

Thursday, February 6, 2025, 6:30 PM
COUNCIL CHAMBER
6650 Beach Boulevard
Buena Park, CA 90621

TRAFFIC & TRANSPORTATION COMMISSION
AGENDA

6:30 p.m.

1. GENERAL

- 1A. CALL TO ORDER
- 1B. ROLL CALL
- 1C. PLEDGE OF ALLEGIANCE

2. ELECTIONS

- 2A. COMMISSIONER APPOINTMENT FOR CHAIR AND VICE CHAIR

3. COMMUNICATIONS

3A. ORAL COMMUNICATIONS

— This is the portion of the meeting set aside to invite public comments regarding any matter within the jurisdiction of the Traffic and Transportation Commission. Public comments are limited to no more than three minutes each. If comments relate to a specific agenda item, those comments will be taken following the staff report for that item and prior to the Traffic and Transportation Commission vote. Those wishing to speak are asked to add your information at the digital public kiosk located at the entrance of the Council Chamber.

4. CONSENT CALENDAR

The items listed under the Council Consent Calendar are considered routine business and will be voted on together by one motion unless a Council Member requests separate action. At this time the City Council or public may ask to speak on any item on the Consent Calendar.

4A. APPROVAL OF MINUTES

— Recommended Action: Approve the Minutes of the Traffic and Transportation Meeting of November 7, 2024.

5. NEW BUSINESS

- 5A. REVIEW, DISCUSS, AND DENY THE INSTALLATION OF A RIGHT TURN POCKET AT THE INTERSECTION OF LA PALMA AVENUE AT WESTERN AVENUE

6. AGENDA FORECAST

6A. ANNOUNCEMENTS, CONFERENCE REPORTS AND CALENDAR REQUESTS

- Scheduling dates for future commission meetings.
- Identifying items for future discussion.

7. STAFF REPORTS

7A. STATUS REPORT OF PRIOR APPROVED ITEMS

- Presented by Nader Alqam (verbal report)

7B. OTHER INFORMATIONAL ITEMS

- Presented by Norm Wray (verbal report)

7C. OTHER POLICE DEPARTMENT INFORMATIONAL ITEMS

- Verbal Report

8. ADJOURNMENT

8A. Adjournment

Next scheduled Traffic & Transportation Meeting is on Thursday, May 1, 2025.

This agenda contains a brief general description of each item to be considered. Supporting documents are available for review and copying at City Hall or at www.buenapark.com. This governing body is prohibited from discussing or taking action on any item which is not included in this agenda; however, may ask clarifying questions, ask staff to follow-up, or provide other direction. The order of business as it appears on this agenda may be modified by the governing body.

In compliance with the Americans with Disabilities Act, if you need accommodations to participate in this meeting, contact the Public Works Department at (714) 562-3670 or the California Relay Service at 711. Notification at least 48 hours prior to the meeting will enable the City to make arrangements to assure accessibility.

If you would like to participate in any matter of business on the agenda and would like translation in Chinese, Korean, Spanish, Tagalog, or Vietnamese, please contact the **Department of Public Works Engineering Division at (714) 562-3670 48-hours prior to the meeting.**

Residents requiring translation during Oral Communications are encouraged to bring interpreters.

시의회 목록에 있는 정식 안건에 대해 의견을 발표하고 싶으신 경우, 중국어, 한국어, 스페인어, 타갈로에 대한 통역사가 필요하시면 시미팅 48시간전 시서기 오피스로 (714-562-3750) 연락하시면 됩니다. 정식안건이 아닌 주민 발언시간에 발표하실 경우, 본인의 통역사를 직접 모시고 오시면 감사하겠습니다.

Si le gustaría participar en audiencia pública o cualquier asunto de negocios programado en la agenda y necesita traducción en chino, coreano, español, tagalo o vietnamita, comuníquese con la Oficina del Secretario de la Ciudad, 48 horas antes de la reunión al (714) 562-3750. Para participar en los comentarios públicos sobre cualquier otro asunto dentro de la jurisdicción del ayuntamiento, se les recomienda que traiga un intérprete.

I, Kristi Ibarra, City of Buena Park, do hereby certify, under penalty of perjury under the laws of the State of California that a full and correct copy of this agenda was posted pursuant to Government Code Section 54950 et. seq., at Buena Park City Hall, 6650 Beach Blvd., and uploaded to the City of Buena Park website www.buenapark.com.

Kristi Ibarra
Administrative Assistant

Date Posted: January 30, 2025



Traffic and Transportation Commission Agenda Report

A. COMMISSIONER APPOINTMENT FOR CHAIR AND VICE CHAIR

Meeting	Agenda Group
Thursday, February 6, 2025, 6:30 PM	ELECTIONS Item: 2A.
Presented By	Prepared By
	Kristi Ibarra , Administrative Assistant
Approved By	Presented By
Mina Mikhael, Director of Public Works	Kristi Ibarra , Administrative Assistant

Annually, at the start of each calendar year, the Chair and Vice Chair for the City's Commissions will rotate.



