

TRAFFIC ENGINEERING STAFF REPORT

Agenda Item 4.b.

Traffic Concerns – Orangewood Avenue
and Monarch Street

September 2, 2014

OBJECTIVE

To consider a request for the installation of a four-way stop at the intersection of Orangewood Avenue and Monarch Street.

BACKGROUND

The City has received a request and petition from Ms. Ilene M. Young of Saint-Gobain Plastics, 7301 Orangewood Avenue, to install a four-way stop at the intersection of Orangewood Avenue and Monarch Street. The request stems from the number of accidents that have occurred at the intersection.


DISCUSSION

Orangewood Avenue is a secondary arterial roadway with a posted speed limit of 40 miles per hour. It has one lane in each direction with left turn pockets at Monarch Street. Traffic volumes on Orangewood Avenue are approximately 7,000 vehicles per day. Monarch Street is a two-lane street with a posted speed limit of 35 miles per hour. It has one lane in each direction with left turn pockets at Orangewood Avenue. Traffic volumes on Monarch Street are approximately 2,000 vehicles per day. Monarch Street is controlled by a stop sign on the north and south side of Orangewood Avenue.

A four-way stop sign warrant study for an arterial intersection was conducted. The study takes into account the entering volumes from all directions, accidents correctable with the installation of a four-way stop and any unusual conditions that exist such as visibility and design geometrics. The warrants for the number of accidents and traffic volumes entering the intersection were satisfied; therefore, the intersection warrants the installation of a four-way stop.

