about seven years after the project is complete. To address this delay, PBOT engineers released the initial project report shortly after construction and updated with two years of crash data. For consistency, staff did not change the preliminary crash data in this report and added this updated crash analysis.

Crashes on E Burnside St					
<i>Number of crashes on E Burnside Street between 15th and Laurelhurst avenues</i>					
	Before 2009-2013	After 2015-2019	Change	Citywide and 1-mile average change	Relative change
Fatal and Serious Injury Crashes	5	8	60%	27%	26%
Pedestrian Crashes	7	15	114%	26%	71%
Bicycle Crashes	4	8	100%	-26%	170%
Vision Zero Focus Crashes*	13	26	100%	-5%	111%
All Crashes	149	168	13%	-5%	18%

**Vision Zero focus crashes are all crashes that involved a person dying, a person suffering a serious injury, a person biking, and/or a pedestrian.*

Updated Crash Analysis (2023) - Crash patterns

Pedestrian crashes

- Eight of the 15 pedestrian crashes happened at a signal, at 20th, 28th, and 32nd avenues. Six of the crashes were left turn crashes. PBOT crews installed [left turn calming](#) at 20th Avenue in 2021, and that intersection had a pedestrian head start. There may be opportunities to install left turn calming and pedestrian head starts at the other intersections too.
- Five of the 15 pedestrian crashes happened at 22nd and 24th avenues, where the project installed new crossings with crossing islands. At 24th Avenue, PBOT has [a funded project](#) to add rapid flashing beacons and access management. At 22nd PBOT can explore adding an island and crossing on the east leg of the intersection.
- The other two crashes happened when a driver turned left off of Burnside and hit a pedestrian moving along the north side of Burnside. The safety project added a left turn lane, which can reduce left turning crashes by providing a place for drivers to wait for a gap in traffic, but it may also have reduced the number of turning gaps and therefore opportunities for drivers to turn left. Continuing to reduce travel speed can help prevent these types of crashes in the future.

Bicycle Crashes

- Four of the eight bicycle crashes happened when the person biking was crossing Burnside. Two were at 24th and 32nd avenues, following similar patterns to the ones discussed above at those locations. The other two were at Floral Place and 16th Avenue. PBOT has [a funded project to add a hybrid beacon](#) at E Burnside Street and 16th Avenue.
- Two of the bicycle crashes involved a person driving turning in or out of a driveway and hitting a person biking west-bound. Without bike facilities drawing attention to people biking on this corridor it could be difficult to address these crashes. There may be some opportunities to set back parking leading up to driveways.
- The other two bike crashes had unclear circumstance, including one where it appears two vehicle drivers collided and one vehicle was pushed onto the sidewalk, striking a person biking. The 2021 speed limit reduction and future efforts to reduce speed can decrease the risk of these types of crashes.

Other Fatal and Serious Injury Crashes

- There were three fatal and serious injury crashes that did not involve pedestrians or people biking. In two of those crashes the person killed was riding a motorcycle. Two of the crashes (one motorcycle and one motor vehicle) involved an impaired driver travelling at a high speed and crossing the center line.

PBOT is committed to safety changes on High Crash Network streets. Sometimes these changes are incremental due to budgetary or other constraints. The East Burnside Lane Reconfiguration project was implemented with limited funds. PBOT continues to enhance the original project, including with a reduced speed limit, left turn calming, and crossing enhancements. Physical traffic calming measures like these may help mitigate future crashes. Other efforts to reduce impaired, high-speed driving citywide are also critical.