

14th Avenue/Walnut Road Speed Limit Revision

Prepared: 12/14/2017

Speed Study Summary

Location	Date	Traffic Volume	85 th Percentile Speed (mph)	Average Speed (mph)	Minimum Speed (mph)	Maximum Speed (mph)	10 mph Pace	% of Total in 10 mph Pace
Walnut Road east of Ethel Street	March, 2016	915	38.1	33.3	10.1	49.6	28-38	73.7%
Walnut Road west of Walnut Loop	March, 2016	959	36.5	30.8	10.3	49.7	26-36	65.5%
Walnut Road east of Walnut Loop	March, 2016	884	37.5	31.9	10.1	49.9	27-37	67.0%
Walnut Road west of Division Street	March, 2016	871	35.3	30.4	10.2	48.4	26-36	72.8%

Accident History Summary

Staff reviewed the 3-year accident history, January 1, 2014 thru December 31, 2016, for 14th Avenue and Walnut Road between Cooper point road and Division Street.

- There were no accidents that indicated speed was a contributing factor. Accident history showed that there was one accident. The cause was driver judgment error in hitting a fixed object.
 - Driver swerved to avoid an object in the street and collided with power pole guy wire.

01/01/2014 – 12/31/2016

STREET NAME	STREET SECTION	NUMBER OF ACCIDENTS	PRIMARY TYPE OF ACCIDENT
Walnut Street	West of Division Street	1	Fixed Object

Under 23 United States Code - Section 409, this data cannot be used in discovery or evidence at trial in any action for damages against the City of Olympia, or the jurisdictions involved in the data.

Street Characteristics

Street and Driveway count:

- 14th Avenue/Walnut Road between Cooper Point Road and Ethel Street
 - Commercial driveways – none
 - Residential driveways – One (1) multi-family on north side of street, three (3) on south side of street
 - Intersecting Streets include:
 - Cooper Point Road (both sides of 14th Avenue/Walnut Road, 4-way intersection), stop control
 - Tabitha Court (south side of 14th Avenue/Walnut Road, tee-intersection), stop control
 - Cyrene Drive (north side of 14th Avenue/Walnut Road, tee-intersection), stop control
 - Ethel Street (both sides of 14th Avenue/Walnut Road, 4-way intersection), stop control
- 14th Avenue/Walnut Road between Ethel Street and Walnut Loop
 - Commercial driveways – none
 - Residential driveways – Five (5) on north side of street, none (0) on south side of street
 - Intersecting Streets include:
 - Walnut Loop (south side of 14th Avenue/Walnut Road, tee-intersection), stop control
- 14th Avenue/Walnut Road between Walnut Loop and Division Street
 - Commercial driveways – none
 - Residential driveways – Fourteen (14) on north side of street, eleven (10) on south side of street
 - Intersecting Streets include:
 - Bing Street (south side of 14th Avenue/Walnut Road, tee-intersection), stop control
 - Division Street (both sides of 14th Avenue/Walnut Road, 4-way intersection), stop control

Street Geometrics/CrossSection:

- 14th Avenue/Walnut Road is generally a two-lane street with left-turn channelization at Cooper Point Road and a westbound bike lane from about 230-feet east of Ethel Street to Tabitha Court.
- 14th Avenue/Walnut Road is generally an uphill grade from Cooper Point Road to Ethel Street going eastbound, continuing with a downhill grade and then an uphill grade from Ethel Street to Walnut Loop going eastbound, and then a downhill grade from Walnut Loop to Division Street going eastbound

- 14th Avenue/Walnut Road has horizontal curves between Ethel Street and Walnut Loop. The street was constructed before the area was annexed to Olympia in 1981, and the design speed for these curves is unknown. Fourteenth Avenue/Walnut Road is a Major Collector, which generally has a maximum design speed of 30 MPH. Ball bank maximum readings at 35 MPH, 5 MPH over posted speed limit:
 - Westbound: 3 degrees left west of Walnut Loop and 7 degrees right east of Ethel Street
 - Eastbound: 3 degrees left east of Ethel Street and 6 degrees right west of Walnut Loop
- Developments along north side of 14th Avenue/Walnut Road have built frontage improvements to Olympia standards in place at time of development, including sidewalks and street lights
- 14th Avenue/Walnut Road has sidewalk and planting strip on the north side, from Cooper Point Road to about 230 feet east of Ethel Street, and a short section of sidewalk and planting strip from about 230 feet east of Ethel Street to about 380 feet east of Ethel Street

Other information

- The posted speed limit of 14th Avenue/Walnut Road is 35 MPH between Cooper Point Road and Walnut Loop, and 25 MPH between Walnut Loop and Division Street
- Street lighting along 14th Avenue/Walnut Road:
 - One 138-watt LED streetlight installed on power pole at Cooper Point Road intersection
 - Four 101-watt LED streetlights with 20-watt pedestrian-scale lights installed on City-standard fiberglass poles on north side from Cyrene Drive and just east of Ethel Street
 - One 100-watt HPS streetlight installed on concrete pole at Walnut Loop
 - One 138-watt LED streetlight installed on power pole at Division Street intersection
- Land use is primarily single-family and multi-family residential in character. Olympia Christian School is located south of 14th Avenue/Walnut Road, accessed via Ethel Street intersection. Many residential lots are large and some large forested areas remain undeveloped.
- Bicycle use – June 2016 13-hour study (6 a.m. – 7 p.m.) showed 11 bicyclists used roadway, while 13 bicyclists used roadway during peak periods (7 a.m. -9 a.m., 11 a.m. – 1 p.m., 4 p.m. – 6 p.m.) in February 2016.
- Pedestrian use – June 2016 13-hour study (6 a.m. – 7 p.m.) showed 18 pedestrians used roadway, while 28 pedestrians used roadway during peak periods (7 a.m. -9 a.m., 11 a.m. – 1 p.m., 4 p.m. – 6 p.m.) in February 2016.
- Heavy vehicle / truck use – street is not a truck route, and heavy vehicles comprise about 4% of traffic

Conclusion:

Staff recommends reducing the speed limit for the following safety reasons:

- The physical features of the street alignment, presence of residential driveways and people biking and walking.
- Narrow grass/gravel shoulders for people to walk on and speed of vehicles.
- Safety of people biking due to narrow street width and speed of vehicles.

A consistent speed limit of 25 mph from Cooper Point Road to Division Street will give drivers greater ability to respond to the actions of all other users. All streets are safe and inviting for people walking and biking. Streets are designed to be human scale, but also can accommodate motor vehicles, and encourage safe driving.