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TRAFFIC IMPACT ANALYSIS

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT

Ontario, California
January 22, 2015

Prepared for:

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LLG Ref. 2-12-3334-1

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EXECUTIVE SUMMARY
MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT
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- ***Project Description*** – The project proponent, Sares-Regis Group (PA-1) and Meredith International properties, proposes to construct a mix of industrial, commercial and residential land uses within five (5) planning areas (PA) of the Project site that includes up to 4,150,000 square-feet (SF) of floor area, up to 800 residential units and 600 overnight lodging units/hotel rooms.

  The Project is anticipated to be competed in two phases. PA-1 is expected to be constructed in one phase and will open by Year 2017 with approximately 86,000 SF of retail space in PA-2 to be developed within the same time frame. The remaining project development located within PA-2, PA-3 & PA-4 is expected to be completed by the Year 2020. Below shows the proposed mix of uses:

Land Use / Project Description	Building Square-Footage (SF) / Rooms / Dwelling Units (DU)					Totals
	Planning Area (PA) 1	Planning Area (PA) 2	Planning Area (PA) 3	Planning Area (PA) 4	Planning Area (PA) 5	
❑ 110: General Light Industrial	620,027 SF	--	--	--	--	620,027 SF
❑ 140: Manufacturing	--	--	--	--	--	--
❑ 152: High-Cube Warehouse	2,386,973 SF	--	--	--	--	2,386,973 SF
❑ 220: Apartments	--	--	--	800 DU	--	800 DU
❑ 310: Hotel	--	115,000 SF w/200 rooms	230,000 SF w/400 rooms	--	--	345,000 SF w/600 rooms
❑ 710: General Office	--	180,000 SF	100,000 SF	--	--	280,000 SF
❑ 820: Shopping Center	--	355,000 SF[1]	150,000 SF[2]	--	13,000 SF Existing	518,000 SF
Total Building Floor Area	**3,007,000 SF**	**650,000 SF w/200 hotel rooms**	**480,000 SF w/400 hotel rooms**	**800 DU**	**13,000 SF**	**Up to 4,150,000 SF w/600 hotel rooms and 800 multi-family DU**

- ***Study Scope*** – Thirty-six (36) key study intersections were selected for evaluation based on Project site locations, trip assignments, and surrounding arterial network. The intersections

[1] PA 2 includes development of 355,000 SF mixed-use retail center, 180,000 SF of general office and 115,000 SF hotel with 200 rooms. Approximately 86,000 SF of retail space is expected to be completed by Year 2017.

[2] PA 3 includes development of 150,000 SF mixed-use retail center, 100,000 SF of general office and 230,000 SF hotel(s) with 400 rooms total.

listed below provide both local and regional access to the study area and define the extent of the boundaries for this traffic impact investigation:

Key Study Intersections

1. Vineyard Avenue at Arrow Route (RC)
2. Archibald Avenue at Arrow Route ** (RC)
3. Baker Avenue at 8th Street (RC/O)
4. Vineyard Avenue at 8th Street (RC/O)
5. Archibald Avenue at 8th Street (RC)
6. Grove Avenue at 6th Street (O)
7. Baker Avenue at 6th Street (O)
8. Vineyard Avenue at 6th Street (O)
9. Hellman Avenue at 6th Street (RC)
10. Archibald Avenue at 6th Street (RC)
11. Hermosa Avenue at 6th Street (RC)
12. Haven Avenue at 6th Street (RC)
13. Grove Avenue at 4th Street ** (O)
14. I-10 EB Ramps at 4th Street ** (O/C)
15. I-10 WB Ramps at 4th Street ** (O/C)
16. Baker Avenue at 4th Street (O)
17. Mariposa Avenue at 4th Street (O)
18. Corona Avenue at 4th Street (O)
19. Orange Avenue at 4th Street (O)
20. Vineyard Avenue at 4th Street (O)
21. Del Rio Place at 4th Street (O)
22. Hellman Avenue at 4th Street (O)
23. Archibald Avenue at 4th Street ** (RC/O)
24. Turner Avenue at 4th Street (RC/O)
25. Haven Avenue at 4th Street ** (RC/O)
26. Vineyard Avenue at Jay Street (O)
27. Vineyard Ave at Inland Empire Blvd (O)
28. Archibald Ave at Inland Empire Blvd (O)
29. Turner Ave at Inland Empire Blvd (O)
30. Haven Ave at Inland Empire Blvd (O)
31. Vineyard Avenue at I-10 WB Ramps (O/C)
32. Vineyard Avenue at I-10 EB Ramps (O/C)
33. Archibald Ave at I-10 Freeway ** (O/C)
34. Vineyard Avenue at G Street (O)
35. Vineyard Avenue at D Street (O)
36. Vineyard Avenue at 7th Street (O)

****** = denotes San Bernardino County CMP intersection
Jurisdictions (RC = Rancho Cucamonga, O = Ontario, C = Caltrans)

The traffic impact study scenarios are:

- Existing Traffic,
- Existing Plus PA-1 and PA-2 (Interim) Project Traffic,
- Scenario (2) with Recommended Improvements, if any,
- Existing Plus Total Project (PA-1 through PA-4) Traffic,
- Scenario (4) with Recommended Improvements, if any,
- Year 2017 Cumulative Traffic Conditions,
- Year 2017 With PA-1 and PA-2 (Interim) Project Traffic, and
- Scenario (7) With Recommended Improvements, if any.
- Year 2020 Cumulative Traffic Conditions,
- Year 2020 Cumulative Plus Total Project (PA-1 through PA-4) Traffic,
- Scenario (10) With Recommended Improvements, if any.
- Year 2035 General Plan Buildout (No-Project) Traffic (assuming the Project site develops per the Ontario Plan,
- Year 2035 General Plan Buildout With Project Traffic (assuming the Project site develops per the current proposal (Project)),
- Scenario (13) With Recommended Improvements, if any.

- ***Level of Service (LOS) Standards and Significant Impact Criteria*** – The City of Ontario General Plan Infrastructure Element indicates that Level of Service (LOS) D is to be used for the sizing of roadway segments, while LOS E should be maintained at intersections. The County of San Bernardino CMP definition of deficiency is based on maintaining a level of service standard of LOS E or better, except where an existing LOS F condition is identified in the CMP document.

  The City of Rancho Cucamonga considers LOS D to be the minimum acceptable LOS for all intersections.

  Caltrans has established that LOS D is the operating standard for all Caltrans facilities. Caltrans has determined that all state owned facilities that operate below LOS D should be identified and improved to an acceptable LOS. The *Caltrans Traffic Impact Study Guidelines dated December 2002* does state that if an existing state owned facility operates at less than LOS D, the existing service level should be maintained.

- ***Existing Traffic Conditions*** – Based on the HCM method of analysis and the LOS criteria described in this report, four (4) of the thirty-six (36) key study intersections are forecast to operate at an unacceptable level of service during the PM peak hour when compared to the LOS standards defined in this report. The remaining thirty-two (32) key study intersections are forecast to operate at acceptable levels of service during the AM and PM peak hours. The intersections operating adversely are:

	AM Peak Hour			PM Peak Hour		
Key Intersection	**Delay (s/v)**	**V/C**	**LOS**	**Delay (s/v)**	**V/C**	**LOS**
14. I-10 EB Ramps at 4th Street	--	--	--	78.1	0.808	E
22. Hellman Avenue at 4th Street	--	--	--	*75.4*	--	*F*
26. Vineyard Avenue at Jay Street	--	--	--	*50.7*	--	*F*
30. Haven Avenue at Inland Empire Boulevard	--	--	--	102.8	0.742	F

**Italicized text* corresponds to unsignalized intersections.

- ***Project Trip Generation*** - The four Planning Areas of the proposed Project have a combined trip generation potential totaling up to 42,057 daily trips (one half arriving, one half departing), with 2,802 trips (1,922 inbound, 880 outbound) produced during the AM peak hour and 3,660 trips (1,331 inbound, 2,329 outbound) produced during the PM peak hour on a "typical" weekday.

  However, the trip generation potential of the Project, assuming development of PA-1 and up to 86,000 SF of retail space within PA-2 by Year 2017 is forecast to generate 14,015 daily PCE trips (one half arriving, one half departing), with 1,337 PCE trips (1,088 inbound, 249 outbound) produced during the AM peak hour and 1,462 trips (305 inbound, 1,157 outbound) produced during the PM peak hour on a "typical" weekday.

- ***Existing Plus Project PA-1 and PA-2 (Interim) Traffic Conditions*** – Based on the HCM method of analysis and the LOS criteria described in this report, the proposed Project will have a significant impact at two (2) of the key study intersections are forecast to operate at unacceptable levels of service during the PM peak hours when compared to the LOS standards defined in this report. The intersections forecast to operate adversely with the addition of PA-1 and PA-2 (Interim) traffic are:

	AM Peak Hour			PM Peak Hour		
Key Intersection	**Delay (s/v)**	**V/C**	**LOS**	**Delay (s/v)**	**V/C**	**LOS**
14. I-10 EB Ramps at 4th Street	--	--	--	83.2	0.821	F
30. Haven Avenue at Inland Empire Boulevard	--	--	--	102.7	0.746	F

The remaining key study intersections are forecast to operate at an acceptable LOS based on the LOS criteria previously mentioned.

- ***Existing Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions*** – Based on the HCM method of analysis and the LOS criteria described in this report, the proposed Project will have a significant impact at two (2) of the key study intersections are forecast to operate at unacceptable levels of service during the PM peak hour when compared to the LOS standards defined in this report. The intersections operating adversely with the addition of PA-1, PA-2, PA-3 and PA-4 traffic are:

	AM Peak Hour			PM Peak Hour		
Key Intersection	**Delay (s/v)**	**V/C**	**LOS**	**Delay (s/v)**	**V/C**	**LOS**
14. I-10 EB Ramps at 4th Street	--	--	--	94.2	0.852	F
30. Haven Avenue at Inland Empire Boulevard	--	--	--	102.3	0.754	F

The remaining key study intersections are forecast to operate at an acceptable LOS based on the LOS criteria previously mentioned.

- ***Year 2017 Background Traffic Conditions*** – Based on the HCM method of analysis and the LOS criteria described in this report, seven (7) of the key study intersections are forecast to operate at an unacceptable level of service during the AM and/or PM peak hours when compared to the LOS standards defined in this report. The intersections operating adversely are:

	AM Peak Hour			PM Peak Hour		
Key Intersection	**Delay (s/v)**	**V/C**	**LOS**	**Delay (s/v)**	**V/C**	**LOS**
2. Archibald Avenue at Arrow Route	--	--	--	56.5	1.013	F
14. I-10 EB Ramps at 4th Street	--	--	--	113.5	0.912	F
22. Hellman Avenue at 4th Street	*79.9*	--	*F*	*193.4*	--	*F*
25. Haven Avenue at 4th Street	--	--	--	73.1	1.034	F
26. Vineyard Avenue at Jay Street	--	--	--	*89.2*	--	*F*
28. Archibald Avenue at Inland Empire Boulevard	--	--	--	106.7	0.746	F

30. Haven Avenue at Inland Empire Boulevard	--	--	--	141.6	0.805	F

**Italicized text* corresponds to unsignalized intersections.

The remaining key study intersections are forecast to operate at an acceptable LOS based on the LOS criteria previously mentioned.

- ***Year 2017 Cumulative Plus Project PA-1 and PA-2 (Interim) Traffic Conditions*** – Based on the HCM method of analysis and the LOS criteria described in this report, four (4) of the key study intersections are forecast to operate at unacceptable levels of service during the PM peak hour when compared to the LOS standards defined in this report. The intersections operating adversely are:

	AM Peak Hour			PM Peak Hour		
Key Intersection	**Delay (s/v)**	**V/C**	**LOS**	**Delay (s/v)**	**V/C**	**LOS**
2. Archibald Avenue at Arrow Route	--	--	--	61.8	1.028	F
14. I-10 EB Ramps at 4th Street	--	--	--	123.7	0.970	F
25. Haven Avenue at 4th Street	--	--	--	73.5	1.043	F
30. Haven Avenue at Inland Empire Boulevard	--	--	--	141.4	0.810	F

The remaining key study intersections are forecast to operate at an acceptable LOS based on the LOS criteria previously mentioned.

- ***Year 2020 Cumulative Traffic Conditions*** – Based on the HCM method of analysis and the LOS criteria described in this report, seven (7) of the key study intersections are forecast to operate at an unacceptable level of service during the AM and/or PM peak hours when compared to the LOS standards defined in this report. The intersections operating adversely are:

	AM Peak Hour			PM Peak Hour		
Key Intersection	**Delay (s/v)**	**V/C**	**LOS**	**Delay (s/v)**	**V/C**	**LOS**
2. Archibald Avenue at Arrow Route	--	--	--	66.2	1.042	F
14. I-10 EB Ramps at 4th Street	--	--	--	129.3	0.961	F
22. Hellman Avenue at 4th Street	*125.6*	--	*F*	*297.4*	--	*F*
25. Haven Avenue at 4th Street	--	--	--	89.6	1.088	F
26. Vineyard Avenue at Jay Street	--	--	--	*125.2*	--	*F*
28. Archibald Avenue at Inland Empire Boulevard	--	--	--	124.8	0.784	F
30. Haven Avenue at Inland Empire Boulevard	92.3	0.612	F	167.2	0.849	F

*****_Italicized text_ corresponds to unsignalized intersections.

The remaining key study intersections are forecast to operate at an acceptable LOS based on the LOS criteria previously mentioned.

- ***Year 2020 Cumulative Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions*** – Based on the HCM method of analysis and the LOS criteria described in this report, seven (7) of the key study intersections are forecast to operate at unacceptable levels of service during the AM and/or PM peak hours when compared to the LOS standards defined in this report. The intersections operating adversely are:

	AM Peak Hour			PM Peak Hour		
Key Intersection	**Delay (s/v)**	**V/C**	**LOS**	**Delay (s/v)**	**V/C**	**LOS**
2. Archibald Avenue at Arrow Route	--	--	--	78.3	1.093	F
14. I-10 EB ramps at 4th Street	--	--	--	151.3	1.036	F
23. Archibald Avenue at 4th Street	--	--	--	83.7	1.108	F
25. Haven Avenue at 4th Street	--	--	--	91.2	1.109	F
28. Archibald Avenue at Inland Empire Boulevard	--	--	--	94.0	0.900	F
30. Haven Avenue at Inland Empire Boulevard	91.9	0.616	F	166.0	0.861	F
32. Vineyard Avenue at I-10 EB Ramps	42.7	1.001	F	41.6	1.003	F

**Italicized text* corresponds to unsignalized intersections.

The remaining key study intersections are forecast to operate at an acceptable LOS based on the LOS criteria previously mentioned.

