TECHNICAL MEMORANDUM II
to
Traffic Impact Analysis for Wal-Mart on Arden Drive in the City of El Monte, April 2014:

Levels of Service Analyses with Planned Improvements by City of El Monte

BACKGROUND

Mountain Pacific, Inc. (MPI) prepared a *Traffic Impact Analysis for Wal-Mart on Arden Drive in the City of El Monte, April 2014* (referred to as "TIA" in this memorandum) on a vacant parcel that is located on the east side of Arden Drive, north of Valley Boulevard. The proposed development includes a Wal-Mart Supercenter with just under 182,500 square feet of building area (referred to as "Project" in this memorandum) with an anticipated opening date in 2016.

The analysis was conducted assuming lane configurations and traffic control which existed or were anticipated at the time of analysis. The City of El Monte has since then proposed two improvements which will be implemented prior to occupancy of the Project:

1) Restriping at the intersection of Valley Boulevard and Santa Anita Avenue (Intersection 4) which will result in more capacity than assumed in the TIA, as shown in Figure 1; and
2) Cycle 2 Federal Safe Routes to School Project Intersection Improvements at Arden Drive – Arden Way (Intersection 34) which will reduce the number of through lanes in the northbound direction to one, as shown on Figure 2.

The purpose of this Technical Memorandum is to re-analyze the Levels of Service (LOS's) at these two intersections with the currently proposed improvements to determine if these proposed improvements would change the conclusions and findings in the TIA and Draft Environmental Impact Report (DEIR) prepared for the Wal-Mart Project.

ANALYSIS

LOS analysis was conducted for the following scenarios to determine potential impacts of the Project at the two intersections where improvements currently planned by the City of El Monte would be in place prior to occupancy of the Project:

- Existing weekday morning and evening and Saturday midday peak hours;
- Existing-plus-Project weekday morning and evening and Saturday midday peak hours;
- Opening Year No Project weekday morning and evening and Saturday midday peak hours;
- Opening Year With-Project weekday morning and evening and Saturday midday peak hours;
- Horizon Year No Project weekday morning and evening and Saturday midday peak hours;
- Horizon Year With-Project weekday morning and evening and Saturday midday peak hours; and
- Mitigated conditions assuming currently proposed improvements by the City of El Monte.

Results

Valley Boulevard – Santa Anita Avenue (Intersection 4)

Table 1 shows the LOS results for each of these scenarios for Intersection 4, Valley Boulevard - Santa Anita Avenue with the lane configurations shown on Figure 1. The results are consistent with the TIA, since this intersection will operate at LOS E or better under all scenarios except for the Horizon Year weekday morning peak hour when the intersection is anticipated to operate at LOS F (V/C of 1.012) under No-Project conditions and LOS F (V/C of 1.039) under With-Project conditions.

The V/C increase of 0.027 is considered significant per the City of El Monte significance thresholds. The addition of a separate right-turn lane in the southbound direction, shown as Mitigation Option 2 in the DEIR TIA, will off-set Project-related impacts. Project fair-share contribution of 17% to improvements at this location will mitigate Project-related impacts, consistent with the findings of the DEIR TIA. This improvement in combination with the 2015 striping improvements proposed by the City in 2015 are shown on Figure 3.

Arden Drive – Arden Way (Intersection 34)

