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NOTICE and AGENDA
SPECIAL MEETING
CITY OF CORONADO CITY COUNCIL

1825 Strand Way
CORONADO, CALIFORNIA
Tuesday, June 23, 2015 12 p.m.

1. ROLL CALL.
2. COMMUNICATIONS - ORAL: Each person wishing to speak before the City Council on only matters listed on this agenda shall approach the City Council, give their name, and limit their presentation to 3 minutes.
3. CITY COUNCIL BUSINESS:
 - a. Deliberation and/or Direction Concerning Traffic Enforcement, Crossing Guards, Speed Survey and Miscellaneous Early Action Improvements to Reduce Speeds and Calm Traffic on State Route 75 East of Orange Avenue, Also Referred to as Third and Fourth Streets, and Take Action to Encourage and Support the Use of Radar and Lidar to Enforce the Speed Limit. (Pg 1)
Recommendation: Support the use of radar and Lidar for SR 75/Third and Fourth Streets east of Orange Avenue.
4. ADJOURNMENT

Materials related to an item on this Agenda submitted to the Council after distribution of the agenda packet are available for public inspection in the City Clerk's Office at 1825 Strand Way during normal business hours.

DATED: June 19, 2015

Casey Tanaka
Mayor
City of Coronado

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DELIBERATION AND/OR DIRECTION CONCERNING TRAFFIC ENFORCEMENT, CROSSING GUARDS, SPEED SURVEY AND MISCELLANEOUS EARLY ACTION IMPROVEMENTS TO REDUCE SPEEDS AND CALM TRAFFIC ON STATE ROUTE 75 EAST OF ORANGE AVENUE, ALSO REFERRED TO AS THIRD AND FOURTH STREETS, AND TAKE ACTION TO ENCOURAGE AND SUPPORT THE USE OF RADAR AND LIDAR TO ENFORCE THE SPEED LIMIT

ISSUE: What action(s) should the City Council take to reduce speeds and calm traffic?

RECOMMENDATION: Support the use of radar and Lidar for SR 75/Third and Fourth Streets east of Orange Avenue.

FISCAL IMPACT: The cost to prepare this report and the Special City Council meeting are nominal.

The estimated cost to provide a crossing guard is \$42 per hour. The estimated cost to provide crossing guards Monday through Friday, at two intersections, on a split shift for seven hours per day, is approximately \$154,000 annually. For comparison purposes, the cost of a Police Officer, including equipment, is approximately \$150,000 annually.

The installed cost of a speed advisory sign is approximately \$10,000 to \$15,000.

The estimated cost for a “Pedestrian Flag Program” is \$1,500 per intersection per year.

CITY COUNCIL AUTHORITY: SR 75 is a State Highway. The City Council does not have the authority to set speed limits. However, Vehicle Code §22354.5(b) requires that the Department of Transportation consider the input of the City Council prior to changing the speed. But, also, Vehicle Code §22354 establishes a mandatory methodology for setting the speed limit. If the Council desires to make physical changes to SR 75, Caltrans’ permission is required.

PUBLIC NOTICE: The Special Meeting was set at the June 16 City Council meeting. The meeting has been posted and noticed pursuant to the law. No other notice has been required. The meeting will be broadcast.

BACKGROUND: At its June 2, 2015 meeting, the Council received a presentation on the traffic survey for State Routes 282 and 75 and the resulting speed limits. After receiving public comment regarding enforcement and the desire to calm traffic speeds, the Council voted to consider further action and asked that the topics of speed, enforcement, roadway engineering, and traffic calming be discussed at a future meeting. The next regularly scheduled City Council meeting is July 21. It was the consensus of the Council to consider the topic sooner than the next regular Council meeting. On June 16, the City Council unanimously agreed to schedule a Special City Council meeting for Tuesday, June 23, at noon, which was the earliest possible date and time available, and to limit the meeting to the topics of enforcement, crossing guards, if a new speed study should be requested, and small-scale early action items.

The speed limit proposed for SR 282 remains 25 mph. The speed limit for SR 75 between Orange Avenue and the toll plaza is proposed by Caltrans to be increased to 30 mph.

ANALYSIS:

Traffic Enforcement: Traffic enforcement of the Third and Fourth Street corridor. Attached is a memorandum from the Police Department addressing its opportunities and limitations for traffic enforcement along the corridor. The point is made that the purpose of enforcement is to modify driver behavior that causes accidents. During the 2014 calendar year, the Coronado Police Department issued 436 speeding tickets in the Third and Fourth Street corridor. Overall, 96 percent more speeding citations were issued in 2014 than 2013.