MINUTES
Traffic and Transportation Commission Meeting
City of Buena Park
City Council Chamber
6650 Beach Boulevard, Buena Park, CA 90622
Thursday, November 7, 2024

1. GENERAL:

1A. CALL TO ORDER:

Chair Robertson called the Traffic and Transportation Commission (TTC) meeting of August 1, 2024, to order at 6:30 PM.

1B. ROLL CALL:

PRESENT: Chair Robertson, Commissioner Desai, Commissioner Rodden

ABSENT: Vice Chair Arellano

STAFF MEMBERS PRESENT: Nader Alqam, Principal Engineer, Norman Wray, Senior Engineering Technician, Fareen Masum, Assistant Engineer, Kristi Ibarra, Administrative Assistant.

POLICE DEPARTMENT REPRESENTATIVE PRESENT: None

CITY COUNCIL MEMBERS PRESENT: None

1C. PLEDGE OF ALLEGIANCE: Chair Robertson led the Pledge of Allegiance.

2. COMMUNICATIONS:

2A. ORAL COMMUNICATIONS:

None.

3. CONSENT CALENDAR:

3A. APPROVAL OF MINUTES

ACTION: Motioned by Commissioner Desai, Seconded by Commissioner Rodden

Motion carried 3-0 to:

Approve meeting minutes from August 1, 2024 meeting.

4. NEW BUSINESS:

4A. REVIEW, DISCUSS, AND DENY A REQUEST FOR AN ON-STREET ACCESSIBLE PARKING SPACE AT 6531 NAOMI AVENUE

Ms. Masum presented the item and was available to answer questions.

TRAFFIC COMMISSION DISCUSSION:

Chair Robertson informed the Commission that former council member Jose Castaneda reached out about the applicant's absence at the Traffic and Transportation Commission meeting. Chair Robertson read the letter from the former council member, which stated that the resident was not given time to obtain a doctor's note due to it being with the veteran's office.

Commissioner Rodden explained that the applicant has a two-car driveway, with one space used for boat storage, and asked whether the boat could be moved to storage or the street.

Mr. Alqam confirmed that the City has a policy regarding no RV's or unattached trailers parking allowed on the street, and clarified that anyone could park in the ADA space if one were to be established. He also stated that the primary reason for denial is due to using the garage for storage instead of parking.

Commissioner Rodden reiterated that if an ADA (Americans with Disabilities Act) parking is approved, the handicap parking would be open to anyone.

Commissioner Desai asked whether the individual has a recent or long-term disability and if a doctor's certificate or verification of the disability had been submitted.

Mr. Alqam explained that they did not focus on the type or duration of the disability, but the applicant did not submit a required physician's note stating the disability prevents walking long distances.

Commissioner Desai asked whether that physician's note was provided.

Mr. Alqam stated that it was not, and added that a blank form as requested by the applicant has never been provided to any applicant before, and that even if a form was provided the timeline did not allow for it to be added to the application in time for the meeting.

Commissioner Rodden asked if the driveway needed a certain incline for acceptance, noting that the image provided appears that the driveway is leveled and not meeting the criteria for special parking. He noted that past requests have had an incline and was a factor for staff's approval.

Mr. Alqam confirmed that if the slope is greater than 5%, then the driveway is considered unusable due to the steep incline, but this was not the case for this driveway. Mr. Alqam also noted that staff has been in contact with the resident since the prior month and notified him of staff's recommendation. He also informed the resident that the recommendation to deny is based on the garage that is being used for storage.

Chair Robertson stated that per the policy, the driveway would need to be less than 14 feet and asked if staff would evaluate it differently if multiple disabled individuals reside at the address, because the applicant stated that his wife is also disabled.

Mr. Alqam explained that the application was submitted as one application and included both placards. Typically, it is one application per placard but it may be possible to consider it as two separate applications. He further reemphasized that the primary obstacle in the approval of this item is the garage not being utilized for parking.

Chair Robertson asked if the driveway was only one car size and no driveway then would it have been considered differently.

Mr. Alqam agreed.

Commissioner Desai asked if the policy being enforced aligns with ADA regulations and the existing Buena Park policy.

Mr. Wray responded that the policy was developed with the City Attorney to ensure compliance with federal and state ADA laws, as well as relevant court rulings.

PUBLIC COMMENTS AND INPUT: None

ACTION: Motioned by Commissioner Rodden, Seconded by Commissioner Desai

Motion carried 3-0 to:

Deny for an on-street accessible parking space at 6531 Naomi Avenue.

5. AGENDA FORECAST:

5A. ANNOUNCEMENTS, CONFERENCE REPORTS AND CALENDAR REQUESTS:

Commissioner Rodden requested an investigation into the sudden reduction of lanes from three to two on westbound La Palma Avenue, specifically between Western Avenue and Valley View Street. He suggested that the merge sign be moved further back, beyond the Stagecoach crosswalk. Additionally, he recommended that the inside lane be designated as a right-turn-only lane to help alleviate congestion in the area.

Chair Robertson inquired whether the intersection of La Palma Ave and Stanton Ave is scheduled for repairs or if any proposals have been made for improvements.

Mr. Alqam responded that the location is not currently included in the CIP (Capital Improvement Program). However, he mentioned that he could reach out to the Public Works Street team to gather more information and coordinate a potential timeline for any work.