- ***Year 2035 General Plan Buildout "No Project" (TOP) Traffic Conditions*** – Based on the HCM method of analysis and the LOS criteria described in this report, nine (9) of the key study intersections are forecast to operate at an unacceptable level of service during the AM and/or PM peak hours when compared to the LOS standards defined in this report. Please note that intersections 20, 27, 28 and 37 would be improved to acceptable levels of service should the TOP plan move forward, and are therefore excluded from the total list of deficient intersections. The intersections operating adversely are:

	AM Peak Hour			PM Peak Hour		
Key Intersection	**Delay (s/v)**	**V/C**	**LOS**	**Delay (s/v)**	**V/C**	**LOS**
2. Archibald Avenue at Arrow Route	58.9	1.005	F	103.6	1.197	F
3. Baker Avenue at 8th Street	*47.4*	--	*E*	*40.6*	--	*E*
12. Haven Avenue at 6th Street	--	--	--	55.3	0.867	E
20. Vineyard Avenue at 4th Street**	84.4	1.065	F	144.9	1.239	F
23. Archibald Avenue at 4th Street	--	--	--	100.0	1.077	F
25. Haven Avenue at 4th Street	--	--	--	102.5	1.122	F
27. Vineyard Avenue at Inland Empire Boulevard**	125.6	0.959	F	183.4	1.579	F
28. Archibald Avenue at Inland Empire Boulevard**	166.9	1.305	F	319.4	2.099	F
30. Haven Avenue at Inland Empire Boulevard	98.3	0.642	F	181.0	0.955	F
32. Vineyard Avenue at I-10 EB Ramps	50.7	1.028	F	--	--	--
33. Archibald Avenue at I-10 Freeway	--	--	--	79.0	1.129	F
36. Vineyard Avenue at 7th Street	*51.8*	--	*F*	*131.9*	--	*F*
*37. Vineyard Avenue at Plaza Serena**	--	--	--	*108.1*	--	*F*

**Italicized text* corresponds to unsignalized intersections.

**Intersection would be improved to acceptable levels of service should the TOP plan move forward.

The remaining key study intersections are forecast to operate at an acceptable LOS based on the LOS criteria previously mentioned.

- ***Year 2035 General Plan Buildout Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions*** – Based on the HCM method of analysis and the LOS criteria described in this report, ten (10) of the key study intersections are forecast to operate at unacceptable levels of service during the AM and/or PM peak hours when compared to the LOS standards defined in this report. The intersections operating adversely are:

	AM Peak Hour			PM Peak Hour		
Key Intersection	**Delay (s/v)**	**V/C**	**LOS**	**Delay (s/v)**	**V/C**	**LOS**
2. Archibald Avenue at Arrow Route	--	--	--	87.5	1.133	F
3. Baker Avenue at 8th Street	*54.4*	--	*F*	*43.6*	--	*E*
9. Hellman Avenue at 6th Street	--	--	--	*35.6*	--	*E*
12. Haven Avenue at 6th Street	--	--	--	55.4	0.873	E
20. Vineyard Avenue at 4th Street	--	--	--	92.2	1.017	F
23. Archibald Avenue at 4th Street	--	--	--	98.6	1.048	F
25. Haven Avenue at 4th Street	--	--	--	97.3	1.111	F
28. Archibald Avenue at Inland Empire Boulevard	--	--	--	91.9	0.886	F
30. Haven Avenue at Inland Empire Boulevard	99.1	0.636	F	184.1	0.927	F

**Italicized text* corresponds to unsignalized intersections.

The remaining key study intersections are forecast to operate at an acceptable LOS based on the LOS criteria previously mentioned.

- ***Project Specific Improvements*** – The following improvements are proposed in conjunction with development of the proposed Project to ensure adequate access and egress to the site is provided. The proposed Project will be required to construct improvements along their frontage on Vineyard Avenue, Inland Empire Boulevard and 4th Street, to include the following:
  - **Vineyard Avenue, adjacent to the Project site to 4th Street:** Construct Vineyard Avenue bordering the Project site in accordance with the conditions of approval identified in the Specific Plan Amendment and Tract Map to be determined by the City, to include three-travel lanes in each direction separated by a landscaped median (125-foot right-of way section, 100-foot paved width, and 12-foot sidewalk/landscape areas on the west side and 13-foot sidewalk/landscape areas on the east side). The implementation of improvements along Vineyard Avenue and 4th Street will require modifications to the existing traffic signal at the intersection of Vineyard Avenue and 4th Street as well as new signals at the realigned Inland Empire Boulevard and Jay Street, which will be interconnected to provide synchronization.

- **Inland Empire Boulevard:** Realign Inland Empire Boulevard to the north as required by the City of Ontario to intersect with Vineyard Avenue. Design and construct Inland Empire Boulevard, between Vineyard Avenue and Archibald Avenue in accordance with the conditions of approval identified in the Specific Plan Amendment and Tract Map to be determined by the City, to include two-travel lanes in each direction separated by a landscaped median with on-street bike lanes (100-foot right-of way section, 76-foot paved width, and 12-foot sidewalk/landscape areas on either side with necessary widening at intersections and driveways based on lane configurations recommended in this report). With the realignment of Inland Empire Boulevard, convert Vineyard Avenue at Plaza Serena from signalized access to an unsignalized right-turn in/out only access and install a new traffic signal at the intersection of Vineyard Avenue and Inland Empire Boulevard. The improvements associated with Inland Empire Boulevard consists of constructing the project frontage improvements at the intersection of Inland Empire Boulevard and Archibald Avenue, including a third receiving lane west bound to accommodate the recommended third left-turn lane northbound which is identified as a 2035 improvement. This third lane will terminate at one of the driveways serving PA-3, depending on final site planning for that parcel. It is anticipated that there will be four (4) new traffic signals on Inland Empire Boulevard at Del Rio Place (to be installed with PA-1 and PA-2 interim) and at Driveway A, C and D when further development of PA-2, PA-3 and/or PA-4 warrants them.

- **4th Street, adjacent to the Project site to Vineyard Avenue:** Construct 4th Street bordering the Project site in accordance with the conditions of approval identified in the Specific Plan Amendment and Tract Map to be determined by the City, to include two-travel lanes in each direction separated by a landscaped median (100-foot right-of way section, 72-foot paved width, and 14-foot sidewalk/landscape areas on either side). The improvements associated with 4th Street also include the installation of a traffic signal at the intersection of 4th Street and Hellman Avenue.

- **Jay Street:** Extend Jay Street easterly from Vineyard Avenue and connect with the future alignment of Del Rio Place. Design and construct Jay Street to the City of Ontario "Local Industrial" street standards (66-foot right-of way section, 40-foot paved width, and 13-foot sidewalk/landscape areas on either side). The improvements associated with Jay Street also include the installation of a traffic signal at the intersection of Vineyard Avenue and Jay Street with necessary widening at the intersection with Vineyard Avenue based on lane configuration recommended in this report.

- **Del Rio Place:** Extend Del Rio Place southerly from future Jay Street and intersect with Inland Empire Boulevard. Design and construct Del Rio Place to the City of Ontario "Local Industrial" street standards. (66-foot right-of way section, 40-foot paved width, and 13-foot sidewalk/landscape areas on either side). The improvements

associated with Del Rio Place also include the installation of a traffic signal at the intersection of Inland Empire Boulevard and Del Rio Place with necessary widening at the intersection with Inland Empire Boulevard based on lane configuration recommended in this report.

- ***Recommended Improvements and Costs*** – *Table A* presents the recommended improvements and cost along with the timing of each.

- ***City of Ontario Development Impact Fee (DIF) Program*** – Approximately **$9,296,598.00** of the total potential DIF of **$26,729,741.00** would be allocated to DIF eligible improvements, of which **$4,492,458.00** would be the responsibility of PA-1 (3,007,000 SF x 1.494 SF per SF).

- ***Project Related Fair-Share and Development Impact Fee (DIF)*** – The Project's total fair-share contribution consist of an Ontario DIF fair-share component, an Ontario Non-DIF fair-share component and a Rancho Cucamonga fair-share component. The total of all three tables results in total fair-share contribution of **$1,026,215.00** to mitigate project impacts.

  Please note that of above-referenced total, **$268,044.50** is associated with DIF-related improvements, inclusive of **$73,612.50** that is associated with the improvements at the Vineyard Avenue/I-10 Interchange, which is under Caltrans jurisdiction, while **$623,505.50** represents the Project's fair-share contribution for Non-DIF related recommended improvements within the City of Ontario, inclusive of **$230,000.00** that is associated with the intersection of I-10 EB Ramps at 4th Street, which is also Caltrans jurisdiction. Given $268,044.50 of the Project's fair-share contribution is associated with DIF-related improvements, this amount could be credited against the fees allocated to the construction costs associated with roadway and intersection improvements, bridges, interchange improvements.

  The Project's fair-share contribution of the recommended improvements at the intersections located within or share a border with the City of Rancho Cucamonga totals **$134,665.00**.

TABLE A
RECOMMENDED IMPROVEMENTS AND PRELIMINARY COSTS[3]

Key Intersections	Jurisdiction	Improvement Description	Unit Improvement Cost	Improvements by Scenario				
				Existing Plus Project PA-1 and PA-2 (Interim)	Existing Plus Project PA-1, PA-2, PA-3 and PA-4	Year 2017	Year 2020	Year 2035
2. Archibald Avenue at Arrow Route	Rancho Cucamonga	▪ Construct an exclusive NB right-turn lane.	$50,000.00	--	--	X	X	X
		▪ Construct an exclusive EB right-turn lane.	$50,000.00	--	--	--	--	X
		▪ Construct an exclusive WB right-turn lane.	$50,000.00	--	--	--	--	X
		▪ Modify existing traffic signal.	$75,000.00	--	--	X	X	X
			Total:	$0.00	$0.00	$125,000.00	$0.00	$175,000.00
3. Baker Avenue at 8th Street	Rancho Cucamonga/Ontario	▪ Install Traffic Signal	$250,000.00	--	--	--	--	X
			Total:	$0.00	$0.00	$0.00	$0.00	$250,000.00
9. Hellman Avenue at 6th Street	Rancho Cucamonga	▪ Install Traffic Signal	$250,000.00	--	--	--	--	X
			Total:	$0.00	$0.00	$0.00	$0.00	$250,000.00
12. Haven Avenue at 6th Street	Rancho Cucamonga	▪ Construct exclusive NB right-turn lane.	$50,000.00	--	--	--	--	X
		▪ Modify existing traffic signal.	$75,000.00	--	--	--	--	X
			Total:	$0.00	$0.00	$0.00	$0.00	$125,000.00
14. I-10 EB Ramps at 4th Street	Ontario/Caltrans	▪ Construct an additional WB through-lane.	$130,000.00	X	X	X	X	--
		▪ Restripe accordingly	$25,000.00	X	X	X	X	--
		▪ Modify existing traffic signal.	$75,000.00	X	X	X	X	--
			Total:	$230,000.00	$0.00	$0.00	$0.00	$0.00
20. Vineyard Avenue at 4th Street	Ontario	▪ Construct an additional SB through-lane.	$130,000.00	--	--	--	--	X
		▪ Modify existing traffic signal.	$75,000.00	--	--	--	--	X
			Total:	$0.00	$0.00	$0.00	$0.00	$205,000.00
23. Archibald Avenue at 4th Street	Rancho Cucamonga/Ontario	▪ Construct a 2nd exclusive NB left-turn lane.	$50,000.00	--	--	--	X	X
		▪ Construct an additional NB through-lane.	$130,000.00	--	--	--	X	X
		▪ Modify existing traffic signal.	$75,000.00	--	--	--	X	X
			Total:	$0.00	$0.00	$0.00	$255,000.00	$0.00

Note:

- X = Denotes that the improvement carries over from the previous scenario and is assumed to be already implemented, and therefore is not considered in the cost.

3 The improvement costs have been estimated using cost guidelines contained in *Appendix G of the San Bernardino County CMP, 2003 Update* as well as our general knowledge based on extensive working with contractors and vendor on outside projects. Costs represent a rough order of magnitude for construction only and do not include acquisition of right-of way.

TABLE 11-A (CONTINUED)

RECOMMENDED IMPROVEMENTS AND PRELIMINARY COSTS[4]

Key Intersections	Jurisdiction	Improvement Description	Unit Improvement Cost	Improvements by Scenario				
				Existing Plus Project PA-1 and PA-2 (Interim)	Existing Plus Project PA-1, PA-2, PA-3 and PA-4	Year 2017	Year 2020	Year 2035
25. Haven Avenue at 4th Street	Rancho Cucamonga/Ontario	▪ Construct an additional NB through-lane.	$130,000.00	--	--	X	X	X
		▪ Construct an additional SB through-lane.	$130,000.00	--	--	--	X	X
		▪ Construct an exclusive EB right-turn lane.	$50,000.00	--	--	X	X	X
		▪ Modify existing traffic signal.	$75,000.00	--	--	X	X	X
			Total:	$0.00	$0.00	$255,000.00	$205,000.00	$0.00
28. Archibald Avenue at Inland Empire Boulevard	Ontario	▪ Construct 3rd NB left-turn lane.	$50,000.00	--	--	--	--	X
		▪ Construct an additional SB through-lane.	$130,000.00	--	--	--	X	X
		▪ Modify existing traffic signal	$75,000.00	--	--	--	X	X
			Total:	$0.00	$0.00	$0.00	$205,000.00	$125,000.00
30. Haven Avenue at Inland Empire Boulevard	Ontario	▪ Modify existing traffic signal to install median pedestrian push buttons.	$75,000.00	X	X	X	X	X
		▪ Modify median to provide 6' refuge and provide minor restriping.	$30,000.00	X	X	X	X	X
			Total:	$105,000.00	$0.00	$0.00	$0.00	$0.00
32. Vineyard Avenue at I-10 EB Ramps	Ontario/Caltrans	▪ Construct an exclusive NB right-turn lane.	$50,000.00	--	--	--	X	--
		▪ Modify existing traffic signal.	$75,000.00	--	--	--	X	--
			Total:	$0.00	$0.00	$0.00	$125,000.00	$0.00
		TOTAL COSTS OF IMPROVEMENTS:		**$335,000.00**	**$0.00**	**$380,000.00**	**$790,000.00**	**$1,130,000.00**

Note:

- X = Denotes that the improvement carries over from the previous scenario and is assumed to be already implemented, and therefore is not considered in the cost.

[4] The improvement costs have been estimated using cost guidelines contained in *Appendix G of the San Bernardino County CMP, 2003 Update* as well as our general knowledge based on extensive working with contractors and vendor on outside projects. Costs represent a rough order of magnitude for construction only and do not include acquisition of right-of way.

- ***Freeway Analysis*** – The Project is forecast to cumulatively impact sixty-six (66) of the sixty-eight (68) *freeway mainline* segments by Year 2035. Hence, the Project's contribution to the freeway system can be considered cumulatively significant under this traffic impact analysis scenario.

  The Project is forecast to cumulatively impact the *freeway ramps* by Year 2035 at I-10 Interchange with Archibald Avenue, Vineyard Avenue and Grove Avenue. Hence, the Project's contribution to the on and off-ramps on the I-10 Freeway at 4th Street, Vineyard Avenue and Archibald Avenue can be considered cumulatively significant under this traffic impact analysis scenario.

  The Project is forecast to cumulatively impact the three (3) *freeway weaving* segments by Year 2035. Hence, the Project's contribution to the freeway system can be considered cumulatively significant under this traffic impact analysis scenario.

  The I-10, I-15 and SR-57 Freeways are controlled exclusively by the State, there is no mechanism by which the lead agency (City of Ontario) can construct or guarantee the construction of any improvements to these freeways segments. Therefore, the proposed Project's incremental impacts on key freeway study segments assessed in the report are considered unmitigatable as there are no feasible mitigation measures that will reduce cumulative mainline impacts to below significance thresholds or achieve acceptable service level goals.

