



REPORT TO MAYOR AND COUNCIL

TO THE HONORABLE MAYOR AND COUNCIL:

DATE: April 8, 2014

SUBJECT: ADOPTION OF RESOLUTION NO. 14-3521.1 AUTHORIZING THE INSTALLATION OF ALL-WAY STOP CONTROL AT THE INTERSECTION OF STANWELL DRIVE AND BISSO LANE

Report in Brief

City staff recently conducted a comprehensive review of pedestrian safety at the intersection of Stanwell Drive and Bisso Lane in response to concerns raised by a member of the business community in this area. Based on this review, CED staff has determined that the intersection of Stanwell Drive and Bisso Lane should be upgraded from the existing one-way STOP sign on Bisso Lane to All-Way STOP control to improve pedestrian safety at this intersection.

Staff recommends that the City Council adopt Resolution No. 14-3521.1 authorizing the installation of All-Way STOP control at the intersection of Stanwell Drive and Bisso Lane.

Background

CED staff received a request from CERUS Corporation (CERUS) to review the safety of an existing crosswalk across Stanwell Drive at Bisso Lane. CERUS occupies two buildings located at 2550 and 2411 Stanwell Drive, serving as the company's global headquarters. CERUS is a biomedical products company focused in the field of blood safety.

Currently, traffic control at the intersection of Stanwell Drive and Bisso Lane consists of a one-way STOP sign on Bisso Lane and no traffic control on Stanwell Drive. There are two marked crosswalks at this intersection, one on Bisso Lane (north-south) and the other on Stanwell Drive (east-west) across the northerly leg of the intersection. These crosswalks serve a heavy volume of pedestrians generated from the adjoining businesses on Stanwell Drive.

The north-south crosswalk is controlled by a STOP sign on Bisso Lane; however, there is no traffic control protecting pedestrians from opposing vehicles turning from Stanwell Drive onto Bisso Lane. Similarly, the east-west crosswalk is uncontrolled and there is no traffic control protecting pedestrians from approaching vehicles on Stanwell Drive. In both cases, pedestrians must exercise caution and watch closely for oncoming traffic from Stanwell Drive before crossing the street. Moreover, sight distance for the east-west crosswalk is negatively affected by a nearby, sharp S-curve on Stanwell Drive just north of Bisso Lane.

CERUS employees use the east-west crosswalk on Stanwell Drive on a regular basis as a link in the pathway between the two office buildings occupied by the company in a campus-like atmosphere. As a result, this crosswalk experiences a high volume of pedestrians each business day. CERUS staff has informed the City that pedestrians do not have adequate visibility of oncoming traffic from the north to safely cross Stanwell Drive from west to east. The line of sight between pedestrians (crossing eastbound) and drivers

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(traveling southbound) is constrained by the S-curve on Stanwell Drive, thus raising concerns regarding the safety of this crosswalk.

The posted speed limit on Stanwell Drive is 25 mph.

Discussion

CED staff has reviewed field conditions at the Stanwell Drive/Bisso Lane intersection and obtained new traffic data at this location including parking conditions, sight distance measurements, daily traffic counts, pedestrian counts, recent collision history and speed data. The review process and findings are summarized below.

Sight Distance Review. On-street parking is allowed on Stanwell Drive except at driveway locations, bus stops and the northern end of the street. Stanwell Drive is approximately 47 feet wide and is designed to accommodate two, 15-foot travel lanes for adequate auto/delivery truck access, plus parallel parking on both sides of the street. There is a red curb zone (15 feet) on the west side of Stanwell Drive just north of the east-west crosswalk. On-street parking is permitted along the S-curve (upstream of the red curb) to accommodate employee and visitor parking needs for the adjacent businesses. Sight distance measured around the S-curve indicates that the ***pedestrian*** line of sight of oncoming traffic when crossing Stanwell Drive in the eastbound direction could be limited to only 50 feet if parking spaces along the S-curve were occupied (see Figure 1).