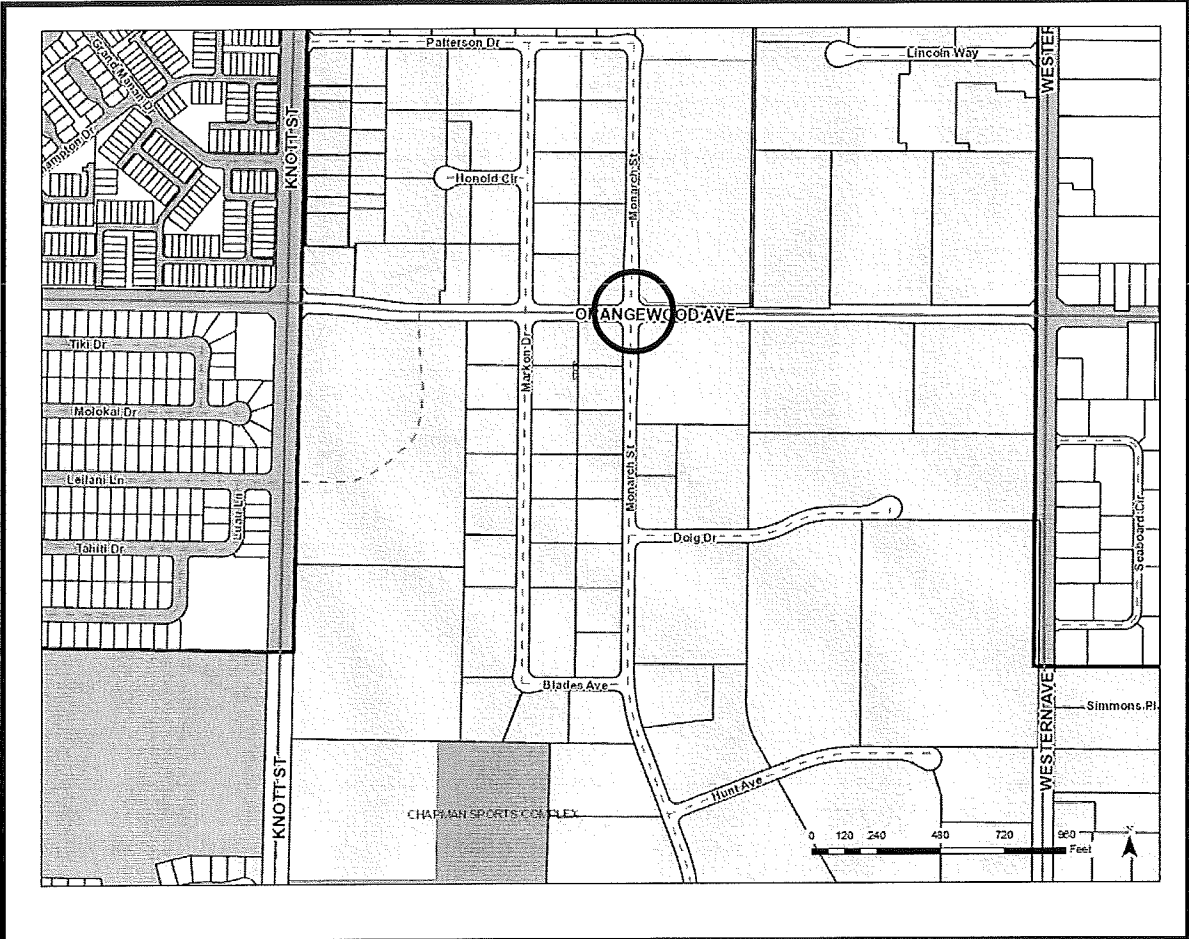
RECOMMENDATION

It is recommended that the Traffic Commission receive public input and approve staff's recommendation to install a four-way stop at the intersection of Orangewood Avenue and Monarch Street.


Tony Aquino, P.E.
Executive Secretary

Attachments: Location Map; Request Letter and Petition; 4-way Stop Sign Warrant Study;
Notification Letter

LOCATION MAP



Agenda Item 4.b



January 6, 2014

To: Dan Candelaria, Garden Grove Traffic Commission

Re: Driver and Pedestrian Safety on Oranewood Ave, Garden Grove

PURPOSE OF PETITION

Our goal is to prevent accidents and injury by creating a 4-way stop with enhanced crosswalk markings at the intersection of Oranewood Avenue & Monarch Street in Garden Grove. In addition, we ask for signage advising motorist in all four directions, "SLOW FOR TRUCKS-DO NOT PASS".

PETITION BACKGROUND

Since 1999 I have personally witnessed numerous accidents at this intersection, as well as two hundred fifty feet (250) to the west of the intersection, directly in front of the Saint-Gobain, and Ferguson Company driveways. In addition to daily near-misses, the incidents range in severity from fender-benders to a fatality on October 3, 2013, with the most recent recorded occurrence on Jan 3, 2014. The current 2-way stop does not affect the speed of vehicles traveling east and west on Oranewood Ave, or allow pedestrians a safe crossing. It is our belief that the proposed changes to this intersection will reduce injuries and property loss by decreasing speed and deterring future incidents.

Respectfully submitted by:

Ilene M. Young, Office Support Specialist

Saint-Gobain Performance Plastics

7301 Oranewood Avenue


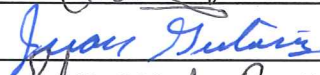








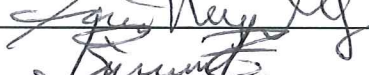
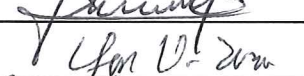
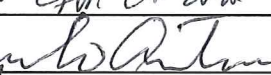
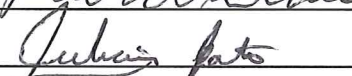
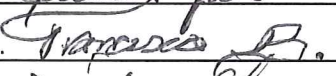


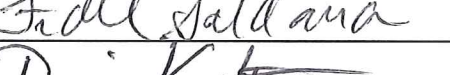
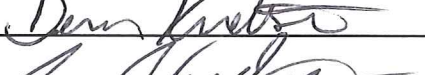
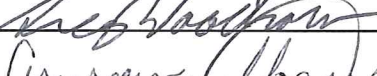
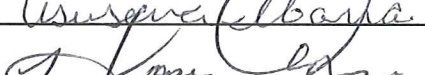
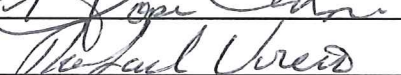