Speed Survey: Attached is a memorandum reviewing the conditions under which a speed survey is conducted and recommendations are made.

Pedestrian Crossing Guards: Attached is a memorandum reviewing the pros and cons of increasing the use of pedestrian crossing guards. The estimated cost to provide a crossing guard is \$42 per hour per guard. The estimated cost to provide crossing guards Monday through Friday, at two intersections, on a split shift for seven hours per day, is approximately \$154,000 annually. For comparison purposes, the cost of a Police Officer, including equipment, is approximately \$150,000 annually.

Vehicle Speed Feedback Signs: Attached is a memorandum discussing the possible uses of Vehicle Feedback Signs. On June 2, 2015, the Deputy Director of Traffic Operations for Caltrans District 11 implied that Caltrans would be willing to install the feedback signs. The installed cost of a speed advisory sign is approximately \$10,000 to \$15,000.

Pedestrian Flag Program: Attached is a memorandum discussing pedestrian flag programs. The estimated cost for a Pedestrian Flag Program is \$1,500 per intersection per year.

Painted Speed Limit Marking: The posted speed limit could be painted in each travel lane to remind the motorist to drive the speed limit.

Pedestrian Prohibition Sign: The “No Pedestrian Crossing” (R9-3a) sign may be used to prohibit pedestrians from crossing a roadway at an undesirable location or in front of a school or other public building where a crossing is not designated. These signs are typically used at signalized intersections that have three crossings that can be used and one leg that cannot be crossed. Although no studies or statistics could be found on the effectiveness of these signs, anecdotal evidence and observations suggest that these signs are often ignored if the pedestrian is required to deviate a considerable distance out of their way. If a “No Pedestrian Crossing” sign were to be installed on B Avenue at Fourth Street, a pedestrian would have to travel 1400 to 1500 feet to utilize the protected signalized crossing at Orange Avenue. Those pedestrians who are unfamiliar with Coronado may follow the signs. In this regard, the signs could be effective. The restriction may be ignored by other pedestrians. The restriction may also have the unintended effect of leading pedestrians to cross at mid-block locations.

Marked Crosswalks and “Pedestrian Crossing” Warning Signs (State Law – “Yield to Pedestrians”) at SR 75 and A, B, and C Avenues: A marked crosswalk would provide motorists a visual clue that there may be pedestrians present. However, City warrants would not support a marked crosswalk at these locations unless combined with other engineered enhancements. The City has effectively installed a few in-street walk warning signs, but they are normally installed in conjunction with marked crosswalks. Again, these locations would not meet warrants for a marked crosswalk. Caltrans is conducting a pedestrian survey; however, the results are not expected until after August.

Submitted by City Manager/King

Attachments:

1. Memorandum re. Traffic Enforcement – Third and Fourth Street Corridor
2. Memorandum re. Speed Surveys
3. Memorandum re. Engineering and Traffic Surveys
4. Memorandum re. Vehicle Speed Feedback Signs
 - 4a. Location Map Showing Possible Installation Locations
5. Memorandum re. Pedestrian Flag Programs

CM	ACM	AS	CA	CC	CD	CE	F	L	P	PSE	R/G
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Coronado Police Department

interoffice

MEMORANDUM

To: Honorable Mayor and Councilmembers
Via: Blair King, City Manager
From: Jon Froomin, Chief of Police
Re: Traffic Enforcement – Third and Fourth Street Corridor
Date: June 23, 2015

On June 2, a member of Caltrans presented information to the City Council about a traffic speed survey that was conducted for SR 75 and SR 282. During that meeting, several members of the community responded to the Caltrans report, and also voiced opinions related to the level of traffic enforcement being conducted by the Coronado Police Department and the California Highway Patrol. The comments focused on the Third and Fourth Street corridor and on the areas east of Orange Avenue. Before any further discussion, it is worth noting that, although the California Highway Patrol has statewide authority for the enforcement of traffic laws, that agency does not typically patrol State highways that are within incorporated city jurisdictions.

Traffic management involves three main components: engineering, education, and enforcement. Engineering is addressed through roadway design and other physical measures implemented to control the flow of traffic and is the focus of the Third and Fourth Street Corridor Study being conducted by Fehr and Peers. The use of the Police Department message boards, the decoy police car, and public communication through the press and social media address the education component. The final strategy is enforcement, which is the responsibility of the police department and will be my main focus.

