

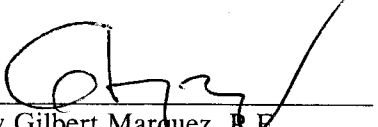


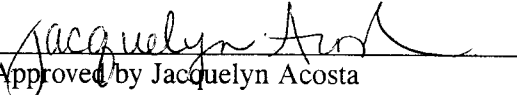
City of Carson

Report to Mayor and City Council

October 1, 2013
Unfinished Business

SUBJECT: CONSIDER A REQUEST TO INSTALL A TRAFFIC SIGNAL AT THE INTERSECTION OF 223RD STREET AND LUCERNE STREET


Submitted by Gilbert Marquez, P.E.
Acting Principal Civil Engineer


Approved by Jacquelyn Acosta
Acting City Manager

I. SUMMARY

This item is on the agenda at the request of Mayor Dear.

At the August 6, 2013, meeting, the City Council considered a request from residents to install a traffic signal at the intersection of 223rd Street and Lucerne Street (Exhibit No. 1). The City Council referred the issue to the Public Works Commission. The item was placed on the Public Works Commission's September 9, 2013 agenda. After discussion, the request to install a traffic signal at the intersection of 223rd Street and Lucerne Street was approved on a 4-1 vote (Exhibit No. 2). Staff, however, does not recommend installation of a traffic signal at the intersection of 223rd Street and Lucerne Street at this time, based on current guidelines. Staff does recommend that they continue to monitor the location and in six-months provide the City Council with a status update on the traffic at this location.

II. RECOMMENDATION

TAKE the following actions:

1. DENY the request to install a traffic signal at the intersection of 223rd Street and Lucerne Street at this time.
2. DIRECT staff to continue to monitor the location; and in six months, present updated traffic data for consideration.

III. ALTERNATIVES

1. DIRECT staff to install a traffic signal at the intersection of 223rd Street and Lucerne Street (Public Works Commission's recommendation) and APPROPRIATE \$200,000.00 from the unreserved, undesignated general fund balance to cover the costs of the traffic signal.
2. TAKE another action the City Council deems appropriate.

IV. BACKGROUND

In response to the request for a traffic signal, a technical analysis was conducted to determine if a signal would be warranted based on the guidelines of the "California Manual on Uniform Traffic Control Devices," (CAMUTCD) which is used by public agencies throughout California for the evaluation of signal installations. The manual presents various signal warrant checks that should be evaluated to determine if a traffic signal is justified at an intersection. The tests consider such measures as traffic volumes and collision history. Comparisons of the signal warrant values recommended in the manual and the observations at the 223rd Street / Lucerne Street location are presented below.

1. The first warrant check is based on the traffic volumes during the eight highest hours of a typical weekday. The guidelines indicate that a signal may be justified if the major street (223rd Street) has a traffic volume of at least 420 vehicles per hour (vph) for at least eight hours of the day (eastbound and westbound combined) while the minor street (Lucerne Street) has a traffic volume of at least 105 vph approaching the intersection from one direction for the same eight hours (Condition A - Minimum Vehicular Volume). The guidelines also indicate that a signal may be justified if the major street has a traffic volume of at least 630 vph for at least eight hours of the day while the minor street has a traffic volume of at least 53 vph for the same eight hours (Condition B - Interruption of Continuous Traffic).

The results of the traffic counts are summarized on the table below for the 12 busiest hours of the day; i.e., from 7:00 a.m. to 7:00 p.m.:

TRAFFIC VOLUMES AT 223RD STREET / LUCERNE STREET INTERSECTION			
Time Period	Hourly Traffic Volume		
	Major Street 223rd Street (both directions)	Minor Street Lucerne Street	
		Northbound	Southbound
7-8 a.m.	1,048	41	36
8-9	701	30	18
9-10	648	36	20
10-11	663	39	24
11-12	624	71	27
12-1 p.m.	677	96	28
1-2	703	72	18

2-3	875	101	28
3-4	1,050	200	36
4-5	1,183	182	22
5-6	1,392	184	30
6-7	797	50	35

The traffic volumes on 223rd Street exceed 420 vph for all 12 hours of the day; i.e., all hours from 7:00 a.m. to 7:00 p.m. The traffic volumes on Lucerne Street, however, exceed 105 vph for only three hours of the day. **The Condition A requirements are not met because the warrant criteria state that the threshold should be exceeded for eight hours of the day.**

With regard to Condition B, the traffic volumes exceed 630 vph on 223rd Street for 11 of the 12 hours per day; however, the traffic volumes on Lucerne Street exceed 53 vph for only six of the hours that coincide with a traffic volume of 630 vph or greater on 223rd Street. **The Condition B thresholds are not met because the warrant criteria state that the thresholds for both streets should be exceeded for the same eight hours of the day.**

As the traffic volumes at the 223rd Street / Lucerne Street intersection do not exceed the threshold criteria recommended in the manual for justifying the installation of a traffic signal, a signal is not warranted at this time based on current traffic volumes. However, staff intends to continue to monitor the intersection because the thresholds were close to being met.

