

SW Capitol Highway Complete Streets Project

Evaluation Report



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SW CAPITOL HIGHWAY COMPLETE STREETS PROJECT



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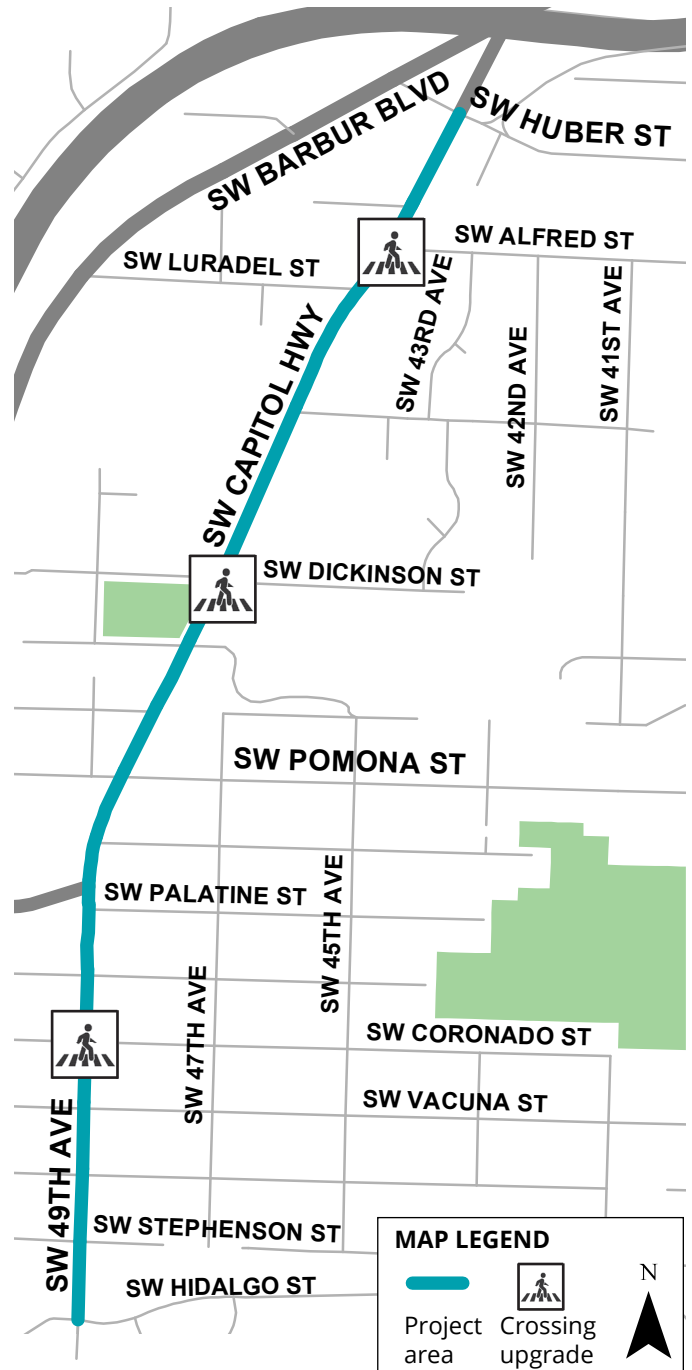
SW Capitol Highway Complete Streets Project Evaluation

June 2025

The SW Capitol Highway Complete Streets project reconfigured lanes and enhanced pedestrian crossings SW Huber Street to Hidalgo Street. It converted four travel lanes with bike lanes to two travel lanes, a center turn lane, and protected bike lanes. Two intersections received pedestrian median crossing islands and three intersections received lighting improvements. Existing bike lanes were upgraded to protected bike lanes with parking or vertical posts. Lastly, the Oregon Department of Transportation (ODOT) approved a speed limit reduction from 35 mph to 30 mph in 2021. These improvements are projected to make it easier and safer to cross the street while still handling the same amount of traffic.

The project was completed in two phases. Phase one consisted of travel lane striping, crosswalk painting, signal updates, and new paint and post protection to the bike lanes. Phase one was completed in late 2019. Phase two built more pedestrian crossings with median islands and lighting at SW Coronado, Dickinson, and Alfred streets. Phase two was completed in 2021. To accommodate extensive changes to traffic patterns after Covid-19, this evaluation only considers travel time, transit, vehicle speed, and vehicle volume data from before March 2020, at which time the road striping was complete but lighting upgrades were not yet installed.