The main purpose of traffic enforcement is to reduce collisions by changing driver behavior. This is accomplished through visibility of patrol personnel, verbal and written warnings, and traffic citations. Traffic enforcement and resource allocation is based primarily on traffic collision data. Traffic data indicates areas where higher numbers of collisions are occurring, which currently indicates a need to focus emphasis on Third and Fourth Streets east of Orange Avenue; the intersection of Fourth Street and Orange Avenue; Ninth Street and Orange Avenue; and the Silver Strand, which has the highest number of collisions. The intersection of Fifth Street and Orange Avenue had been an area of numerous collisions in 2012 and 2013. Yield signs and roadway markings were added and the annual average number of collisions dropped from 11 to 1.

June 23, 2015

Next, the primary cause of collisions is assessed to determine the types of traffic violations causing the most collisions. In the case of the corridor (Third and Fourth Streets), 2014 year-end and 2015 year-to-date traffic collision data indicates the primary cause of 64% (32 of 50) of the collisions has been unsafe turning or right-of-way violations. These have been exclusively related to traffic (auto, bike and pedestrians) entering or crossing Third Street or Fourth Street from one of the side streets. Many of these violations are related to the cross traffic inaccurately assessing the severity of the hazard of oncoming traffic before entering the intersection to cross. The factors that need to be considered are the approximate speed of traffic in all three lanes and the distance traffic is from the point of crossing. The more lanes of traffic being traversed, the higher the degree of difficulty in accurately assessing this information and the more difficult it is for oncoming traffic to see and react to cross traffic. All of this contributes to the dangers related to this area.

Traffic data indicates a need for traffic enforcement attention in the area. One of the top priorities for traffic and patrol officers is presence and traffic enforcement on Third and Fourth Streets. Though it is a significant focus, officers also have a need to address traffic, crime prevention patrols, and respond to other calls for service in other areas within the community. This is true during both the morning and evening commute times. The focus of this enforcement, based on the aforementioned collision data, should be on right-of-way and turning violations; however, the officers patrolling this area also pay very close attention to speed and to a lesser degree, other types of violations. Presence and high visibility enforcement of any violation supports the education component for passing motorists. Traffic enforcement data indicates, during 2014 and 2015, between 20%-25% of all citations and written warnings have been issued for violations on Third and Fourth Streets, which is commensurate with traffic collision data that indicates between 21%-25% of the collision reports taken resulted from collisions on these streets. In 2014, Coronado police officers issued 436 speeding tickets on Third and Fourth Streets and slightly over 1,500 citations/written warnings in total.

Enforcement in the area has primarily been conducted using the aid of Lidar. To use this tool, a certified and valid speed survey is necessary. In the absence of a current speed survey, between February 2015 and present, officers have continued enforcing traffic violations in the corridor using high visibility traffic stops to educate the public. Speed-related citations have decreased dramatically because the practice of pacing is less effective and efficient. Pacing requires the officer to follow the violator vehicle for a reasonable duration while maintaining a consistent distance between the violator and the officer. This permits the officer, using the patrol car speedometer, to determine the approximate speed of the violator vehicle. This has been the method used by officers while the survey has been studied by Caltrans. Despite this obstacle, officers have issued more citations and written warnings in the first five months of 2015 than were issued in the same period of 2014 in the Third and Fourth Street corridor.

June 23, 2015

Mayor and Council

Though the Third and Fourth Street corridor has and continues to be the highest priority for traffic enforcement in Coronado, based on collision data and community input, the Police Department is committed to using a variety of additional/enhanced strategies to effect positive change in this area. These methods include the use of speed feedback trailers, decoy patrol cars moved throughout the area, saturation patrols, and focusing additional emphasis on right-of-way and unsafe turning movements, in addition to speed violations. This effort will certainly see significantly greater results once the speed survey is certified and officers resume the use of Lidar for enforcement of speed. A saturation patrol in Coronado is being scheduled for either July or August. During this event, officers from a variety of local police departments will be assisting us in a maximum enforcement effort.

As was stated by traffic engineering professionals, the best method for long-term traffic management improvements is by use of roadway engineering. Despite this fact, the Coronado Police Department remains committed to its mission of traffic collision reduction through education and enforcement, especially in the City's most problematic areas.