6. STAFF REPORTS:

6A. STATUS REPORT OF PRIOR APPROVED ITEMS

Mr. Alqam provided an update on the previous items regarding the ADA parking request for Darlington Avenue and the approval to add Gramercy Street to Preferential Parking District No. 4. He informed the Commission that all approvals were received, and work orders had been sent out to staff and have been implemented. He further explained that staff has been coordinating with the police department to develop an enforcement schedule. Enforcement will typically begin after a grace period.

Commissioner Rodden asked about the Brenner Street permit parking district item that was taken to the City Council, and why it is not on the Traffic and Transportation Commission agenda.

Mr. Alqam stated that Mr. Wray will speak on that.

6B. OTHER INFORMATIONAL ITEMS.

Mr. Wray clarified that the Brenner Street permit parking will be taken to the upcoming City Council meeting per their request due to urgency.

Mr. Wray provided an update on the request for additional crossing guards on Camellia Drive, Buena Park Safe Routes School Plan, and the Dale Whitaker Complete Streets.

Council Member Art Brown invited the Commissioners to his Retirement Reception, scheduled for December 12th from 4:00 pm to 7:00 pm at Heritage Hall, located at the Senior Center.

Lotus Thai, the City's Sustainability Manager, gave a presentation on sustainability.

6C. OTHER POLICE DEPARTMENT INFORMATIONAL ITEMS

None

7. ADJOURNMENT

Chair Robertson adjourned the meeting at 7:35 PM.

The next scheduled TTC meeting is Thursday, February 6, 2025 at 6:30 PM.

Pete Arellano, Chair

ATTEST:

Kristi Ibarra, Secretary



Traffic and Transportation Commission Agenda Report

A. REVIEW, DISCUSS, AND DENY THE INSTALLATION OF A RIGHT TURN POCKET AT THE INTERSECTION OF LA PALMA AVENUE AT WESTERN AVENUE

Meeting	Agenda Group
Thursday, February 6, 2025, 6:30 PM	NEW BUSINESS Item: 5A.
Presented By	Prepared By
Nader Alqam, P.E., Principal Engineer	Nader Alqam, Principal Engineer
Approved By	Presented By
Mina Mikhael, Director of Public Works	Nader Alqam, Principal Engineer

RECOMMENDED ACTION

Staff recommends that the Traffic and Transportation Commission review, discuss, and deny the installation of a right turn pocket at the intersection of La Palma Avenue at Western Avenue.

DISCUSSION

At the November 2024 Traffic and Transportation Commission Meeting, Commissioner Rodden calendared an evaluation and discussion for adding a right turn pocket for the westbound traffic at La Palma Avenue at Western Avenue. The request was made in hopes that the improvement would increase traffic flow, and simplify the southbound right turn movement by reducing the time it takes to yield to oncoming traffic.

La Palma Avenue is an east/west primary arterial street with 3 lanes westbound and 3 lanes eastbound near Western Avenue. Its intersection with Western Avenue is controlled by a traffic signal. The speed limit on La Palma Avenue in this area is posted at 40 MPH. La Palma Avenue in this segment is approximately 84 feet wide. On both approaches of Western Avenue, La Palma Avenue is divided by a striped median and two-way left-turn lane. There are two mid-block crosswalks to the East of the intersection, the westerly crosswalk that used by Knott’s Berry Farm facilities, whereas the easterly crosswalk is primarily used by Knott’s Berry Farm patrons.

Western Avenue is a north/south secondary arterial street with two lanes in the northbound direction and two lanes in the southbound direction near La Palma Avenue. The speed limit on Western Avenue in this area is posted at 40 MPH. Western Avenue in this segment is approximately 64 feet wide. On both approaches of La Palma Avenue, Western Avenue is divided by a striped median and two-way left-turn lanes. On Western Avenue, south of the intersection, there is a mid-block signalized crosswalk serving the Knott’s Berry Farm staff parking lot.

The intersection of Western Avenue at La Palma Avenue is surrounded by a host of zones and services. The northeast and southeast corners of the intersection are zoned for Amusement Resort, which currently serves Knott’s Berry Farm overflow parking and theme park. The northwest and southwest corners of the intersection are zoned for Community Shopping. The vicinity map of the intersection can be found in Attachment A.

The movement of study, the westbound number 3 lane, ends soon after motorists cross the intersection. The existing signing and striping include a "Lane ends" (W4-2) sign, as well as evenly spaced lane drop transition arrows.

In response to the request in the area, staff conducted a thorough field review of the existing conditions on the roadway, collected traffic volumes, and collision history on La Palma Avenue at Western Avenue. Intersection movement counts for the intersection can be found in Attachment B.

Turning Movement Counts at La Palma Avenue at Western Avenue				
Date	Total westbound through traffic	Total westbound right traffic	Total westbound through Peak Hour traffic	Total westbound right Peak Hour traffic
11/14/24	2,913	596	650	154

The Buena Park General Plan has a goal that all signalized intersections perform at a level of service of "D" or better. Level of service, or "LOS," is a qualitative description of traffic at a location and compares (in this case) the volume of traffic at an intersection to the intersection's actual capacity. LOS values range from A to F, and the lower values indicate the likelihood of longer delays to traffic at an intersection. An analysis of the LOS of this intersection shows that it currently operates at a LOS of D, and it will degrade to a LOS of E if one of the westbound through lane becomes a right turn only pocket. Making this change will prevent the intersection from operating at the capacity specified in the general plan. The intersection worksheets can be found in attachments C and D.