Note: The project area includes SW 49th Ave, which becomes Kerr Parkway at Hidalgo Street. This report will refer to the entire project area from Huber Street to Hidalgo Street as "SW Capitol Highway".



Learn more about this project:
<https://www.portland.gov/transportation/capitol-highway-complete-street>

EVALUATION

PBOT staff collected data before and after the project construction to evaluate changes to speed, transit travel time, vehicle travel time, crashes, and compliance with active transportation guidelines.

Project goals: Reduce speeds, reduce crashes, improve pedestrian crossings, improve access to transit, and enhance existing bike facilities.

Project funding: Funding for this \$275,000 project on SW Capitol Highway came from General Transportation Revenue and local cannabis tax revenue. As a street on the Portland High Crash Network, this project qualifies for Vision Zero funds.

RESULTS

The evaluation shows the projects achieved some project goals with minimal undesirable side effects.

Safety: Speeds and crashes on the corridor both decreased, meeting project goals. Impacts to travel time were within projected estimates.

Access to transit: New crosswalks improved safety for accessing some transit stops. There were no changes to stop frequency and no impact on transit travel times.

Improve pedestrian and bicycle facilities: New marked crossings and improved lighting enhanced pedestrian safety, while physical protection upgraded bike lanes.

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KEY FINDINGS

- Three years after the completion of restriping, **there have been no recorded fatal or serious injury crashes, or bicycle or pedestrian crashes of any injury level.**
- **Median and prevailing speeds decreased moderately** on SW Capitol Highway between 2018 and 2020.
- The number of people driving **more than 10 mph over the speed limit** decreased substantially.
- This project had **no measurable impacts on transit runtime, delay, or variability.**
- **Travel times increased slightly** on SW Capitol Highway after the project. The biggest increases were during evening travel peaks. Travel time increases were still within estimates projected before construction.
- After three new pedestrian crossings were added or upgraded with this project, **89% of the corridor is within the desired distance of a crossing.**

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CRASHES ON SW CAPITOL HIGHWAY

Key findings: Three years after the completion of restriping, there have been no recorded deadly or serious injury crashes or bicycle or pedestrian crashes at any injury level.

PBOT staff focus on five key crash categories:

- Deadly and serious injury crashes
- Pedestrian crashes
- Bicycle crashes
- Vision Zero focus crashes: crashes where a pedestrian or person biking is injured or where anyone is killed or seriously injured.
- All crashes

This report will include the number of crashes before and after project construction, as well as normalized change before and after the project

for crash categories that meet thresholds. The appendix contains the methodology used to determine how many years of crash data are needed and shares when this report will be updated with a comparative analysis for other crash categories.

Phase one of the SW Capitol Highway Complete Streets project was completed in 2019. Pre-project data includes ten years of crash data from 2009 to 2018. Post-project data includes three years of data from 2020 to 2022.

The first table below shows the annual average number of crashes for these time periods. The second table shows a normalized change before and after the project for categories that meet thresholds for comparative analysis.

Crashes on SW Capitol Highway *Annual average of crashes from Huber to Hidalgo streets*

	Before 2009 - 2018	After 2020 - 2022
Deadly and serious injury crashes	.2	0
Pedestrian crashes	1.1	0
Bicycle crashes	.5	0
Vision Zero focus crashes	1.8	0
All crashes	14.7	5.3

Comparative Analysis of Crashes on SW Capitol Highway *Change in crash rates from Huber to Hidalgo streets*

	Before 2009 - 2018	After 2020 - 2022	Change	Citywide and District change	Relative Change
Pedestrian crashes	1.1	0	-100%	-26%	-100%
Vision Zero focus crashes	1.8	0	-100%	-18%	-100%
All crashes	14.7	5.3	-64%	-32%	-47%

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SPEED ON SW CAPITOL HIGHWAY

Key findings: Median and prevailing speeds decreased moderately on SW Capitol Highway between 2018 and 2020.

The number of people driving more than 10 mph over the speed limit decreased substantially.