TRAFFIC IMPACT ANALYSIS

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT

Ontario, California
January 22, 2015

1.0 INTRODUCTION

This Traffic Impact Analysis report addresses the potential traffic impacts and circulation needs associated with the proposed Meredith International Centre Specific Plan Amendment (hereinafter referred to as Project). The Meredith International Centre Specific Plan was approved by the City of Ontario in 1981. The project proponent, Sares-Regis Group (PA-1) and Meredith International properties, proposes to construct a mix of industrial, commercial and residential land uses within five (5) planning areas (PA) of the Project site that includes up to 4,150,000 square-feet (SF) of floor area, up to 800 residential units and 600 overnight lodging units/hotel rooms.

The Project is anticipated to be competed in two phases. PA-1 is expected to be constructed in one phase and will open by Year 2017 with approximately 86,000 SF of retail space in PA-2 to be developed within the same time frame. The remaining project development located within PA-2, PA-3 & PA-4 is expected to be completed by the Year 2020.

1.1 Scope of Work

This traffic report documents the findings and recommendations of a traffic impact analysis conducted by Linscott, Law & Greenspan, Engineers (LLG) to determine the potential impacts associated with the proposed Project. The traffic analysis evaluates the existing operating conditions at thirty-six (36) key study intersections within the project vicinity, estimates the trip generation potential of the proposed Project, and forecasts future near-term (Year 2017 and 2020) and long-term (Year 2035) operating conditions. Where necessary, intersection improvements/mitigation measures are identified.

This traffic report satisfies the traffic impact requirements of the City of Ontario and City of Rancho Cucamonga and is consistent with the most current *San Bernardino County Congestion Management Program (CMP).* The Scope of Work for this traffic study was developed in conjunction with City of Ontario Public Works Department staff. Given that some of the key study intersections also reside within the City of Rancho Cucamonga, this report also is consistent with City of Rancho Cucamonga guidelines. Due to the location of the Project site in proximity to the San Bernardino (I-10) Freeway, the criteria outlined in the current Caltrans *Guide for the Preparation of Traffic Impact Studies dated December 2002* was adhered to.

The project site has been visited and an inventory of adjacent area roadways and intersections was performed. Existing weekday peak hour traffic count information has been collected at thirty-six (36) key study intersections for use in the preparation of intersection level of service calculations. Information concerning cumulative projects (planned and/or approved) in the vicinity of the proposed Project has been researched at the City of Ontario, City of Rancho Cucamonga, City of Chino, City of Upland, City of Fontana, City of Eastvale, and City of Montclair. Based on our

research, there are seven (7) related projects located in the City of Ontario, eight (8) related projects located in the City of Rancho Cucamonga, twenty-six (26) related projects located in the City of Chino, fifteen (15) related projects located in the City of Fontana, three (3) related projects located in the City of Upland, seven (7) related projects located in the City of Eastvale, and two (2) related projects located in the City of Montclair. The sixty-eight (68) related projects were considered in the cumulative traffic analysis.

This traffic report analyzes existing and future weekday AM peak hour and PM peak hour traffic conditions for a near-term PA-1 and PA-2 (Interim) (Year 2017 condition), near-term PA-1, PA-2, PA-3 & PA-4 (Year 2020 condition) and long-term (Year 2035 condition) traffic setting upon completion of the proposed Project. Near-term cumulative peak hour traffic forecasts were projected by incorporating a two percent (2.0%) annual growth rate and the trip generation potential of the related projects. Long-term (Year 2035) peak hour traffic forecasts were projected based on modeled traffic projections prepared by SANBAG utilizing the San Bernardino Traffic Analysis Model (SBTAM) Year 2035 Model.

1.2 Study Area

Thirty-six (36) key study intersections were selected for evaluation based on Project site locations, trip assignments, and surrounding arterial network. The intersections listed below provide both local and regional access to the study area and define the extent of the boundaries for this traffic impact investigation:

Key Study Intersections

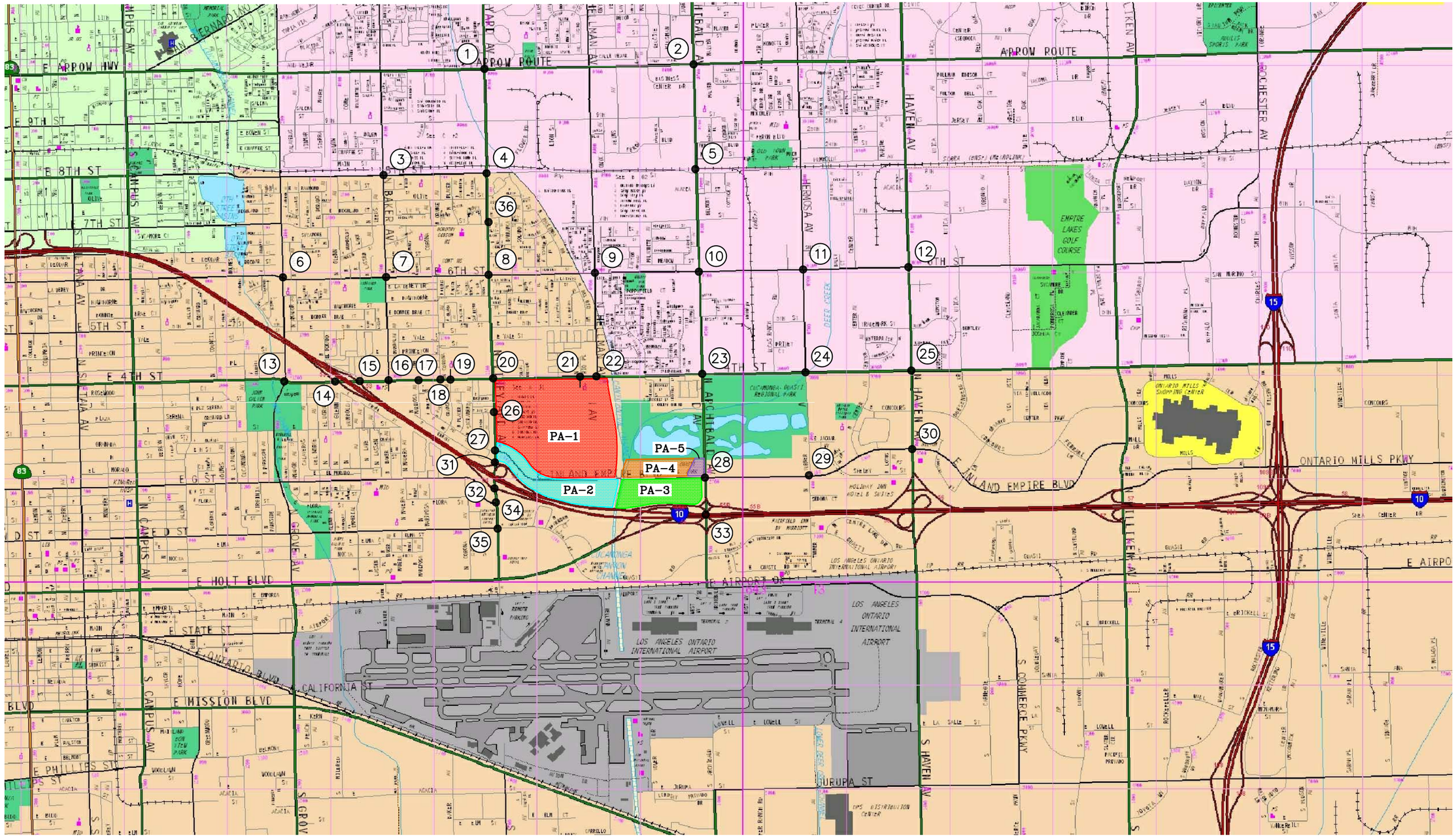
1. Vineyard Avenue at Arrow Route (RC)
2. Archibald Avenue at Arrow Route ** (RC)
3. Baker Avenue at 8th Street (RC/O)
4. Vineyard Avenue at 8th Street (RC/O)
5. Archibald Avenue at 8th Street (RC)
6. Grove Avenue at 6th Street (O)
7. Baker Avenue at 6th Street (O)
8. Vineyard Avenue at 6th Street (O)
9. Hellman Avenue at 6th Street (RC)
10. Archibald Avenue at 6th Street (RC)
11. Hermosa Avenue at 6th Street (RC)
12. Haven Avenue at 6th Street (RC)
13. Grove Avenue at 4th Street ** (O)
14. I-10 EB Ramps at 4th Street ** (O/C)
15. I-10 WB Ramps at 4th Street ** (O/C)
16. Baker Avenue at 4th Street (O)
17. Mariposa Avenue at 4th Street (O)
18. Corona Avenue at 4th Street (O)
19. Orange Avenue at 4th Street (O)
20. Vineyard Avenue at 4th Street (O)
21. Del Rio Place at 4th Street (O)
22. Hellman Avenue at 4th Street (O)
23. Archibald Avenue at 4th Street ** (RC/O)
24. Turner Avenue at 4th Street (RC/O)
25. Haven Avenue at 4th Street ** (RC/O)
26. Vineyard Avenue at Jay Street (O)
27. Vineyard Ave at Inland Empire Blvd (O)
28. Archibald Ave at Inland Empire Blvd (O)
29. Turner Ave at Inland Empire Blvd (O)
30. Haven Ave at Inland Empire Blvd (O)
31. Vineyard Avenue at I-10 WB Ramps (O/C)
32. Vineyard Avenue at I-10 EB Ramps** (O/C)
33. Archibald Ave at I-10 Freeway ** (O/C)
34. Vineyard Avenue at G Street (O)
35. Vineyard Avenue at D Street (O)
36. Vineyard Avenue at 7th Street (O)

****** = denotes San Bernardino County CMP intersection
Jurisdictions (RC = Rancho Cucamonga, O = Ontario, C = Caltrans)

Figure 1-1 presents a Vicinity Map, which illustrates the general location of the PA-1 PA-2, PA-3, PA-4 & PA-5 components' Project sites, as well as depicting the locations of the thirty-six (36) key study intersections and the surrounding street system. PA-5 is currently developed with a 13,000 SF shopping center and is a part of the existing baseline conditions. When necessary, this report recommends intersection and/or roadway improvements that may be required to accommodate future traffic volumes and restore/maintain an acceptable Level of Service, and/or mitigates the impact of the project.

Included in this Traffic Impact Study are:

1) Existing Traffic,
2) Existing Plus PA-1 and PA-2 (Interim) Project Traffic,
3) Scenario (2) with Recommended Improvements, if any,
4) Existing Plus Total Project (PA-1 through PA-4) Traffic,
5) Scenario (4) with Recommended Improvements, if any,
6) Year 2017 Cumulative Traffic Conditions,
7) Year 2017 With PA-1 and PA-2 (Interim) Project Traffic, and
8) Scenario (7) With Recommended Improvements, if any.
9) Year 2020 Cumulative Traffic Conditions,
10) Year 2020 Cumulative Plus Total Project (PA-1 through PA-4) Traffic,
11) Scenario (10) With Recommended Improvements, if any.
12) Year 2035 General Plan Buildout (No-Project) Traffic (assuming the Project site develops per the Ontario Plan,
13) Year 2035 General Plan Buildout With Project Traffic (assuming the Project site develops per the current proposal (Project)),
14) Scenario (13) With Recommended Improvements, if any.



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LINSCOTT LAW & GREENSPAN engineers

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KEY

(#) = STUDY INTERSECTION	= PA-3
= PA-1	= PA-4
= PA-2	= PA-5

FIGURE 1-1

VICINITY MAP

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO

2.0 PROJECT DESCRIPTION AND LOCATION

The proposed Development Project consists of a mix of industrial, commercial and residential land uses within five (5) planning areas of the Project site that includes up to 4,150,000 square-feet (SF) of floor area, up to 800 residential units and 600 overnight lodging units/hotel rooms. ***Figure 2-1*** presents the *Conceptual Land Use Plan* that depicts the physical arrangement of land uses for each of the Planning Areas as well as conceptual access points on 4th Street, Vineyard Avenue and Inland Empire Boulevard.

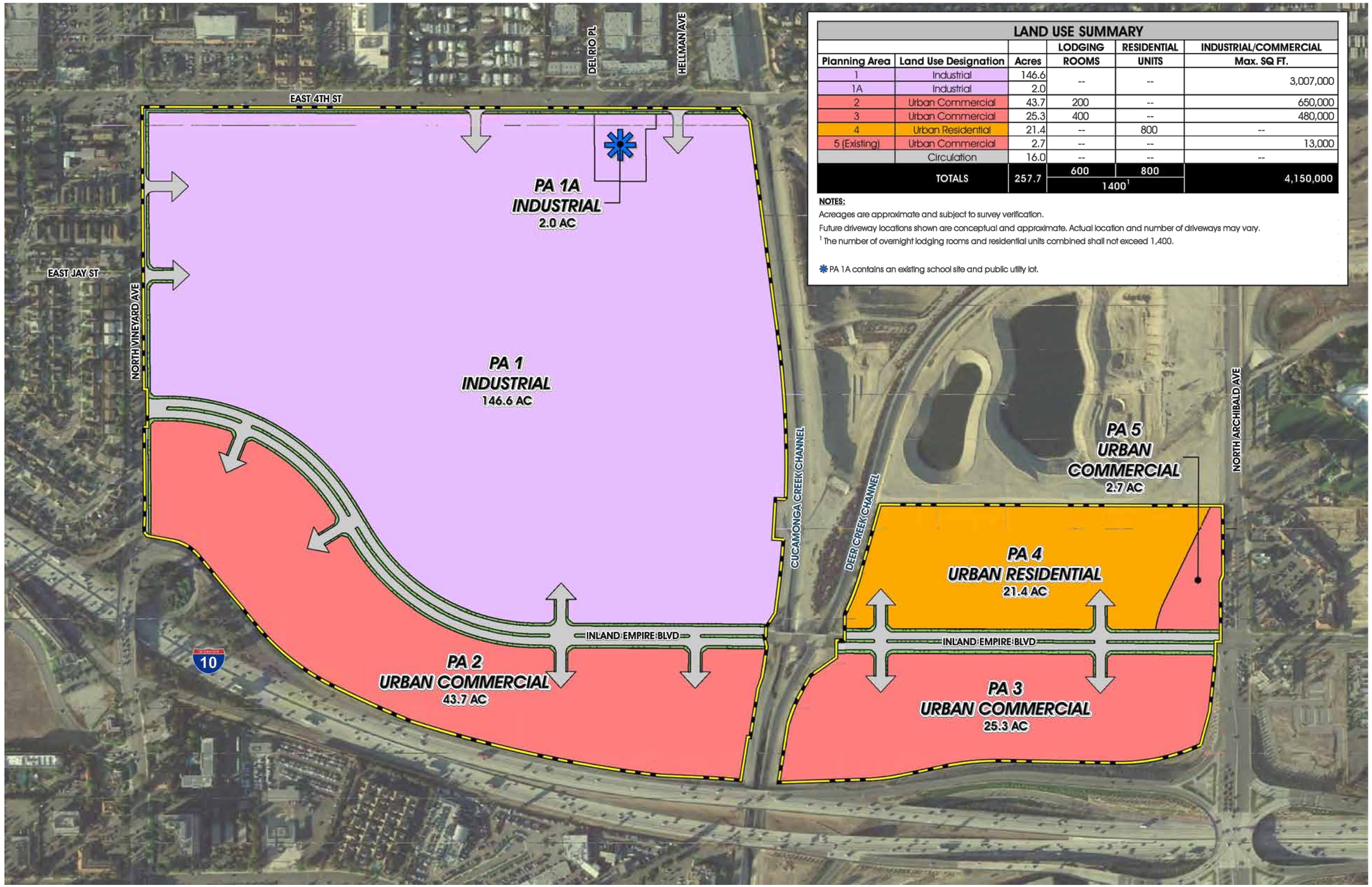
Planning Area 1

Encompassing 146.6 acres in the northwesterly corner of the Project site, Planning Area (PA) 1 is the largest of the Planning Areas. This Planning Area includes PA-1A which is now developed with a public school, but is proposed to be added within the Specific Plan boundary. PA-1/1A will contain approximately 3 million square feet of industrial uses. Uses allowed within this Planning Area would include general industrial, manufacturing, and warehouse/distribution uses. Two site plans have been prepared for PA-1, with an option to encompass PA-1A.

