CITY OF CHARLOTTESVILLE, VIRGINIA

CITY COUNCIL AGENDA

Agenda Date:	November 16, 2020
Action Required:	No Action Required (Report Only)
Presenter:	Brennen Duncan, City Traffic Engineer
Staff Contacts:	Brennen Duncan, City Traffic Engineer
Title:	**Traffic Safety Report**

Background

Over the past few months, several traffic calming/safety issues have been sent to City Council. This report will discuss those issues, steps that staff has already taken to address, and some longer term possible solutions that would need council support in the Capital Improvement Program (CIP).

History/Discussion

- The first issue was a petition sent to City Council on July 24th for traffic calming along Cherry Avenue. The city had already planned on performing a traffic study along Cherry Avenue as part of the Small Area Plan that was completed. Due to COVID-19, that study had been postponed as traffic patterns had not yet returned to normal. Traffic has still not fully returned to normal, but Traffic Engineering had counts taken the week of November 2nd and will be preparing a report about the state of Cherry Avenue and what recommendations might be appropriate for both the commercial area east of Roosevelt Brown and also the residential area to the west.

- The second issue that was brought up on September 14th was traffic calming issues on Willard Drive in the Fry Spring neighborhood. These issues were regarding the noise generated by the speed bumps along the roadway, truck traffic, vegetation blocking signage, and poor placement of speed limit signs.

  In 2008, the residents in the area started the traffic calming process as outlined in the City's Traffic Calming handbook. At that time, it was determined that there was not a speeding issue, but there was a cut-through issue, and as such, speed bumps were installed.

Staff has addressed all of the signage issues clearing away overgrowth, moving the speed limit sign, and adding "No Truck" signage to the major roadways before they would reach Willard. As previously stated, the installation of the speed bumps were after working through the traffic calming process. Currently there is no process for what to do if a neighborhood wants to remove traffic calming measures. Staff has reviewed this and is recommending that we amend the traffic calming handbook to mimic the process for installation, but to stipulate that the process for removal could not be started until those devices had been installed for at least 10 years.

- The third and final issue is regarding the safety along 5th Street, particularly between Harris Road and Cherry/Elliot Avenue. There have been 5 fatal crashes along this stretch of roadway since November of 2016, three of these being since July of this year. Many residents complain about the overall speed along the corridor. The City's 5th/Ridge/McIntire plan completed in 2017 also showed that the overall incident rate along the corridor was higher than the statewide average.

  Charlottesville Police Department (CPD) provided traffic engineering with the crash reports for 4 of the 5 (the 5th report has not been finished yet) fatalities that have occurred over the past 4 years. All of the fatal crashes were the result of driver action and not necessarily roadway design. Four of the incidents resulted from a combination of reckless driving and excessive speed, while the 5th was related to impaired driving.

  CPD has also conducted two separate speed studies along the corridor within the last 18 months. Both of these gave very similar results. The average speed over drivers (50th percentile) was below the posted speed limit of 45mph at between 42-44mph. The 85th percentile was less than 5mph over the posted speed limit. Both of these are within general practice of traffic engineering tolerances.

  Traffic Engineering looked more closely at the crash data from the 5th/Ridge/McIntire study and found that the vast majority of the incidents occurred at the intersections and not along the segments between.

  Based on reviewing all of the data available, it is the traffic engineer's opinion that there is not a speeding problem along the corridor. That being said, with the nature of the fatalities and the speeds that were able to be obtained, we do have a roadway that is designed to allow for higher speeds for those who wish to break the posted speed limit. The majority of all the accidents along the corridor are congestion related. There are nearly 21,000 vehicles per day (vpd) that use 5th Street to come and go from the City and approximately 18,000 vpd on this particular stretch of roadway. There are also developments in various stages of design that could add as many as 5,000 additional vehicle trips to this corridor.

Recommendations

There are several measures that Traffic Engineering is recommending be done to mitigate issues along the corridor.

Immediate Measures

- Reduction of the speed limit from 45mph to 40mph.
    - Even though speeding was not found to be a problem along the corridor, nearly 1/3 of the accidents in the 5th/Ridge/McIntire plan were rear end collisions. Reducing the speed limit will give more reaction time and reduce the severity of any of these types of crashes.
- Installation of advanced intersection warning signs
    - There are currently no warning signs along 5th Street of upcoming intersecting streets. Installing these signs will help alert drivers of possible upcoming conflicts
- Signal Improvements
    - Staff will be installing advanced flashing "Signal Ahead" signs that will activate upon the red signal to help alert drivers in advance of the signal that they are approaching a red light.
    - Staff will be replacing the traditional green ball for permissive left turns with the flashing yellow arrow.
    - Staff will be installing high visibility back plates on the signals.
- Crosswalk at Old Ridge
    - Staff recommends removal of the long, unsignalized crosswalk.

Mid Term Measures

- Staff has already been using the VDOT Smartscale process to apply for funding to implement projects laid out in the 5th/Ridge/McIntire plan. Because of the nature of that funding, those projects are still several years out and any new applications would be 10-15 years before implementation. If the city wishes to accelerate that process, it will need to be done with the CIP and local funding.
- Traffic Engineering is recommending the installation of a Roundabout just north of Bailey Road. Installing this would break up the 1 mile corridor and make it harder to attain the high speeds witnessed in the recent fatalities. This has been discussed with the property owner adjacent to the roadway and they are amenable to donating the land required for this with the stipulation that their proposed development would be able to have ingress/egress off of the roundabout.
- Lighting – There are 2 kinds of lighting that could be installed along the corridor. The first is just intersection lighting. Most of the intersections do not have dedicated lighting and this should be looked at to be installed to help mitigate conflicts during nighttime

hours. The second is pedestrian scale lighting along the corridor. This would be a benefit to pedestrians and cyclists who wish to use the corridor as well as give a greater sense of "place" which is shown to reduce overall speeds as well.

Long Term Measures

- As was noted before, the majority of the accidents are related to congestion. The only way to mitigate congestion along this corridor as well as others in the area is to reduce the number of vehicles. As a long term recommendation, traffic engineering is suggesting that park and ride lots/structures should be implemented along the city/county line to encourage bus use. In order for this to be effective, our transit model for the city would need to change. Transit lines would need to focus on our main arterial roadways and get lead times between busses down in the 10-15 minute range.

Budgetary Impact

Short Term Measures

- Using departmental funds – no impact

Mid Term Measures

- Implementation of 5th/Ridge/McIntire plan ~ $15-20m
- Implementation of Roundabout ~$3-4m

Long Term Solutions

- Costs unknown at this time

Council Action

No action required at this time