

**CITY OF HUNTINGTON BEACH  
PUBLIC WORKS COMMISSION  
REQUEST FOR ACTION**

Item No. 07-29

**SUBMITTED TO:** Chairman Siersema and Members of the Commission

**SUBMITTED BY:** Travis Hopkins, PE, Acting Director of Public Works

**DATE:** **December 5, 2007**

**SUBJECT:** Recommend Approval and Funding of a Lighted Pedestrian Crosswalk Installation on Bushard Street at Yellowstone Drive and Radar Feedback Locations on Indianapolis Avenue

**Statement of Issue:** Changes in attendance district boundaries for Hawes Elementary School have resulted in an increase in demand for a pedestrian and bicyclist crossing of Bushard Street north of Indianapolis Avenue. A pilot program to evaluate the effectiveness of in-pavement lighted crosswalk treatments has been proposed to improve crossing visibility. The City Council will be considering a staff report on this issue at the December 17, 2007 regular meeting.

**Funding Source:** Funding for this program has not been included in the current Capital Improvement Program. Appropriation of funds from the General Fund in the amount of \$90,000 is included in the recommended action.

**Recommended Action:** Motion to recommend to City Council:

1. Amend the current 2007-08 Capital Improvement Program to design and construct an in-road flashing crosswalk on Bushard Street at Yellowstone Drive including all appropriate signs and markings associated with the treatment.
2. Amend the current 2007-08 Capital Improvement Program to install up to six (6) galvanized steel poles on Indianapolis to support radar speed feedback signs.
3. Appropriate funds in the amount of \$90,000 for the design and construction of the projects from the General Fund undesignated balance.
4. Designate the lighted crosswalk project as a Pilot Program and request a review of the treatment back to the Public Works Commission after six months and 12 months of use during the school year, with a follow-up recommendation from staff and the Public Works Commission regarding criteria for potential future applications.

### **Alternative Action(s):**

1. Recommend City Council not approve the Pilot Program with justification for recommendation.
2. Recommend alternative treatment of intersection with appropriate justification.

### **Analysis:**

Over the past three months, Public Works staff has been working with residents, the Police Department and City Council representatives to review pedestrian, bicycle and motor vehicle safety issues in the vicinity of Indianapolis Avenue between Beach Boulevard and Brookhurst Street. A combined effort that included engineering studies, public input and feedback from the Police Department and the School District helped identify several areas where improvements could be made to help provide an environment that facilitates pedestrian and bicycle activity, along with reduced incidents of speeding and vehicle/pedestrian/bicyclist conflicts. The following presents a brief summary of the actions currently being pursued:

- Install up to six (6) poles along Indianapolis in areas with school activity and rotate the use of two (2) radar speed feedback signs
- Modify lanes on Indianapolis at Brookhurst to provide only one eastbound left turn lane
- Complete current CIP project to construct a traffic signal at Indianapolis and Titan
- Enhance motorist notification of pedestrian and bicyclist activity at or near the intersection of Bushard and Yellowstone Drive
- Submit application for the Safe Route to School Grant program to potentially obtain funding of additional pedestrian and bicycle facility enhancements.

### **Radar Speed Feedback Signs**

The City Police Department has received funding to purchase up to four radar speed feedback signs as part of an on-going education and enforcement program. The Police Department has designated two of those signs for deployment by the Public Works Department in fixed locations. The other two signs are being purchased as portable devices for use throughout the City. Based on the amount of school activity along Indianapolis Avenue, staff recommends that the two signs designated for "fixed" locations be used at up to six locations along Indianapolis. The individual units will be solar powered and are mounted on moderately sized poles similar to a 10 foot high streetlight pole. These poles require concrete foundations for structural stability. In one day, with the proper equipment, a maintenance crew can relocate two of the solar

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installations to a different location. Since this effort requires a significant amount of staff resources, it is recommended that the signs be moved no more than every two months during the school year. Installing six poles along Indianapolis will provide the ability to target motorists within each of the three primary school areas along the street in both directions of travel.