Garden Grove, CA 92841-1411

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PETITION GOAL: Driver and Pedestrian Safety on Orangewood Ave/Monarch St, Garden Grove

HC	PLEASE PRINT NAME	Signature	Date
1	Brandy Umana		2/27/14
2	ILENE YOUNG		2/27/14
3	CARL MUELLER		2/27/14
4	KHA LE		2/27/14
5	Enrique Barrios		2/27/14
6	Tammy Cecil-Hammers		2/27/14
7	ANN PHAN		2/27/14
8	Bammy Lowe		2/27/14
9	MARLA ZWONITZER		"
10	Annette Wade		2-27-14
11	Patricia Ware		2-27-14
12	Gabriela Bustamante		2-27-14
13	Elena Reyes		2-27-14
14	SLOTH ENGLISH		2-27-14
15	Sanjeep Karki		2-27-14
16	BING KONGMEHOL		2-27-14
17	DON MUNRO		2-27-14
18	Jim Goodman		2-27-14
19	SILVANO BOSPACHIN		2-27-14
20	Bernardo Pliego		2/27/14
21	Christel C. Goy		2/27/14
22	Rebecca Phan		2/27/14
23	Sam A. Bontano		2-27-14
24	MARY M STEVENS		2-27-14
25	MARC ALLEN		2-27-14
26	JESUS CARDENAS		2-27-14
27	Mary Nguyen		2-27-14
28	BRET WINDUST		2-28-14
29	Mike Groat		2-28-14
0	Bobbi Manspeake		2-28-14

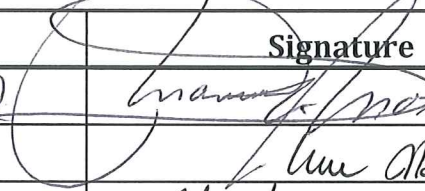







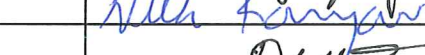










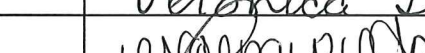










PETITION GOAL: Driver and Pedestrian Safety on Orangewood Ave/Monarch St, Garden Grove

HC	PLEASE PRINT NAME	Signature	Date
31	ANDY HIBEN		2/28/14
32	JUAN R. GUTIERREZ		2-28-14
33	STEVEN A. BOERS		2/28/14
34	JANICE JOHNSTON		2/28/14
35	Bedros Taslakian		2/28/14
36	Fernando Rodriguez		2/28/14
37	Juan M Arina		2/28/14
38	Martin Godoy		2-28-14
39	HOANG HUYNH		2/28/14
40	Imelda Castorena		2/28/14
41	TIMOTHY DANG		2-28-14
42	JOSE R. JIMENEZ		2-28-14
43	TRAN, SON V		2-28-14
44	RICARDO ANTONIO		2-28-14
45	Julian Gater		2.28.14
46	FRANCISCO BARUELOS		2-28-14
47	BILL SYKES		2/28/14
48	ALEX GOMEZ		2-28-14
49	Fidel Saldana		2-28-14
50	Dennis Knudtson		2-28-14
51	GREG WOODROW		2/28/14
52	Asusena Tbarra		2/28/14
53	Heze Urechija		2/28/14
54	Rafael Ureño		2-28-14
55	TAN LY		2-28-14
56	JUAN GONZALEZ		2-28-14
57	SINGH TRAN		2-28-14
58	Josa Lariz		2/28/14
59	BU TRIUNGA		2-28-14
0	THO TRAN		2-28-14