Based on the findings and review of the application, staff recommends denying this request as the movement does not necessitate the change, and intersection level of service would degrade.

Staff evaluated the existing signing and striping for this vicinity and found the locations to be in accordance with the California Manual on Uniform Traffic Control Devices (CA MUTCD). Staff will install a "Right Lane Ends" (W9-1) sign in advance of the lane reduction to improve driver recognition of the upcoming configuration change.

BUDGET IMPACT

None

Attachments

[ATTACHMENT A - Vicinity Map v2.pdf](#)

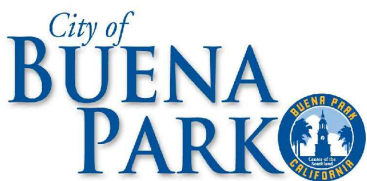
[ATTACHMENT A - Vicinity Map.pdf](#)

[ATTACHMENT B - Turning Movement Counts.pdf](#)

[ATTACHMENT C - ICU Analysis - Exist.pdf](#)

[ATTACHMENT D - ICU Analysis - Proposed.pdf](#)

[ATTACHMENT E - PROPOSED IMPROVEMENTS.pdf](#)



DEPARTMENT OF PUBLIC WORKS

PROJECT TITLE

REQUEST TO INSTALL RIGHT TURN POCKET
LA PALMA AVENUE AT WESTERN AVENUE
VICINITY MAP

EXHIBIT NO.

A

DRAWN BY: NMA

DATE: 01/22/2025



DEPARTMENT OF PUBLIC WORKS

PROJECT TITLE

REQUEST TO INSTALL RIGHT TURN POCKET
LA PALMA AVENUE AT WESTERN AVENUE
VICINITY MAP

EXHIBIT NO.

A

DRAWN BY: NMA

DATE: 01/22/2025

INTERSECTION TURNING MOVEMENT COUNTS

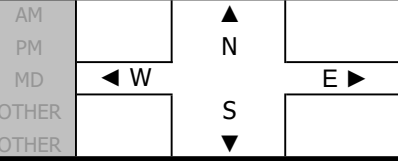
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
Thu, Nov 14, 24

LOCATION:
NORTH & SOUTH: Buena Park
EAST & WEST: Western Ave
La Palma Ave

PROJECT #: SC4289
LOCATION #: 6241
CONTROL: SIGNAL

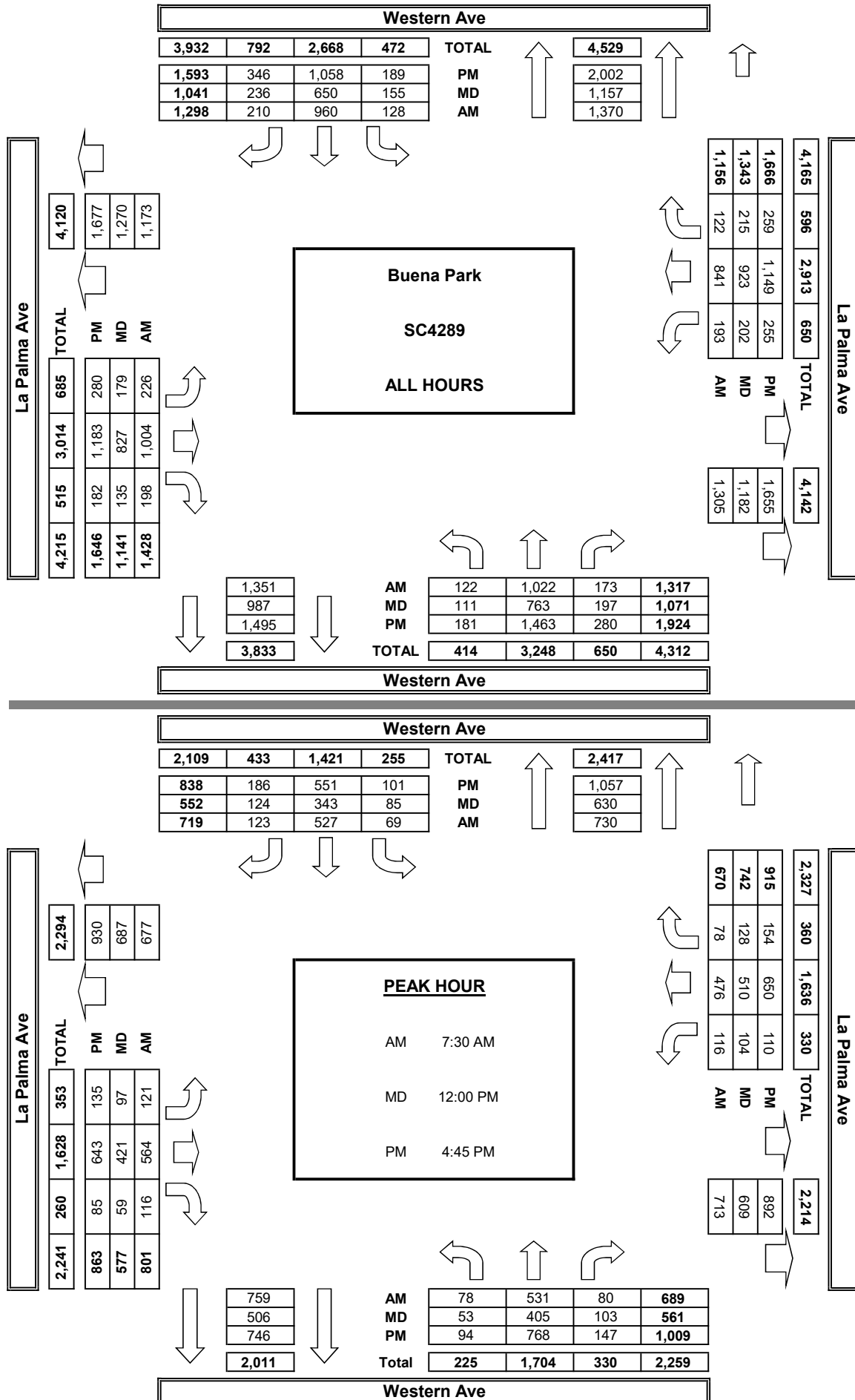
NOTES:



