

122nd Avenue Crash Summary

NE Marine Drive to SE Foster Road

March 2018

Key Findings

- The incidence of pedestrian crashes is about 50% higher than the Citywide average, with 39 crashes coded as involving pedestrians between 2011 and 2015.
- In 2011, the average distance between pedestrian crossing improvements (signals or pedestrian islands) was over ¼ mile, or approximately 1400 feet. Since then pedestrian projects have reduced that distance to 935 feet, or about 4 blocks. This is still further than most pedestrians will walk out-of-direction and is further than guidance from Ped PDX, Portland’s Pedestrian Plan.
- Pedestrian crashes at night are still overrepresented compared to other modes (49% at night vs. 28% for bike and auto nighttime crashes.)
- At five feet in width, unprotected from adjacent auto lanes and the door zone of parked cars, the existing bike lanes are substandard for the traffic volumes and speeds on 122nd Avenue. Additionally, bike lanes are shared with right turn lanes at major intersections, which does not meet the City’s best design practice.
- The incidence of crashes at driveways is twice as high as the Citywide average. Crashes at driveways are almost always classified as ‘turning’ or ‘angle’ crashes. Consequently, the incidence of turning crashes on 122nd is about 50% higher than the Citywide average. ‘Turning’ crashes and ‘angle’ crashes are typically more severe and result in more injuries and deaths.
- 4% of crashes on 122nd Ave involve alcohol, which is twice the Citywide average.

Corridor Data

Corridor Data Overview	
Average daily traffic volume	Ranges from 15,000 south of Holgate to 25,000 between NE Broadway and SE Powell.
Roadway section curb to curb	5 travel lanes with center turn lane, bike lanes & parking both sides
Total roadway width	Typ. 76’
Total length of corridor	33,650 feet (6.4 miles)
Posted speed	35 MPH south of Sandy, 45 MPH north of Sandy

Crash Summary Data, 2011-2015	
Injuries and Fatalities	Crashes by Top 3 Location Types
1 Fatality*	803 Intersection crashes (54%)
*3 additional fatalities were reported in 2017	420 Midblock, straight crashes (28%)
19 Severe or Incapacitating Injuries (Inj A)	272 Driveway related crashes (18%)
175 Moderate Injuries (Inj B)	
996 Minor Injuries (Inj C)	Crashes by Top Collision Types
669 Property damage only crashes	691 Rear-end (46%)
1500 Total Reported Crashes	488 Turning (33%)
	112 Sideswipe, passing (7%)
39 Total crashes involving pedestrians	97 Angle (6%)
43 Total crashes involving bicyclists	39 Pedestrian (2.6%)

High Crash Network Intersections Along 122 nd Avenue		
<i>Crashes below are only fatal crashes and injury crashes, 2011 to 2015</i>		
Intersection	Citywide Crash Rank	Number of crashes
SE 122 nd & Stark	#1	122 crashes, incl. 1 ped crashes & 2 bike crashes
SE 122 nd & Division	#3	117 crashes, incl. 4 ped crashes & 1 bike crash
NE 122 nd & Glisan	#6	90 crashes, incl. 2 ped crashes & 5 bike crashes This is also a high crash bike intersection
SE 122 nd & Powell	#7	79 crashes, incl. 2 ped crash & 3 bike crashes
NE 122 nd & Halsey	#11	79 crashes, incl. 2 ped crashes & 0 bike crashes
NE/SE 122 nd & Burnside	#32	49 crashes, incl. 5 ped crashes & 1 bike crash
SE 122 nd & Holgate	#41	40 crashes, incl. 3 ped crashes & 0 bike crashes
SE 122 nd & Foster	#48	41 crashes, incl. 0 ped crashes & 0 bike crashes

Pedestrian & Bicyclist Crossing and Crashes

The roadway width and high speeds on 122nd Avenue make it difficult for pedestrians and bicyclists to navigate. There are 36 enhanced pedestrian and/or bicyclist crossings along the entire corridor. The average distance between these crossings is about 935 feet, or nearly 4 blocks. In general, pedestrian enhancements are provided at most bus stops. There are three bus stop locations without enhanced crossings: SE Reedway (SB only), NE Davis St and NE Multnomah St. These locations should be evaluated for pedestrian improvements. NCHRP suggests active or enhanced markings when crosswalks are marked. In general, crosswalks should include actuation for pedestrians, except perhaps where volumes are lower, such as south of Holgate Blvd.

