



DATE: July 10, 2017

TO: Transportation Authority of Marin Board of Commissioners

FROM: Dianne Steinhauser, Executive Director
Dan Cherrier, Project Manager

SUBJECT: Award of Contract for Counting of Crossing Guard Locations (Action) Agenda Item 9a

RECOMMENDATION

Authorize the Executive Director to enter a contract with Wiltech of Pasadena for crossing guard counts required under the ½-cent Transportation Sales Tax Strategic Plan (2006-). Counts shall remain in effect for four years. The contract is established for a Not to Exceed amount of \$235,000 for vehicle and pedestrian counts. Contract to terminate June 2018.

Approve an amendment to the FY 17/18 TAM budget for crossing guard counts to increase the line item to \$235,000.

BACKGROUND

The TAM Crossing Guard Program is in the twelfth year of operation and currently provides for 90 guard locations. Seventy-two of these locations are funded through the one-half percent Transportation Sales Tax (Measure A), ten through the Vehicle Registration Fee (Measure B), and eight on a reimbursed basis for various school districts.

The implementation policies and the list of locations for the TAM Crossing Guard Program were initially developed during the 2005-06 school year. The process began with a questionnaire being distributed to all the public and private schools in Marin County and to all the members of the Marin Public Works Association (MPWA). While the questionnaire was being distributed and the responses collected, the MPWA together with the TAM Technical Advisory Committee (TAC) established a set of “qualifying” criteria for prioritizing potential crossing guard locations. The evaluation criteria were based on the California Manual of Uniform Traffic Control Devices with California Amendments (CMUTCD) and the Criteria for Adult Crossing Guards published by Caltrans. These resources are generally used by communities in California to determine if crossing guards are warranted and cost effective at specific locations. In order to apply the criteria, traffic data was collected for each of the locations. The traffic data included vehicle and pedestrian counts during a morning period for trips to school and an afternoon period for trips leaving school. In addition to the traffic data, information about the roadway characteristics such as the number of lanes and the type of intersection control, e.g. stop sign, signal, etc. was also collected.

A list of 39 crossing guard locations was recommended for funding through the TAM Crossing Guard Program based on the responses to the questionnaire and the analysis of the data collected. The questionnaire was distributed a second time (Phase 2) and a second round of traffic data was collected for approximately 30 additional locations. The Phase 2 analysis by the MPWA and the TAC identified another five (5) locations that met the qualifying criteria and ten (10) locations recommended as “pilot” locations.

The implementation policies for the TAM Crossing Guard Program provided for a three-year funding commitment for locations that meet the qualifying criteria and that pilot locations will be funded on a year-by-year basis. The list of 54 locations approved for funding by TAM for the first year of the Crossing Guard Program included 44 locations that met the qualifying criteria and ten (10) pilot locations.

The implementation policies adopted by the TAM Board for the Crossing Guard Program allowed for the consideration of other factors (i.e. other than the traffic data) when recommending locations for a crossing guard. Such locations were referred to as “pilot” locations and each pilot location was considered on a case by case basis. The pilot locations are still being provided guards. The pilot locations were carefully reviewed by the TAC and MPWA before selection.

A new survey was distributed earlier in 2008 and traffic data for 18 locations was collected during May 2008. Staff presented the list of candidate locations to the MPWA and the TAC for their consideration on June 19, 2008. The locations were listed in the order by the extent to which they satisfy the qualifying criteria established by the MPWA and TAC. The TAC and MPWA had differing recommendations. The TAC recommended funding the top locations and noted that two locations were recommended for funding by the MPWA based on factors other than the traffic volumes.

The discussions at the MPWA and TAC meetings brought to light the need to address the consideration of other factors in the process for evaluating potential future crossing guard locations. The evaluation based on the vehicular and pedestrian volumes was numerical and lends itself straightforwardly to developing a ranked list. The evaluation of other factors such as roadway geometry, sight distance, the speed of traffic and other site-specific conditions was based in large part on engineering judgment and presented a greater challenge to developing a ranked list. The MPWA and TAC highlighted the need to develop a new process for the recertification of locations.

Throughout 2008 and into 2009 a new ranking system was developed through the efforts of MPWA and the TAC. The revised evaluation criteria were implemented successfully for the creation of the location list developed and approved in time for the 2010/2011 school year. During that process 125 locations were evaluated. The process resulted in the loss of twelve locations that were previously guarded. This number would have been larger except the TAM Board took action to temporarily use the Transportation Sales Tax to fund an additional twelve locations in anticipation of passage of the Vehicle Registration Fee that same Fall. It was found that the twelve discontinued sites had very low usage and the relocation of the guards allowed for other sites to be included in the program. The revised scoring system was evaluated by the TAC and found to have produced satisfactory results and was well accepted due to the quantitative results. Minor modifications to the scoring process was approved by the TAM Board in June 2017.

The new scoring criteria actually score each crosswalk leg of an intersection. This results in a total of eight possible scores for each crosswalk leg during a four-hour time period. The highest score for all crosswalk legs is then chosen to represent the score for that intersection. This approach also allows the vehicle data for the crosswalk to be compared to the pedestrian volumes for the same time period, allowing for actual potential conflicts to be evaluated. This can result in 32 or more separate scores for each location; however, staff feels this is the fairest approach and is worth the extra data reduction time.