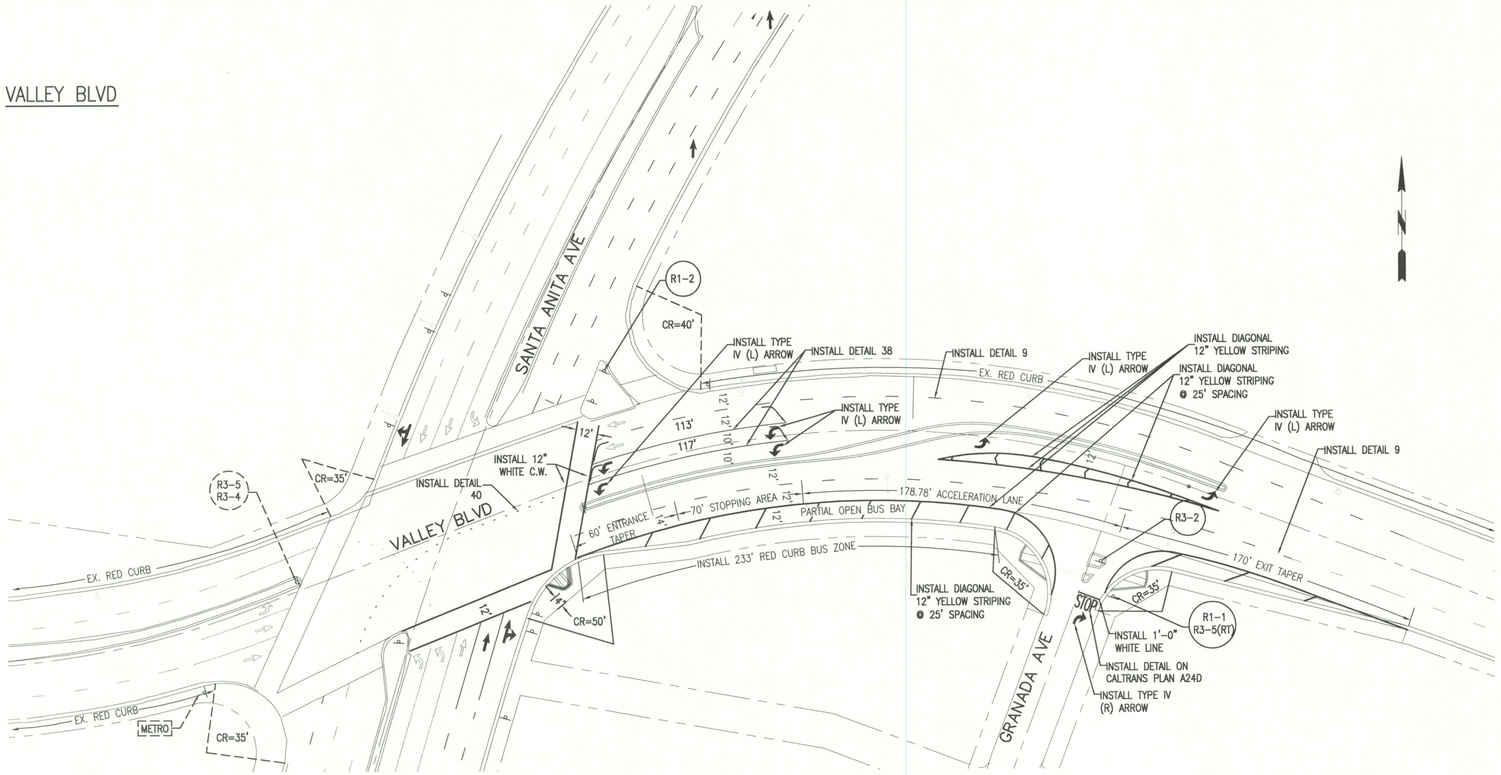
Table 2 shows the LOS results for each of these scenarios for Intersection 34, Arden Drive – Arden Way. Even though the Safe Route to School Improvement Plan reduces the number of through travel lanes from two to one in the northbound direction, LOS D or better will be maintained in Opening Year under With-Project conditions with the proposed improvements shown on Figure 2.

However, side street delay under Horizon Year weekday morning and evening peak-hour conditions will result in this intersection operating at LOS E, which is lower than the City of El Monte threshold. LOS E was anticipated at this location in the DEIR TIA with two travel lanes northbound as well.

As identified in the DEIR TIA, installation of a traffic signal, when warranted by the City of El Monte, would mitigate Project-related impacts with improved pedestrian crossings and channelization which would further enhance school access safety. While the DEIR TIA improvement concept included two travel lanes northbound and one left-turn and one through lane southbound at this intersection, the narrowing to one travel lane in the northbound and southbound direction per the Safe Route to School plans will also achieve LOS B or better with the installation of the traffic signal in the future. The Project's contribution to 43% of the share of the proposed signalization and associated improvements will mitigate its impacts. The City of El Monte can determine the final lane configurations, channelization and pedestrian crossing configuration which would be consistent with the Safe Route to School plan when the signal is warranted. The concept for traffic signalization of this intersection in combination with the high visibility crossing per the 2015 Safe Route to School improvements proposed by the City is provided on Figure 4.

CONCLUSIONS

The currently proposed improvements by the City of El Monte at the intersections of Valley Boulevard - Santa Anita Avenue and Arden Drive – Arden Way do not change any of the findings in the Wal-Mart Project DEIR TIA. The fair share contribution to the addition of a separate right-turn lane at Valley Boulevard - Santa Anita Avenue (Intersection 4) and to the installation of a traffic signal at Arden Drive – Arden Way (Intersection 34) will mitigate Project-related impacts, consistent with the DEIR, and these improvements would enhance the currently proposed improvements and the Safe Route to School plans.