The Option A site plan for PA-1, which includes PA-1A, would consist of 425,207 SF of general light industrial floor area and 2,581,793 SF of warehouse/distribution floor area for a total building area of 3,007,000 SF. The proposed site plan for PA-1, Option A, as prepared by RGA Architects is illustrated in ***Figure 2-2A.***

The Option B site plan for PA 1, which excludes PA-1A, would consist of 620,027 SF of general light industrial floor area and 2,386,973 SF of warehouse/distribution floor area for a total building area of 3,007,000 SF. The proposed site plan for PA-1, Option B, as prepared by RGA Architects is illustrated in ***Figure 2-2B.*** As a conservative assessment Option B, which yields the higher of the two trip generation estimate, has been assessed throughout this report.

As shown in *Figure 2-2A* and *Figure 2-2B,* the site plans include the realignment of Inland Empire Boulevard to the north as required by the City of Ontario, while Jay Street will extend easterly from Vineyard Avenue and connect with the future alignment of Del Rio Place; Del Rio Place is shown to extend southerly from Jay Street and intersect with Inland Empire Boulevard. Both Jay Street and Del Rio Place are proposed to be constructed by Project to the City of Ontario "Local Industrial" street standards and will be public streets. Vineyard Avenue, Inland Empire Boulevard and 4th Street will be constructed in accordance to conditions of approval identified in the Specific Plan Amendment as determined by the City. The improvements also include the signalization of Vineyard Avenue at Jay Street, Del Rio Place at Inland Empire Boulevard (herein named Intersection 39, Driveway B at Inland Empire Boulevard) and Hellman Avenue at 4th Street, as well as the conversion of Vineyard Avenue at Plaza Serena from signalized access to an unsignalized right-turn in/out only access with the realignment of Inland Empire Boulevard. Please note that from a review of *Figure 2-1,* as well as *Figures 2-2A* and *2-2B,* access to PA-1 from Vineyard Avenue, north of Jay Street, will be provided via "right-turn only" driveway. However, this proposed "right-turn only" driveway was ignored in this report to provide a worse-case evaluation of the future signalized intersection of Vineyard Avenue at Jay Street.



LAND USE SUMMARY

Planning Area	Land Use Designation	Acres	LODGING ROOMS	RESIDENTIAL UNITS	INDUSTRIAL/COMMERCIAL Max. SQ FT.
1	Industrial	146.6	--	--	3,007,000
1A	Industrial	2.0			
2	Urban Commercial	43.7	200	--	650,000
3	Urban Commercial	25.3	400	--	480,000
4	Urban Residential	21.4	--	800	--
5 (Existing)	Urban Commercial	2.7	--	--	13,000
	Circulation	16.0	--	--	--
	TOTALS	257.7	600	800	4,150,000
			1400[1]		

NOTES:

Acreages are approximate and subject to survey verification.

Future driveway locations shown are conceptual and approximate. Actual location and number of driveways may vary.

[1] The number of overnight lodging rooms and residential units combined shall not exceed 1,400.

* PA 1A contains an existing school site and public utility lot.

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LINSCOTT LAW & GREENSPAN engineers

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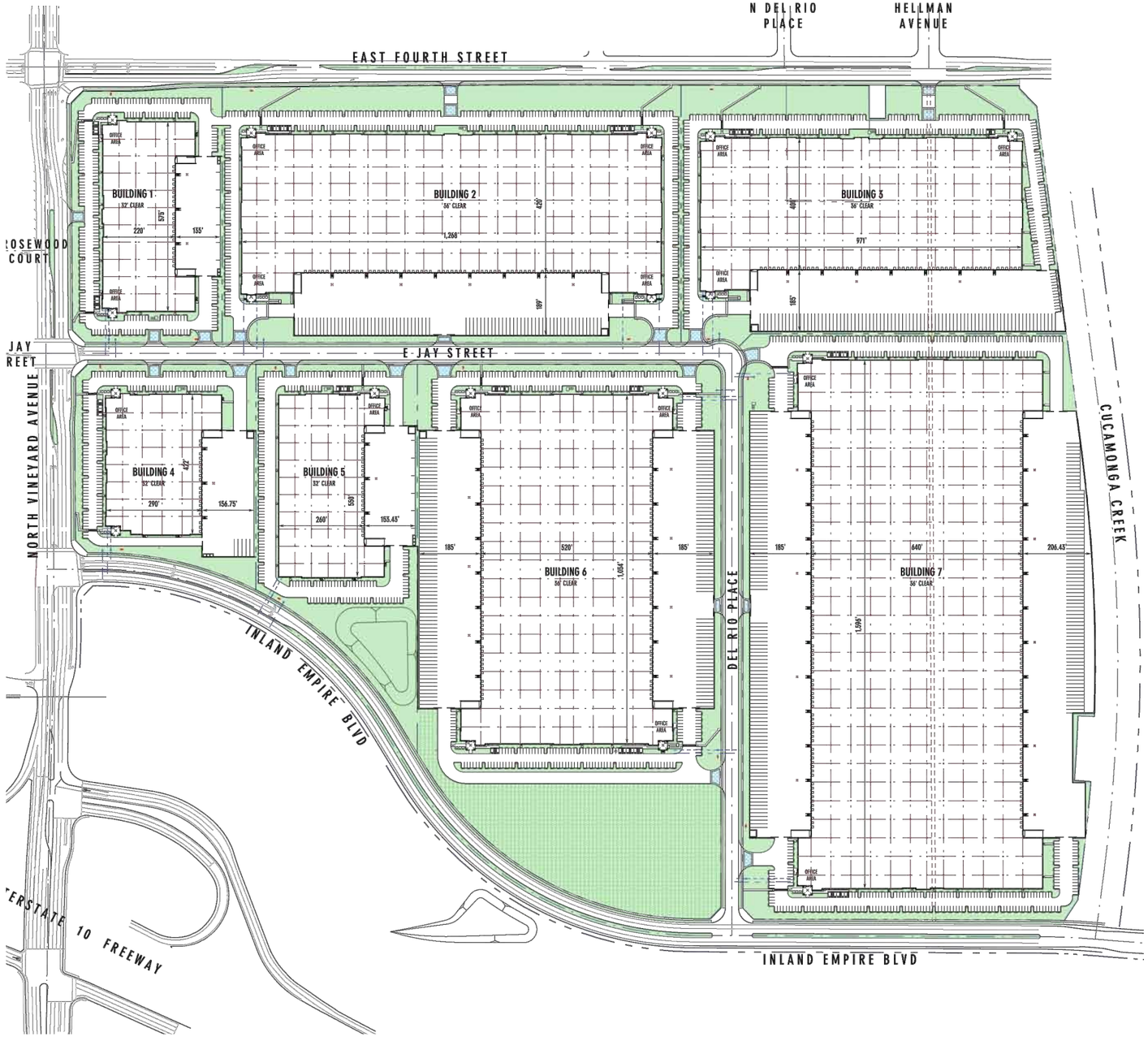
SOURCE: T&B PLANNING

FIGURE 2-1

CONCEPTUAL LAND USE PLAN

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



SOURCE: RGA ARCHITECTURAL DESIGN

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FIGURE 2-2A

SITE PLAN OPTION A

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO

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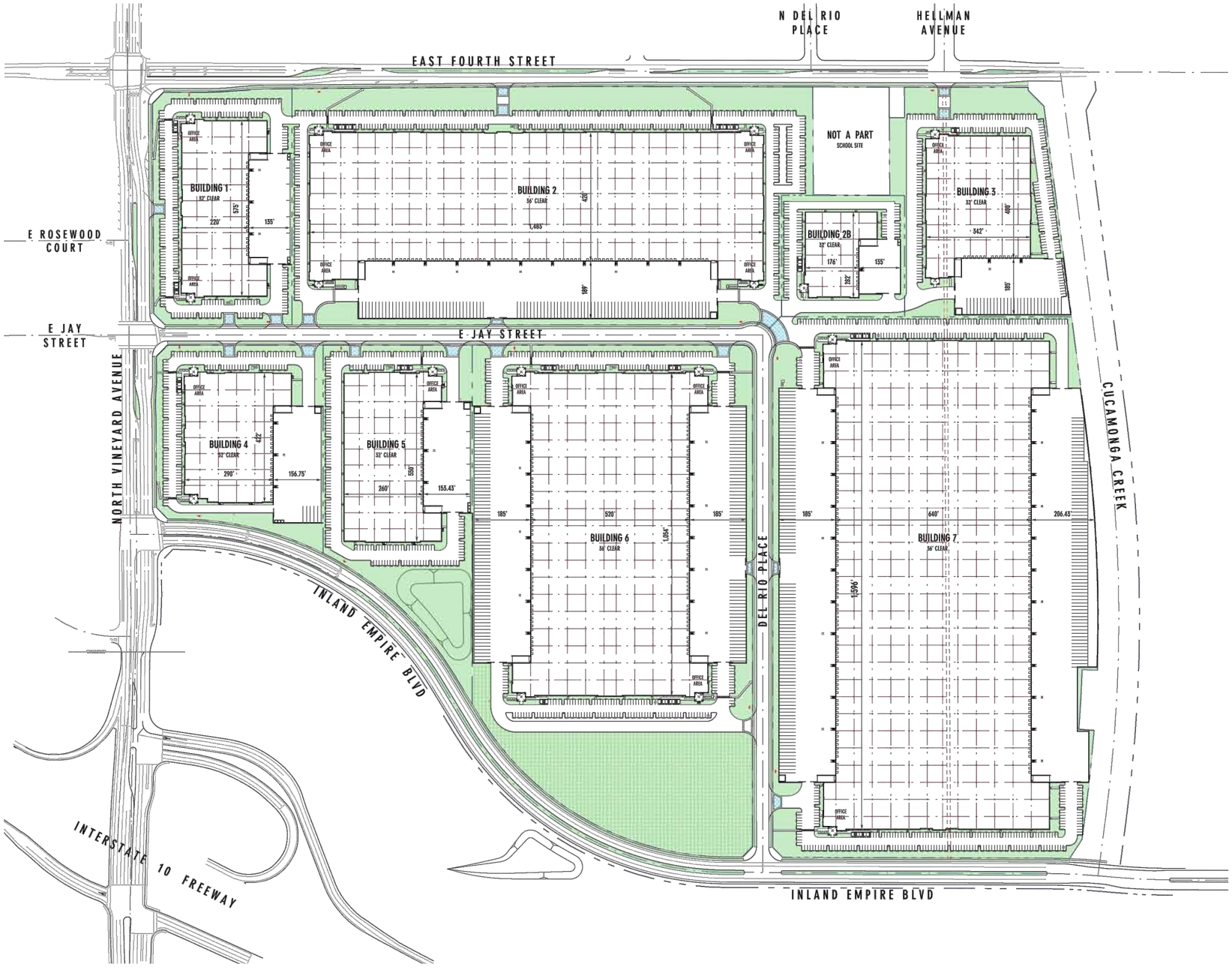

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SOURCE: RGA ARCHITECTURAL DESIGN

FIGURE 2-2B

SITE PLAN OPTION B

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO

Planning Area 2

PA-2 encompasses 43.7 acres, and is bound on the north by Inland Empire Boulevard, on the south by the I-10 Freeway, on the west by Vineyard Avenue, and on the east by the Cucamonga Creek Channel. The Urban Commercial designation of PA-2 would allow for a range of commercial uses, including shopping center, furniture store, automobile sales, sit-down and fast food restaurants, office uses, entertainment, and overnight lodging. The proposed Project within PA-2 consists of up to 355,000 SF of retail shopping center floor area, 180,000 SF of office space, and an 115,000 SF, 200-room hotel for a total floor area of 650,000 SF and 200 overnight lodging units/hotel rooms. As currently planned, access to PA-2 will be limited to Inland Empire Boulevard; no access will be allowed from Vineyard Avenue. From a review of *Figure 2-1*, access to PA-2 from Inland Empire Boulevard will be provided via two "right-turn only" driveways, a future full access signalized intersection (herein named Intersection 38, Driveway A at Inland Empire Boulevard) and a full access signalized driveway to be located opposite Del Rio Place (herein named Intersection 39, Driveway B at Inland Empire Boulevard). As a conservative assessment and to provide a worse-case evaluation of the two proposed signalized driveways that will serve PA-2, the two "right-turn only" driveways were ignored in this report.

Planning Area 3

PA-3 is bound on the north by Inland Empire Boulevard, on the south by the I-10 Freeway, on the west by the Cucamonga Creek Channel, and on the east by Archibald Avenue. Similar to PA-2, uses allowed within this 25.3-acre Urban Commercial area include shopping centers, furniture stores, automobile sales, sit-down and fast food restaurants, office uses, entertainment, and overnight lodging. The proposed Project within PA-3 consists of up to 150,000 SF of retail shopping center floor area, 100,000 SF of office space, and two hotels with a total floor area of 230,000 SF and 400 rooms. The development potential within PA-3 would total 480,000 SF and 400 overnight lodging units/hotel rooms. Access to PA-3 will be limited to Inland Empire Boulevard via two full access signalized driveways (herein named Intersection 40, Driveway C at Inland Empire Boulevard, and Intersection 41, Driveway D at Inland Empire Boulevard); no access will be allowed from Archibald Avenue.

Planning Area 4

PA-4 allows for Urban Residential uses within a 21.4-acre area located in the easterly portion of the Project site. Inland Empire Boulevard forms the southern boundary of PA-4 and the San Bernardino County Flood Control facilities form the northern boundary and the Cucamonga Creek Channel borders the site on the west, while PA-5 borders the site on the east. PA-4 allows for multi-family residential uses, and certain ancillary uses, including carports, garages, and private recreation centers. The development potential within PA-4 will consist of up to 800 multi-family (apartment) residential units. Access to PA-4 will be limited to Inland Empire Boulevard via two full access signalized driveways that will be located opposite the driveways that will provide access to PA-3; no access will be allowed from Archibald Avenue.

Planning Area 5

PA-5 encompasses 2.7 acres and is located at the northwest corner of Archibald Avenue and Inland Empire Boulevard. The site is currently developed with 13,000 SF of retail and service commercial uses, including fast food restaurants, a convenience store, and a self-serve fueling station. No change in existing uses is proposed as a part of the Project. The street improvements along PA-5's project frontage on Inland Empire Boulevard and Archibald Avenue are currently in place. However, the implementation of the proposed Project necessitates additional improvements that require widening to add additional travel lanes at the intersection of Inland Empire Boulevard and Archibald Avenue based on the findings of the traffic analysis.