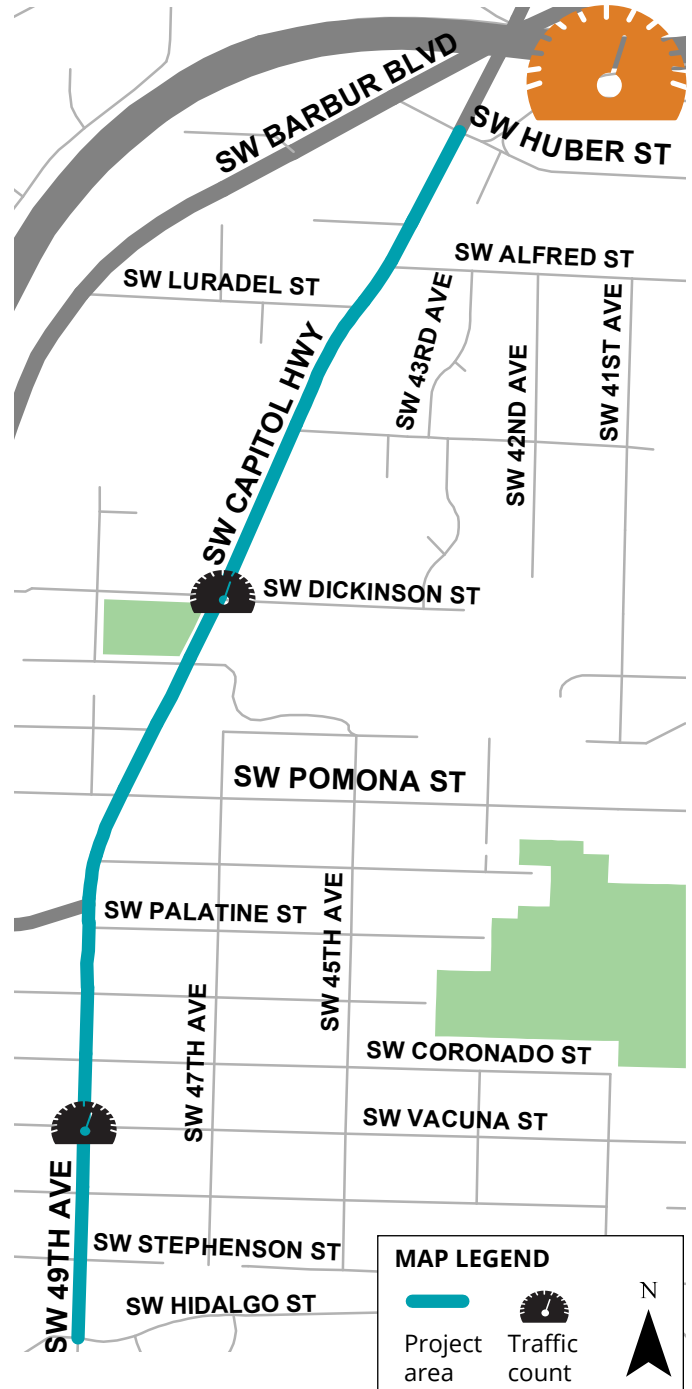
Reducing auto speeds was one of the primary project goals. Reducing vehicle speed, especially top-end speeding, is a powerful tool for improving safety.

PBOT measured traffic speed at two locations on SW Capitol Highway: north of Dickinson Street and north of Vacuna Street. Pre-project counts were collected in spring 2018. Post-project counts were taken in January 2020 after striping work had been completed and before the impacts of Covid-19 were widespread. This report cannot definitively explain why speed increased or decreased where it did. The speed limit was 35 mph when pre- and post-project counts were taken.

Three speed measures were evaluated:

- Median speed (50th percentile)
- Prevailing speed (85th percentile)
- Top-end speeders

See the Appendix for more details on speed analysis.