Additional Facts:

CPD issued 96% more speeding citations in 2014 than in 2013

CPD issued 13% more traffic citations in 2014 than in 2013

2014 - 40% reduction in property damage collisions

2014 – 8% reduction in injury collisions

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**CITY OF CORONADO
CITY MANAGER'S OFFICE
M E M O R A N D U M**

DATE: June 23, 2015

TO: Honorable Mayor and Council

FROM: Blair King, City Manager

SUBJECT: Speed Survey

Pursuant to the California Vehicle Code, an Engineering and Traffic Survey (E&TS) is required to set a speed below the maximum speed for California roadways (65 mph or 55 mph, depending on the road design). Per section 21400(b) of the Vehicle Code, the speed limit shall be set to the 85th percentile speed rounded to the nearest 5 mph increment. A 5 mph reduction may be applied when conditions not readily apparent to the driver (such as collision data, volume of pedestrians/bicyclists, high residential density, etc.) are documented and approved as warranting the reduction by a registered Civil or Traffic Engineer.

Speed limits set by an E&TS are normally set near the 85th percentile speed, as federal studies have found that setting a speed limit too high or too low can increase collisions. Speed limits that are set near the 85th percentile are considered safer and produce less variance in vehicle speeds. In addition, studies have found that the majority of motorists do not alter their speed to conform to speed limits that they perceive as unreasonable for prevailing conditions.

The speed survey conducted for State Route 75 between the toll plaza and Orange Avenue determined the 85th percentile speed to be 34 mph and 35 mph respectively, which would be rounded to 35 mph. After applying a 5 mph reduction based on collision rates, high pedestrian/bicyclist volume, and high residential density, the speed was recommended to be lowered to 30 mph, which is a 5 mph increase over the currently posted speed of 25 mph. The California Manual for Setting Speed Limits allows for only one 5 mph adjustment. Therefore, the 30 mph speed limit is the lowest defensible speed limit possible given the survey results.

The California Manual for Setting Speed Limits, Section 3.2.3, requires that speed surveys must be conducted only when traffic is free-flowing and not influenced by anything other than roadway geometry. That is to say, the speed survey should not be influenced by the proximity to traffic control devices, slow vehicles such as trucks or buses, by enforcement or the perception of enforcement, inclement weather, or other impediment. In addition, the location of a speed survey spot should be at least .2 miles (1,056 feet) away from a signal, or midway between traffic signals, whichever is less. B Avenue is approximately 750 feet from the Orange Avenue traffic signal.

Given the above requirements, it is highly unlikely that an additional speed survey on Third and Fourth Streets between Orange Avenue and the toll plaza would produce a different result that would legally justify a lower speed limit without some intervening influence. There is risk that a new speed survey may produce a higher rate of speed. This conclusion is supported by non-official speed surveys conducted in the corridor over the past several years that produced suggested speed limit results similar or higher than Caltrans most recent speed survey. Additionally, a second speed survey conducted prior to any changes in the roadway design could be called into question by the courts, requiring an officer to not only prove the elements of the violation, but also convince the court of the validity of the subsequent speed survey.

Without a valid speed survey, law enforcement cannot use radar/Lidar, the most effective and safest means to enforce the speed on a roadway. As an alternative, law enforcement can enforce the speed by pacing, which utilizes the enforcement vehicle's speedometer to determine the speed of another vehicle. Pacing is difficult. The officer must maintain a constant and equal distance and rate of speed between the police vehicle and the suspect's vehicle long enough to make a reasonably accurate estimation of its speed. The minimum distance to pace is at least two-tenths of a mile to a quarter of a mile. The longer the pace occurs, the more defensible the citation.

Given the concern of speeding in the Third and Fourth Street Corridor, it may be pragmatic to have Caltrans finalize its speed survey for the corridor, permitting the use of Lidar, while the City explores short- and longer-term solutions to reduce the engineered speed of the roadway, and then request a new speed survey be conducted once those solutions have been implemented.

This recommendation reflects the collective opinions of the Police and Public Services and Engineering departments.



Coronado Police Department

interoffice

MEMORANDUM

To: Honorable Mayor and City Council
Via: Blair King, City Manager
From: Jon Froomin, Chief of Police
Re: Pedestrian Crossing Guards
Date: June 23, 2015

Crossing guards are trained individuals placed at specific intersections to assist pedestrians in safely crossing the street. Most crossing guards work in the areas of schools to assist children to and from school.

Well-trained crossing guards can help to accomplish the following goals:

- Use existing gaps in traffic to help pedestrians cross safely.
- Alert motorists that pedestrians are in the process of crossing.
- Educating children on traffic safety.
- Observe and report any incidents or conditions that present a potential safety hazard to the pedestrians or the guard.

