City of San Marcos
1 Civic Center Drive
San Marcos, CA 92069

AGENDA REPORT

Meeting of the San Marcos Traffic Commission

MEETING DATE:	November 3, 2021
AGENDA ITEM NO:	7A
SUBMITTED BY:	Manas Bista, P.E. – Associate Civil Engineer-Traffic
APPROVED BY:	Nic Abboud, P.E. – Principal Civil Engineer- Transportation
SUBJECT:	Fulton Road–Speed Cushions Pilot Project

BACKGROUND:

The City receives a sizeable number of speeding complaints throughout the City. Engineering staff developed a Speed Cushion Policy and Procedure to guide staff through the evaluation and prioritization of potential candidate sites, and included the following steps:

1. Initial Screening – Once a property owner, Homeowners Association (HOA), Neighborhood Watch Group (NWG), or other community organization expresses a speeding concern on their street, the Transportation Engineering division will conduct an initial screening to determine if the street is a possible candidate for a speed cushion treatment.

2. Petitioning - If the street segment is determined to be a candidate for a speed cushion treatment after initial screening, the next step will be for the lead petitioner to obtain supporting signatures from all adjacent residents (100%) within one hundred (100) feet of each proposed speed cushion location (on both sides of the street), and at least two-thirds (67%) of all vicinity households in the speed cushion's influence area (500 ft. from speed cushions).

3. Feasibility Study - Once the petition is submitted with the required signatures, Transportation Engineering staff will conduct a feasibility study to determine if the street is a candidate for a speed cushion treatment. This study will include an analysis of average daily traffic, traffic speeds, collision history, proximity of traffic control devices, and affected driveways/intersections and parallel streets, if any.

4. Selection - After submission of the petition and a review by City departments with vested interest, the petition will be presented before the Traffic Commission at a regularly scheduled meeting for review and approval. The lead petitioner will be notified of the Commission's decision. If approved, Transportation Engineering staff will discuss scheduling and funding options with the lead petitioner.

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CRITERIA THRESHOLDS

For a roadway segment to be considered eligible for evaluation, an ADT threshold of 500 to 3,000 vehicles per day as well as a minimum 85th percentile speed of 32 MPH

DISCUSSION:

Engineering staff reviewed a list of locations where speeding complaints were received to determine eligibility for speed cushion installation and to select a pilot project for implementation. The following locations were selected to be analyzed based on meeting the initial screening criteria:

1. Fulton Road, between Catherine Avenue and Elizabeth Street
2. Fulton Road, between Richland Road and Harwich Drive
3. Fulton Road, between Flagstone Court and Quiet Hills Drive
4. Applewilde Drive, between Smoketree Court and Honeysuckle Drive
5. Poppy Road, between Windridge Circle (W) and Windridge Circle (E)
6. Quail Hill Drive, between Cardinal Court and Partridge Court
7. Richland Road, between Elizabeth Street and Linda Lane
8. Coast Avenue, between Summit Pointe Way and Island Drive

TRAFFIC DATA COLLECTION

Data collection was conducted for three consecutive weekdays (Tuesday, Wednesday and Thursday). Average daily traffic (ADT) counts and speed surveys were collected for 72 continuous hours at the roadway segments listed above. **Table 1** presents the average results of the three-day data collection for ADT and the 85th percentile speed. The 85th percentile speed is the travel speed at which or under which 85% of the vehicles surveyed were traveling. The location of the data collection sites as well as the averaged results of ADT and 85th % speeds are depicted graphically in Figure **1**.

Among all the study segments, **Table 1** and **Figure 1** show the roadway segment with the highest ADT (2,611 vehicles per day) to be the segment of Poppy Road between Applewilde Drive and Foxhall Drive. The table and figure also identify the segment of Fulton Road between Woodland Parkway and Bennett Avenue to be the one with the highest 85th percentile speed (40 MPH), followed by another segment on Fulton Road between Richland Road and Woodland Parkway with 85th percentile speed of 38 MPH.

