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DEPARTMENT OF PUBLIC WORKS

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Farhad Mansourian, RCE
Director

April 25, 2011

California Traffic Control Devices Committee
Department of Transportation, Division of Traffic Operations MS 36,
P.O. Box 942874,
Sacramento, CA 94274-0001

RE: Experimentation Progress Report
Flashing yellow arrow for permissive right turn movement
Intersection of Sir Francis Drake Blvd and Wolfe Grade,
Kentfield, CA

Attn: Devinder Singh
CTCDC Executive Secretary

Dear Mr. Singh

On August 18, 2008 the proposed change was accomplished by modifying the traffic signal at the intersection of Sir Francis Drake Blvd and Wolfe Grade. Additional pedestrian indications were installed on both of the north corners and both of the right turn islands. The full crossing between the north corners was then controlled as one pedestrian phase. New three section vehicle heads were installed to control the westbound right turn movement. The new three section heads consisted of a steady right red arrow, a steady right yellow arrow and a flashing right yellow arrow (FYA). The new three section head were programmed to display a FYA, to create a permissive right turn phase, when westbound through traffic has the green unless there is a pedestrian call for the north crosswalk, in which case the right turn indications continue to display the solid red arrow. This was accomplished by using an overlap phase with pedestrian phase omit. An R10-17a sign was installed to allow westbound right turns on red during the steady red arrow. The free right turn from southbound Wolfe Grade to westbound Sir Francis Drake Boulevard received a similar design treatment for essentially the same reasons.

Purpose

The purpose of the proposal use of FYA is to evaluate the effects of such displays on intersection crashes involving permissive mode right turning vehicles. We have determined that, with the circular green signal indications that currently/used to control the two permissive right turn movements in question, the level of right turn movements are insufficient. The use of FYA

for these right turn movements better communicates to drivers that the permissive turns are to be made with caution and appropriate yielding behavior.

One Year Collision Evaluation

According to CHP Collision report, there were no reported collisions between August 2008 and August 2009 for the intersection of Sir Francis Drake Blvd and Wolfe Grade. Compared this to the 12 collisions (7 yrs period), due to the permissive right turning vehicles conflicting with protected left turn vehicles that happen before the experimentation, there is a significant accident reduction. In addition pedestrians were able to use the crosswalk without the right turning vehicles encroaching and or violating their right of way. We will continue to monitor traffic conditions and submit to CTCDC a final report on June 2011. Attached is the CTCDC status of experiment progress report form and a few photos of the intersection.

Sincerely,

Amanuel Haile
Assistant Engineer

Attachments:
CTCDC Status of experiment progress report form
Photos of intersection

C: Farhad Mansourian

CTCDC
STATUS OF EXPERIMENT

Date **June 9, 2011**

Item **08-20**

Experiment: ***Flashing yellow arrow for permissive right turn movement***

Sponsor **Mr. Farhad Mansourian**

Supporting Agency & Contact **County of Marin, Amanuel Haile**

Next Appearance before the CTCDC **TBD**

Milestones **Flashing yellow arrow installed August 18, 2008**
1 year collision (08/2008-08/2009) data collected and analyzed

Status: The primary measure of effectiveness for the change as previously reported is crash data. The County of Marin has compiled a crash data for the test location for a period of two years prior to installation of the experimental design. The County has now compiled and is reporting as a progress report a one year crash data to evaluate the effectiveness of the change. The crash data is analyzed below to determine if the number of crashes involving westbound right turn vehicles declined as a result of the experimental design.

According to CHP Collision report, there were no reported collisions between August 2008 and August 2009 for the intersection of Sir Francis Drake Blvd and Wolfe Grade. Compared this to the two year before the experimentation (August 2006- August 2008, 6 collisions) there is a significant accident reduction.