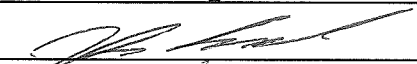






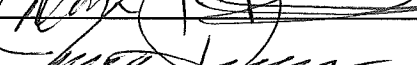
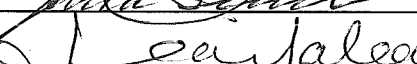
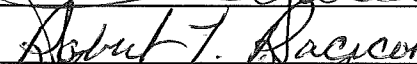
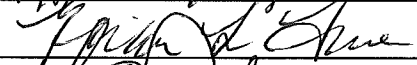







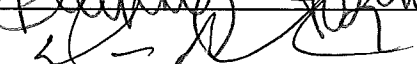
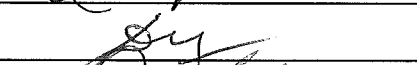
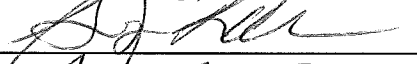

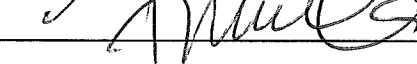
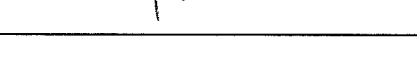

PETITION GOAL: Driver and Pedestrian Safety on Orangewood Ave/Monarch St, Garden Grove

HC	PLEASE PRINT NAME	Signature	Date
52	TRUONG MAM		2-28-14
63	TOA NGUYEN		2-28-14
64	CESAR OLIVEROS		2-28-14
65	Chantha Lim		2-28-14
66	David Montgomery		2-28-14
67	Silvia Trujillo		2-28-14
68	FRANCES Raymond		2-28-14
69	HONG BANG		2/28/14
70	STANLEY FRANK		2-28-14
71	ANTI Lu		2-28-14
72	LE-QUANG LE		2-28-14
73	Rebecca Galvez		2/28/14
74	Marcus Walker		2/28/14
75	PORTH DANNY ROEUN		2/28/14
76	KIEU HA		2/28/14
77	JILIO HERNANDEZ		2/28/14
78	JESVS CAMACHO		2/28/14
79	ISMAEL GALINDO		2-28-14
80	RIGUEL J HERNANDEZ		2-28-14
81	Michalek Mehner		2-28-14
82	Mark Amador		2-28-14
83	Bianca Valdez		02-28-2014
84	Michael MacIsaac		2/28/14
85	Patricia Weathers		2/28/14
86	William Leas		2/28/2014
87	Jose Salvatierra JR		2/28/14
88	KEVIN NGUYEN		3/3/14
89	ERIC TIAO		3/2/14
90	Hy Nguyen		3/4/14
1	"TINA" LUKA ERICKSON		3/4/14

PETITION GOAL: Driver and Pedestrian Safety on Orangewood Ave/Monarch St, Garden Grove

HC	PLEASE PRINT NAME	Signature	Date
92	MARNGY MORAN		3/5/2014
93	LIEU NGUYEN		3-6-14
94	Hoa Tran		3-6-14
95	LOAN NGUYEN		3-6-14
96	BERTA ARAUZ		3-6-14
97	NGUYEN LAM		3-6-14
98	TON NGUYEN		3.6.14
99	TONY NGUYEN		3.6.14
100	Nith Kanyavong		3-6-14
101	Annie Phan		3/6/14
102	THANH NGUYEN		3-6-14
103	TUAN MAI		3-6-14
104	Elba yanes		3-6-14
105	Pamela E. Fuentes		3/6/14
106	Cindy Escalante		3-7-14
107	Jenny VO		3/7/14
108	Loc Vu		3/7/14
109	LIEU DUONG		3/7/14
110	Veronica Fierro		3/7/14
111	NORMY ARIZA		3/7/14
112	Francisco Zuniga		3/7/14
113	DEAN ROBERTS		11
114	Binh Nguyen		3/7/14
115	CORNELL WACHO		3/7/14
116	Harry Chan		3/7/14
117	JC CASTELLANOS		3/7/14
118	Nhien Nguyen		3-7-14
119	James Curley		3-7-14
120	HIEU NGUYEN		3/7/14
1	JIMMY MAI		3/7/14