There is a high incidence of pedestrian crashes along 122nd Avenue, with the corridor averaging eight pedestrian crashes per year. Of pedestrians hit, 90% were hit while crossing 122nd Avenue; 30% were crossing at a midblock location and nearly 50% were at signalized intersections. At midblock locations 80% of pedestrian crashes occurred at night. In more than half of the crashes at signalized intersections, pedestrians were crossing with the signal and hit by left or right turning drivers. Though 122nd Avenue generally has street lights, midblock crossings should be evaluated for pedestrian scale lighting. Leading pedestrian intervals should also be evaluated to mitigate the pedestrian and turning vehicle conflict at signals.

A high number of rear-end crashes are reported at Oregon St and Stephens St due to cars stopping for peds. Recently installed flashing beacons should mitigate this issue, but these locations should be monitored.

More than 8 bicycle crashes occur each year along 122nd Avenue, nearly all resulting in injury or fatality to cyclists. Although there are bike lanes along the majority of 122nd Avenue, the existing 5-foot bike lanes and shared bike/right turn lanes at major intersections are substandard. Bike lanes on a high speed and high-volume roadway like 122nd Avenue should be protected from moving traffic, should be buffered from parked cars and should be continuous at major intersections. More than one-third of bike crashes occur at driveways along 122nd Avenue and nearly one-third of bike crashes are coded as right hook crashes at signals. The cyclist was judged to have the right-of-way in more than half of these bike crashes; only a few involved wrong-way riding. More information is needed, but on-street parking may be a factor in bike crashes at driveways.

Driveway Crashes

Numerous driveways and access points along 122nd Avenue are a significant cause of traffic crashes. The incidence of crashes at driveways along 122nd Avenue is twice as high as the citywide average. The commercial zoning on 122nd has resulted in many businesses set-back with driveways leading to large parking lots. These numerous driveway entrances (often located near busy intersections) create conflict areas for pedestrians, bicyclists and motorists. Limiting access and reducing the number of access points is recommended to reduce driveway crashes.

Recommendations

Add bike lane extensions through unsignalized intersections and green paint at conflict areas leading up to signalized intersections	Funded; construction 2018
Access management where turning crashes at non-signalized intersections or driveways would be mitigated. Funded projects include: <ul style="list-style-type: none">• NE 122nd/Glisan• NE 122nd/Halsey	ARTS projects funded for 2020. Other locations as need and funding are identified.
Construct pedestrian crossing improvements at bus stops where no improvements exist: SE Reedway, NE Davis & NE Multnomah	Improvement is funded at NE Davis
Evaluate on-street parking removal to address visibility limitations that may be contributing to a high number of crashes at driveways, particularly bicycle crashes at driveways.	
Consider lane reductions on north and south ends where traffic volumes are lower and conversion would not result in diversion or significant travel time increases for autos. This would allow for more robust pedestrian facilities and/or protected bike facilities.	

Appendix: Ped Crossings along 122nd Ave

Distance to crossing to south	Center of Crossing to Center of Crossing	Device
	SE Foster Road	Signal
1420'	Springwater Trail	Signal
1035'	SE Harold St	Signal
995'	SE Raymond St	Island Only
535'	SE Schiller St	Island Only
800'	SE Holgate Blvd	Signal
850'	SE Boise St	Beacon
850'	SE Bush St	Hybrid Signal
960'	SE Powell Blvd	Signal
1385'	SE Woodward St	Hybrid Signal
1175'	SE Division St	Signal
1390'	SE Lincoln St	Beacon
410'	SE Stephens St	Beacon
935'	SE Market St	Signal
600'	SE Madison (Pedestrian signal)	Signal
505'	SE Main St	Beacon
765'	Midland Library/Morrison St	Beacon
850'	SE Stark St	Signal
805'	SE Ash St	Signal
470'	E Burnside St	Signal
1385'	NE Glisan St	Signal
715'	NE Oregon St	Beacon
1950'	NE Halsey St	Signal
1335'	NE San Rafael St	Signal
2900'	NE Brazee St	Ped Bridge
600'	NE Russell St	Beacon
500'	NE Stanton St	Beacon
875'	NE Fargo St	Signal
1050'	NE Fremont St	Signal
1330'	NE Shaver St	Signal
685'	NE Skidmore St	Signal
1700'	NE Erin Way	Signal
470'	NE Marx St	Signal
975'	NE Whitaker Way	Signal
1480'	NE Airport Way	Signal
900'	NE Marine Drive (new signal 2018)	Signal