A speed survey was also conducted on Stanwell Drive to supplement the sight distance analysis. The 90th percentile speed was measured at 30 mph. This measurement indicates that 90% of the vehicles surveyed were traveling at or below the speed of 30 mph. The 90th percentile speed is fairly representative of the design speed for a local street such as Stanwell Drive. At this speed, the safe stopping distance to stop before reaching an object in its path (such as a pedestrian crossing the street) is 200 feet, based on guidelines published by the American Association of State Highway and Transportation Officials (AASHTO). AASHTO standards are used in highway design and construction throughout the United States.

Assuming the safe stopping distance on Stanwell Drive is 200 feet, the ***driver*** line of sight of a pedestrian when driving southbound toward Bisso Lane could fall below the 200 feet required for safe stopping if the driver view of the pedestrian was blocked by vehicles parked along the S-curve, as shown in Figure 1. Should this be the case, the driver of a vehicle traveling at 30 mph may have to abruptly apply the brakes or make an evasive maneuver to avoid colliding with the pedestrian, hence placing both pedestrians and motorists at potential safety risk within the sight distance zone defined in Figure 1. One option to mitigate this potential problem would be to remove on-street parking altogether from this area; however, this measure is not recommended because parking on Stanwell Drive is needed to support the daily operations of the adjacent businesses.

Traffic Data Review. New traffic counts collected on Stanwell Drive and Bisso Lane suggest moderate traffic volumes entering this intersection on an hourly or daily basis. As a result, All-Way STOP control is not warranted at this intersection strictly based on traffic volumes as specified in the California Manual on Uniform Traffic Control Devices (MUTCD). However, a significant number of pedestrians enter this intersection on weekdays between 7:00 AM and 6:00 PM based on a recent pedestrian count, including 72 pedestrians crossing Stanwell Drive (many of whom are CERUS employees) and 94 pedestrians crossing Bisso Lane.

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The east-west crosswalk on Stanwell Drive is uncontrolled and sight distance may not be adequate to safely accommodate crossing activities of 70+ pedestrians during business hours, as noted above. Similarly, the north-south crosswalk on Bisso Lane is heavily utilized (e.g., 90+ pedestrians each business day) and provides no protection from traffic approaching from Stanwell Drive and turning onto Bisso Lane. Furthermore, if a transit bus is stopped at the designated bus stop just south of the intersection, sight distance of pedestrians in this crosswalk could be partially blocked by the bus as motorists drive around the bus to turn right onto Bisso Lane (see Figure 2).

A recent review of collision history at the Stanwell Drive/Bisso Lane intersection indicates that no accidents have occurred at this location since January 2010. However, the potential for conflict between vehicles and pedestrians does exist at this intersection based on prevailing conditions and pedestrian volumes in the area.

Even though All-Way STOP signs are not warranted at this intersection based on traffic volumes or recent collision history, the California MUTCD includes a special provision advising that All-Way STOP control may be warranted to fulfill “[t]he need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes.” The City’s Transportation Manager’s evaluation of this intersection supports upgrading the Stanwell Drive/Bisso Lane intersection to All-Way STOP sign control based on this MUTCD provision to mitigate potential safety hazards associated with recurring pedestrian activities at this intersection.

All-Way STOP control at Stanwell Drive/Bisso Lane would significantly improve pedestrian and traffic safety at this intersection by requiring vehicles on Stanwell Drive to stop. This improvement would also address the impact of transit buses stopped at the designated bus stop and blocking sight distance for vehicles turning from Bisso Lane onto Stanwell Drive.

The outbound driveway from the private property at 2525 Stanwell Drive should also be STOP sign controlled for traffic safety purposes. This driveway is located directly opposite Bisso Lane within the physical boundaries of the intersection, hence justifying 4-Way STOP sign control at this location. A STOP sign controlling the outbound movement from this driveway would also benefit pedestrian safety in the existing sidewalk across the driveway.

