

Memorandum

Department of Planning & Development Services



To: Planning and Public Works Committee

From: Jessica Henry, Assistant City Planner *jh*

Date: August 23, 2018

RE: Parking Stall Width Analysis Follow-Up Information

*Forward to
PPW.
moy
8/17/2018*

At the July 19, 2018 Planning and Public Works Committee meeting, Staff presented an analysis of the City’s requirements for parking stall sizes following discussion at the City Council regarding the desire to ensure the City’s standards remain appropriate. The original memo is attached for the Committee’s reference. During the July 19th Committee discussion, Staff was directed to provide additional information regarding the composition of the “U.S. Vehicle Fleet.”

The information in the following table shows the number of vehicles in the U.S. passenger vehicle fleet by type. This data was sourced from the Federal Highway Administration’s National Household Travel Survey 2017 data.

Vehicle Type	Number of Vehicles		
	Sample Size	Sum (Thousands)	Percent
Automobile/Car/Station Wagon	122,391	110,231	49.6
Van (Mini/Cargo/Passenger)	13,184	13,513	6.1
SUV (Santa Fe, Tahoe, Jeep, etc.)	60,353	52,669	23.7
Pickup Truck	46,232	35,429	15.9
Other Truck	1,414	1,126	0.5
RV (Recreational Vehicle)	2,097	1,402	0.6
Motorcycle/Motorbike	9,283	7,321	3.3
Something Else	829	560	0.3
All	255,783	222,253	100


Figure 1: Federal Highway Administration, 2017 National Household Travel Survey (NHTS)

As the table indicates, approximately half of all vehicles fall under the “automobile/car/station wagon” classification, with the combined classifications of SUV and Pickup Truck accounting for another 39.6.% of the fleet. The following section of the report provides the dimensions of some of the largest vehicles classified as Pickup Truck or SUV in the U.S. Passenger Vehicle Fleet.

Comparison Vehicles

Staff selected six commonly referenced large vehicles, with three in the SUV category and three in the Pickup Truck category. The dimensions of these vehicles are provided in the following tables.

Make/Model	Length (feet)	Width (feet)	
2019 Ford F-450	19.3 - 22.1	8.0	
2019 Ram 1500	19.0 – 19.4	6.8	
2018 Ford F-150	17.4 – 20.9	6.6 – 7.1	

Make/Model	Length (feet)	Width (feet)	
2018 Ford Expedition MAX	18.4	6.6	
2018 Chevy Suburban	18.7	6.7	
2018 Cadillac Escalade ESV	18.6	6.75	<p>Escalade ESV</p>  <p>224.3 Inches</p>

Looking at the dimensions of some of these very large vehicles, it is apparent that while they all could physically fit into the standard 9' wide parking stall, it would be difficult for passengers to exit some of these vehicles if a similarly large vehicle was parked in the adjacent parking stall. While some of these vehicles also exceed the 19' standard parking stall length, the standard drive aisle width is 22 feet, which would allow for vehicles to maneuver around longer vehicles that extend into the parking lot drive aisle. When considering the appropriate standard design size for parking stalls, it's important to consider how these very large vehicles fit proportionally into the overall U.S. Passenger Vehicle Fleet.

While SUVs and Pickup Trucks make up approximately 39.6% of the overall vehicle fleet, the following table drills deeper to look at the percentage of specific models of vehicles within the fleet.

Vehicle Model		
	Sum (Thousands)	Percent
Expedition	1,060	0.5
Excursion	153	0.1
F-Series pickup	8,440	3.9
Escalade/ESV (2004 on)	109	0.1
Escalade EXT (2002 -2006)	78	0
Escalade EXT (2007)	40	0
Suburban (2004 on)	594	0.3
Suburban (1950-2003)	647	0.3
Suburban/Yukon XL (2004 on)	298	0.1
Suburban/Yukon XL (1950-2003 only)	175	0.1
Ram Pickup	3,841	1.8

Figure 2: Federal Highway Administration, 2017 National Household Travel Survey (NHTS)

While this table is certainly not an exhaustive listing of very large model vehicles, it does capture some of the most commonly known large vehicles and indicates that these models account for approximately 7.2% of the U.S. Passenger Vehicle Fleet.

Recommendation

After reviewing this additional information in conjunction with the City of Chesterfield’s current requirements, national best practices, and reviewing existing conditions presented in the initial Staff report on this topic, Staff continues to recommend that no changes be made to the parking stall size requirements.