### Motorist Notification at Bushard/Yellowstone Drive

Substantial input has been received by staff about the need to have additional motorist warnings and/or traffic control on Bushard Street near Yellowstone Drive. When Kettler School was closed two years ago, the Huntington Beach City School District modified the area attendance boundaries. As a result, students living between Bushard and the flood control channel west of Bushard were moved from Moffett Elementary to Hawes Elementary. This created a new area where children could reasonably walk to school, but were required to cross Bushard Street. Due to the layout of the street system and the location of Hawes School, the majority of students would have to walk in excess of 1000 feet more to access either the traffic signal at Adams or at Bushard. The most logical crossing point for students is Yellowstone Drive. This access point is also a convenient location for middle school students near Hawes School to exit the tract on bicycles. Typically, the student bicyclists would prefer to cross the street to access the on-street bike lane in the appropriate direction of travel. Recent observations indicate that approximately 14 elementary and middle school students cross Bushard Street near Yellowstone Drive. However, parents have expressed a strong desire to walk students to school if the crossing could be enhanced to improve driver notification and safety. The number of potential users of this area could be up to 50 per day, or more.

Staff has considered several options for addressing this crossing. Current warning signs are effective general warnings, but do not alert motorists to actual pedestrian activity. Staff has identified the following major modifications to address this issue.

1. Install advance flashing beacons that are programmed to operate during typical school activity times (\$75,000)
2. Install an in-pavement flashing crosswalk activated when pedestrians are crossing the roadway (\$65,000)
3. Install overhead flashing beacons activated when pedestrians are crossing the roadway (\$95,000)
4. Install a pedestrian activated traffic signal with typical green/yellow/red indications along with WALK/DON'T WALK indications (\$165,000)

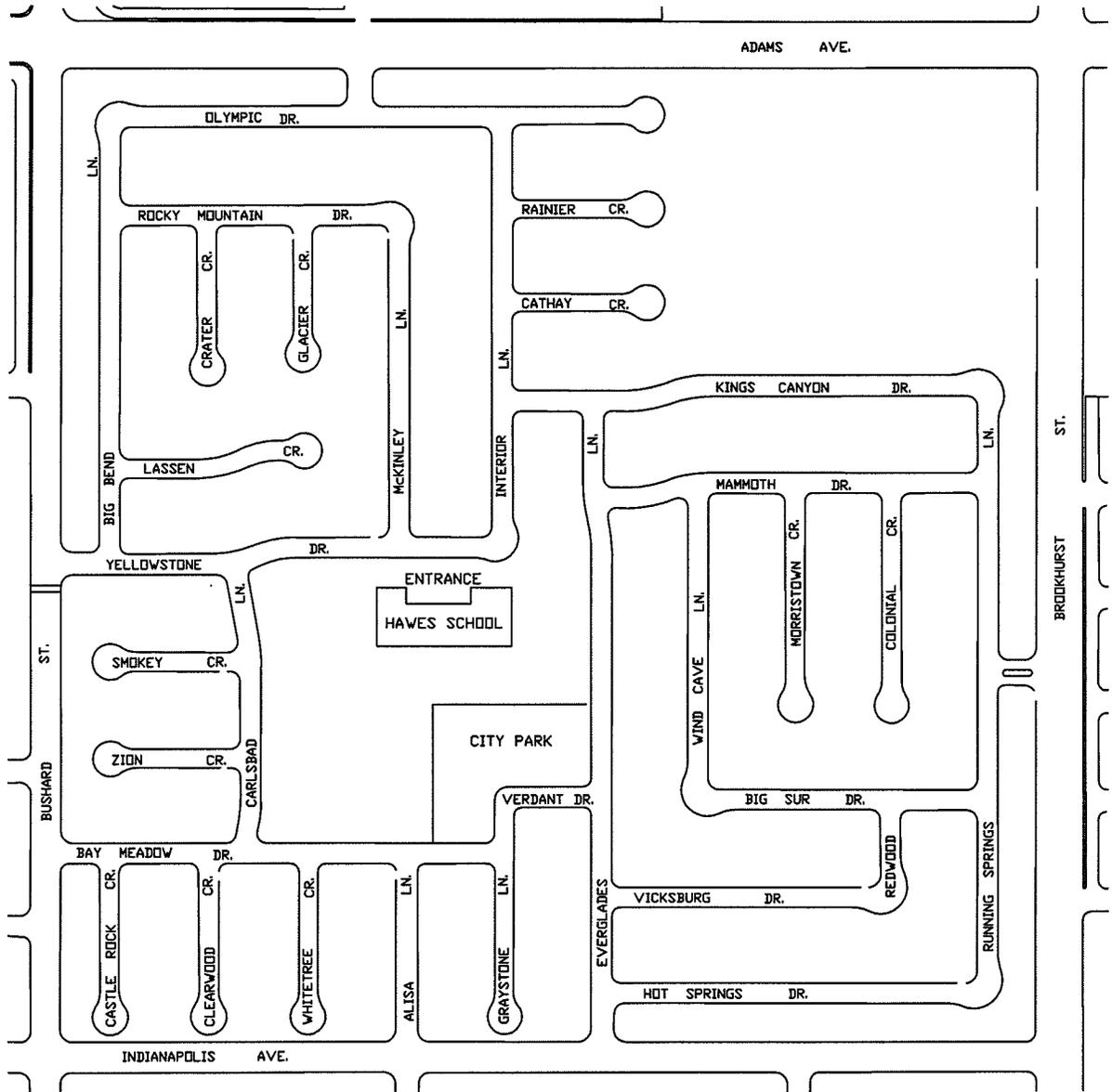
Staff believes that option 2 – an in-road flashing crosswalk, offers a substantial increase in meaningful driver warning at a moderate construction and maintenance cost. The City has not installed this type of treatment, but many other agencies have recent experience with them. Both positive and negative aspects of the installations have been noted. However, with recent advancements in the systems and better understanding of where these installations are most effective, the probability of a positive experience is improved. This treatment provides a visible warning during the actual time when pedestrians are crossing the street, without unnecessary motorist delays.