	NORTHBOUND Western Ave			SOUTHBOUND Western Ave			EASTBOUND La Palma Ave			WESTBOUND La Palma Ave			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 3	ER 0	WL 1	WT 3	WR 0	TOTAL

AM	7:00 AM	10	108	21	12	94	11	21	81	12	12	72	8	462
	7:15 AM	7	118	22	18	104	22	24	114	13	12	79	12	545
	7:30 AM	22	141	26	15	132	30	29	165	29	36	104	19	748
	7:45 AM	21	148	16	18	149	31	25	153	37	27	153	28	806
	8:00 AM	19	125	24	23	126	35	44	137	25	27	116	17	718
	8:15 AM	16	117	14	13	120	27	23	109	25	26	103	14	607
	8:30 AM	14	139	20	16	130	25	34	111	28	24	103	11	655
	8:45 AM	13	126	30	13	105	29	26	134	29	29	111	13	658
	VOLUMES	122	1,022	173	128	960	210	226	1,004	198	193	841	122	5,199
	APPROACH %	9%	78%	13%	10%	74%	16%	16%	70%	14%	17%	73%	11%	
	APP/DEPART	1,317	/	1,370	1,298	/	1,351	1,428	/	1,305	1,156	/	1,173	0
MD	BEGIN PEAK HR	7:30 AM												
	VOLUMES	78	531	80	69	527	123	121	564	116	116	476	78	2,879
	APPROACH %	11%	77%	12%	10%	73%	17%	15%	70%	14%	17%	71%	12%	
	PEAK HR FACTOR	0.911			0.908			0.898			0.805			0.893
	APP/DEPART	689	/	730	719	/	759	801	/	713	670	/	677	0
	11:00 AM	16	87	18	19	78	34	14	98	22	19	85	20	510
	11:15 AM	10	89	25	18	66	31	24	96	13	22	113	24	531
	11:30 AM	19	91	29	14	83	24	22	105	21	25	93	19	545
	11:45 AM	13	91	22	19	80	23	22	107	20	32	122	24	575
	12:00 PM	8	114	24	25	97	27	22	105	15	24	125	33	619
PM	12:15 PM	14	105	27	14	79	34	32	92	15	28	125	27	592
	12:30 PM	17	97	26	24	86	34	18	110	14	26	131	33	616
	12:45 PM	14	89	26	22	81	29	25	114	15	26	129	35	605
	VOLUMES	111	763	197	155	650	236	179	827	135	202	923	215	4,596
	APPROACH %	10%	71%	18%	15%	62%	23%	16%	72%	12%	15%	69%	16%	
	APP/DEPART	1,071	/	1,157	1,041	/	987	1,141	/	1,182	1,343	/	1,270	0
	BEGIN PEAK HR	12:00 PM												
	VOLUMES	53	405	103	85	343	124	97	421	59	104	510	128	2,432
	APPROACH %	9%	72%	18%	15%	62%	22%	17%	73%	10%	14%	69%	17%	
	PEAK HR FACTOR	0.961			0.926			0.937			0.976			0.982
	APP/DEPART	561	/	630	552	/	506	577	/	609	742	/	687	0
PM	4:30 PM	27	182	38	24	159	70	30	155	18	24	114	27	868
	4:45 PM	22	196	26	18	140	48	39	161	17	29	172	48	916
	5:00 PM	32	190	38	32	146	51	39	151	26	27	127	37	896
	5:15 PM	12	157	38	27	119	41	28	175	25	27	204	33	886
	5:30 PM	28	225	45	24	146	46	29	156	17	27	147	36	926
	5:45 PM	21	183	24	19	125	32	45	163	25	49	141	26	853
	6:00 PM	25	171	36	27	120	32	37	116	27	30	112	20	753
	6:15 PM	14	159	35	18	103	26	33	106	27	42	132	32	727
	VOLUMES	181	1,463	280	189	1,058	346	280	1,183	182	255	1,149	259	6,829
	APPROACH %	9%	76%	15%	12%	66%	22%	17%	72%	11%	15%	69%	16%	
	APP/DEPART	1,924	/	2,002	1,593	/	1,495	1,646	/	1,655	1,666	/	1,677	0
PM	BEGIN PEAK HR	4:45 PM												
	VOLUMES	94	768	147	101	551	186	135	643	85	110	650	154	3,625
	APPROACH %	9%	76%	15%	12%	66%	22%	16%	75%	10%	12%	71%	17%	
	PEAK HR FACTOR	0.846			0.915			0.946			0.866			0.979
	APP/DEPART	1,009	/	1,057	838	/	746	863	/	892	915	/	930	0