Project Phasing/Opening Years

PA-1 is expected to be constructed in one phase and will open by Year 2017 with approximately 86,000 SF of retail space in PA-2 to be developed within the same time frame. The remaining development potential/project uses within PA-2 plus PA-3 and PA-4 are expected to be constructed and occupied in several phases over the next four to seven years, depending on several factors, including prevailing economic and market conditions. Given the above, a Year 2020 horizon year for PA-2, PA-3 and PA-4 is assumed to be the completion year of these Planning Areas. ***Table 2-1*** presents the development summary for the proposed uses within each Planning Area of the Project. Please note that the development total for PA-1 as summarized in *Table 2-1* is representative of the potential mix of land uses for the Option B site plan, which yields a higher trip generation estimate than that of the Option A site plan.

As noted earlier, the Option A site plan for PA-1, which includes PA-1A, would consist of 425,207 SF of general light industrial floor area and 2,581,793 SF of warehouse/distribution floor area for a total building area of 3,007,000 SF, whereas the Option B site plan for PA 1, which excludes PA-1A, would consist of 620,027 SF of general light industrial floor area and 2,386,973 SF of warehouse/distribution floor area for a total building area of 3,007,000 SF.

TABLE 2-1

PROPOSED PROJECT DEVELOPMENT SUMMARY[5]

Land Use / Project Description	Building Square-Footage (SF) / Rooms / Dwelling Units (DU)					Totals
	Planning Area (PA) 1 – Option B	**Planning Area (PA) 2**	**Planning Area (PA) 3**	**Planning Area (PA) 4**	**Planning Area (PA) 5**	
❑ 110: General Light Industrial	620,027 SF	--	--	--	--	620,027 SF
❑ 140: Manufacturing	--	--	--	--	--	--
❑ 152: High-Cube Warehouse	2,386,973 SF	--	--	--	--	2,386,973 SF
❑ 220: Apartments	--	--	--	800 DU	--	800 DU
❑ 310: Hotel	--	115,000 SF w/200 rooms	230,000 SF w/400 rooms	--	--	345,000 SF w/600 rooms
❑ 710: General Office	--	180,000 SF	100,000 SF	--	--	280,000 SF
❑ 820: Shopping Center	--	355,000 SF[6]	150,000 SF[7]	--	13,000 SF Existing	518,000 SF
Total Building Floor Area	**3,007,000 SF**	**650,000 SF w/200 hotel rooms**	**480,000 SF w/400 hotel rooms**	**800 DU**	**13,000 SF**	**Up to 4,150,000 SF w/600 hotel rooms and 800 multi-family DU**

[5] Source: Sares-Regis Group / City of Ontario. Development totals for PA-1 are representative of the potential land use mix associated with the Option B site plan for PA-1.

[6] PA 2 includes development of 355,000 SF mixed-use retail center, 180,000 SF of general office and 115,000 SF hotel with 200 rooms. Approximately 86,000 SF of retail space is expected to be completed by Year 2017.

[7] PA 3 includes development of 150,000 SF mixed-use retail center, 100,000 SF of general office and 230,000 SF hotel(s) with 400 rooms total.

3.0 EXISTING CONDITIONS

Regional access to the Project site is primarily provided by the San Bernardino (I-10) Freeway. This 8-lane facility is a major highway that extends through Los Angeles County and San Bernardino County and links Ontario with adjacent jurisdictions. High Occupancy Vehicle (HOV) lanes are provided for each direction of travel on the I-10 Freeway. Primary access to the Project site is provided via the Vineyard Avenue/I-10 Freeway Interchange, with additional freeway access provided at the 4th Street/I-10 Freeway Interchange and Archibald Avenue/I-10 Freeway Interchange.

3.1 Existing Street Network

The principal local network of streets serving the site consists of Baker Avenue, Vineyard Avenue, Archibald Avenue, Haven Avenue, Arrow Route, 8th Street, 6th Street, 4th Street, and Inland Empire Boulevard.

Baker Avenue is a two-lane, undivided roadway oriented in the north-south direction. On-street parking is not permitted along this roadway in the vicinity of the project. The posted speed limit on Baker Avenue is 35 miles per hour (mph). Baker Avenue is classified as a Collector Street in the City of Ontario Master Plan of Streets.

Vineyard Avenue is a four-lane, divided roadway oriented in the north-south direction that borders the Project site on the west. On-street parking is generally permitted on the west side of Vineyard Avenue, between 4th Street and Inland Empire Boulevard, but is restricted along the east side along Project frontage. The posted speed limit on Vineyard Avenue is 45 mph. Vineyard Avenue along Project frontage is classified as a Principal Arterial in the City of Ontario Master Plan of Streets.

Archibald Avenue is a four to six-lane, divided roadway oriented in the north-south direction that essentially borders the Project site on the east. On-street parking is not permitted along this roadway in the vicinity of the project. The posted speed limit on Archibald Avenue is 45 mph. Archibald Avenue is classified as a six-lane divided Arterial (120-foot right-of-way) in the City of Ontario Master Plan of Streets.

Haven Avenue is a six-lane, divided roadway oriented in the north-south direction. On-street parking is generally not permitted along this roadway in the vicinity of the project. The posted speed limit on Haven Avenue is 50 mph.

Arrow Route is a two-lane undivided roadway west of Vineyard Avenue, and a four-lane divided roadway east of Vineyard Avenue. It is oriented in the east-west direction. On-street parking is generally not permitted along this roadway in the vicinity of the project. The posted speed limit on Arrow Route is 45 mph.

8th Street is generally a two-lane undivided roadway oriented in the east-west direction. On-street parking is generally not permitted along the roadway within the vicinity of the project. The posted

speed limit on 8th Street is 45 mph. 8th Street is classified as a Minor Arterial in the City of Ontario Master Plan of Streets.

6th Street is generally a two to four-lane divided roadway oriented in the east-west direction. On-street parking is not permitted within the vicinity of the project. The posted speed limit on 6th Street is 45 mph. 6th Street is classified as a Collector Street in the City of Ontario Master Plan of Streets.

4th Street is a four-lane, divided roadway oriented in the east-west direction that borders the Project site on the north. On-street parking is not permitted along this roadway in the vicinity of the Project. The posted speed limit on 4th Street is generally 55 mph within the vicinity of the project. 4th Street along Project frontage is classified as a six-lane divided Arterial (120-foot right-of-way) in the City of Ontario Master Plan of Streets.

Inland Empire Boulevard is a four-lane, undivided roadway oriented in the east-west direction that bisects the subject property on the south. The posted speed limit on Inland Empire Boulevard is 50 mph. Inland Empire Boulevard, between Vineyard Avenue and Archibald Avenue is classified as a six-lane divided Arterial (120-foot right-of-way) in the City of Ontario Master Plan of Streets.

Figure 3-1 presents an inventory of the existing roadway conditions for the intersections evaluated in this report. The number of travel lanes and intersection controls for the thirty-six (36) key area existing intersections are identified.

3.1.1 *Public Transit*

Public transit bus service is provided in the project area by OmniTrans. Five OmniTrans bus routes operate within the vicinity of the Project site on Vineyard Avenue, Arrow Highway, Inland Empire Boulevard, Milliken Avenue, and Haven Avenue. Route 61 operates east-west along Inland Empire Boulevard, along the project site, between the cities of Fontana and Pomona. Route 68 operates east-west along Arrow Highway, north of the Project site, between the City of Chino, Montclair and Chaffey College. Route 80 operates north-south along Vineyard Avenue, west of the Project site, between the City of Montclair and Chaffey College. Route 81 operates north-south along Inland Empire Boulevard and Milliken Avenue, east of the project site, between the City of Ontario and Chaffey College. Route 82 operates north-south along Haven Avenue, east of the project site, between the City of Rancho Cucamonga and Sierra Lakes. Additional, Metrolink provides a transit service, Riverside Line, within the vicinity of the project site which connects Riverside County to Los Angeles County. The Metrolink station is located approximately 3 miles south east of the project site.

Figure 3-2 shows roadway classifications within the City of Ontario as shown on the City's Master Plan of Streets and Highways. ***Figure 3-3*** shows the existing trails and bikeways network as shown on the City's Multipurpose Trails and Bikeway Corridor Plan. Vineyard Avenue has been designated as a Class III bikeway between Inland Empire Boulevard and G Street. However, as a part of the proposed Vineyard Avenue/I-10 Freeway Interchange improvement, Class II bikeway improvements

are expected to be completed. Inland Empire Boulevard has been designated as a Class II bikeway within the vicinity of the site. ***Figure 3-4*** shows the OmniTrans Transit Bus Systems Map.

3.2 Existing Area Traffic Volumes

Existing AM and PM peak hour traffic volumes at the thirty-six (36) key study intersections evaluated in this traffic study were collected in May 2014 by Pacific Traffic Data Services. ***Appendix B*** contains the detailed traffic count data.

Figures 3-5 and ***3-6*** present the existing AM and PM peak hour traffic volumes, respectively, for the thirty-six (36) key study intersections. The existing AM and PM peak hour traffic volumes illustrated in *Figures 3-5* and *3-6* are comprised of passenger vehicles, large 2-axle trucks, 3-axle trucks and 4+ axle trucks. The truck traffic turning movements were converted to passenger car equivalents (P.C.E.'s) using SANBAG approved factors. P.C.E. factors of 1.5, 2.0 and 3.0 were utilized for large 2-axle trucks, 3-axle trucks and 4+ axle trucks, respectively. ***Appendix B*** contains copies of the peak period count sheets for the existing key study intersections evaluated in this report and the summary tables for converting truck traffic turning movements to P.C.E.'s.

3.3 Level of Service (LOS) Analysis Methodologies

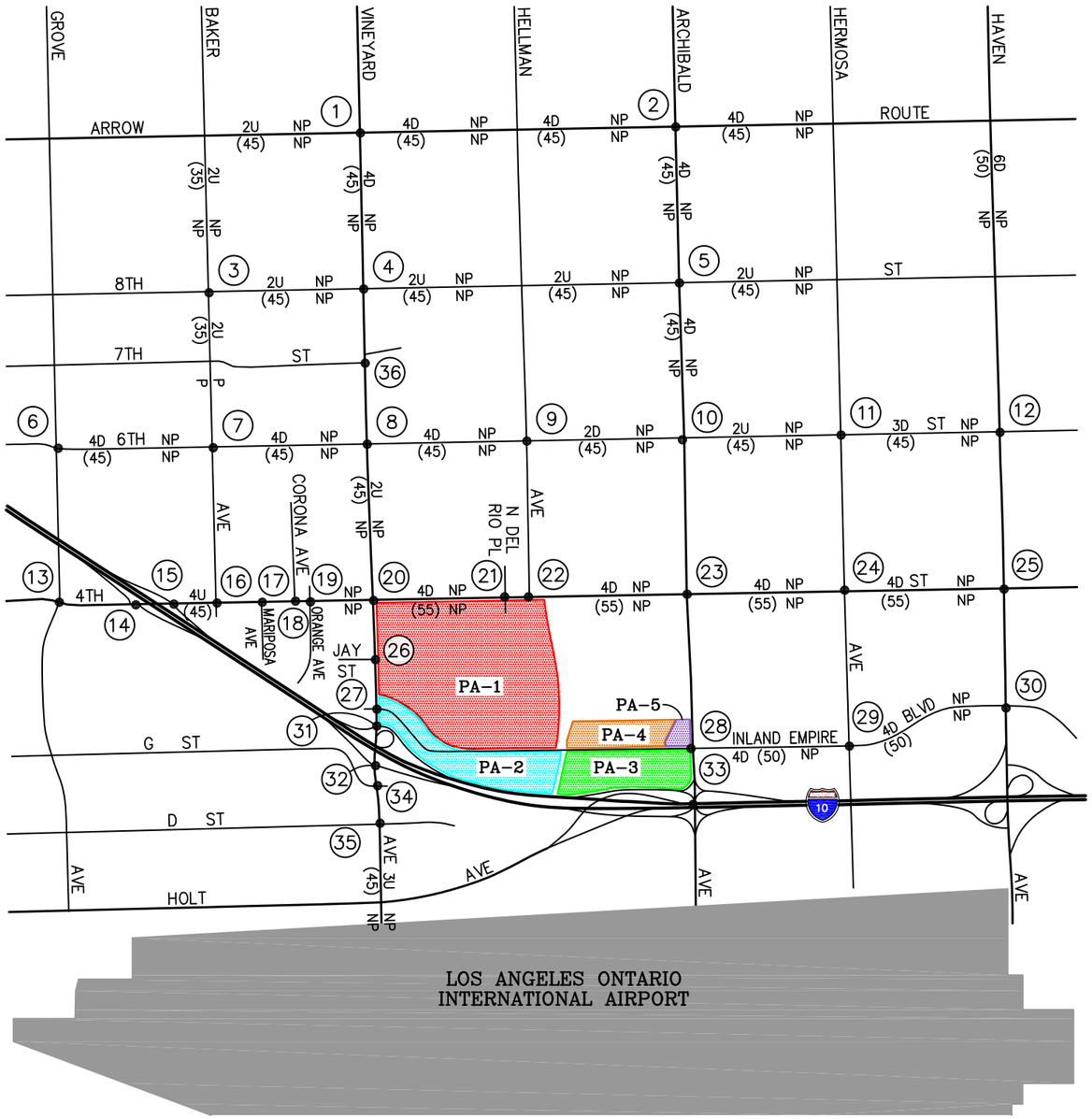
In conformance with the City of Ontario, Rancho Cucamonga and San Bernardino County CMP requirements, as well as Caltrans requirements, AM and PM peak hour operating conditions for the key study intersections were evaluated using the methodology outlined in *Chapter 16 of the Highway Capacity Manual 2000 (HCM 2000)* for signalized intersections and the methodology outlined in *Chapter 17 of the HCM 2000* for unsignalized intersections. All study intersections were analyzed using the software package Traffix (Version 8.0 R1, 2008).