A pedestrian activated signal (option 4) would provide the most positive vehicle control and assistance to pedestrians. However, it is a relatively expensive option and the location does not meet typical State of California warrants for a pedestrian signal. Staff believes that the combination of relatively low actual pedestrian volumes along with the conditions at this location make the flashing crosswalk a preferable option. Since the City does not have any specific experience with the use of this treatment based on effectiveness, standards for application and for operations/maintenance, we recommend that this installation be treated as a Pilot Program allowing staff to conduct evaluations of the use of the crosswalk and basic motorist response. The results of this review will help the City in making future decisions about possible applications of this technology at other locations.

**Attachments:**

1. Vicinity Map
2. Radar Speed Feedback Sign Rotation Locations
3. Recommended Flashing Crosswalk Location
4. Radar Speed Feedback Example
5. Flashing Crosswalk Example

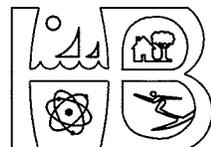
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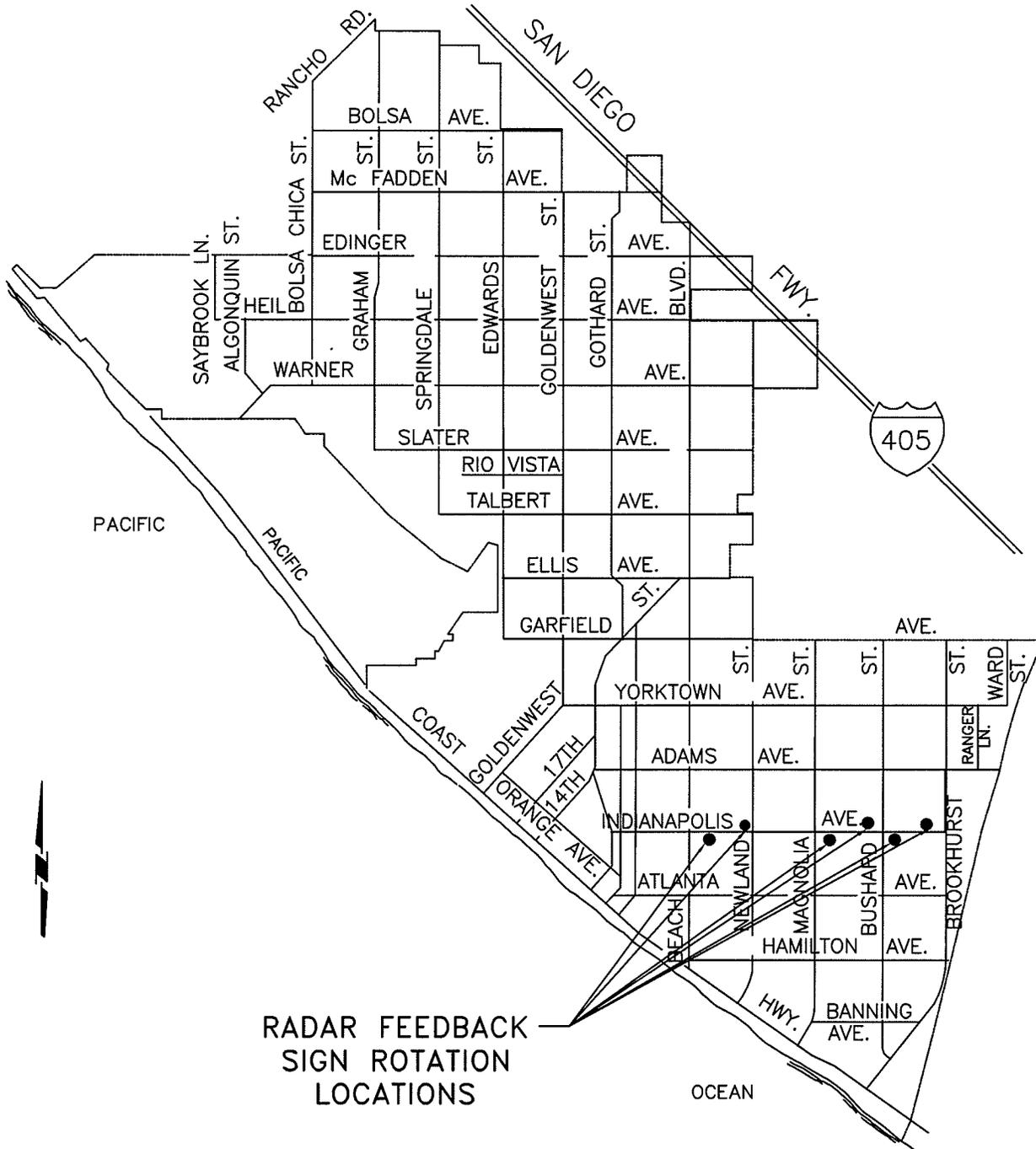
DEPARTMENT OF PUBLIC WORKS  
TRAFFIC ENGINEERING



## VICINITY MAP

ATTACHMENT 1

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RADAR FEEDBACK  
SIGN ROTATION  
LOCATIONS