AimTD LLC
TURNING MOVEMENT COUNTS



Intersection Capacity Utilization Worksheet

Intersection Location: La Palma Avenue & Western Avenue













City: Buena Park

Analyzed by: NMA

Alternative: Existing Conditions

Date and Time of Data: 11/14/24 – 7 AM – 6 PM













Project: La Palma Avenue at Western Avenue

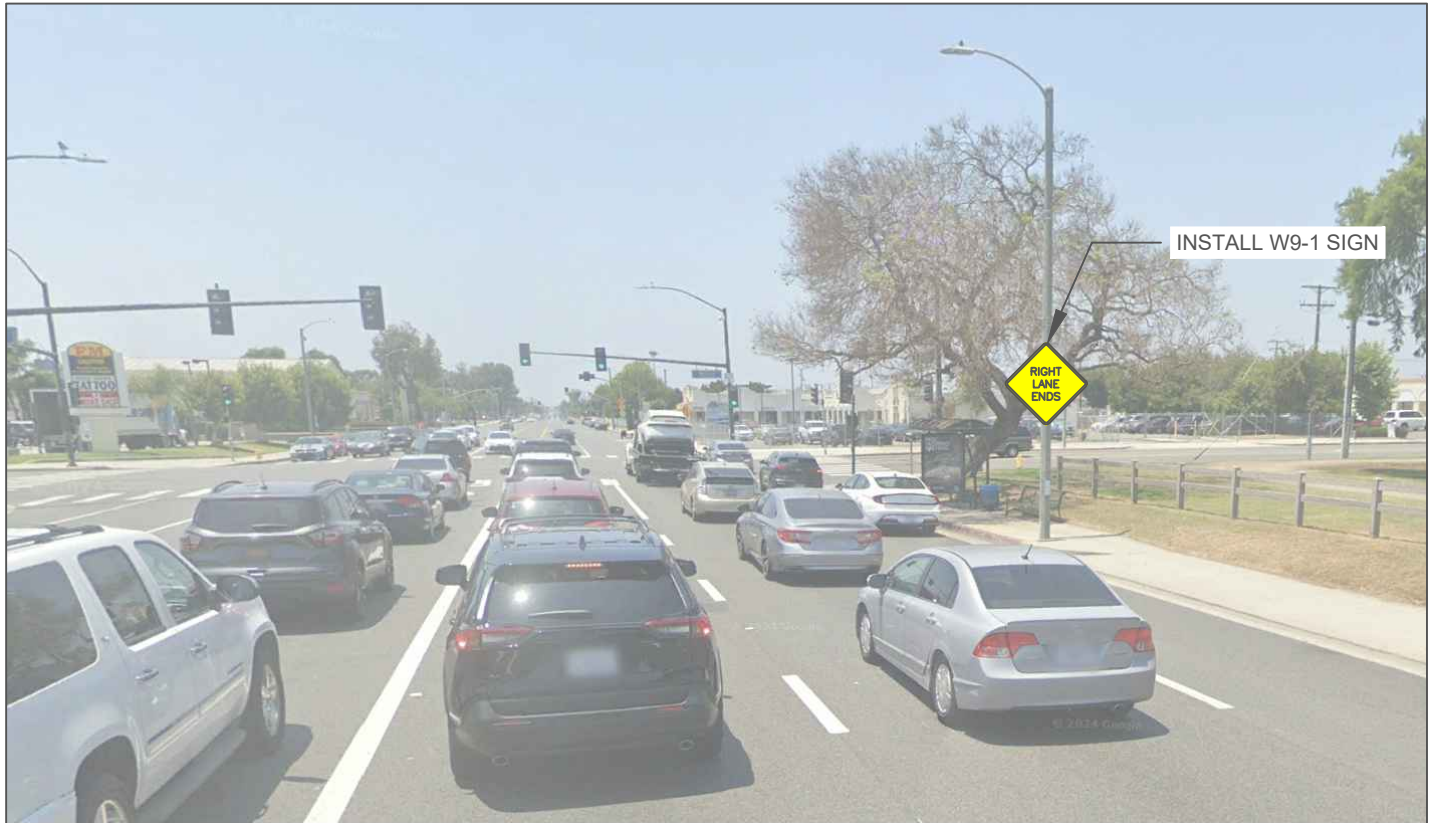
1 Movement	 EBL	 EBT	 EBR	 WBL	 WBT	 WBR	 NBL	 NBT	 NBR	 SBL	 SBT	 SBR								
2 Lanes	1	3	0	1	3	0	1	2	0	1	2	0								
3 Shared LT Lane (y/n)	<input type="checkbox"/> Yes			<input type="checkbox"/> Yes			<input type="checkbox"/> Yes			<input type="checkbox"/> Yes										
4 Volume	135	643	85	110	650	154	94	768	147	101	551	186								
5 Pedestrians			0			0			0			0								
6 Ped Button (y/n)		<input checked="" type="checkbox"/> Yes			<input checked="" type="checkbox"/> Yes			<input checked="" type="checkbox"/> Yes			<input checked="" type="checkbox"/> Yes									
7 Pedestrian Timing Required		25			24			30			29									
8 Free Right (y/n)			<input checked="" type="checkbox"/> Yes			<input checked="" type="checkbox"/> Yes			<input checked="" type="checkbox"/> Yes			<input checked="" type="checkbox"/> Yes								
9 Ideal Flow	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700								
10 Lost Time	6	6	6	6	6	6	6	6	6	6	6	6								
11 Minimum Green	4	4	4	4	4	4	4	4	4	4	4	4								
12 Reference Cycle Length	120																			
13 Volume Combined	135.0	728.0	0.0	110.0	804.0	0.0	94.0	915.0	0.0	101.0	737.0	0.0								
14 Volume Separate Left	135.0	728.0		110.0	804.0		94.0	915.0		101.0	737.0									
15 Lane Utilization Factor	1.000	0.908	1.000	1.000	0.908	1.000	1.000	0.952	1.000	1.000	0.952	1.000								
16 Turning Factor Adjust	0.950	0.982	0.850	0.950	0.971	0.850	0.950	0.976	0.850	0.950	0.962	0.850								
17 Saturated Flow Combined	1615.0	4549.7	0.0	1615.0	4497.8	0.0	1615.0	3158.8	0.0	1615.0	3114.3	0.0								
18 Saturated Flow Separate	1615.0	4549.7		1615.0	4497.8		1615.0	3158.8		1615.0	3114.3									
19 Pedestrian Interference Time		0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0								
20 Pedestrian Frequency		0.0%			0.0%			0.0%			0.0%									
21 Protected Option Allowed		TRUE			TRUE			TRUE			TRUE									
22 Reference Time	10.0	19.2	0.0	8.2	21.5	0.0	7.0	34.8	0.0	7.5	28.4	0.0								