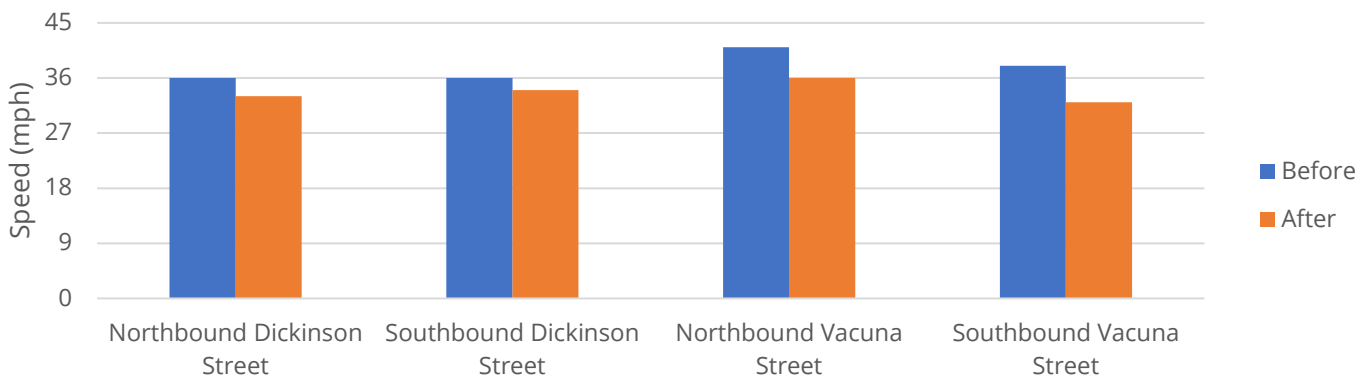


SW Capitol Highway at:	Median Speed	Prevailing Speed	Top-End Speeders
SW Dickinson Street	7% ↓	7% ↓	77% ↓
SW Vacuna Street	14% ↓	16% ↓	90% ↓

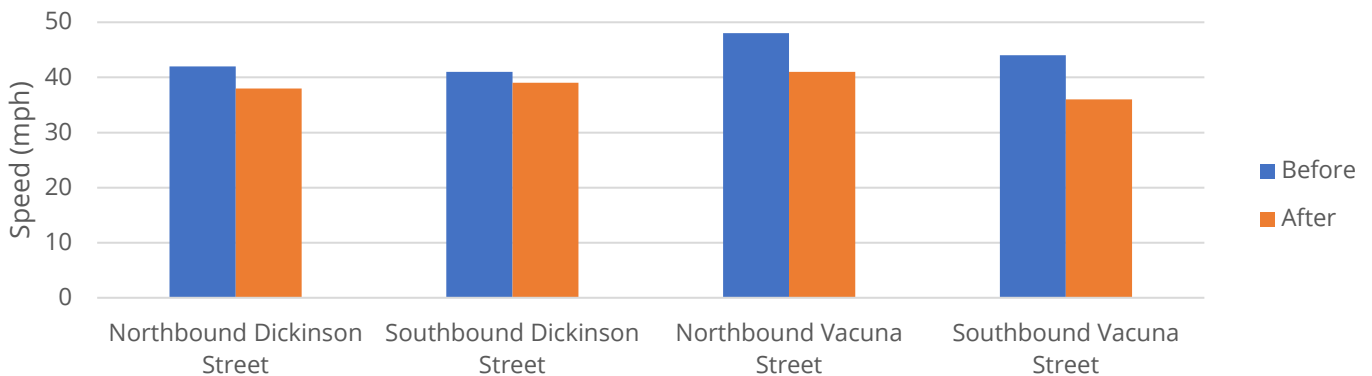
SPEED ON SW CAPITOL HIGHWAY

Median and prevailing speeds decreased on SW Capitol Highway. Prevailing speeds at SW Vacuna Street were higher than Dickinson Street before project construction and decreased 16%, from 46 mph to 39 mph. Prevailing speeds at Dickinson Street decreased from 42 mph to 39 mph. With a speed limit of 35 mph at both locations during the period of measurement, the share of drivers speeding more than 10 mph over the speed limit decreased 75% at Dickinson and 90% at Vacuna streets after project construction. Traffic volumes were similar between all measured locations, ranging from 14,435 vehicles in 2018 to 13,233 in 2020.