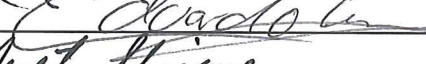

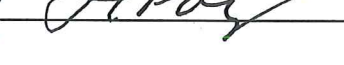
PETITION GOAL: Driver and Pedestrian Safety on Orangewood Ave/Monarch St, Garden Grove

HC	PLEASE PRINT NAME	Signature	Date
122	JOHN LONGOBARDI		3-7-14
123	Kathy Nguyen		3-7-14
124	JAMES RUFAR		3-10-14
125	JAY COOPER		3-10-14
126	DAVE CASTILLO		3-10-14
127	Nhien Nguyen		3-17-14
128	Jon Vu		3-19-14
129	Don Piles		3/24/14
130	Armac Duran		3/24/14
131	Jeanne Jalean		3/25/14
132	ROBERT RACICOT		3/25/2014
133	EMMA L. TILL		3-27-14
134	Misty Drake		3/27/14
135	Russell A. Harper		4-3-14
136	JOSE FUENTES		4/3/14
137	MELISSA MELLENDEZ		4/3/14
138	Luke Santos		4/3/14
139	Paul Kerr		4/3/14
140	Ralph DiAntonio		4/3/14
141	BRIHANY FORTUCA		4/3/14
142	DAVID HICKMAN		4/8/14
143	DUNG -TRAN		4-4-14
144	Sonya Oishe		4/4/14
145	AJA CHACARA		4-16-14
146	TUAN LA		4-23-2014
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PETITION GOAL: Driver and Pedestrian Safety on Orangewood Ave/Monarch St, Garden Grove

HC	PLEASE PRINT NAME	Signature	Date
152	Cindy Morales	Cindy Morales	4/3/14
153	Jessica M. Guzzi	Jessica M. Guzzi	4/3/14
154	Louis Herriges JR	Louis Herriges JR	4/3/14
155	Jonathan Wighton	Jonathan Wighton	4/3/14
156	Spencer Wighton	Spencer Wighton	4/3/14
157	WALTER MILLER	Walter Miller	4-3-14
158	Shane Florcy	Shane Florcy	4/3/14
159	Blake Cochran	Blake Cochran	4/3/2014
160	[Signature]	[Signature]	4/3/14
161	Justin Ennen	Justin Ennen	4/3/14
162	Aurora Garcia	Aurora Garcia	4-4-14
163	Chela DeHof	Chela DeHof	4-4-14
164	Shandra Martinez	Shandra Martinez	4/4/14
165	HAROLD D. DOWE	Harold D. Dowe	4-4-14
166	HOANG TAM NGUYEN	Hoang Tam Nguyen	4-7-14
167	GARY REESE	Gary Reese	4-7-14
168	Ken Wingo	Ken Wingo	4-7-14
169	Scott Bruce	Scott Bruce	4-7-14
170	José A. Contreras	José A. Contreras	4-7-14
171	Leo Medina	Leonila Medina	4-7-14
172	[Signature]	NATHAN DAVE	4-7-14
173	Nancy Balzano	Nancy BALZANO	4-9-14
174	ANNIE MEJIA	Annie Mejia	4-9-14
175	Al Balzano	Al Balzano	4-9-14
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PETITION GOAL: Driver and Pedestrian Safety on Orangewood Ave/Monarch St, Garden Grove

HC	PLEASE PRINT NAME	Signature	Date
182	Tina Ray		4-11-14
183	Josef Benitez		4/11/14
184	Crystal Flores		4/11/14
185	EVARISTO LABRA		4-11-14
186	Eileen Downer		4/11/14
187	MICHAEL OBRIEN		4-11-14
188	Eduardo Leon		4-11-14
189	JUSTIN SHIROMA		4-11-14
190	Loanne I Papas		4-11-2014
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TRAFFIC ENGINEERING
POLICY TE 44

FOUR-WAY STOP SIGN WARRANT
ARTERIAL INTERSECTION

GENERAL STATEMENT

This policy provides the criteria for the installation of four-way stop control at an arterial intersection in accordance with the policy approved by the City of Garden Grove City Council.