DISCUSSION/ANALYSIS

The current master list of guard locations has increased to 147 sites. The TAM Board in June 2017 approved reducing the number of locations to be counted to 119. The others will retain scores from the last set of counts. Staff is in the process of verifying the existing 2014 data on the 28 sites that will not be counted. Any question regarding the existing counts (weather at time of count, special school function,

etc.) will result in that site being counted as part of this contract. Staff will be working with MPWA and school officials to inform them of the locations of the counts and to make sure that special events and functions will not affect the validity of the data. The contract will have prohibitions regarding counting on inclement days.

Staff were pleased with the methodology of utilizing video counts for the 2014. This approach allowed for review and corroboration of the counting data for use during the scoring process. However, only one camera was used for each intersection during 2014 and it was very difficult for the contractor to identify and distinguish school age pedestrians and bicyclists. A major part of the RFP stressed the ability to identify school age pedestrians. The selected firm will be using a separate camera for each leg of the intersection and in several locations even a separate camera for each direction. This higher level of cameras will be utilized at locations when high school students are traveling the same direction as middle school students.

A Request For Proposals was released in mid-May for counting the various locations. TAM received four proposals. A selection panel comprised of TAM staff and outside consultants evaluated each proposal and decided to interview three firms. Based on the results of the interview, and other selection criteria, the selection panel is recommending Wiltech Traffic Engineering and Data Research from Pasadena, California. Due to the magnitude of this project Wiltech will be teaming with National Data and Surveying Services (NDS) for a portion of the work. Wiltech will retain overall quality control.

Wiltech and NDS will use cameras at each intersection and then reduce the data with their staff reviewing the video image. Advantages of this approach over manual counts allow for additional days of data collection and the ability to review counts if anomalies are found. Parents and school officials are frequently concerned that a one-day count may have occurred during a period that is not representative of the normal traffic associated with the school. With additional data, staff will be able to use the peak day of traffic collection.

The selection panel was especially impressed with Wiltech's approach to obtaining permission and/or encroachment permits from the various jurisdictions to mount the necessary cameras. Wiltech understands that there may be a jurisdiction that is reluctant to use cameras for traffic counts and is prepared to perform manual counts at those locations.

The selection panel was also impressed about the sensitivity that Wiltech displayed in working around school age children. They were uniquely aware of the concerns that many parents have, regarding observing the movements of their children. Data will become the proprietary property of TAM and will be held solely by TAM for internal technical usage only, to assure security. Video will be deleted upon adoption of a revised ranked list.

FISCAL CONSIDERATION

Wiltech proposed six different prices based on the type of intersection (number of crosswalks) and the level of resolution required. Each price is for two days. Higher resolution is required if a High School is nearby. The prices per intersection are:

A-1 Simple intersection (one crosswalk) and Manual Counts – Low Resolution	\$720
A-2 Standard intersection (up to four crosswalks) and Manual Counts – Low Resolution	\$1,440
A-3 Complex intersection (more than four crosswalks) and Manual Counts – Low Resolution	\$2,160
B-1 Simple intersection (one crosswalk) – High Resolution	\$1,440
B-2 Standard intersection (up to four crosswalks) – High Resolution	\$2,880
B-3 Complex intersection (more than four crosswalks) – High Resolution	\$4,320

Public Works Directors can request that any of the 28 sites designated to not be count in their jurisdiction can be counted upon their request. Staff expect approximately 10 of the 28 will be put forward for counts. Staff will work with Wiltec to agree on the category for each of the resulting 129 intersections that will be counted after contract execution.

For budgeting purposes only TAM staff have determined the following breakdown. This breakdown is based on staff's familiarity with the locations. Actual charges from the contractor will be based on the actual agreed upon category

Type A1	24 Locations	\$720 per Location	\$17,280
Type A2	45 Locations	\$1,440 per Location	\$64,800
Type A3	10 Locations	\$2,160 per Location	\$21,600
Type B1	15 Locations	\$1,440 per Location	\$21,600
Type B2	30 Locations	\$2,880 per Location	\$86,400
Type B3	5 Locations	\$4,320 per Location	\$21,600
Total			\$233,280

Staff recommends entering into a contract with Wiltec for a Not to Exceed amount of \$235,000. A placeholder of \$110,000 was placed in the FY 17/18 TAM budget. This was done before any proposals were received and costs were better known for the magnitude of the requested effort. This action will increase the Budget amount to \$235,000. Sufficient funds exist in the Transportation Sales Tax (Measure A) Strategy 4.2 carryover to cover this increase.

Note that more sites (129) than originally anticipated (110) are being counted. Counts conducted in the previous cycle in 2014 cost the agency \$120,000.

NEXT STEPS

The counts are scheduled to occur during September, October, and partially into November. TAM staff will score each location up until the end of the calendar year and hope to have a draft ranked list by early January. Staff will work closely with school districts, and cities to explore options for those locations that currently have a guard, that may not be positioned for a guard beginning in Fall of 2018. The final ranked list should be ready for full TAM Board approval by the April Board meeting. Notifications will take place in May for those locations that will be affected by the new list.

ATTACHMENTS

None