Recommendation. *Install 4-Way STOP control at the Intersection of Stanwell Drive/Bisso Lane/Private Property Access.* Staff recommends that this improvement be implemented based on the above analysis and findings. The property manager and tenants at 2525 Stanwell Drive have been notified that a STOP sign was being recommended for the outbound driveway at this property as part of the proposed 4-Way STOP control improvement. This intersection will continue to operate at acceptable levels of service (LOS) during the peak hours with the implementation of this improvement, and the intersection safety will be enhanced significantly for both pedestrians and motorists.

The proposed 4-Way STOP control at Stanwell Drive and Bisso Lane will also include the installation of STOP AHEAD warning signs in advance of the intersection to account for the impact on sight distance as a result of the S-curve when approaching the intersection from the north (see Figure 2). Additionally, the two marked crosswalks at this intersection will be upgraded by adding zebra stripes to the interior portion of these crosswalks for enhanced visibility.

The Police and Public Works Departments have been notified of this recommendation and the schedule for Council consideration.

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Fiscal Impact

If approved by the City Council, a total of three STOP signs will be installed to bring the intersection of Stanwell Drive and Bisso Lane to 4-Way STOP control, as specified in this report. Additional signing and striping improvements will be implemented for proper traffic operations, as shown in Figure 2.

The total cost for these improvements is estimated at \$3,000. Sufficient funds are available in the FY 2013-14 operating budgets for Signing & Striping and Transportation Planning to cover this cost. These improvements will be implemented by Public Works Maintenance Staff upon City Council approval of the proposed STOP sign installations.

ADA curb ramp retrofits will be implemented at this intersection at a future date as part of the Citywide Sidewalk Improvement Annual Project (CIP #1173).

Public Contact

Posting of the Council Agenda provides public notification. Additionally, Staff has notified all the businesses and public agencies (except the City) adjoining Stanwell Drive, Stanwell Circle, Bisso Lane and Gasoline Alley. The public notice informed businesses/property owners that 4-Way STOP control was being considered by the City at the Stanwell Drive/Bisso Lane intersection.

Staff has received positive feedback from the property manager and tenants at 2525 Stanwell Drive, noting that the proposed 4-Way STOP sign installation will improve pedestrian and traffic safety in this area.

Recommendation for Action

Staff recommends that the City Council adopt Resolution No. 14-3521.1 authorizing the installation of All-Way STOP control at the intersection of Stanwell Drive and Bisso Lane for an estimated total cost of \$3,000.

Prepared by: Ray Kuzbari
Transportation Manager
Ray.Kuzbari@ci.concord.ca.us

Reviewed by: Victoria Walker
Dir. of Community & Economic Development
Victoria.Walker@ci.concord.ca.us



Valerie J. Barone
City Manager
Valerie.Barone@ci.concord.ca.us

BEFORE THE CITY COUNCIL OF THE CITY OF CONCORD
COUNTY OF CONTRA COSTA, STATE OF CALIFORNIA

A Resolution Amending the Traffic Resolution,
Section C, Stop Intersections

Resolution No. 14-3521.1

WHEREAS, the Transportation Manager has recommended that the Traffic Resolution be amended by adding stop signs at the following intersection:

- 1. Stanwell Drive/Bisso Lane/Private Property Access (all-way stop);

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF CONCORD DOES
RESOLVE AS FOLLOWS:

Section 1. That the Transportation Manager is authorized and directed to remove and install the appropriate signs and markings to effectuate this resolution.

Section 2. This resolution shall become effective immediately upon its passage and adoption.

PASSED AND ADOPTED by the City Council of the City of Concord on April 8, 2014, by the following vote:

AYES: Councilmembers -

NOES: Councilmembers -

ABSTAIN: Councilmembers -

ABSENT: Councilmembers -

I HEREBY CERTIFY that the foregoing Resolution No. 14-3521.1 was duly and regularly adopted at a regular meeting of the City Council of the City of Concord on April 8, 2014.

APPROVED AS TO FORM:

By _____
Mary Rae Lehman
City Clerk

Mark Coon
City Attorney

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