DATE: October 21, 2013

TO: Honorable Mayor and Members of the City Council through City Manager

FROM: Dan St. John, F.ASCE – Director, Public Works and Utilities
Curt Bates, P.E. – City Engineer

SUBJECT: Progress Report on Traffic Study Addressing Petaluma Boulevard South Road Diet Project

RECOMMENDATION

This is a progress report addressing the traffic operations and safety of the recently completed road diet project on Petaluma Boulevard South, between Washington Street and D Street.

BACKGROUND

Per the City Council’s request, the Traffic Engineering Division is in the process of performing a post-project traffic study of the Petaluma Boulevard South Road Diet. The project, located between Washington Street and D Street, consisted primarily of reducing through travel lanes from two in each direction to one in each direction, adding turn lanes at each intersection and restriping lane lines and parking stalls to meet current standards. Construction on the project was completed on June 17, 2013.

DISCUSSION

City staff has been monitoring traffic operations through the subject road diet project since its completion. The monitoring consists of visual observations, traffic volumes, speeds, time runs, and collision data. During the first few weeks after the road diet was complete, City staff observed vehicles stopping in and blocking the intersection of Petaluma Boulevard South and Washington Street. Staff believes the primary reason for this is drivers becoming accustomed to the new lane configurations on the Boulevard. Specifically, the reduction of one travel lane in each direction reduced the storage space for vehicles to queue while a vehicle is parallel parking or pedestrians are using the lighted crosswalk near Putnam Plaza. Recent observations on this have demonstrated that most drivers are now more aware of the new configuration and accustomed to the road diet alignment. The amount of vehicles blocking the intersection has been reduced.

Staff has monitored, logged, and responded to complaints regarding the road diet project; and has met with representatives of the Petaluma Downtown Association and local businesses to solicit...
feedback on the road diet operations. Several complaints were received about the new signal timing at two locations, Washington Street and the Boulevard and at B Street and the Boulevard. Adjustments were made to the signal timing at both locations that have improved traffic operations at both intersections. The traffic signals at Washington Street/PBS and D Street/PBS are in coordinated timing during the morning, mid-day and evening peak commute hours. The signals at Western and B Street are not currently in coordination timing. Staff is currently analyzing whether placing these intersections in coordinated timing will improve traffic operations.

Staff monitors vehicle collision history in the road diet area. There were 90 reported pre-project collisions between January 1, 2006 and July 30, 2009. Collision data was used from this time period because the City first applied for the Road Diet grant in 2009. There have been 6 reported collisions between June 17, 2013 and August 28, 2013, and none since then. Although the post-project sample size is small, the trend is encouraging and suggests a reduction in reported collisions from 2.1 per month to 1.7 per month. City staff will continue to monitor collisions in the road diet area with the experience since August, staff is optimistic that the project will result in a significant reduction in vehicle collisions through the long run.

During the time period of September 17th through October 2nd, staff set monitoring equipment to collect vehicle volumes and speeds on the Boulevard near Putnam Plaza, Center Park and between B and C Streets. The results showed an average daily traffic of approximately 11,023 to 11,923 vehicles per day. The pre-project levels were measured at approximately 10,590 to 11,170 vehicles per day. City staff also measured post road diet traffic volumes at 14,948 vehicles per day on Petaluma Boulevard North, between Washington Street and Lakeville Street. In October 2009, traffic volumes measured at 15,374 vehicles per day on the Boulevard between Washington and Lakeville Street. Vehicles speeds were measured on the Boulevard at an average of 21 MPH between Washington Street and B Street and 26 MPH between B Street and D Street. The results indicate that traffic volumes and average speeds are consistent with conditions observed prior to road diet construction.

Several complaints were received that travel times through the new road diet increased to upwards of 15 minutes. Therefore, staff performed 25 time runs on Petaluma Boulevard between Oak Street and E Street to analyze post project conditions. The runs were performed between September 26th and October 3rd in morning, midday and mid-afternoon hours. The results indicated a minimum of 2 minutes, 36 seconds; a maximum of 6 minutes, 18 seconds; and an average of 3 minutes 47 seconds to travel that distance. The longer runs occurred during the end of the lunch hour period and between 3:00 pm and 3:30 pm after school is out. Approximately 2/3 of the runs took between 3 and 4 minutes. Staff did not perform travel time test before the project was built and therefore does not have data to compare.

Traffic engineering staff is also currently working with the project traffic engineering firm, GHD Inc., to evaluate the post-project level of service at each of the four signalized intersections affected by the road diet. That analysis is expected to be completed in November 2013 and will be used to inform plans to improve timing and synchronization between signals. Staff is also evaluating pavement markings and signage to be sure drivers know they can pass cars in the process of parallel parking as long as the center lane is free.
Staff will summarize the results of the on-going evaluation of the signalized intersections and of the pavement markings and signage and provide a report to the City Council in February 2014.

**FINANCIAL IMPACTS**

Staff has committed $7,240 for the traffic engineering consultant to complete the traffic signal study. There is sufficient funding remaining in the City’s CIP project budget to accommodate these costs. City staff time is covered through existing staff allocations.

**ATTACHMENTS**

1. Power Point Presentation
Progress Report

Petaluma Boulevard South
Post Construction Road Diet Traffic Study
October 21, 2013
Department of Public Works and Utilities
Traffic Engineering Division
* Remove substandard lane (9 feet) and parking stalls in each direction to reduce collisions (90 collisions over 3 1/2 years)
* Install 12-foot wide travel lane in each direction and 8-foot wide x 22 feet long parking stalls
* Install center lane between Washington and Western for truck deliveries
* Install turn lanes at each intersections
* Install share the road lane markings for bicycles (Sharrows)
* Project completed on June 17, 2013.
Post Project Photos
Reported Concerns

Creates additional traffic delays at intersections
Overall time to get through Petaluma Boulevard
Vehicles blocking intersections
Steps Taken to Date

* Adjusted signal timing at Washington/PBS and B/PBS
* Begun Level of Service (LOS) analysis of intersections
* Placed traffic hoses (volume and speeds)
* Time Runs (random sampling)
* Met with Petaluma Downtown Association and Businesses
* Pre Road Diet (Wash. To D St.) = 10,590 – 11,170 ADT
  (source: TFCA signal timing 2010)
* Post Road Diet (Wash. To D St.) = 11,023 – 11,923 ADT
  (source: City hose counts 2013)

* Pre Road Diet (Wash. To Lakeville) = 15,374 ADT
  (source: post PBN road diet City hose count)
* Post Road Diet (Wash. To Lakeville) = 14,948 ADT
  (source: City hose counts 2013)
* Dates run between 9/26/2013 and 10/03/2013
* Time of day: morning, midday and middle afternoon
* 25 runs
* Min time: 2 minutes, 36 seconds
* Max time: 6 minutes, 18 seconds (note: max times were near lunch hour or after school)
* Average: 3 minutes, 47 seconds
* 2/3 sample were in 3 minute range
Observations to Date

* Initial traffic issues resolved – traffic flowing
* Center lane truck unloading working
* Increased bicycle usage
* Collisions reduced (6 reported between June 17, 2013 and August 28, 2013), no reported collisions since, further reduction expected
Next Steps

* Continue to work with Petaluma Downtown Association – informational flyer to PDA and downtown businesses re: the City’s findings on the post road diet study and the benefits of the road diet
* Continue to monitor collision data
* Complete Level of Service (LOS) analysis
Questions/Comments?