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Table 1 – Roadway ADT and 85th Percentile Speed Data

ID	Roadway	Segment	Average Daily Traffic (ADT)	85th Percentile Speed (MPH)
1	Fulton Road	Borden Road to Richland Road	1,917	31
2	Fulton Road	Richland Road to Woodland Parkway	1,787	38
3	Fulton Road	Woodland Parkway to Bennett Avenue	1,619	40
4	Applewilde Drive	Poppy Road to Via Vera Cruz	2,131	28
5	Poppy Road	Applewilde Drive to Foxhall Drive	2,611	30
6	Quail Hill Drive	La Sombra Drive to Fulton Road	717	31
7	Richland Road	Rock Springs Road to Fulton Road	2,087	37
8	Coast Avenue	White Sands Drive to Island Drive	984	29

Source: NDS, 2020.

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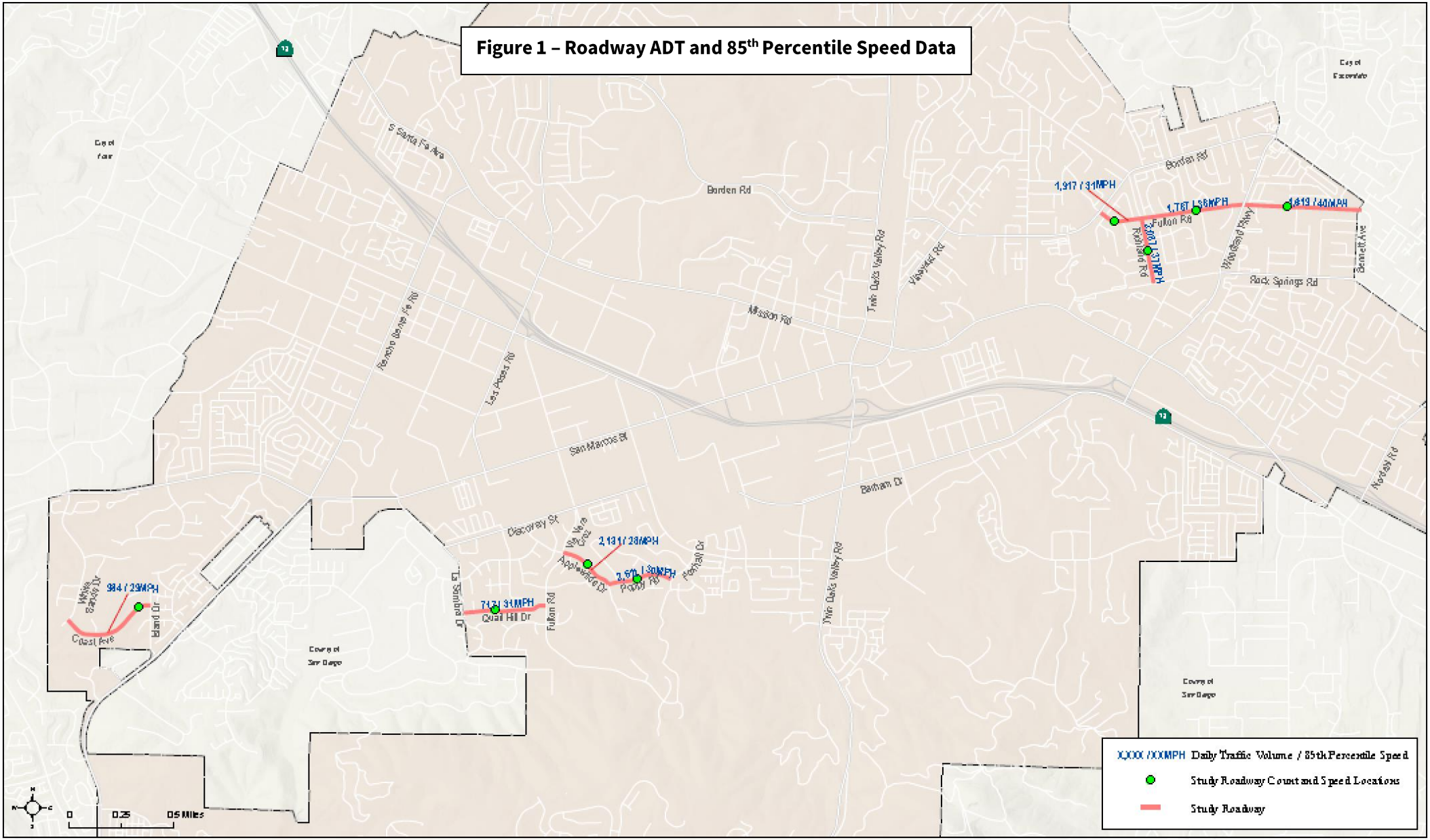
Figure 1 – Roadway ADT and 85th Percentile Speed Data



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ROADWAY SEGMENT ANALYSIS

Consistent with the City's Speed Cushion Guidelines, the thresholds for the ADT and 85th percentile threshold are 500 to 3,000 ADT and 32 MPH, respectively. **Table 2** presents the comparison of the collected ADT and 85th percentile speed data with their respective thresholds, and identifies which segments meet the criteria.