# VICINITY MAP

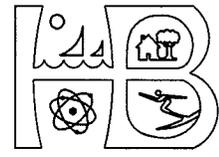
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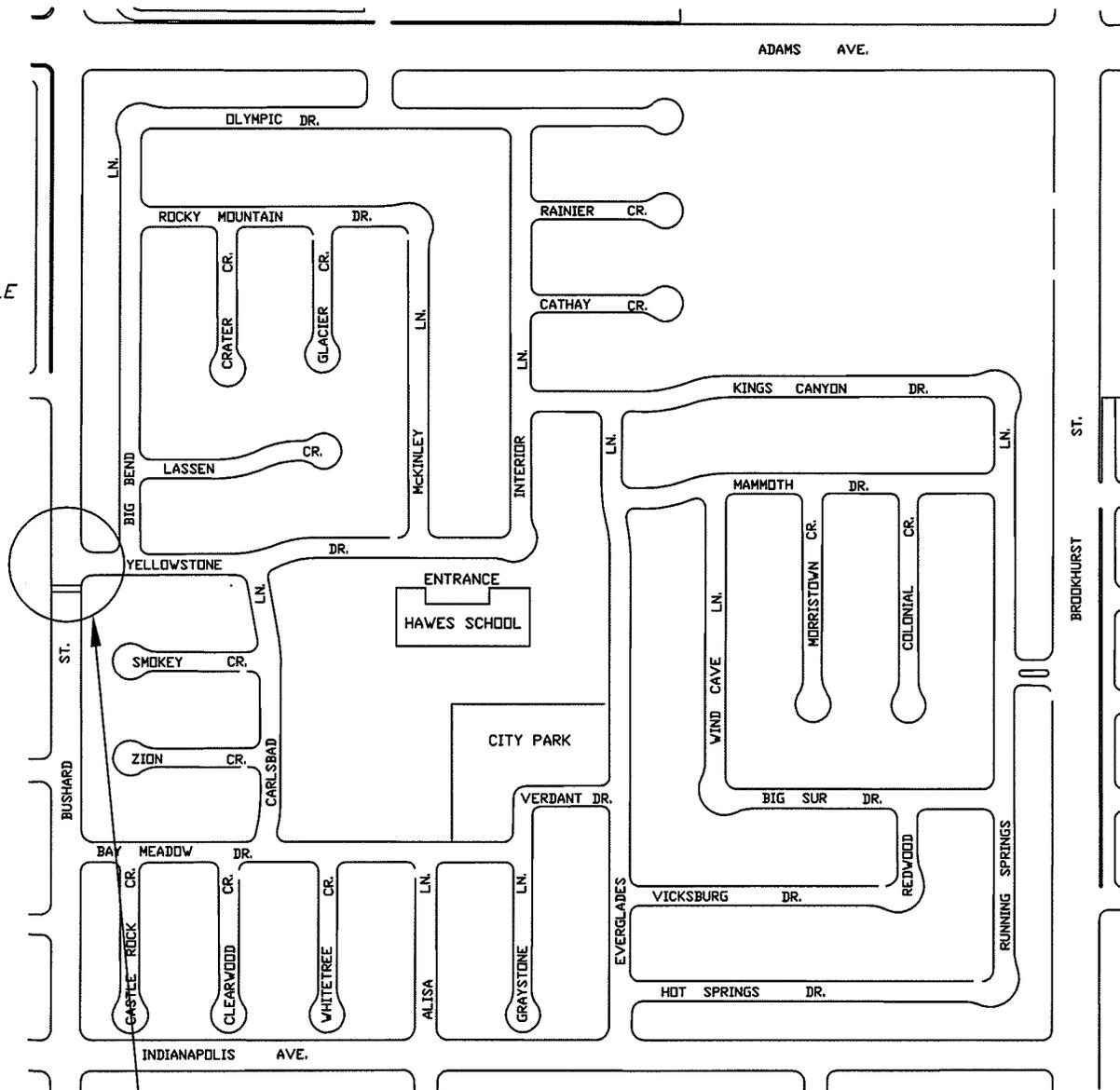
### RADAR FEEDBACK SIGN LOCATIONS VICINITY MAP



ATTACHMENT 2

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NO SCALE



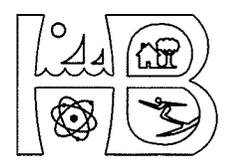
PROPOSED CROSSWALK LOCATION

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FLASHING CROSSWALK  
PROPOSED LOCATION



ATTACHMENT 3

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SPEEDCHECK-1520F pole-mounted radar speed sign calming traffic in a school zone

## ATTACHMENT 4



**Flashing Crosswalk Example**

# ATTACHMENT 5

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