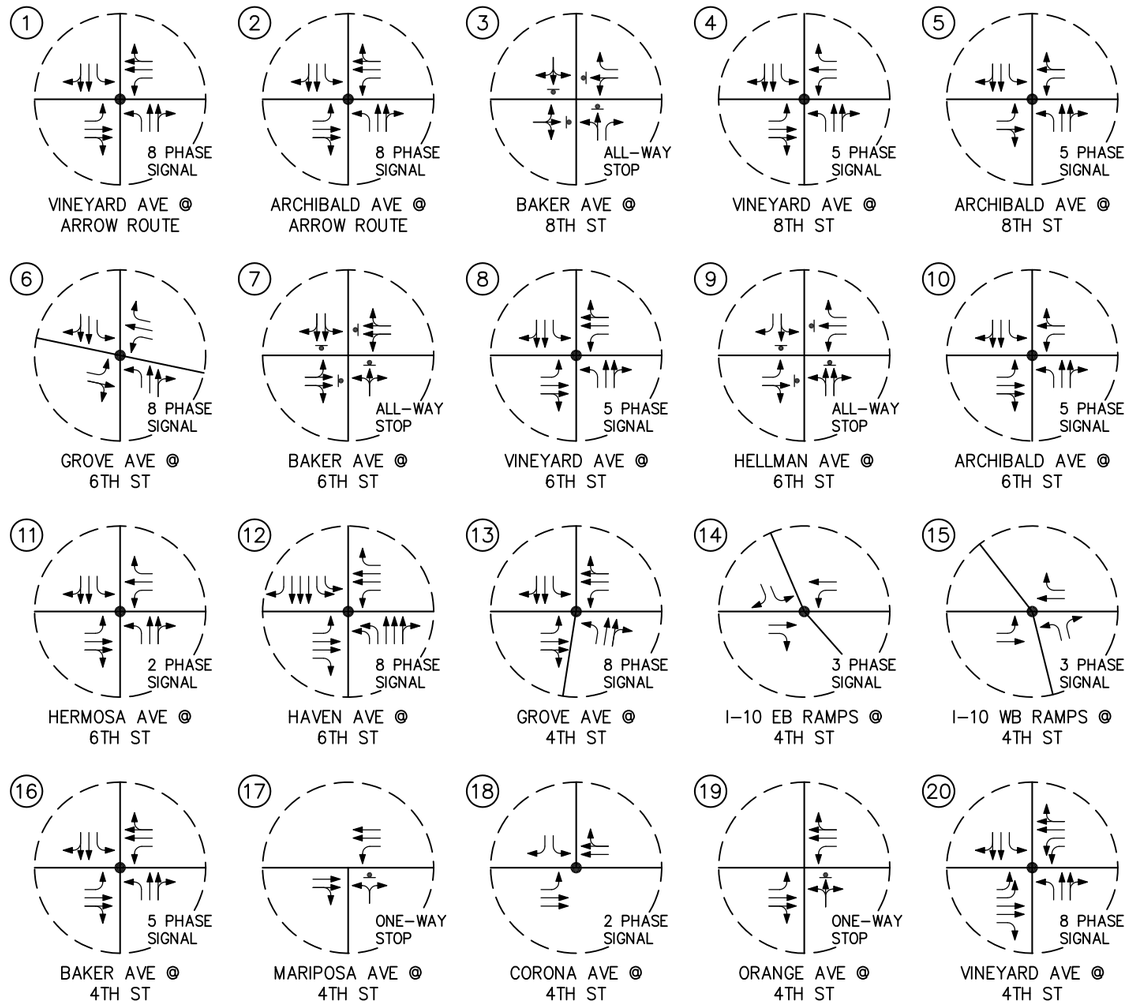
3.3.1 *Highway Capacity Manual (HCM) Method of Analysis (Signalized Intersections)*

AM and PM peak hour operating conditions for the key study intersections were evaluated using the HCM operations method of analysis. Level of service for signalized intersections is defined in terms of control delay, which is a measure of driver discomfort, frustration, fuel consumption and lost travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, geometries, traffic and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during ideal conditions: in the absence of traffic control, in the absence of geometric delay, in the absence of any incidents and when there are no other vehicles on the road.

In Chapter 16 of the HCM, only the portion of total delay attributed to the control facility is quantified. This delay is called *control delay.* Control delay includes initial deceleration delay, queue move-up time, stopped delay and final acceleration delay. In contrast, in previous versions of the HCM (1994 and earlier), delay included only stopped delay.

Specifically, LOS criteria for traffic signals are stated in terms of the average control delay per vehicle. ***Table 3-1*** presents the six qualitative categories of Level of Service that has been defined along with the corresponding HCM control delay value range for signalized intersections.





LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

- = PA-1
- = PA-2
- = PA-3
- = PA-4
- = PA-5

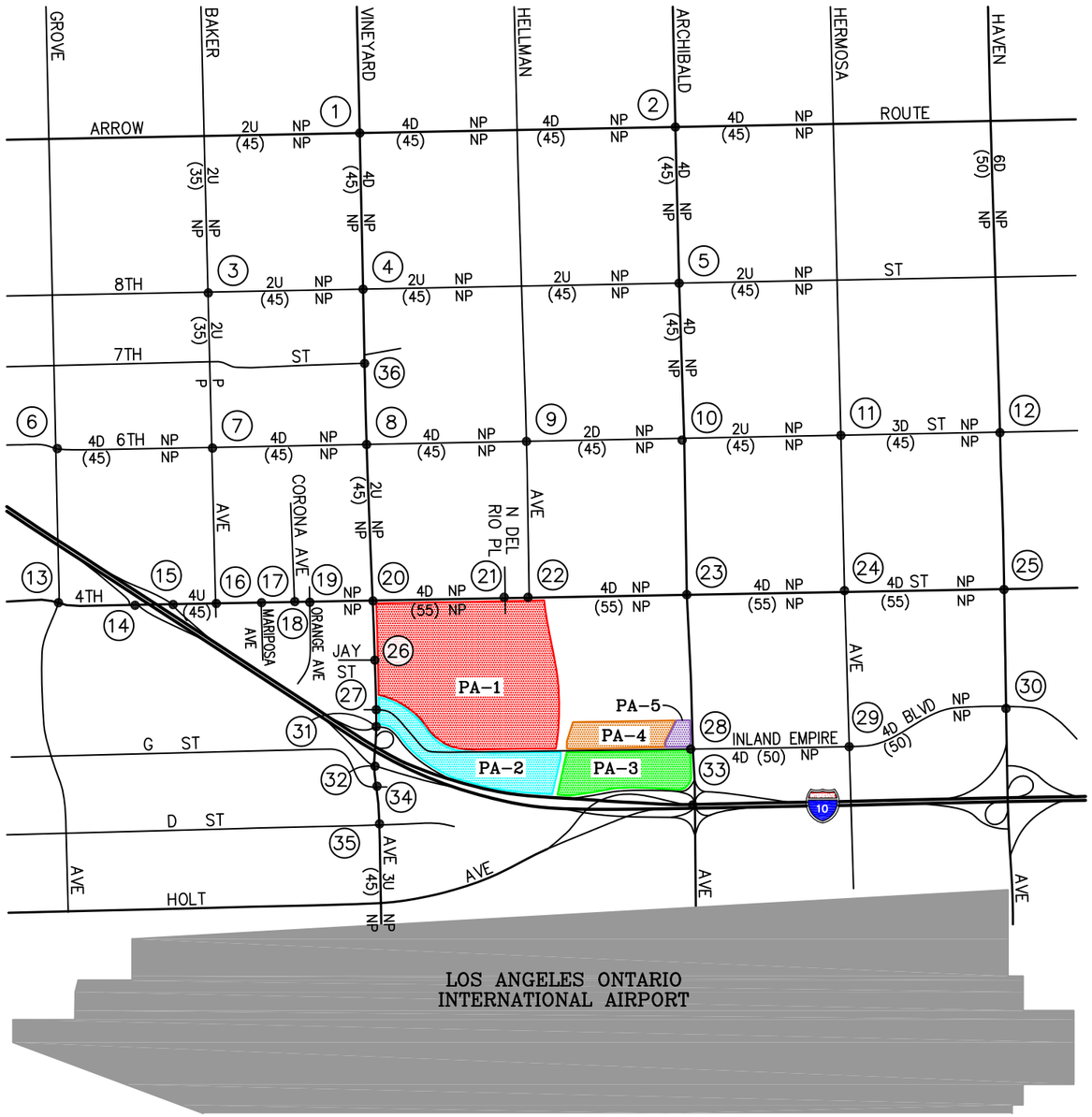
(#) = STUDY INTERSECTION
← = APPROACH LANE ASSIGNMENT
● = TRAFFIC SIGNAL, ⏷ = STOP SIGN
P = PARKING, NP = NO PARKING
U = UNDIVIDED, D = DIVIDED
2 = NUMBER OF TRAVEL LANES

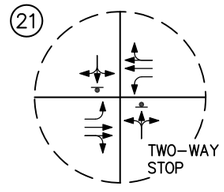
(XX)= POSTED SPEED LIMIT (MPH)
F = FREE-RIGHT

FIGURE 3-1A

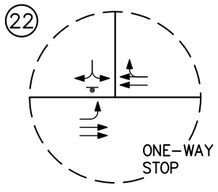
EXISTING ROADWAY CONDITIONS AND INTERSECTION CONTROLS

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO

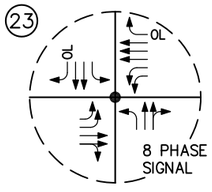




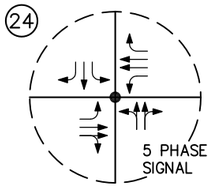
N. DEL RIO PL @ 4TH ST



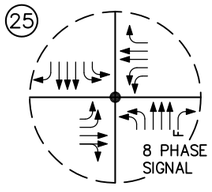
HELLMAN AVE @ 4TH ST



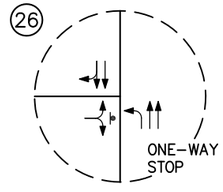
ARCHIBALD AVE @ 4TH ST



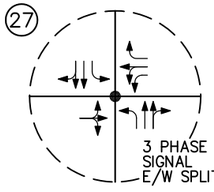
TURNER AVE @ 4TH ST



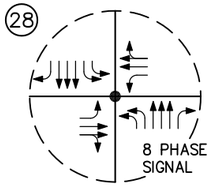
HAVEN AVE @ 4TH ST



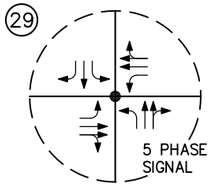
VINEYARD AVE @ JAY ST



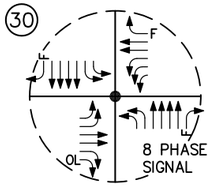
VINEYARD AVE @ INLAND EMPIRE BLVD



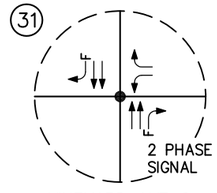
ARCHIBALD AVE @ INLAND EMPIRE BLVD



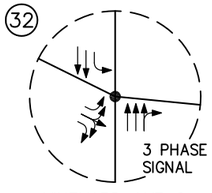
TURNER AVE @ INLAND EMPIRE BLVD



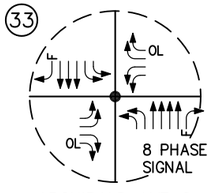
HAVEN AVE @ INLAND EMPIRE BLVD



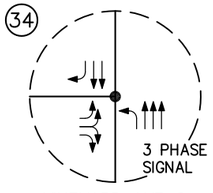
VINEYARD AVE @ I-10 WB RAMPS



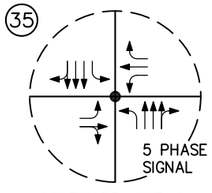
VINEYARD AVE @ I-10 EB RAMPS



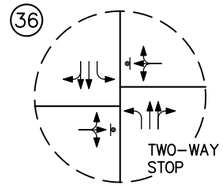
ARCHIBALD AVE @ I-10 FWY SINGLE POINT INTERCHANGE



VINEYARD AVE @ G STREET



VINEYARD AVE @ D STREET



VINEYARD AVE @ 7TH ST

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N NO SCALE

KEY

= PA-1
= PA-2
= PA-3
= PA-4
= PA-5

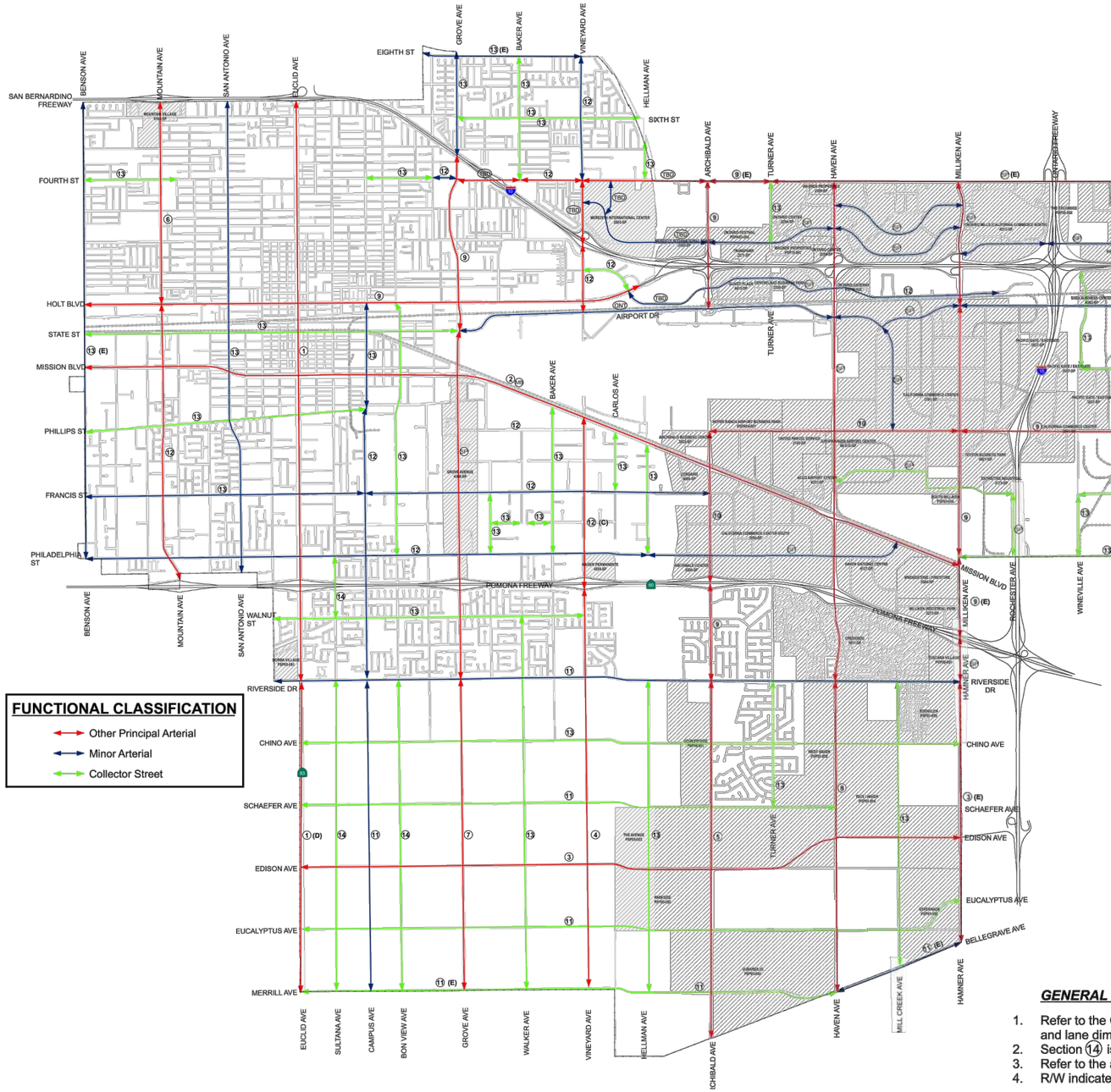
(#) = STUDY INTERSECTION
= APPROACH LANE ASSIGNMENT
● = TRAFFIC SIGNAL, ▾ = STOP SIGN
P = PARKING, NP = NO PARKING
U = UNDIVIDED, D = DIVIDED
2 = NUMBER OF TRAVEL LANES

(XX)= POSTED SPEED LIMIT (MPH)
F = FREE-RIGHT

FIGURE 3-1B

EXISTING ROADWAY CONDITIONS AND INTERSECTION CONTROLS

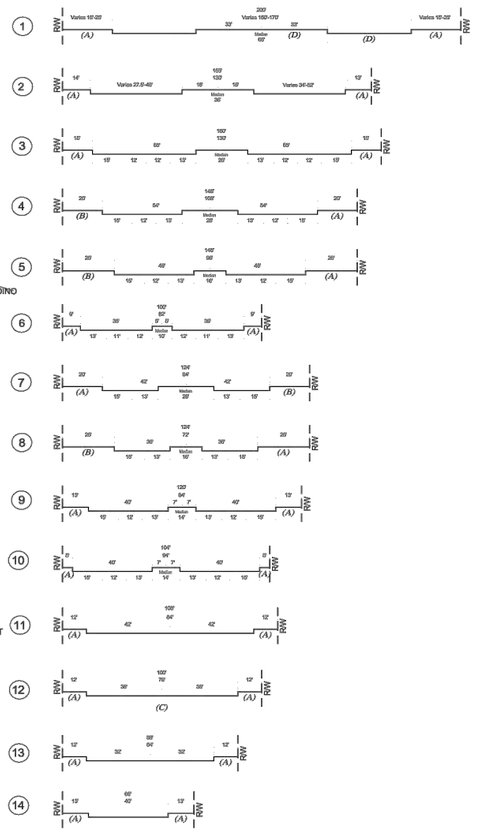
MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



FUNCTIONAL CLASSIFICATION

- Other Principal Arterial
- Minor Arterial
- Collector Street

SECTIONS



(SP) Refer to the Approved Specific Plan Documennt.