GENERAL NOTES

1. ALL TRAFFIC LINES AND PAVEMENT MARKINGS SHALL BE INSTALLED BY THE CONTRACTOR WITH TWO COATS OF PAINT UNLESS OTHERWISE NOTED AND SHALL CONFORM TO CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD PLANS (2006 EDITION).
2. REMOVAL OF ALL CONFLICTING LINES AND MARKINGS SHALL BE DONE BY WET SANDBLASTING OR GRINDING AND INCLUDES REMOVAL OF RAISED PAVEMENT MARKERS.
3. ALL ARROW MARKINGS SHALL BE TYPE IV (L OR R) UNLESS OTHERWISE SPECIFIED.
4. ALL LANE STRIPING AT INTERSECTION APPROACHES WITHOUT CROSSWALK OR LIMIT LINES SHALL END 10 FEET FROM EXTENSION OF THE INTERSECTING CURB LINES.
5. ALL LANE LINES AT INTERSECTION APPROACHES AND DEPARTURES SHALL BEGIN AND END WITH 50 FEET OF 4-INCH SOLID WHITE LINE.
6. ALL SIGNING SHOWN HEREON SHALL BE INSTALLED, RELOCATED, OR REMOVED BY THE CONTRACTOR. THE CONTRACOR SHALL CONTACT THE CITY OF EL MONTE'S MAINTENCE DIVISION FIVE (5) DAYS PRIOR FOR COORDINATION, (XXX) XXX- XXXX.
7. LANE WIDTH SHALL BE MEASURED BETWEEN THE CENTER LINES OF EACH ADJACENT SINGLE OR DOUBLE STRIPE OR FACE OF CURB AS APPROPRIATE.
8. ALL EXISTING STRIPING OR PAVEMENT MARKINGS CONFLICTING WITH PROPOSED STRIPING OR MARKINGS SHALL BE REMOVED.
9. PROPOSED LIMIT LINES SHALL BE PLACED A MINIMUM OF FOUR FEET BEHIND THE CURB EXTENSION OR EDGE OF TRAVELED WAY. IN THE CASE OF INTERSECTIONS WITH WHEELCHAIR RAMPS, THE LIMIT LINE WILL BE BEHIND THE CURB EXTENSION OR EDGE OF TRAVELED WAY BUT IN NO CASE GREATER THAN 30 FEET BACK.
10. SEE TRAFFIC AND SIGNAL PLAN FOR THE LOCATION OF CROSSWALKS AT SIGNALIZED INTERSECTIONS.
11. SEE "MUTCD" 2003 EDITION AND CALIFORNIA SUPPLEMENT FOR TRAFFIC SIGNS.

NO.	REVISIONS	REVISED BY	APPROVED BY	DATE
0	ISSUED FOR CONSTRUCTION	RR	DN	7/11/11

SUBMITTED
RENE BOBADILLA, DEPUTY CITY MANAGER FOR COMMUNITY DEVELOPMENT

REGISTERED PROFESSIONAL ENGINEER DANIEL J. NOLAN No. 36974 6/30/12 CIVIL STATE OF CALIFORNIA
7-11-11
PROJECT ENGINEER DATE

PARSONS
100 WEST WALNUT ST.
PASADENA, CA 91124
626-440-2000

CITY OF EL MONTE
DEPARTMENT OF PUBLIC WORKS

SANTA ANITA AVENUE AND VALLEY BOULEVARD SIGNAGE & STRIPING PLAN

TRACT NO. #8575 | SHEET 9 OF 12

FIGURE 1

CONSTRUCTION NOTES

(2) — INSTALL CURB RAMP PER PLAN (CASE & TYPE AS NOTED)

(3) — INSTALL SIDEWALK PER SPPWC STD PLAN NO. 112-2 (WIDTH AS SHOWN)

(4) — ADJUST UTILITY TO GRADE

(5) — INSTALL CURB AND GUTTER PER SPPWC STD PLAN NO. 120-2, A2-6

(7) — RELOCATE EXISTING SIGN AND POST AS NOTED

(10) — INSTALL SIGN AND POST AS NOTED

(11) — INSTALL HIGH VISIBILITY CROSSWALK MARKINGS PER DETAIL 2, ON SHEET 2

(12) — REMOVE CONFLICTING SIGNING AND/OR STRIPING. STRIPING REMOVAL BY WET SANDBLASTING

(14) — CONSTRUCT BULB OUT PER DETAIL 3, ON SHEET 2

(15) — INSTALL STRIPING DETAIL AND/OR PAVEMENT MARKING AS SHOWN

(16) — INSTALL "STOP" PAVEMENT MARKING AND STOP BAR PER CALTRANS STD PLAN NO. A24D AND A24E

(20) — SAWCUT AND REMOVE EXISTING IMPROVEMENTS, HAUL AWAY AND DISPOSE. CONSTRUCT PCC SIDEWALK, 4" THICK, PER SPPWC STD. PLAN 113-2.