These warrants are a modified version of warrants found in the State of California Department of Transportation, Manual on Traffic Control. This warrant considers accidents, vehicle volume and pedestrian volume.

In addition, wherever unusual conditions exist such as visibility, design road geometrics, a four-way stop may also be warranted.

GUIDELINES

Field data relating to accidents vehicle volumes, pedestrian volumes and speed must be collected. These data are then applied to the criteria that follows to determine if a four-way stop is warranted.

Unusual Circumstances

It is recognized that there are unusual intersection situations which do not readily lend themselves to solutions through use of routine traffic engineering techniques, but safety can be improved by installation of four-way stop control. However, the existence of unusual circumstances does not, in itself, justify the installation of four-way stop control. Rather it must be demonstrated that a lesser restrictive type traffic control device fails to satisfactorily improve the unusual condition.

Accidents

Satisfied if five or more reported accidents of a type susceptible of correction by a four-way stop installation in a 12-month period.

Number of accidents in a 12-month period 5.

Satisfied Yes No

Traffic Volumes

1. Total vehicular volume entering the intersection from all approaches must average 300 per hour for any 8 hours of an average day, and
2. The vehicular volume entering the intersection from the minor street for the same 8 hours must average at least 100 vehicles per hour.

Intersection 8-Hour Average 668

Minor Street 8-Hour Average 151

Satisfied Yes No

If any of the above three warrants are satisfied, the intersection warrants a four-way stop.

Transportation Studies, Inc.
 2640 Walnut Avenue, Suite H
 Tustin, CA. 92780

N-S: MONARCH STREET
 E-W: ORANGEWOOD AVENUE

H1406050
 Site Code: GARDEN GROVE

Start Time	05-Jun-14 Thu	NB	SB	EB	WB	Total
12:00 AM		9	2	5	6	22
12:15		6	1	10	4	21
12:30		13	1	2	3	19
12:45		0	0	2	2	4
01:00		1	1	1	0	3
01:15		0	0	1	2	3
01:30		1	0	2	3	6
01:45		4	0	2	2	8
02:00		4	1	8	6	19
02:15		2	1	3	2	8
02:30		1	0	3	1	5
02:45		2	0	0	1	3
03:00		8	4	2	16	30
03:15		5	1	2	4	12
03:30		3	0	4	0	7
03:45		8	0	1	6	15
04:00		4	0	2	2	8
04:15		2	0	5	2	9
04:30		4	3	16	14	37
04:45		9	1	17	26	53
05:00		5	0	14	11	30
05:15		4	3	25	11	43
05:30		2	0	31	27	60
05:45		12	6	80	60	158
06:00		10	3	29	26	68
06:15		4	1	25	28	58
06:30		12	4	46	28	90
06:45		15	7	75	53	150
07:00		6	3	58	56	123
07:15		13	6	49	43	111
07:30		18	3	63	64	148
07:45		25	8	92	98	223
08:00		22	8	93	94	217
08:15		14	4	72	77	167
08:30		14	5	34	26	79
08:45		11	5	46	42	104
09:00		18	6	50	58	132
09:15		15	8	37	44	104
09:30		11	11	49	44	115
09:45		16	3	42	47	108
10:00		12	6	39	38	95
10:15		16	8	58	52	134
10:30		16	4	50	54	124
10:45		26	15	46	57	144
11:00		12	18	54	50	134
11:15		12	10	36	37	95
11:30		20	24	38	37	119
11:45		23	20	46	30	119
Total		470	215	1465	1394	3544
Percent		13.3%	6.1%	41.3%	39.3%	
Peak	-	07:30	11:00	07:30	07:30	07:30
Vol.	-	79	72	320	333	755
P.H.F.		0.790	0.750	0.860	0.849	0.846