(MB) Refer to Mission Boulevard Corridor Study.

(TBD) By Future Development Specific Plan or Capital Improvement Project.

(ONT) LAWA Owned and Maintained.

NOTES:

(A) Sidewalk to be included on parkway.

(B) Includes both sidewalk and multi-purpose trail.

(C) Vineyard Avenue From State Route 60 to Mission Boulevard 72' Roadway, 14' Parkway.

(D) East Half of Euclid Avenue, Riverside Drive to Merrill Avenue 100' ROW, 33' Median, 52' Roadway, 15' Parkway.

(E) Boundary Line Street, Section may vary.

GENERAL NOTES:

1. Refer to the City of Ontario standard drawings for detailed street section requirements including number of lanes and lane dimensions.
2. Section (14) is shown in the undeveloped area south of Riverside Drive only.
3. Refer to the approved specific plan documents, as noted hereon or otherwise, for detailed street section information.
4. R/W indicates roadway right of way width not including additional "Neighborhood Edge".

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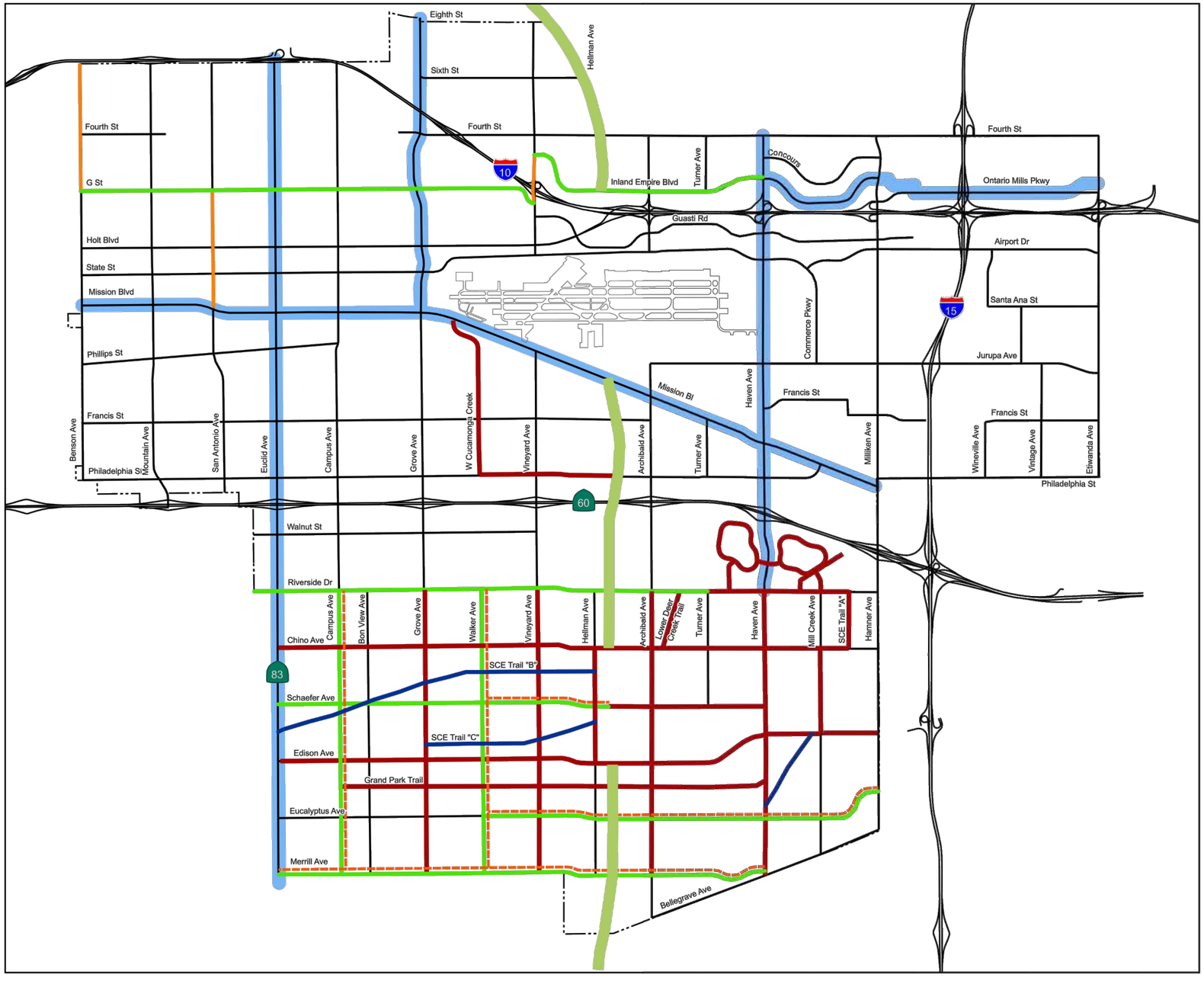
LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

SOURCE: CITY OF ONTARIO

FIGURE 3-2

ROADWAY CLASSIFICATIONS
MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



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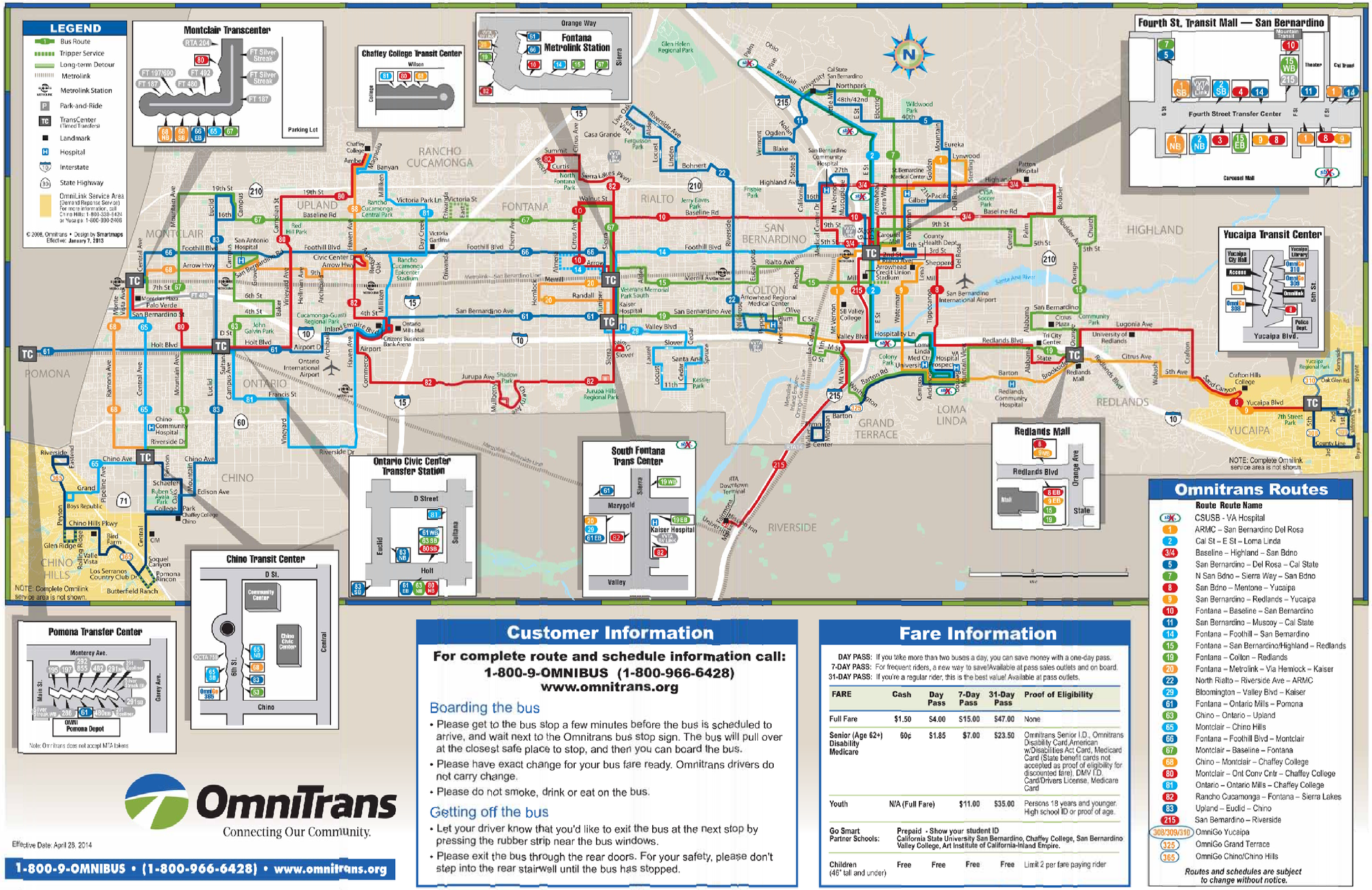
N NO SCALE

SOURCE: CITY OF ONTARIO

FIGURE 3-3

TRAILS AND BIKEWAY PLAN

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



Omnitrans Routes

Route	Route Name
19 WB	CSUSB - VA Hospital
1	ARMC – San Bernardino Del Rosa
2	Cal St – E St – Loma Linda
3/4	Baseline – Highland – San Bdno
5	San Bernardino – Del Rosa – Cal State
7	N San Bdno – Sierra Way – San Bdno
8	San Bdno – Mentone – Yucaipa
9	San Bernardino – Redlands – Yucaipa
10	Fontana – Baseline – San Bernardino
11	San Bernardino – Muscoy – Cal State
14	Fontana – Foothill – San Bernardino
15	Fontana – San Bernardino/Highland – Redlands
19	Fontana – Colton – Redlands
20	Fontana – Metrolink – Via Hemlock – Kaiser
22	North Rialto – Riverside Ave – ARMC
29	Bloomington – Valley Blvd – Kaiser
61	Fontana – Ontario Mills – Pomona
63	Chino – Ontario – Upland
65	Montclair – Chino Hills
66	Fontana – Foothill Blvd – Montclair
67	Montclair – Baseline – Fontana
68	Chino – Montclair – Chaffey College
80	Montclair – Ont Conv Cntr – Chaffey College
81	Ontario – Ontario Mills – Chaffey College
82	Rancho Cucamonga – Fontana – Sierra Lakes
83	Upland – Euclid – Chino
215	San Bernardino – Riverside
308/309/310	OmniGo Yucaipa
325	OmniGo Grand Terrace
365	OmniGo Chino/Chino Hills

Routes and schedules are subject to change without notice.

Customer Information

For complete route and schedule information call:
1-800-9-OMNIBUS (1-800-966-6428)
www.omnitrans.org

Boarding the bus

- Please get to the bus stop a few minutes before the bus is scheduled to arrive, and wait next to the Omnitrans bus stop sign. The bus will pull over at the closest safe place to stop, and then you can board the bus.
- Please have exact change for your bus fare ready. Omnitrans drivers do not carry change.
- Please do not smoke, drink or eat on the bus.

Getting off the bus

- Let your driver know that you'd like to exit the bus at the next stop by pressing the rubber strip near the bus windows.
- Please exit the bus through the rear doors. For your safety, please don't step into the rear stairwell until the bus has stopped.

Fare Information

DAY PASS: If you take more than two buses a day, you can save money with a one-day pass.
7-DAY PASS: For frequent riders, a new way to save!Available at pass sales outlets and on board.
31-DAY PASS: If you're a regular rider, this is the best value! Available at pass outlets.

FARE	Cash	Day Pass	7-Day Pass	31-Day Pass	Proof of Eligibility
Full Fare	$1.50	$4.00	$15.00	$47.00	None
Senior (Age 62+) Disability Medicare	60¢	$1.85	$7.00	$23.50	Omnitrans Senior I.D., Omnitrans Disability Card, American w/Disabilities Act Card, Medicard Card (State benefit cards not accepted as proof of eligibility for discounted fare). DMV I.D. Card/Drivers License, Medicare Card
Youth	N/A (Full Fare)		$11.00	$35.00	Persons 18 years and younger. High school ID or proof of age.
Go Smart Partner Schools:	Prepaid - Show your student ID California State University San Bernardino, Chaffey College, San Bernardino Valley College, Art Institute of California-Inland Empire.				
Children (46" tall and under)	Free	Free	Free	Free	Limit 2 per fare paying rider

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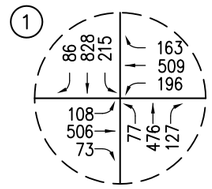
SOURCE: CITY OF ONTARIO

LINSCOTT LAW & GREENSPAN engineers

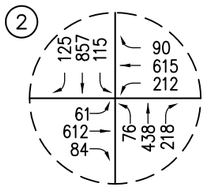
NO SCALE

FIGURE 3-4

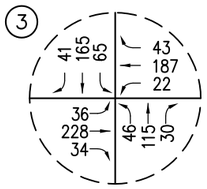
OMNITRANS TRANSIT BUS SYSTEM MAP
MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



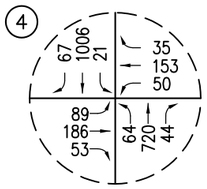
VINEYARD AVE @ ARROW ROUTE



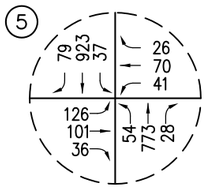
ARCHIBALD AVE @ ARROW ROUTE



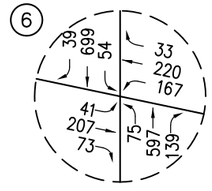
BAKER AVE @ 8TH ST



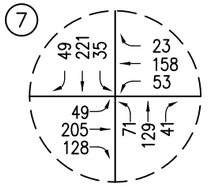
VINEYARD AVE @ 8TH ST



ARCHIBALD AVE @ 8TH ST



GROVE AVE @ 6TH ST



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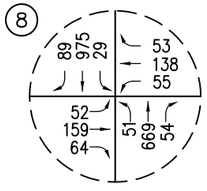
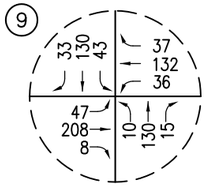