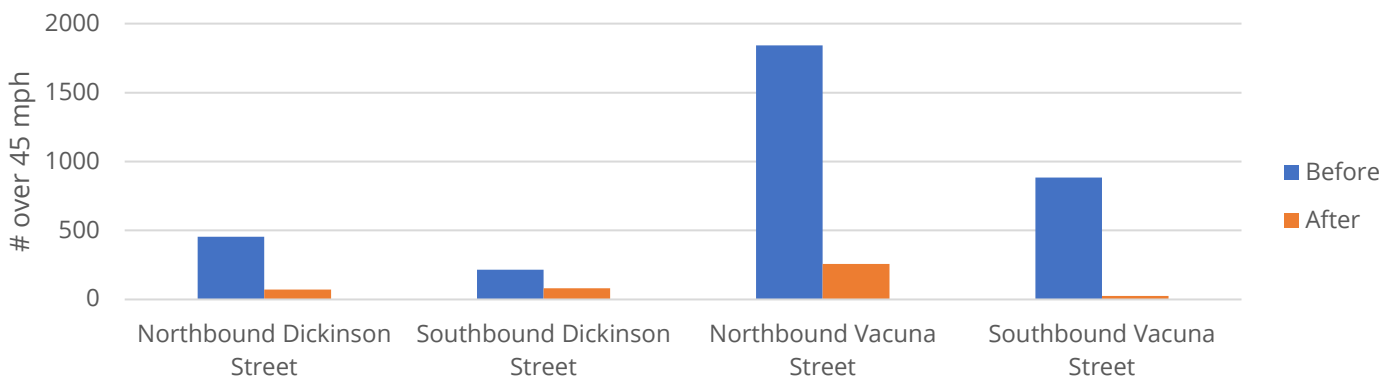
SW Capitol Highway | Median Speed



SW Capitol Highway | Prevailing Speed



SW Capitol Highway | Daily Number of Drivers 45+ mph





VEHICLE TRAVEL TIME

Key findings: Travel times increased slightly on SW Capitol Highway after the project. The biggest increases were during evening travel peaks.

Increases were within estimates projected during project development.

Roadway reorganization projects like the SW Capitol Highway Complete Streets project often raise concerns about vehicle congestion and travel time. PBOT used an INRIX data set to measure travel time in project segments. PBOT staff analyzed weekday data for November, December, and January 2018/2019 (before) and November, December, and January 2019/2020 (after).

The data include vehicle travel times on SW Capitol Highway from Huber to Hidalgo streets. Two measures were evaluated:

- **Median travel time:** Half of the data were faster than this speed, and half were slower.
- **90th percentile travel time:** Only 10% of data were slower than this travel time.

Median travel indicates about how long it takes to travel along the corridor segment. Ninetieth percentile travel time indicates about how long slower trips take along the corridor segment.

Pre-project modeling estimated increased travel times of 13 seconds in the northbound evening peak and 30 seconds in the southbound evening peak. This estimate was calculated for the same segment of SW Capitol Highway, from Huber to Hidalgo Streets.

Measurements after substantial project completion found that median travel times at all hours increased slightly to moderately, at 2.3% (2 seconds) in the northbound direction to 10.3% (11 seconds) in the southbound direction. Increases in the evening peak were the greatest but still below model estimates at 7.7% (9 seconds) northbound and 15% (16 seconds) southbound.

The largest changes to travel time were found in the 90th percentile times, which increased 18.4% (24 seconds) northbound and 20.7% (25 seconds) southbound. This means the longest trips are taking longer. These trips remain below the pre-project estimate of travel time increase for southbound evening traffic of 30 seconds.

Transit performance is usually expected to follow trends for other vehicles when no special accommodations are made as part of a project. An analysis of available transit data found no noticeable change in transit runtime, delay, or variability for this corridor. The analysis was not included in this report because this project did not add any infrastructure intended to impact transit performance. Additionally, this project was completed in late 2019 so reliable and representative data is not available due to changes in transit usage related to Covid-19.

The graphs on the next page show median and 90th percentile vehicle travel times for northbound and southbound traffic. Data is averaged over fifteen minute increments.

