



MEMORANDUM

To: Mayor and City Council

From: Ken Griffin, P.E., Director of Engineering and Public Works

Date: August 22, 2017

Reference: Discussion Concerning Bicycle Signage

2030: Sustainable City Government, Goal 3
Excellent and Well-maintained City Infrastructure and Facilities

General Information:

- State Law regulates when a bicyclist can use a full lane
- The City posted signage in 2016 that bicyclists may use full lane
- Some of the signage has been called into question based on state law

Introduction:

The discussion this evening concerns the signage placed on several streets throughout the City which states bicycles “May Use Full Lane” (see Bicycle Travel Signage Exhibit). After placement of the signs in 2016, a placard was added that said “State Law”. Earlier this year I was contacted by a resident questioning whether the state law reference was accurate.

The State of Texas Transportation Code in Chapter 551 provides rules on when a bicycle can use the full lane. Specifically, the wording in the Transportation Code is:

Sec. 551.103. OPERATION ON ROADWAY.

(a) Except as provided by Subsection (b), a person operating a bicycle on a roadway who is moving slower than the other traffic on the roadway shall ride as near as practicable to the right curb or edge of the roadway, unless:

- (1) the person is passing another vehicle moving in the same direction;
- (2) the person is preparing to turn left at an intersection or onto a private road or driveway;
- (3) a condition on or of the roadway, including a fixed or moving object, parked or moving vehicle, pedestrian, animal, or surface hazard prevents the person from safely riding next to the right curb or edge of the roadway; or
- (4) the person is operating a bicycle in an outside lane that is:

- (A) less than 14 feet in width and does not have a designated bicycle lane adjacent to that lane; or
- (B) too narrow for a bicycle and a motor vehicle to safely travel side by side.
- (b) A person operating a bicycle on a one-way roadway with two or more marked traffic lanes may ride as near as practicable to the left curb or edge of the roadway.
- (c) Persons operating bicycles on a roadway may ride two abreast. Persons riding two abreast on a laned roadway shall ride in a single lane. Persons riding two abreast may not impede the normal and reasonable flow of traffic on the roadway. Persons may not ride more than two abreast unless they are riding on a part of a roadway set aside for the exclusive operation of bicycles.
- (d) Repealed by Acts 2001, 77th Leg., ch. 1085, Sec. 13, eff. Sept. 1, 2001.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995. Amended by Acts 2001, 77th Leg., ch. 1085, Sec. 10, 13, eff. Sept. 1, 2001.

Analysis:

The wording in the code sometimes causes confusion because people stop reading after paragraph (a) which basically states that bicycles should be as close as practicable to the curb if they are moving slower than the other traffic on the roadway. However, the state provides for four exceptions to that rule. Exceptions (1) and (2) are basic in that they just address how a bicycle can pass another vehicle or turn left. The focus of this presentation will be on the content of (3) and (4)(A).

Most of the streets are signed legally based on parked vehicles or the lane being less than 14 feet in width. See table.

Parking Allowed on Street	Outside Lane less than 14 feet in Width
Parkway: Moore to MacArthur Bethel School: Moore to MacArthur Heartz: Sandy Lake to Bethel School	Royal: All Freeport: All Denton Tap: All Samuel: All MacArthur: All Belt Line: All Parkway: Coppell to Moore Sandy Lake: All Bethel: All Bethel School: Denton Tap to Moore Mockingbird: Sandy Lake to Villawood

However, there are still seven signed streets that are not covered by exceptions (1) – (4)(A). Those seven streets are discussed in the following three paragraphs.

Creekview: All / Southwestern: Freeport to Denton Tap / Coppell: All

These three streets are on the west side of Coppell and the outside lane ranges in width from 17 feet to 20 feet. However, the west side of Coppell is mostly industrial use which means a high number of

semis on the street. In reviewing Section 551.103. (a)(4)(A) of the Transportation Code, it is reasonable to assume that the logic behind the 14-foot lane width is as follows: typical passenger vehicle is 8 feet wide, with mirrors; the generally accepted buffer between a bicycle and a vehicle is 3 feet; and the amount of space that a bicyclist needs to ride in is 3 feet. This equates to 14 feet. However, semis are wider than passenger vehicles. The width of the box on a semi is 8.5 feet and the side mirrors extend beyond that so there is improved visibility for the truck driver. The semis also create a greater wind pull when passing a bicyclist than a passenger vehicle. It's my opinion that enforcing a 14-foot-wide lane on the west side of the City does not meet the intent of Section 551.103. (a)(4)(B) which states that the lane should be wide enough for a vehicle to safely travel side by side with a bicycle. My recommendation on the west side is as follows: 11 feet for the width of the semi, with mirrors; 5 feet for the buffer; and 4 feet for the bicycle to travel in. The recommendation for the wider buffer and bicycle area is also partially based on the speed of the semis. This means that a recommended outside lane on the west side of town should be 20 feet. My recommendation is that, by ordinance, any street on the west side of Denton Tap/Belt Line with an outside lane width of 20 feet or less should have signage that states that the bicyclist may use full lane.

Heartz: Parkway to Sandy Lake / Moore: All / Mockingbird: Villawood to Belt Line

These three streets are wider streets because they are collectors on our Thoroughfare Plan. However, each of these streets also have an Elementary School located adjacent to them. It's logical to think that with a school next to the street that younger, inexperienced bicyclists will be using the road to gain access to the school. Section 551.103. (a)(4)(B) of the Transportation Code states that an exception is allowed when the roadway is too narrow for the vehicle and the bicyclist to ride side by side. With younger bicyclists, it's wise to allow more maneuver space to ride in and a wider buffer for vehicles. Also, because the streets are wider, vehicles tend to drive faster. The goal is to provide the safest route that we can for the bicyclists. Therefore, you need to allow the younger bicyclists the opportunity to use the full lane for their safety. My recommendation is that these three streets be included in an ordinance that specifically references Section 551.103. (a)(4)(B) as the basis for stating that bicyclists may use full lane.

Riverchase: All

This street is the only currently signed street that should have the signage modified or removed. Riverchase currently has a striped lane on each side for bicyclists. Because of this, the signage should be modified to state "Share the Road" or removed completely.

Legal Review:

Legal will review when the Ordinance is drafted.

Fiscal Impact:

n/a

Recommendation:

The Engineering Department recommends that we work with our Attorney to draft an Ordinance that will allow the current signage on all streets to remain, except for Riverchase.