2. The second warrant check is based on the collision statistics at the intersection. The guidelines indicate that a signal may be justified if five or more reported collisions have occurred within a 12-month period that are susceptible to correction by a traffic signal. The guidelines also state that alternatives to a traffic signal should first be implemented and observed to determine if these measures would reduce the collision frequency.

Based on accident statistics obtained from the Sheriff's Department for the most recent four-year period, the number of reported accidents at the intersection was one in 2009, four in 2010, two in 2011, and one in 2012. As one of the collisions in 2011 occurred in January, there were five reported collisions within the 12-month period of February 2010 through January 2011. Subsequent to the 12-month time period from February 2010 to January 2011 when five collisions were reported, the curb was painted red to prohibit parking on the north side of 223rd Street east and west of Lucerne Street. This action was taken to improve the visibility of on-coming traffic

for motorists proceeding from southbound Lucerne Street onto 223rd Street. A review of the collision statistics indicates that the crash frequency has decreased for the most recent two years. A traffic signal is not warranted based on the most recent collision statistics. While the five collisions that occurred within the 12-month time period of February 2010 to January 2011, may have warranted a traffic signal at that time, it appears now, that the painting of the red curb has successfully reduced the number of collisions at this location.

When the Carson Toyota dealership underwent an expansion project several years ago, one of the conditions of approval was that the dealership would be required to fund the cost of installing a traffic signal at the 223rd Street / Lucerne Street intersection if the additional traffic generated by Carson Toyota resulted in a signal being warranted. This condition was formulated because there was a possibility that the dealership's site access driveway on Lucerne Street would generate additional traffic volumes that would adversely affect the intersection. Based on the traffic counts provided in the table above, the southbound traffic volumes at this intersection range from 18 vph to 36 vph, which is relatively low as compared to the northbound traffic volumes entering the intersection from the industrial area south of 223rd Street. Traffic from the Carson Toyota dealership has not, therefore, impacted the intersection to a level that would justify the installation of a traffic signal. This intersection has been evaluated several times subsequent to the Carson Toyota expansion to check the need for a traffic signal and the analyses indicated each time that a signal would not be warranted. Furthermore, the condition of approval that would have required Toyota to pay for a traffic signal had a five year duration, which has lapsed.

After the Public Works Commission reviewed the data and heard public testimony from residents who live near the intersection of 223rd Street and Lucerne Street, they voted to recommend approval of the request for a traffic signal at this intersection. The primary reasons for the Commission's recommendation are:

1. The public had concerns regarding safety while turning from Lucerne Street onto 223rd Street and while turning left from 223rd Street onto Lucerne Street.
2. The traffic volumes on Lucerne Street and 223rd Street were barely under the thresholds for two of the hours that the thresholds were not met; i.e., 624 vph on 223rd Street for the 11:00 a.m. – 12:00 p.m. time period (threshold is 630 vph) and 50 vph on Lucerne Street for the 6:00 p.m. – 7:00 p.m. time period (threshold is 53). If there had been six additional vehicles per hour on 223rd Street between 11:00 a.m. and 12:00 p.m. and three additional vehicles on Lucerne Street between 6:00 p.m. and 7:00 p.m., the warrants would have been met for a traffic signal.

3. The intersection had five reported collisions for the 12-month time period of February 2010 to January 2011.

In summary, the Public Works Commission recommends that a traffic signal be installed at this location for the reasons outlined above. However, based on the CAMUTCD guidelines, a traffic signal at the 223rd Street / Lucerne Street intersection is not warranted based on the existing traffic volumes and the collision statistics for the most recent two years (2011 and 2012). Staff does not recommend installation of a traffic signal at this intersection at this time, based on current guidelines. However, staff does recommend that they continue to monitor the location; and in six months, provide the City Council with a status update on the traffic at this location. If a traffic signal is warranted at that time, staff will be able to include funding in the FY 2014/15 proposed budget.

V. FISCAL IMPACT

The estimated cost of designing and installing a traffic signal at this location is \$200,000.00. Funds for this project were not included in the FY 2013/14 budget; therefore, if the project is approved, the budget will need to be increased by \$200,000.00, and funds should be appropriated from the unreserved, undesignated general fund balance to account no. 01-99-999-004-8004/01439. The current balance of the unreserved, undesignated general fund is \$16,560,859.00.