Applicant's Signature

Applicant's Name Amanuel Haile

Address P.O.Box 4186, Room 304, San Rafael, CA 94913-4186

Phone 415-499-7137 FAX 415-499-7847

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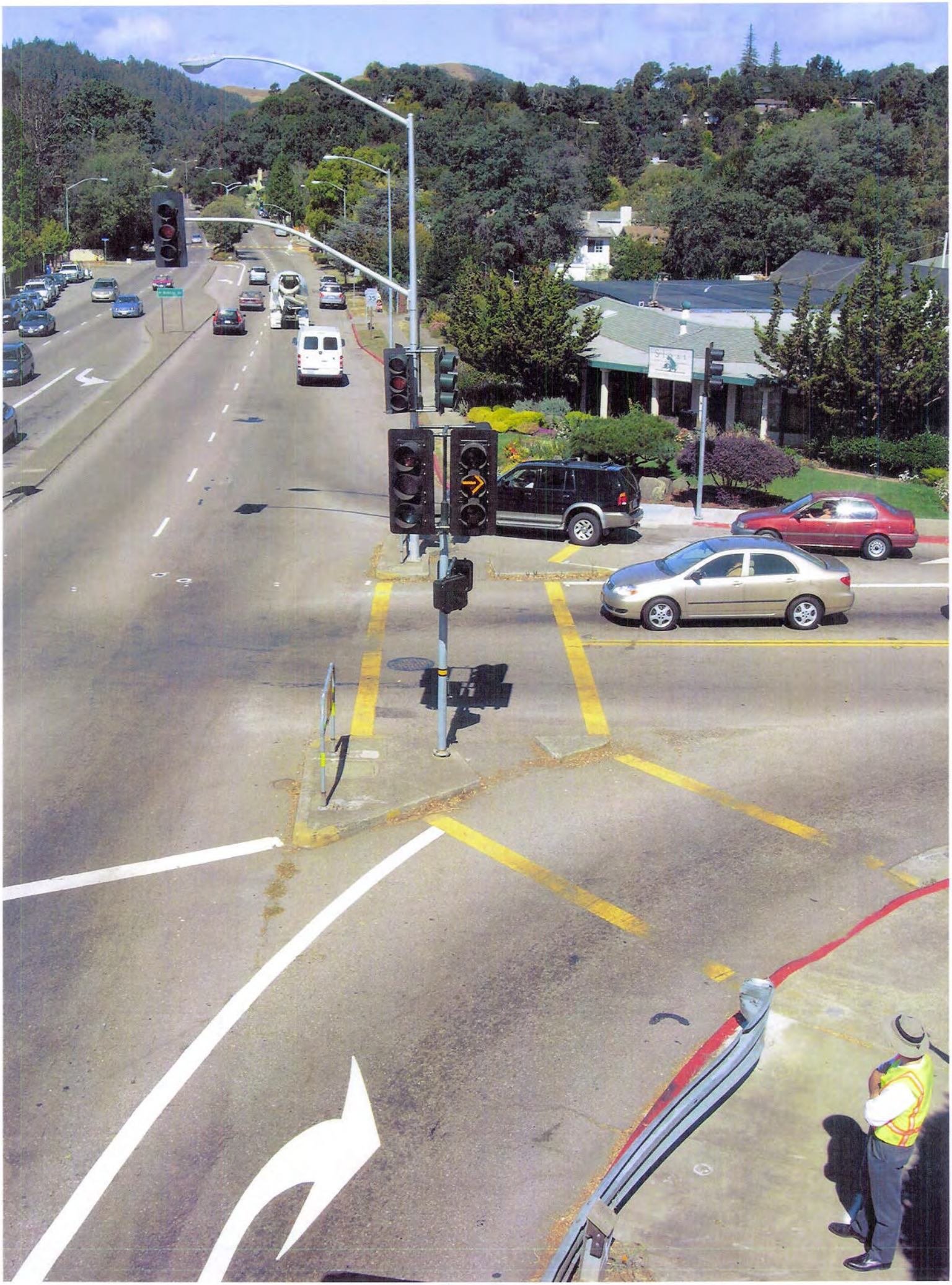

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