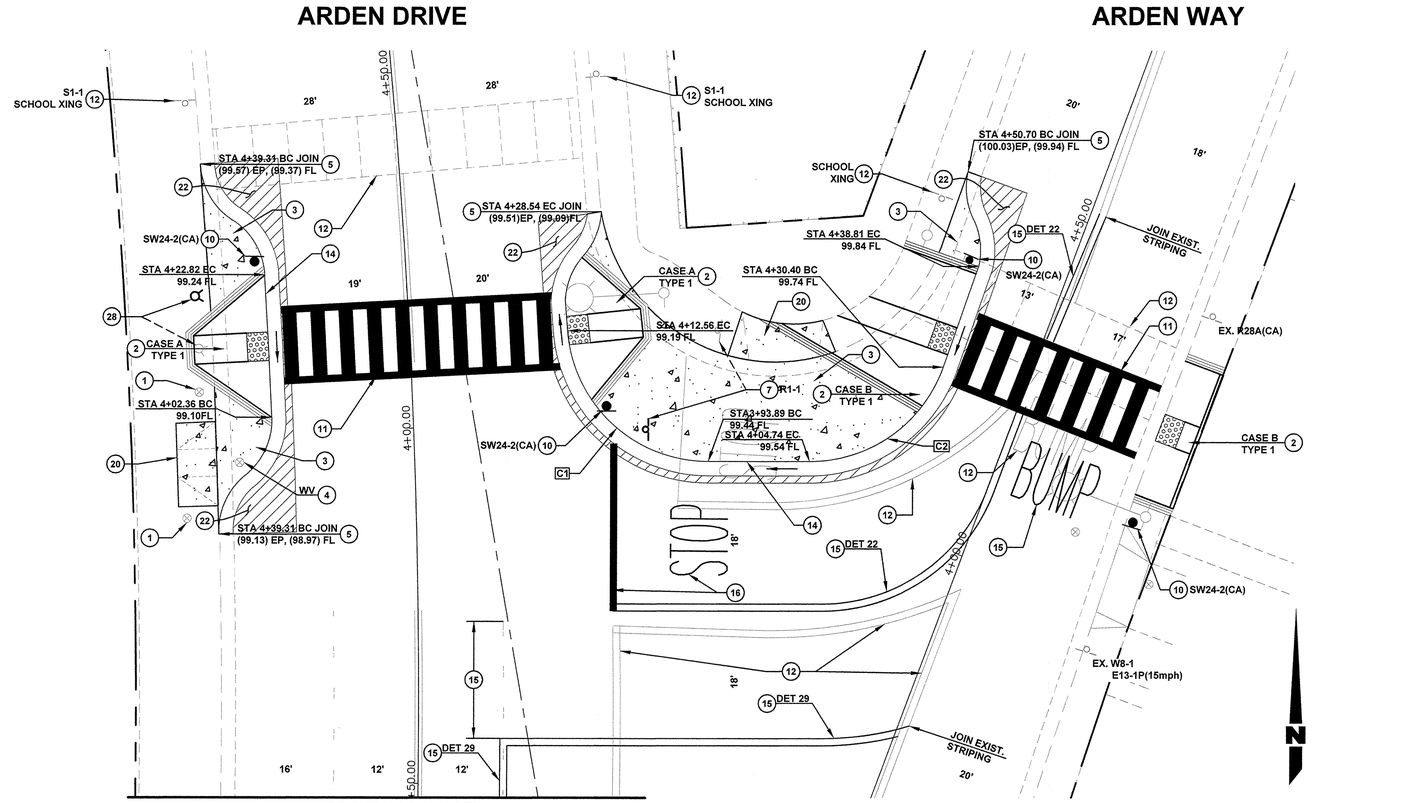
(22) — CONSTRUCT 6" DEPTH AC.

(28) — RELOCATE EXISTING FIRE HYDRANT TO NEW LOCATION SHOWN. COORDINATE WITH CALIFORNIA AMERICAN WATER CO.