Although there is no specific guidance in the Manual on Uniform Traffic Control Devices (MUTCD) regarding their use, the City Engineer does not recommend instituting the use of crossing guards without installing a marked crosswalk. However, warrants for crosswalks on multi-lane roadways require additional engineering enhancements to improve pedestrian safety.

HISTORY: Most intersections controlled by crossing guards are intersections traveled by children on the way to or from school. However, there are a few areas that utilize crossing guards at locations with extremely high pedestrian crossing activity. In Fort Meyers, Florida, a crossing guard program was instituted in December 2014 at one busy intersection. During a 12-day study, the crossing guard assisted over 1,000 pedestrians per day. The cost of the crossing guard at that one intersection for the 12-day study was \$23,000. After completion of the study, they implemented the program.

ANALYSIS: The City of Coronado has utilized paid school crossing guards for several years. Currently, paid crossing guards are used at four intersections in Coronado. The annual budget for this service is \$62,000.

The City of Coronado crossing guard contract charges \$42 per hour for guards on a split schedule.

When crossing guards are late or do not show up, police personnel are utilized to staff the intersections. Currently, this is done to ensure the protection of our youth, and parents have come to expect that this assistance will be provided at the assigned crossing guard locations. Guards placed in other locations could result in a similar expectation. Reassigning Police Department personnel to these types of duties impacts the work which they would normally be performing.

If crossing guards are considered as a potential solution, additional costs will include studies (to determine which intersection(s) should have crossing guards and during what times), as well as the additional cost to staff the locations. Whether guards are used only during the school year or year-round will have a significant impact on the annual budget. If crossing guards were implemented at two intersections, on a split shift for seven hours per day, only on weekdays, the annual cost could be \$154,000.

PROS: Higher visibility due to presence of the crossing guards; trained supervision at crossings; and educational opportunity for pedestrians.

CONS: The costs of the crossing guards and police personnel, if and when crossing guards do not show up or are late; once implemented, the public will expect a guard during scheduled staffing times; once introduced at one intersection, residents may begin wanting/expecting them at other intersections; and increased City liability.

CITY OF CORONADO

ENGINEERING & PROJECT DEVELOPMENT SECTION

INTERDEPARTMENTAL MEMORANDUM

DATE: June 23, 2015
TO: Honorable Mayor and Councilmembers
VIA: Blair King, City Manager
FROM: Ed Walton, City Engineer
SUBJECT: Use of Vehicle Speed Feedback Signs on Third and Fourth Streets

The California Manual on Uniform Traffic Control Devices (CaMUTCD) allows for the use of “Vehicle Speed Feedback Signs” in conjunction with speed limit signs as a tool to utilize in an attempt to reduce vehicle speeds along a particular roadway. These signs typically identify the speed of passing vehicles through the use of radar equipment embedded within the sign and communicates the speed to the passing driver on a digital display.

A variety of vendors supply vehicle speed feedback signs with a number of options available including sign size, hardwired or solar powered options, an ability to display text and/or simple graphics as opposed to just numbers, an ability to collect and store speed data, and programming options regarding the message to be displayed including the ability to have flashing text and vary how long the message stays on the screen. Many models allow for specific programming of the feedback display which could allow the display to be illuminated to show all speeds, vehicles that are exceeding the posted speed limit, or vehicles that are exceeding the speed limit by a designated number (say five miles an hour over). In addition, some models can be programmed so that they only operate during certain hours of the day.



The City of Coronado currently operates two vehicle speed feedback signs that can be deployed at 10 different locations within the Village where mounting posts and brackets have already been installed. The City’s signs are approximately 45" tall, 28" wide, and 4.5" thick and are solar powered. All signs (speed feedback or otherwise) are typically installed at a minimum height of seven feet to prevent access impacts or hazards to pedestrians on adjacent sidewalks, increase visibility, and discourage vandalism.

Research on the overall effectiveness of speed feedback signs concludes that results vary and are largely dependent upon the location/visibility of an installed sign, physical characteristics of the roadway and surrounding land uses, and the severity of the existing

speeding problem. Staff was unable to identify a research paper where speed feedback signs had been installed along an urban, multi-lane roadway outside of a school zone similar to Third and Fourth Streets. However, in general, staff's research concludes that a reduction of one to five miles per hour can be expected immediately after a speed feedback sign is installed, but the sign's effectiveness tends to decrease over time. (Note: When conducting a speed survey study, speed feedback signs are required to be turned off.)