23 Adjusted Reference Time	16.0	25.2	10.0	14.2	27.5	10.0	13.0	40.8	10.0	13.5	34.4	10.0								
Permitted Option																				
24 Proportion Lefts	1	0.00		1	0.00		1	0.00		1	0.00									
25 Volume Left Lane	135	243		110	268		94	458		101	369									
26 Proportion Lefts Left	1	0.00		1	0.00		1	0.00		1	0.00									
27 Left turn Equivalents	15.0	15.0		15.0	15.0		15.0	15.0		0.9	15.0									
28 Left turn Factor	0.07	1.00		0.07	1.00		0.07	1.00		1.07	1.00									
29 Permitted Sat Flow	107.7	1516.6		107.7	1499.3		107.7	1579.4		1722.7	1557.1									
30 Reference Time A	150.5	19.2		122.6	21.5		104.8	34.8		7.5	28.4									
31 Adjusted Saturation B		4549.7			4497.8			3158.8			3114.3									
32 Reference Time B		NA			NA			NA			NA									
33 Reference Time Lefts	NA			NA			NA			NA										
34 Reference Time		150.5			122.6			104.8			28.4									
35 Adjusted Reference Time		156.5			128.6			110.8			34.4									
Split Timing																				
36 Ref Time Combined		19.2			21.5			34.8			28.4									
37 Ref Time By Movement	10.0	19.2		8.2	21.5		7.0	34.8		7.5	28.4									
38 Reference Time		19.2			21.5			34.8			28.4									
39 Adjusted Reference Time	25.2	25.2		27.5	27.5		40.8	40.8		34.4	34.4									
Summary	East West		North South																	
40 Protected Option	43.5		54.3																	
41 Permitted Option	156.5		110.8																	
42 Split Option	52.7		75.2																	
43 Minimum	43.5		54.3																	
44 Combined	97.7																			
Right Turns	EBR	WBR	NBR	SBR																
45 Adjusted Reference Time	10.0	10.0	10.0	10.0																
46 Cross Through Direction	NBT	SBT	WBT	EBT																
47 Cross Through Adj Ref Time	40.8	34.4	27.5	25.2																
48 Oncoming Left Direction	WBL	EBL	SBL	NBL																
49 Oncoming Left Adj Ref Time	14.2	16.0	13.5	13.0																
50 Combined	10.0	10.0	10.0	10.0																
51 Intersection Capacity Utilization	81.5%																			
Level Of Service	D																			

Intersection Capacity Utilization Worksheet

Intersection Location: La Palma Avenue & Western Avenue
Analyzed by: NMA
Date and Time of Data: 11/14/24 – 7 AM – 6 PM

City: Buena Park
Alternative: WB RT Lane Conditions
Project: La Palma Avenue at Western Avenue