Transportation Studies, Inc.
 2640 Walnut Avenue, Suite H
 Tustin, CA. 92780

N-S: MONARCH STREET
 E-W: ORANGEWOOD AVENUE

H1406050
 Site Code: GARDEN GROVE

Start Time	05-Jun-14 Thu	NB	SB	EB	WB	Total
12:00 PM		32	30	62	46	170
12:15		25	11	61	48	145
12:30		22	6	69	32	129
12:45		20	12	47	38	117
01:00		32	7	62	64	165
01:15		25	15	72	62	174
01:30		22	9	74	68	173
01:45		22	6	67	67	162
02:00		21	13	58	53	145
02:15		6	8	62	64	140
02:30		40	34	78	78	230
02:45		24	7	63	66	160
03:00		24	10	56	58	148
03:15		24	8	76	44	152
03:30		44	28	82	70	224
03:45		20	14	81	74	189
04:00		29	20	68	46	163
04:15		31	22	68	49	170
04:30		40	41	76	87	244
04:45		28	22	86	92	228
05:00		51	28	86	98	263
05:15		23	20	66	102	211
05:30		21	13	74	43	151
05:45		16	16	56	30	118
06:00		13	9	74	23	119
06:15		10	2	35	26	73
06:30		9	1	26	14	50
06:45		4	6	34	14	58
07:00		3	13	32	16	64
07:15		7	2	22	12	43
07:30		4	4	22	11	41
07:45		4	0	24	9	37
08:00		6	6	22	8	42
08:15		5	2	24	15	46
08:30		1	6	13	14	34
08:45		3	1	12	13	29
09:00		2	0	7	6	15
09:15		2	1	16	9	28
09:30		2	2	7	5	16
09:45		1	0	8	6	15
10:00		3	0	12	6	21
10:15		4	1	15	5	25
10:30		0	3	6	20	29
10:45		1	1	5	4	11
11:00		1	1	3	0	5
11:15		3	2	4	2	11
11:30		8	1	3	2	14
11:45		1	1	6	2	10
Total		739	465	2082	1721	5007
Percent		14.8%	9.3%	41.6%	34.4%	
Peak	-	16:15	16:15	16:15	16:30	16:30
Vol.	-	150	113	316	379	946
P.H.F.		0.735	0.689	0.919	0.929	0.899
Grand Total		1209	680	3547	3115	8551
Percent		14.1%	8.0%	41.5%	36.4%	
ADT		ADT 8,540		AADT 8,540		

**City of Garden Grove
Traffic Engineering Department**

Traffic Collision History Report

5/15/2014
Page 1

Location: Orangewood Avenue / Monarch Street
Date Range Reported: 1/1/2000 - 9/30/2013
Total Number of Collisions: 17