VI. EXHIBITS

1. Location Map. (pg. 7)
2. Public Works Commission meeting minutes, September 9, 2013, Item No. 7a. (pg. 8)

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Prepared by: Richard Garland, Traffic Engineer

TO: Rev09-05-2013

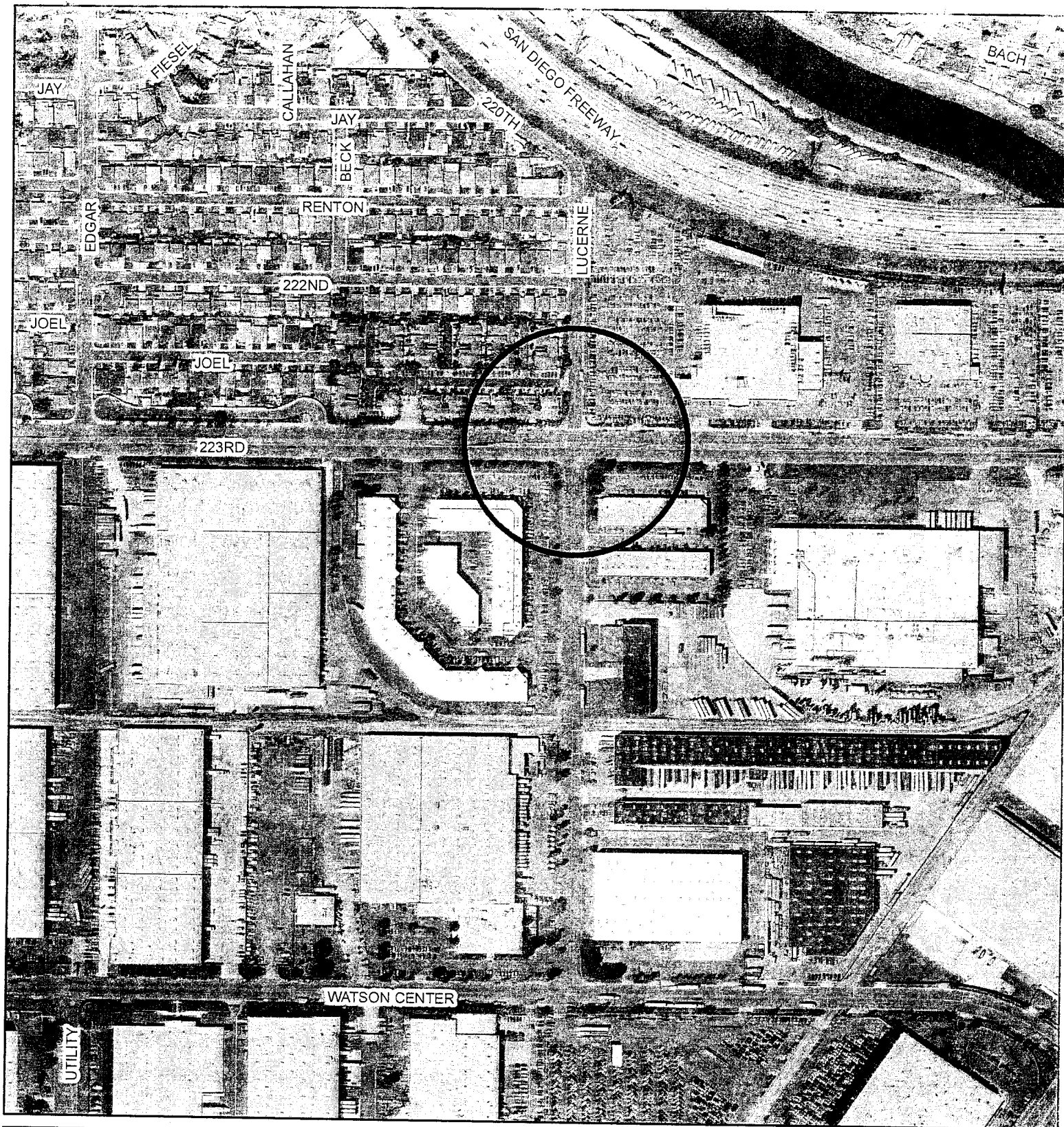
Reviewed by:

City Clerk	City Treasurer
Administrative Services	Public Works
Community Development	Community Services

Action taken by City Council

Date _____

Action _____



Location Map

223rd Street & Lucerne Street Carson - CA

Exhibit No. 1



MINUTES
SEPTEMBER 9, 2013
PUBLIC WORKS COMMISSION

7. NEW BUSINESS

**a. CONSIDER A REQUEST TO INSTALL A TRAFFIC SIGNAL AT THE
INTERSECTION OF 223RD STREET AND LUCERNE STREET**

Staff Recommendation: DIRECT staff as follows:

1. DENY the request to install a traffic signal
at the intersection of 223rd Street and
Lucerne Street

Ms. Diane Miles, President, Stonegate Homeowners Association, 1255 East 223rd Street, Carson, CA, 90745; Ms. Lurandia Wilson, Vice-President, Stonegate Homeowners Association, 1171 East 223rd Street, Carson, CA, 90745; and Ms. Brenda Ramirez, 1246 East 222nd Street, Carson, CA, 90745, were in attendance and cited several safety reasons why they were in favor of the installation of a traffic signal at the intersection of 223rd Street and Lucerne Street.

On a motion by Commissioner Calhoun, seconded by Commissioner Guine, the request to install a traffic signal at the intersection of 223rd Street and Lucerne Street was approved and carried by the following vote:

Ayes:	Calhoun, Gama, Guine, Valdez
Noes:	Johnson
Abstain:	None
Absent:	Fa'avae, Thompson