▨ 6" DEPTH AC

CURVE DATA

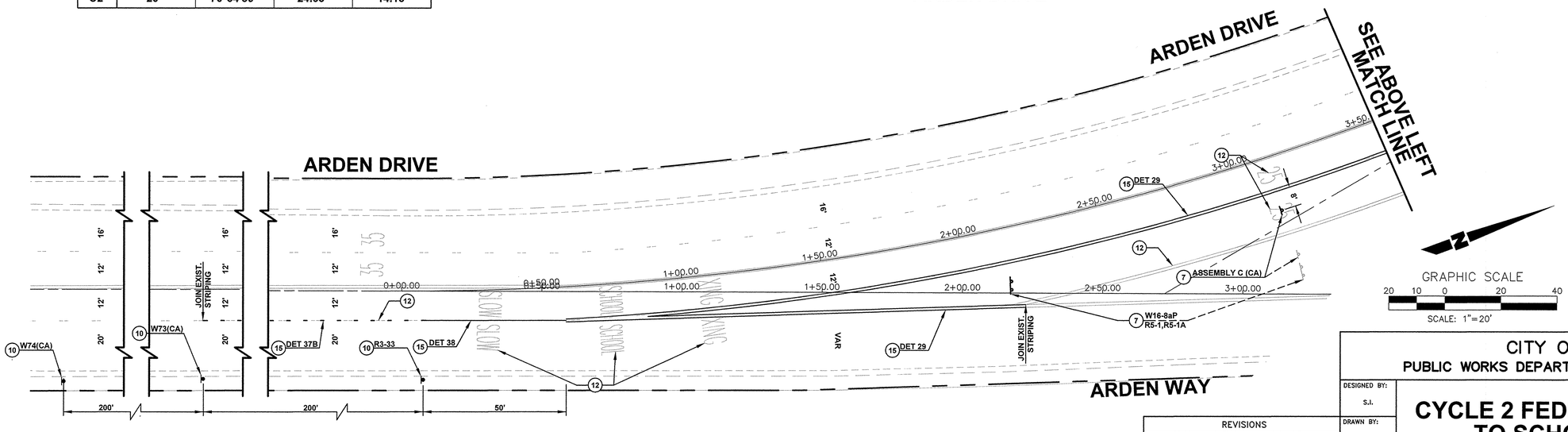
(#)	R	D	L	T
C1	20'	85°25'56"	29.82'	18.46'
C2	20'	70°34'59"	24.63'	14.15'



MATCH LINE SEE BELOW RIGHT

ARDEN DRIVE

GRAPHIC SCALE
10 5 0 10 20
SCALE: 1"=10'



GRAPHIC SCALE
20 10 0 20 40
SCALE: 1"=20'

RESPONSIBLE WATER COMPANY

CALIFORNIA AMERICAN WATER COMPANY - (888) 422-5269
CITY OF EL MONTE WATER COMPANY - (626) 580-2250

FIGURE 2

REGISTERED PROFESSIONAL ENGINEER — JUAN M. DIAZ — No. 50813 — CIVIL — STATE OF CALIFORNIA

Plans Prepared by:
JMD
PLANNING | ENGINEERING | MANAGEMENT
18048 East Gale Avenue, Suite 212
City of Industry, CA 91748
(626) 820-1137 Tel
(626) 820-1138 Fax
www.jmdla.com

Civil
Highways
Land Development
Water
Structures
Traffic
Transit
Transportation

UNDER THE DIRECTION OF: JUAN MARTIN DIAZ — RCE 50813 — 10/2/14 DATE

REVISIONS			
NO.	DESCRIPTION	APP.	DATE

CITY OF EL MONTE
PUBLIC WORKS DEPARTMENT – ENGINEERING DIVISION

CYCLE 2 FEDERAL SAFE ROUTES TO SCHOOL PROJECT INTERSECTION IMPROVEMENT PLAN

DESIGNED BY: S.I.
DRAWN BY: G.A.
CHECKED BY: J.D.
DATE: 8/15/14
SCALE: AS NOTED

APPROVED: CITY OF EL MONTE
MICHELLE MARQUEZ–RILEY RCE — DATE

APPROVED: CITY OF EL MONTE
MIKE RODRIGUEZ, PUBLIC WORKS SUPERINTENDENT — DATE

TR. | SHT. 15 OF 15 SHTS. | PLAN NO.

P:\2013\2013.0038.0002.00 El Monte Cycle 2 Safe Route to Schools\Cadd\Sheet Drawings\13038002MP-02-Cidley.dwg 09/19/2014 16:49

TABLE 1
LEVELS OF SERVICE WITH CITY OF EL MONTE-PLANNED IMPROVEMENTS AT VALLEY BOULEVARD - SANTA ANITA AVENUE (INTERSECTION 4)

Analysis Scenario	Peak Hour	NO-PROJECT LOS[1]			WITH-PROJECT LOS[1]			INCREASE IN V/C	IMPACT YES/NO [5]	MITIGATED LOS[1]			PROJECT CONTRIBUTION TO NEW VOLUMES IN IMPACTED SCENARIO
		ICU[2]	Delay[3]	LOS[4]	ICU[2]	Delay[3]	LOS[4]			ICU[2]	Delay[3]	LOS[4]	
EXISTING	AM	0.880	-	D	0.907	-	E	0.027	NO				
	PM	0.694	-	B	0.744	-	C	0.050	NO				
	SAT	0.606	-	B	0.677	-	B	0.071	NO				
OPENING YEAR	AM	0.944	-	E	0.971	-	E	0.027	NO				
	PM	0.724	-	C	0.778	-	C	0.054	NO				
	SAT	0.644	-	B	0.715	-	C	0.071	NO				
HORIZON YEAR	AM	1.012	-	F	1.039	-	F	0.027	YES	1.003	-	F	17%
	PM	0.771	-	C	0.826	-	D	0.055	NO	0.792	-	C	
	SAT	0.688	-	B	0.759	-	C	0.071	NO	0.723	-	C	

Notes:

(1) Levels of Service

(2) Intersection Capacity Utilization for signalized intersections.