The radar equipment found within a vehicle speed feedback sign is typically effective up to a maximum distance of between 500 to 1000'; sign legibility also tends to have a similar effective range depending on the size of the sign and text. Possible locations to install speed feedback signs on Third and Fourth Streets east of Orange Avenue are shown on the attached map and have been selected to maximize drivers' visibility of the signs and the effective distance of the radar apparatus. However, it is important to note that any proposed location along Third and Fourth Streets will need to be reviewed and approved by Caltrans via the Caltrans encroachment permit process.

The cost to install solar powered speed feedback signs and equipment along SR 75 east of Orange Avenue would range between roughly \$10,000 and \$15,000 per location. The City owns two pole-mounted speed feedback signs that are deployed at various locations on a rotating basis. Insertion sleeves could be installed at the locations shown east of Orange Avenue and included in the rotation or could be permanently installed.

Attachment 4a: Location Map Showing Possible Installation Locations

Location Map Showing Possible Installation Locations



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Coronado Police Department

interoffice

MEMORANDUM

To: Honorable Mayor and City Council

Via: Blair King, City Manager

From: Jon Froomin, Chief of Police

Re: Pedestrian Flag Program

Date: June 23, 2015

The concept of a pedestrian flag program is simple. The idea is to place a container of handheld flags at each end of a crosswalk and instruct pedestrians to carry one with them while crossing the intersection. The brightly colored flags benefit pedestrians by making them more visible to drivers.



Above and below: sample photographs of pedestrian flags.



Although there is no specific guidance in the Manual on Uniform Traffic Control Devices (MUTCD) regarding their use, the City Engineer does not recommend instituting the use of pedestrian flags without installing a marked crosswalk. However, warrants for crosswalks on multi-lane roadways require additional engineering enhancements to improve pedestrian safety.

HISTORY: Programs started as early as 1995, in cities such as Salt Lake City, Utah; Seattle, Washington; Kirkland, Washington; Berkeley, California; and Metuchen, New Jersey.

COSTS: The cost of cloth flags attached to wooden sticks (initial and replacement costs) during the three-year program in Berkeley, California, reached nearly \$10,000 because of the high theft rate. Berkeley used the program at a total of seven intersections. Additional cost components include: studies on which intersections to apply the program; signage; public education; and upkeep and maintenance.

PROS: The flags are highly visible and the program increases public awareness.

CONS:

- Requires constant upkeep and maintenance (i.e., replacing flags and ensuring flags are distributed on both sides of the intersection).
- Cost to maintain flags due to theft and wear and tear.
- Having to carry the flag creates an impediment to walking; not an available option if pedestrians are carrying things and their hands are full.

- Creates additional false sense of security for pedestrians crossing. A San Diego study indicated as much as six times as many crashes involving pedestrians take place in marked crosswalks as unmarked crosswalks. After accounting for pedestrian usage, this number was reduced to about three times as many crashes in marked crosswalks as in unmarked crosswalks. This is due to the false sense of security caused by being “within the lines,” causing pedestrians to be less attentive to traffic.
- Over long periods of time, the program trains drivers to look for bright colored flags making them less aware of actual pedestrians. It could have adverse impacts at intersections without flags.

RESULTS: In Seattle, the program was discontinued. The department of transportation observed that, “having a flag available does seem to make pedestrians more visible to motorists; however, there was not a consistent pattern of improved compliance by motorists.” They had piloted the program at 17 locations.

In Berkley, a three-year pilot program was found to be extremely costly due to continuously having to replace flags due to theft. Surveys by city staff indicated that the flags were used as intended by only two percent of pedestrians, and the use of the flags did not have a noticeable effect upon driver behavior. The program was discontinued. They had piloted the program at seven locations.

Salt Lake City currently has 47 crossing flag locations in its downtown. The flags have been an excellent public education component resulting in a sizable amount of public safety awareness and education. The program has made their neighborhoods safer and raised community-pedestrian safety awareness.

“Field studies conducted in this TCRP (Transit Cooperative Research Program) project found pedestrian crossing flags in Salt Lake City and Kirkland to be moderately effective. The study sites that with crossing flags, motorists’ had yielding rates that ranged from 46 to 79 percent, with an average of 65 percent compliance.” (*Transit Cooperative Research Program, Improving Pedestrian Safety at Unsignalized Crossings, 2006*)