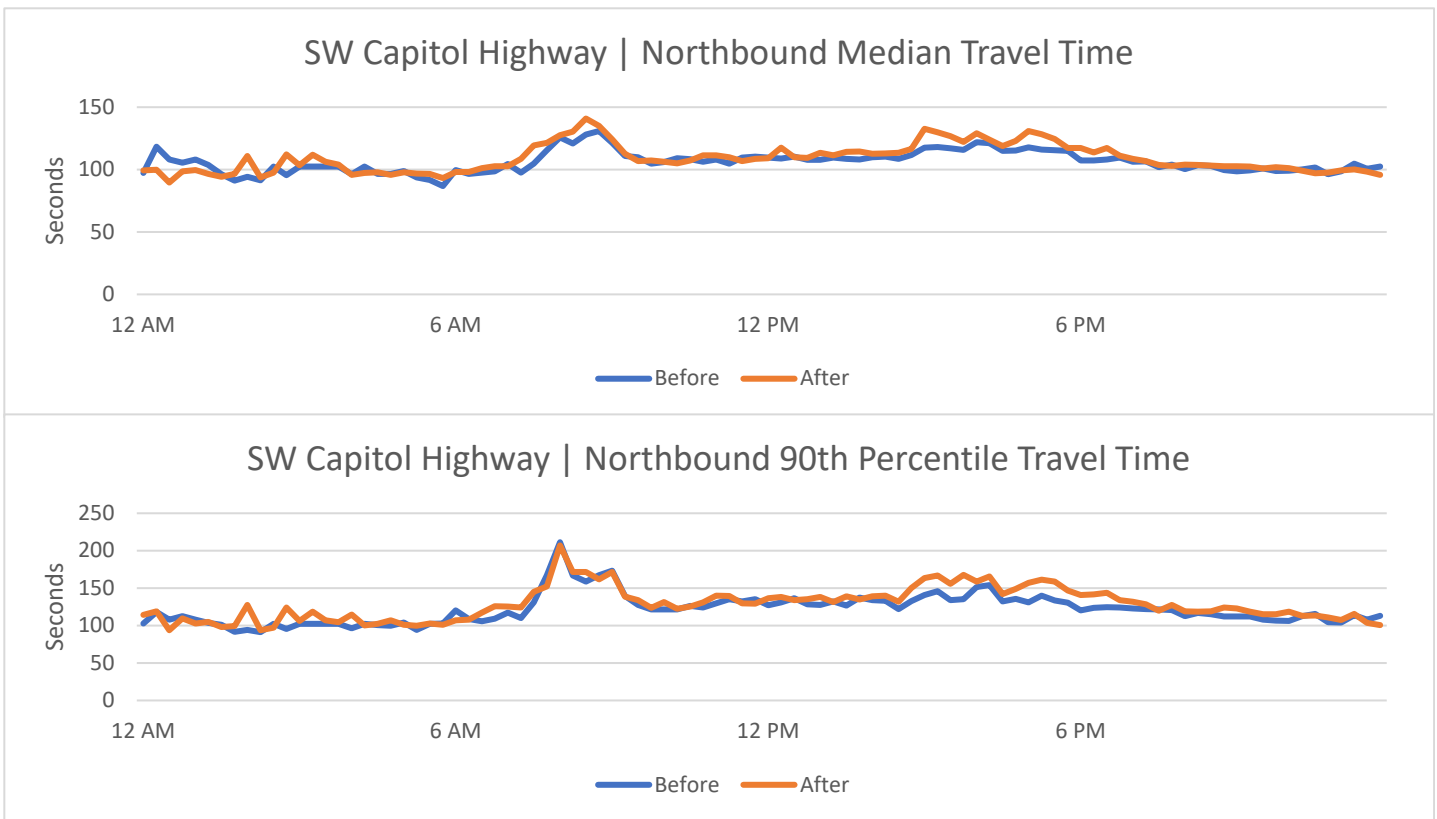
See the Appendix for more details on travel time analysis.

SW CAPITOL HIGHWAY TRAVEL TIME HIDALGO STREET TO HUBER STREET (NORTHBOUND)

The graphs below show vehicle travel time on SW Capitol Highway from Hidalgo to Huber streets, northbound. The data has been averaged over 15 minute increments.

The graphs show slight increases to median travel time and ninetieth percentile time after project completion. Travel times are very similar during off-peak hours. Ninetieth percentile travel time appears to be higher in the morning peak.

Median travel time increased about two seconds in the northbound direction on SW Capitol Highway, from 106 seconds to 108 seconds. During peak periods, the median travel time increased seven to eight seconds after the project. The Ninetieth percentile travel time increased 12 seconds throughout the whole day. The largest increase in Ninetieth percentile travel time occurred during the evening peak when travel time increased 24 seconds, or 18%. During the morning peak, the Ninetieth percentile travel time increased 1%, or two seconds. Median travel times during peak periods ranged from 120 seconds to 123, while averaging 106 seconds throughout the whole day.