1	Movement												
2	Lanes	1	3	0	1	2	1	1	2	0	1	2	0
3	Shared LT Lane (y/n)	<input type="checkbox"/> Yes			<input type="checkbox"/> Yes			<input type="checkbox"/> Yes			<input type="checkbox"/> Yes		
4	Volume	135	643	85	110	650	154	94	768	147	101	551	186
5	Pedestrians			0			0			0			0
6	Ped Button (y/n)		<input checked="" type="checkbox"/> Yes			<input checked="" type="checkbox"/> Yes			<input checked="" type="checkbox"/> Yes			<input checked="" type="checkbox"/> Yes	
7	Pedestrian Timing Required		25			24			30			29	
8	Free Right (y/n)			<input checked="" type="checkbox"/> Yes			<input checked="" type="checkbox"/> Yes			<input checked="" type="checkbox"/> Yes			<input checked="" type="checkbox"/> Yes
9	Ideal Flow	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
10	Lost Time	6	6	6	6	6	6	6	6	6	6	6	6
11	Minimum Green	4	4	4	4	4	4	4	4	4	4	4	4
12	Reference Cycle Length	120											
13	Volume Combined	135.0	728.0	0.0	110.0	650.0	154.0	94.0	915.0	0.0	101.0	737.0	0.0
14	Volume Separate Left	135.0	728.0		110.0	650.0		94.0	915.0		101.0	737.0	
15	Lane Utilization Factor	1.000	0.908	1.000	1.000	0.952	1.000	1.000	0.952	1.000	1.000	0.952	1.000
16	Turning Factor Adjust	0.950	0.982	0.850	0.950	1.000	0.850	0.950	0.976	0.850	0.950	0.962	0.850
17	Saturated Flow Combined	1615.0	4549.7	0.0	1615.0	3236.8	1445.0	1615.0	3158.8	0.0	1615.0	3114.3	0.0
18	Saturated Flow Separate	1615.0	4549.7		1615.0	3236.8		1615.0	3158.8		1615.0	3114.3	
19	Pedestrian Interference Time		0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0
20	Pedestrian Frequency		0.0%			0.0%			0.0%			0.0%	
21	Protected Option Allowed		TRUE			TRUE			TRUE			TRUE	
22	Reference Time	10.0	19.2	0.0	8.2	24.1	12.8	7.0	34.8	0.0	7.5	28.4	0.0
23	Adjusted Reference Time	16.0	25.2	10.0	14.2	30.1	18.8	13.0	40.8	10.0	13.5	34.4	10.0
	Permitted Option												
24	Proportion Lefts	1	0.00		1	0.00		1	0.00		1	0.00	
25	Volume Left Lane	135	243		110	325		94	458		101	369	
26	Proportion Lefts Left	1	0.00		1	0.00		1	0.00		1	0.00	
27	Left turn Equivalents	15.0	15.0		15.0	15.0		15.0	15.0		0.9	15.0	
28	Left turn Factor	0.07	1.00		0.07	1.00		0.07	1.00		1.07	1.00	
29	Permitted Sat Flow	107.7	1516.6		107.7	1618.4		107.7	1579.4		1722.7	1557.1	
30	Reference Time A	150.5	19.2		122.6	24.1		104.8	34.8		7.5	28.4	
31	Adjusted Saturation B		4549.7			3236.8			3158.8			3114.3	
32	Reference Time B		NA			NA			NA			NA	
33	Reference Time Lefts	NA			NA			NA			NA		
34	Reference Time		150.5			122.6			104.8			28.4	
35	Adjusted Reference Time		156.5			128.6			110.8			34.4	
	Split Timing												
36	Ref Time Combined		19.2			24.1			34.8			28.4	
37	Ref Time By Movement	10.0	19.2		8.2	24.1		7.0	34.8		7.5	28.4	
38	Reference Time		19.2			24.1			34.8			28.4	
39	Adjusted Reference Time	25.2	25.2		30.1	30.1		40.8	40.8		34.4	34.4	
	Summary	East West		North South									
40	Protected Option	46.1		54.3									
41	Permitted Option	156.5		110.8									
42	Split Option	55.3		75.2									
43	Minimum	46.1		54.3									
44	Combined	100.4											
	Right Turns	EBR	WBR	NBR	SBR								
45	Adjusted Reference Time	10.0	18.8	10.0	10.0								
46	Cross Through Direction	NBT	SBT	WBT	EBT								
47	Cross Through Adj Ref Time	40.8	34.4	30.1	25.2								
48	Oncoming Left Direction	WBL	EBL	SBL	NBL								
49	Oncoming Left Adj Ref Time	14.2	16.0	13.5	13.0								
50	Combined	10.0	18.8	10.0	10.0								
51	Intersection Capacity Utilization	83.7%											
52	Level Of Service	E											
Revision 2003.0													



DEPARTMENT OF PUBLIC WORKS

PROJECT TITLE

REQUEST TO INSTALL RIGHT TURN POCKET
LA PALMA AVENUE AT WESTERN AVENUE
PROPOSED IMPROVEMENTS

EXHIBIT NO.

E

DRAWN BY: NMA

DATE: 01/22/2025