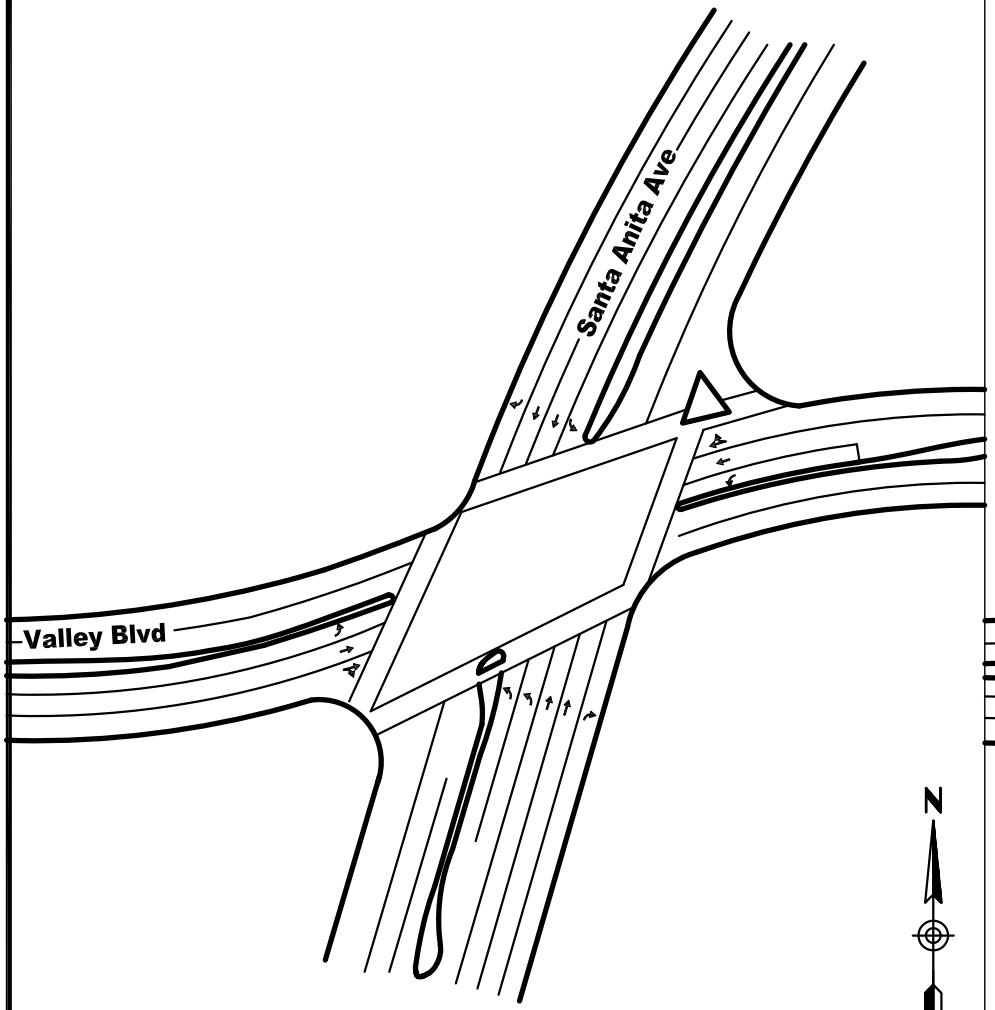
(3) Average control delay for worst-case movement for unsignalized intersections.

(4) See Tables 3 and 4 in DEIR TIA for definition of LOS for signalized and unsignalized intersections.