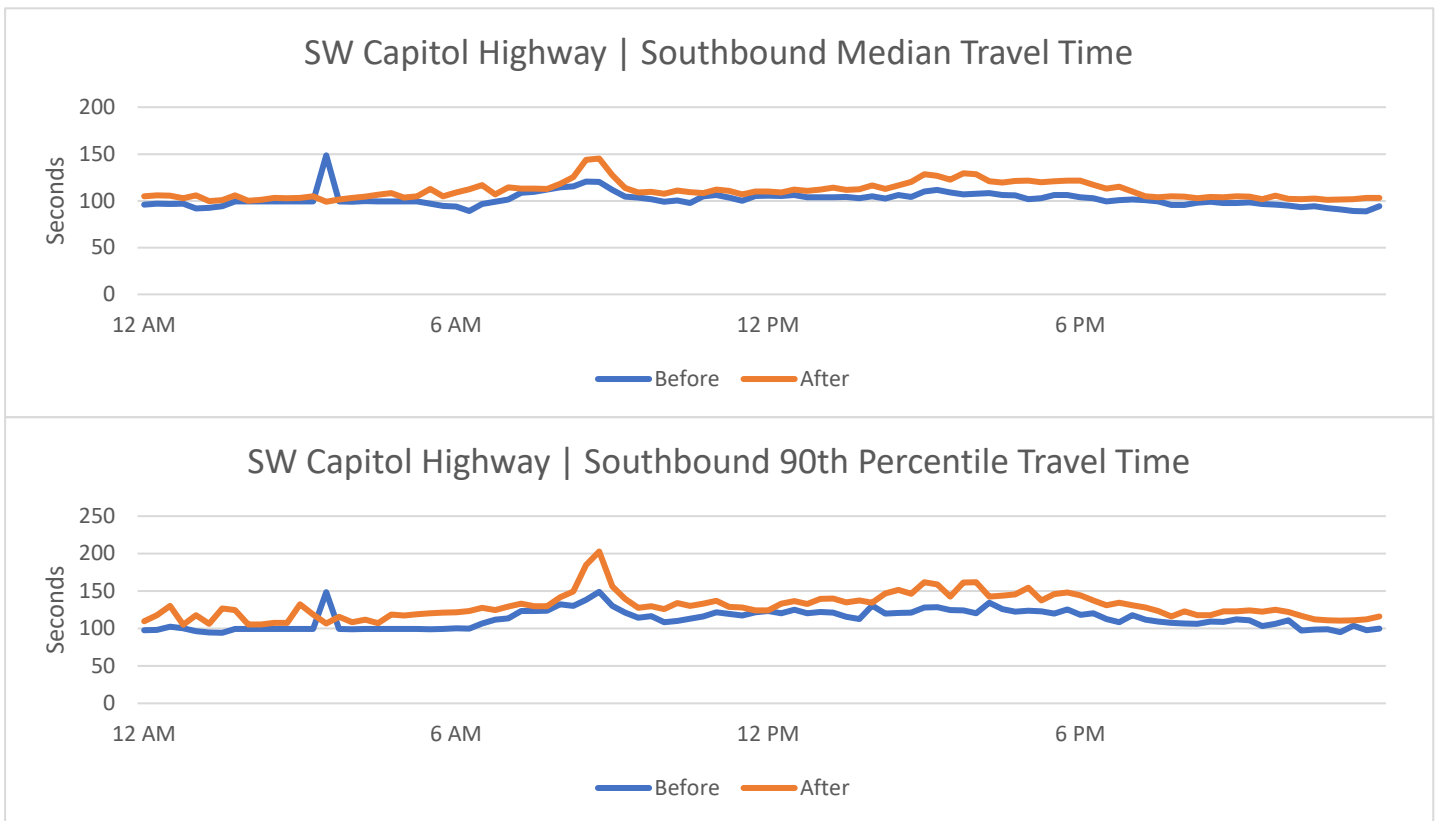


SW CAPITOL HIGHWAY TRAVEL TIME HUBER STREET TO HIDALGO STREET (SOUTHBOUND)

The graphs below show vehicle travel time on SW Capitol Highway from Huber to Hidalgo streets, southbound. The data has been averaged over 15 minute increments.