Report No.	Date	Time	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Direct. of Travel 1	Movement Prec. Coll. 1	Direct. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil
0094066	1/22/02	21:06	0	In Int.	Broadside	Other Motor Vehicle	North	Proceeding Straight	East	Proceeding Straight	Traffic Signals and Signs	1	0
0705030	1/8/03	06:17	0	In Int.	Other	Non-Collision	South	Other	West	Other	Other	1	0
0999252	8/25/03	18:12	0	In Int.	Broadside	Other Motor Vehicle	South	Making Left Turn	East	Proceeding Straight	Traffic Signals and Signs	2	0
1528214	6/14/04	16:17	0	In Int.	Broadside	Other Motor Vehicle	North	Proceeding Straight	West	Proceeding Straight	Other	1	0
1668631	10/5/04	15:48	0	In Int.	Broadside	Other Motor Vehicle	North	Entering Traffic	West	Proceeding Straight	Auto RW Violation	0	0
1760390	10/6/04	07:14	0	In Int.	Broadside	Other Motor Vehicle	North	Entering Traffic	West	Proceeding Straight	Auto RW Violation	2	0
1760353	10/21/04	12:37	0	In Int.	Broadside	Other Motor Vehicle	North	Proceeding Straight	East	Proceeding Straight	Auto RW Violation	0	0
2091519	5/13/05	17:32	0	In Int.	Broadside	Other Motor Vehicle	South	Proceeding Straight	Not Stated	Proceeding Straight	Auto RW Violation	0	0
2588797	3/31/06	13:45	0	In Int.	Broadside	Other Motor Vehicle	South	Proceeding Straight	East	Proceeding Straight	Auto RW Violation	0	0
3544613	12/13/07	06:03	0	In Int.	Broadside	Other Motor Vehicle	North	Proceeding Straight	East	Proceeding Straight	Auto RW Violation	0	0
3647262	3/5/08	16:30	0	In Int.	Sideswipe	Other Motor Vehicle	South	Making Left Turn	West	Proceeding Straight	Improper Turning	0	0
3782015	6/20/08	08:51	0	In Int.	Sideswipe	Other Motor Vehicle	North	Proceeding Straight	East	Proceeding Straight	Auto RW Violation	0	0
3953351	10/2/08	17:19	0	In Int.	Broadside	Bicycle	East	Making Left Turn	East	Proceeding Straight	Auto RW Violation	1	0
3960654	12/1/08	16:35	0	In Int.	Broadside	Other Motor Vehicle	South	Proceeding Straight	East	Proceeding Straight	Other	0	0
4131413	2/24/09	23:12	0	In Int.	Broadside	Other Motor Vehicle	South	Proceeding Straight	West	Proceeding Straight	Traffic Signals and Signs	0	0

**City of Garden Grove
Traffic Engineering Department
Traffic Collision History Report**

5/15/2014
Page 2

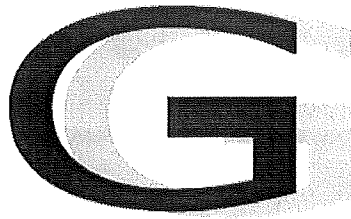
Location: Oranewood Avenue / Monarch Street
Date Range Reported: 1/1/2000 - 9/30/2013
Total Number of Collisions: 17

Report No.	Date	Time	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Direct. of Travel 1	Movement Prec. Coll. 1	Direct. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil
5263956	7/12/11	10:53	0	In Int.	Broadside	Other Motor Vehicle	West	Making Left Turn	East	Proceeding Straight	Auto R/W Violation	1	0
5738114	7/12/12	14:58	10	East	Broadside	Other Motor Vehicle	South	Proceeding Straight	West	Proceeding Straight	Auto R/W Violation	1	0

Total Number of Collisions: 17

Settings Used For Query

<u>Parameter</u>	<u>Setting</u>
Street Name	ORANGEWOOD AVENUE
Cross Street	MONARCH STREET
Starting Date	1/1/2000
Ending Date	9/30/2013
Intersection	Intersection Related



GARDEN GROVE

NOTICE OF PUBLIC FORUM

Dear Resident:

The City of Garden Grove Traffic Commission will hold its regularly scheduled meeting on Tuesday, September 2, 2014 at 6:00 p.m. The meeting will be held in the City Council Chambers of the Community Meeting Center, 11300 Stanford Avenue.

The Traffic Commission will be considering a request for the installation of a four-way stop at the intersection of Orangewood Avenue and Monarch Street.

We invite you to attend and provide input at this meeting. **(AGENDA ITEM 4-B)** If you have any questions, please call Traffic Engineering at 714.741.5185.