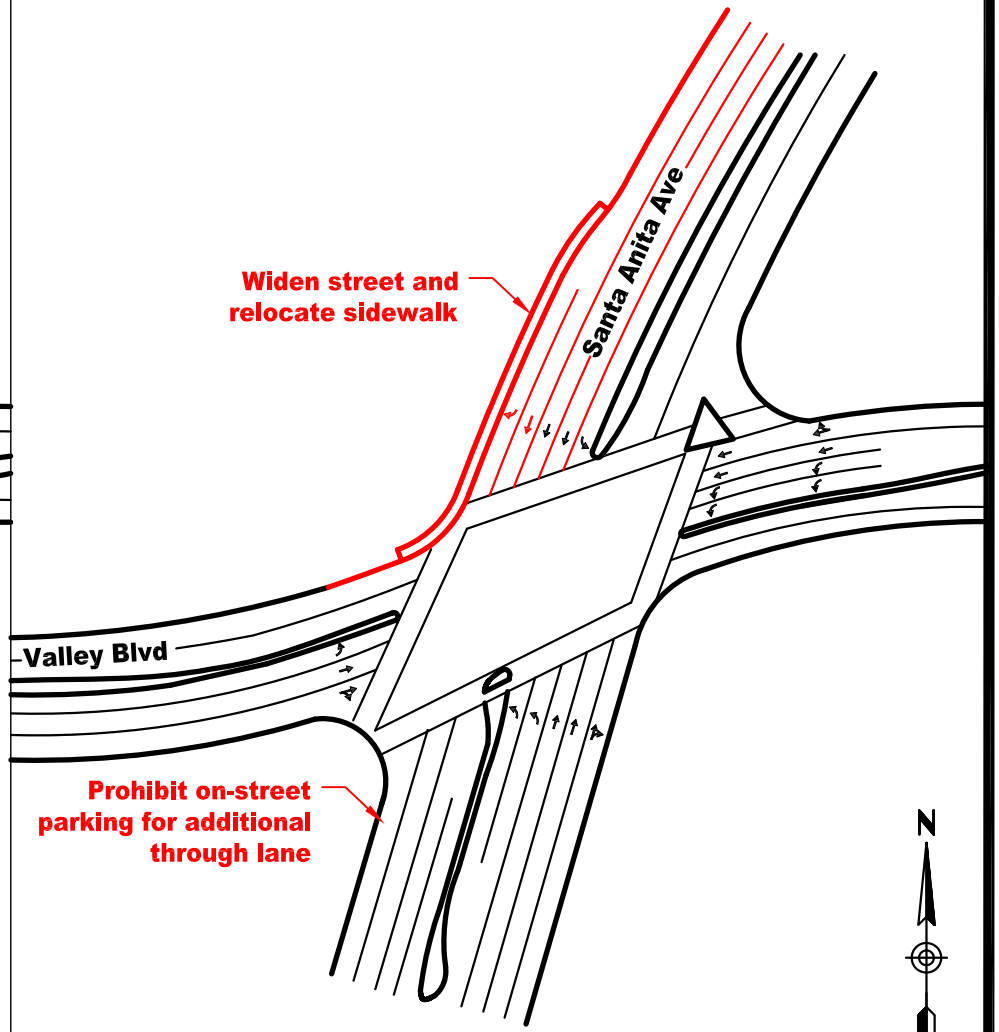
(5) Impact/Contribution to Impact based on each jurisdictions' thresholds of significance as shown on Table 2 in DEIR TIA

Intersections operating below their respective jurisdiction's minimum standard LOS are highlighted. Project-related impact also highlighted.

For Presentation Purposes Only
Not for Construction



Existing Configuration



Proposed Configuration Mitigation (Option 2)

Mountain Pacific, Inc.
Civil/Transportation Engineers
P.O. Box 4266 Laguna Beach, CA 92652 (949) 497-8127
www.mountainpacificusa.com

EXISTING & PROPOSED LANE CONFIGURATION MITIGATION (OPTION 2) WITH REVISED STRIPING PER CITY 2015 SIGING AND STRIPING PLANS VALLEY BLVD. & SANTA ANITA AVE., EL MONTE, CA

WAL-MART PROJECT, EL MONTE, CA

Figure 3

TABLE 2
LEVELS OF SERVICE WITH CITY OF EL MONTE SAFE ROUTE TO SCHOOL IMPROVEMENTS AT ARDEN DRIVE - ARDEN WAY (INTERSECTION 34)

Analysis Scenario	Peak Hour	NO-PROJECT LOS[1]			WITH-PROJECT LOS[1]			INCREASE IN DELAY	IMPACT YES/NO [5]	MITIGATED LOS[1], [6]			PROJECT CONTRIBUTION TO NEW VOLUMES IN IMPACTED SCENARIO
		ICU[2]	Delay[3]	LOS[4]	ICU[2]	Delay[3]	LOS[4]			ICU[2]	Delay[3]	LOS[4]	
EXISTING	AM	-	23.5	C	-	26.2	C	2.7	NO				
	PM	-	24.3	C	-	29.8	D	5.5	NO				
	SAT	-	13.8	B	-	16.2	B	2.4	NO				
OPENING YEAR	AM	-	25.3	D	-	28.5	D	3.2	NO				
	PM	-	26.1	D	-	32.5	D	6.4	NO				
	SAT	-	14.1	B	-	16.6	C	2.5	NO				
HORIZON YEAR	AM	-	31.5	D	-	36.7	E	5.2	YES	0.549	-	A	29%
	PM	-	31.4	D	-	41.0	E	9.6	YES	0.618	-	B	43%
	SAT	-	15.0	B	-	17.9	C	2.9	NO	0.342	-	A	

Notes:

(1) Levels of Service

(2) Intersection Capacity Utilization for signalized intersections.