Table 2 – Analysis of Roadway ADT and 85th Speed Data

ID	Roadway	Segment	Average Daily Traffic (ADT)		85th Percentile Speed (MPH)		Meets Criteria?
			Threshold	ADT	Threshold	Speed	
1	Fulton Road	Borden Road to Richland Road	500 – 3,000	1,917	32	31	No
2	Fulton Road	Richland Road to Woodland Parkway	500 – 3,000	**1,787**	32	**38**	**Yes**
3	Fulton Road	Woodland Parkway to Bennett Avenue	500 – 3,000	**1,619**	32	**40**	**Yes**
4	Applewilde Drive	Poppy Road to Via Vera Cruz	500 – 3,000	2,131	32	28	No
5	Poppy Road	Applewilde Drive to Foxhall Drive	500 – 3,000	2,611	32	30	No
6	Quail Hill Drive	La Sombra Drive to Fulton Road	500 – 3,000	717	32	31	No
7	Richland Road	Rock Springs Road to Fulton Road	500 – 3,000	**2,087**	32	**37**	**Yes**
8	Coast Avenue	White Sands Drive to Island Drive	500 – 3,000	984	32	29	No

Note:
Bold indicates a segment meets both ADT and 85th percentile speed thresholds.

As shown in Table 2, the following three (3) roadway segments were found to meet both the ADT and the 85th percentile speed criteria:

1. Fulton Road, between Richland Road and Woodland Parkway;
2. Fulton Road, between Woodland Parkway to Bennett Avenue; and
3. Richland Road, between Rock Springs Road and Fulton Road.

Therefore, based on the criteria described in this technical memorandum, the three (3) roadway segments identified above meet the requirements for the installation of speed cushions. Fulton Road with the two roadway segments with the highest speeds is selected for the speed cushion pilot project

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SUMMARY AND CONCLUSION

Based on the traffic data collected, the ADT threshold of **500 to 3,000 ADT** and a **minimum 85th percentile speed** of **32 MPH**, the following three (3) roadway segments were found to meet both the ADT and 85th percentile speed criteria and are eligible candidates for speed cushion treatments:

1. Fulton Road, between Richland Road and Woodland Parkway;
2. Fulton Road, between Woodland Parkway to Bennett Avenue; and
3. Richland Road, between Rock Springs Road and Fulton Road.

However, the two contiguous segments of Fulton Road with the highest 85th percentile speeds are proposed for consideration in the pilot program.

SAFETY RECORDS

Although the three segments meet the screening criteria, there are situations when other factors may warrant consideration of speed cushions even when the initial screening criteria is not met. Such factors proximity to pedestrian generators, nearby schools, a high concentration of elderly or special needs population, and collision history. For the purpose of completeness, the evaluation also looked at the collision history to identify the safety of the roadway segments.

For the recommended pilot project, the collision history for the five most recent years was researched and the results show a total of five recorded, with three recorded collisions on Fulton Road, between Richland Road and Woodland Parkway, and two recorded collisions on Fulton Road, between Woodland Parkway to Bennett Avenue.

RECOMMENDATIONS:

Following are staff's recommendations to the Traffic Commission:

1) Require the residents to produce a signed petition within 30 days (successful petition includes approval by 100% of residents within 100 ft. and at least 2/3 of residents within 500 ft.) – Further action by staff depends on the successful completion of the petition.

2) Approve the selection of Fulton Road for the speed cushions pilot project (in support of the successful petition)

3) Approve installation of speed cushions at the identified locations along the two selected segments of Fulton Road

4) Approve an evaluation period of 3, 6, or 12 months post installation to quantify the effectiveness of the speed cushions in speed reduction and safety improvement.

5) Approve the preparation of a Before-After study at the conclusion of the evaluation period

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ATTACHMENTS:

- TRAFFIC VOLUME DATA
- SPEED DATA
- COLLISION DAT