The graphs show a slight but consistent increase to median travel time throughout the whole day. There is a slight increase during the morning peak. Ninetieth percentile time is also higher after the project. Similar to northbound travel, there was an increase in Ninetieth percentile travel time in the morning peak. The conventional morning peak period and evening peak periods both increased at similar rates.

The median travel time on SW Capitol Highway increased 11 seconds over the whole day, or 17%. The biggest increase to median travel time was during the evening peak, when it increased 16 seconds or 15%. Ninetieth percentile travel times increased 21 seconds throughout the whole day, or 18%. The largest increase to Ninetieth percentile travel time was during the morning peak, at 26 seconds or 20%.



EQUITY

Transportation is responsible for 44% of Portland's carbon emissions according to the [Climate Emergency Dashboard](#). Improving active transportation infrastructure like the new and improved crossings, better bus stops, more efficient bus operations, and safer protected bike lanes in this project is a key tool to convert car trips to walking, biking, and transit trips and reduce Portland's carbon emissions.

Communities of color and low-income households are disproportionately impacted by traffic violence. Air pollution is worse in communities of color and low-income communities, frequently spurred by vehicle exhaust. Many of Portland's poorest community members and community members with disabilities cannot afford or are unable to drive a car. Improving safety on our streets and comfort of getting around without a car supports PBOT's equity goals by disproportionately improving safety and mobility for people of color and community members living on a low income.

PBOT uses a tool called the [Equity Matrix](#) to determine geographic prioritization of projects. The PBOT Equity Matrix assigns a score (between 2 and 10) to every census tract using the demographic variables of race, ethnicity, and income. Race and ethnicity are combined for a rating on the index from 1 to 5. For the race and ethnicity score, the higher the percentage of residents who self-identified in the U.S. Census as people of color or Latinx (of any race) in a census tract, the higher the score. Income is also ranked from 1 to 5. The lower the median income in a census tract, the higher the score.

The SW Capitol Highway Complete Streets Project spans two census tracts with an average equity matrix score of 6.

CONCLUSIONS

The findings in this report suggest SW Capitol Highway south of Huber Street now better serves all people using the street. The project achieved goals of improving safety with minimal impact to traffic flow. Vehicle speeds, especially top-end speeding, have substantially decreased. Three crosswalks were improved and bike lanes were upgraded along the entire project area. There was no measured impact to transit travel times. Vehicle travel times had minimal increases and fell within pre-project estimates.

NEXT STEPS

Further Improvements and Modifications

Additional lighting improvements are planned on SW Capitol Highway from Garden Home Road to Stephenson Street. This project is expected to begin construction in late 2025.

Crash Evaluation

The ODOT releases full crash data in calendar year batches with a two-year delay. This report will be updated in 2026 and 2031 with five and 10 year datasets.

Questions?

[PBOT Vision Zero Contact](#)

visionzero@portlandoregon.gov

APPENDIX - ANALYSIS METHODOLOGY

The Vision Zero evaluate webpage has an [Evaluation Methodology Appendix](#) that offers more details on how staff conduct evaluation analysis for crashes, speed, vehicle travel time, and active transportation improvements.

This appendix includes values used in the evaluation that are specific to the SW Capitol Highway Complete Streets project.

Crashes

Based on the threshold analysis described in the methodology appendix, the following number of years of post-project crash data are needed for comparative analysis by crash category:

	SE Huber to Kerr Parkway
Deadly and serious injury crashes	More than 10 years
Pedestrian crashes	3 years
Bicycle crashes	10 years

Given these thresholds, **staff used ten years of pre-project crash data for the analysis.**

This project is in District 4, therefore District 4 crash data is used for establishing the normalization coefficient in the comparative analysis. The following values were used to calculate a relative change:

	Citywide Change	District 4 Change	Average
Pedestrian Crashes	-2%	+49%	-26%
Vision Zero Focus Crashes	+11%	-46%	-18%
All Crashes	-14%	-50%	-32%

Speed

This report used the following speed counts:

- North of SW Dickinson Street: pre-project April 2018, post-project January 2020
- North of SW Vacuna Street: pre-project May 2018, post-project January 2020

Vehicle travel time

For this evaluation, staff used a minimum confidence score of 20 and a C-value of 50 for graphing and statistical analysis.

Active transportation improvements

This project is in a pedestrian district north of SW Dickinson Street.