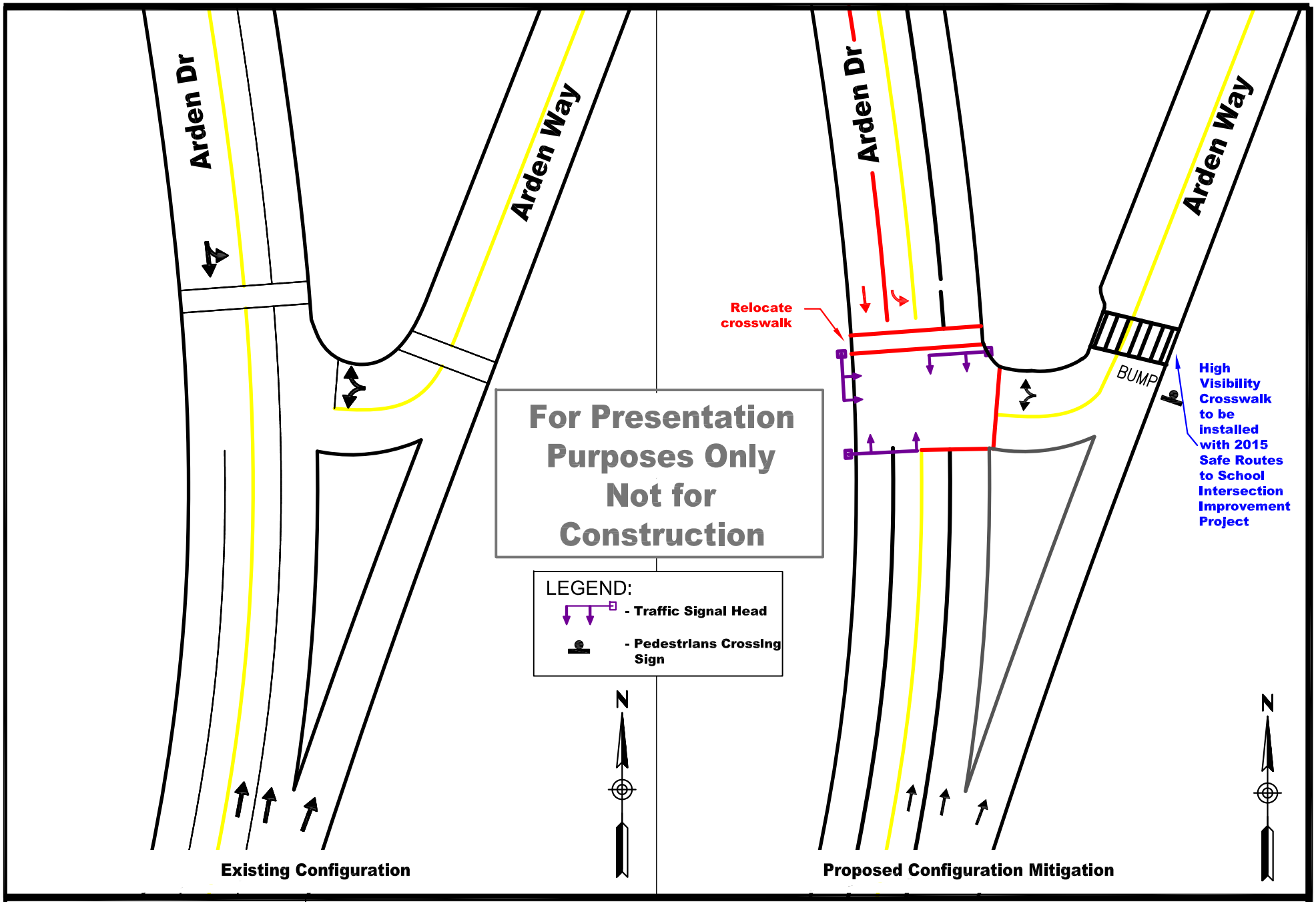
(3) Average control delay in seconds for worst-case movement for unsignalized intersections.

(4) See Tables 3 and 4 in DEIR TIA for definition of LOS for signalized and unsignalized intersections.

(5) Impact/Contribution to Impact based on each jurisdictions' thresholds of significance as shown on Table 2 in DEIR TIA

(6) Mitigation changes traffic control from STOP-sign to traffic signal.

Intersections operating below their respective jurisdiction's minimum standard LOS are highlighted. Project-related impact also highlighted.



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www.mountainpacificusa.com

EXISTING AND PROPOSED LANE CONFIGURATION MITIGATION with 2015 SAFE ROUTE TO SCHOOL IMPROVEMENTS ON ARDEN WAYARDEN DR. & ARDEN WAY, EL MONTE, CA

WAL-MART PROJECT, EL MONTE, CA

Figure 4