VINEYARD AVE @ 6TH ST



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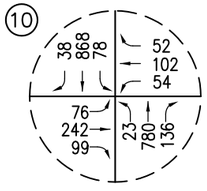
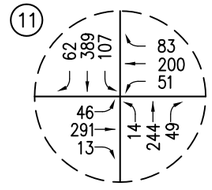
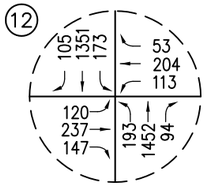


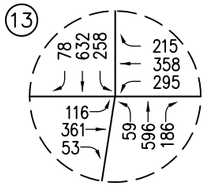
ARCHIBALD AVE @ 6TH ST



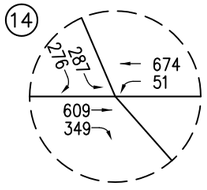
HERMOSA AVE @ 6TH ST



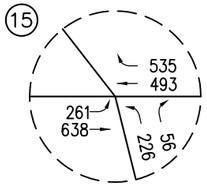
HAVEN AVE @ 6TH ST



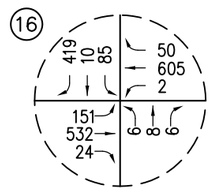
GROVE AVE @ 4TH ST



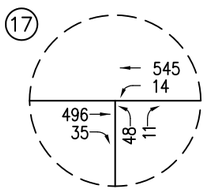
I-10 EB RAMPS @ 4TH ST



I-10 WB RAMPS @ 4TH ST



BAKER AVE @ 4TH ST



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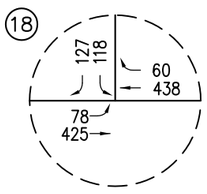

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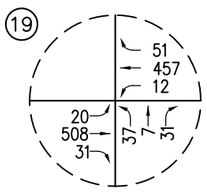
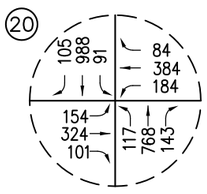


ORANGE AVE @ 4TH ST



VINEYARD AVE @ 4TH ST

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(#) = STUDY INTERSECTION
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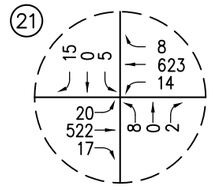
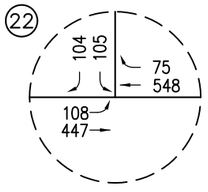
= PA-2
= PA-3
= PA-4
= PA-5

FIGURE 3-5A

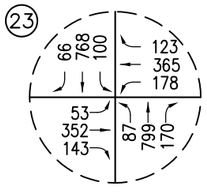
EXISTING AM PEAK HOUR TRAFFIC VOLUMES
MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



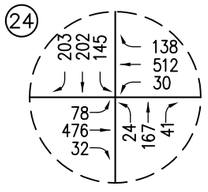
N. DEL RIO PL @ 4TH ST



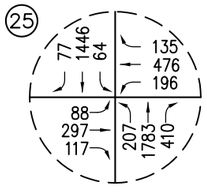
HELLMAN AVE @ 4TH ST



ARCHIBALD AVE @ 4TH ST



TURNER AVE @ 4TH ST



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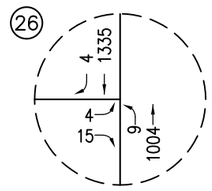
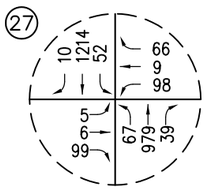
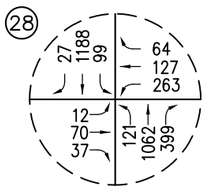


VINEYARD AVE @ JAY ST



VINEYARD AVE @ INLAND EMPIRE BLVD



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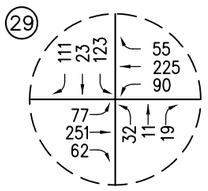

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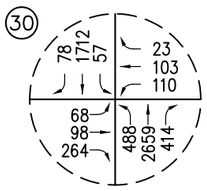

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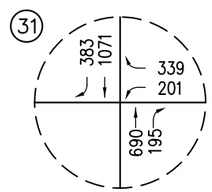
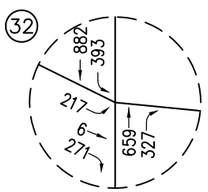
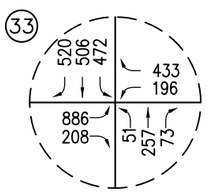


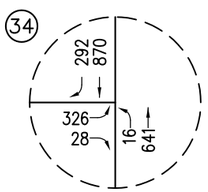
VINEYARD AVE @ I-10 WB RAMPS



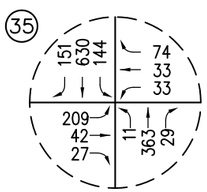
VINEYARD AVE @ I-10 EB RAMPS



ARCHIBALD AVE @ I-10 FWY SINGLE POINT INTERCHANGE



VINEYARD AVE @ G STREET



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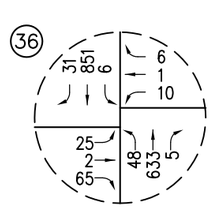

VINEYARD AVE @ 7TH ST

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N NO SCALE

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= PA-2
= PA-3
= PA-4
= PA-5

FIGURE 3-5B

EXISTING AM PEAK HOUR TRAFFIC VOLUMES
MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO

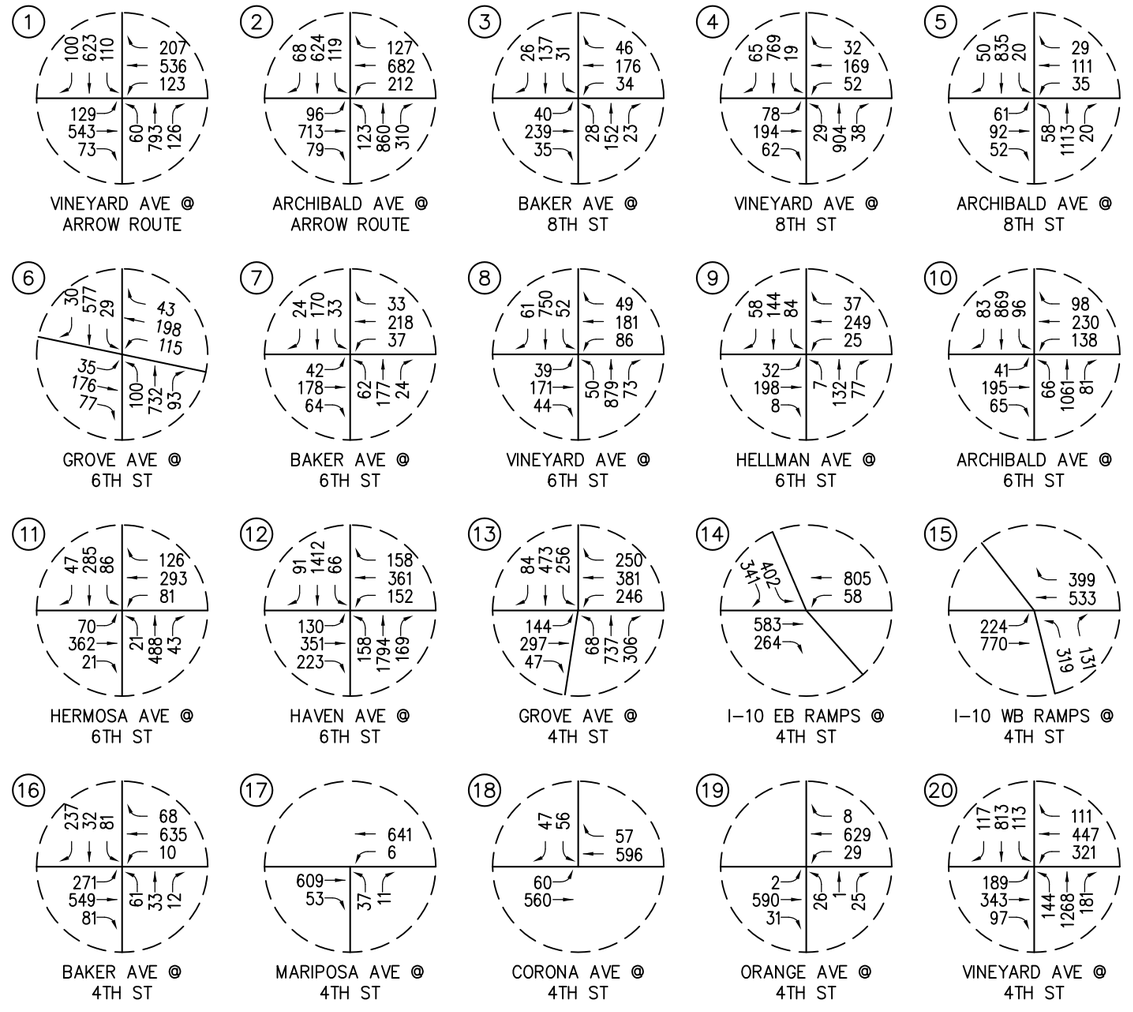

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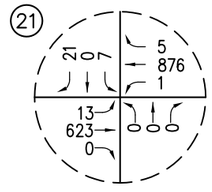
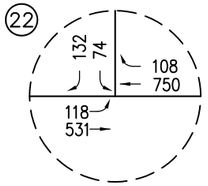
FIGURE 3-6A

EXISTING PM PEAK HOUR TRAFFIC VOLUMES

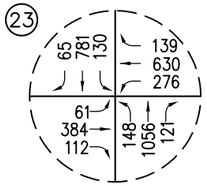
MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



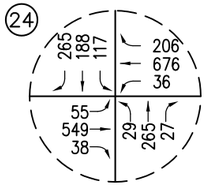
N. DEL RIO PL @ 4TH ST



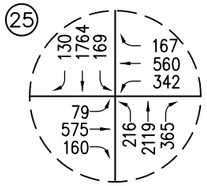
HELLMAN AVE @ 4TH ST



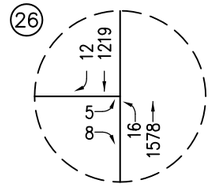
ARCHIBALD AVE @ 4TH ST



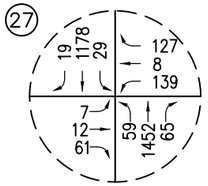
TURNER AVE @ 4TH ST



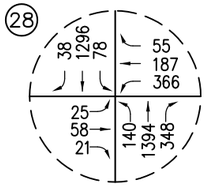
HAVEN AVE @ 4TH ST



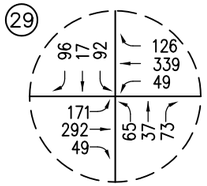
VINEYARD AVE @ JAY ST



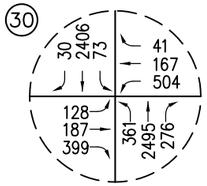
VINEYARD AVE @ INLAND EMPIRE BLVD



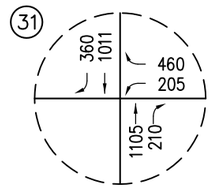
ARCHIBALD AVE @ INLAND EMPIRE BLVD



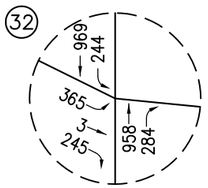
TURNER AVE @ INLAND EMPIRE BLVD



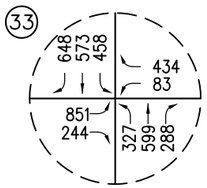
HAVEN AVE @ INLAND EMPIRE BLVD



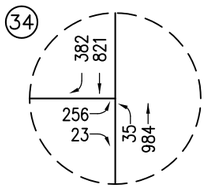
VINEYARD AVE @ I-10 WB RAMPS



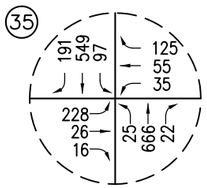
VINEYARD AVE @ I-10 EB RAMPS



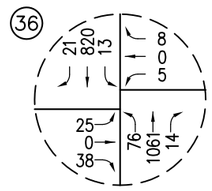
ARCHIBALD AVE @ I-10 FWY SINGLE POINT INTERCHANGE



VINEYARD AVE @ G STREET



VINEYARD AVE @ D STREET



VINEYARD AVE @ 7TH ST

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KEY

(#) = STUDY INTERSECTION

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= PA-2

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= PA-4

= PA-5

FIGURE 3-6B

EXISTING PM PEAK HOUR TRAFFIC VOLUMES

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO

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TABLE 3-1

LEVEL OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS (HCM METHODOLOGY)[8]

Level of Service (LOS)	Control Delay Per Vehicle (seconds/vehicle)	Level of Service Description
A	≤ 10.0	This level of service occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.
B	> 10.0 and ≤ 20.0	This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of average delay.
C	> 20.0 and ≤ 35.0	Average traffic delays. These higher delays may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.
D	> 35.0 and ≤ 55.0	Long traffic delays At level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high *v/c* ratios. Many vehicles stop and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	> 55.0 and ≤ 80.0	Very long traffic delays This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths and high *v/c* ratios. Individual cycle failures are frequent occurrences.
F	≥ 80.0	Severe congestion This level, considered to be unacceptable to most drivers, often occurs with over saturation, that is, when arrival flow rates exceed the capacity of the intersection. It may also occur at high *v/c* ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing factors to such delay levels.

[8] Source: *Highway Capacity Manual 2000,* Chapter 16 (Signalized Intersections).

3.3.2 *Highway Capacity Manual (HCM) Method of Analysis (Unsignalized Intersections)*

AM and PM peak hour operating conditions for the key unsignalized study intersections were evaluated using the HCM 2000 unsignalized methodology for stop-controlled intersections. For all-way stop-controlled intersections, this methodology estimates the average control delay for each of the subject movements and determines the level of service for each movement. The overall average control delay measured in seconds per vehicle and level of service is then calculated for the entire intersection. The HCM control delay value translates to a Level of Service (LOS) estimate, which is a relative measure of the intersection performance.

For one-way and two-way stop-controlled (minor street stop-controlled) intersections, this methodology estimates the worst side street delay, measured in seconds per vehicle and determines the level of service for that approach. The HCM delay value translates to a Level of Service (LOS) estimate, which is a relative measure of the intersection performance. The six qualitative categories of Level of Service have been defined along with the corresponding HCM control delay value range, as shown in ***Table 3-2***.

3.4 Impact Criteria and Thresholds

The City of Ontario General Plan Infrastructure Element indicates that Level of Service (LOS) D is to be used for the sizing of roadway segments, while LOS E should be maintained at intersections. The County of San Bernardino CMP definition of deficiency is based on maintaining a level of service standard of LOS E or better, except where an existing LOS F condition is identified in the CMP document.

The City of Rancho Cucamonga considers LOS D to be the minimum acceptable LOS for all intersections.

Caltrans has established that LOS D is the operating standard for all Caltrans facilities. Caltrans has determined that all state owned facilities that operate below LOS D should be identified and improved to an acceptable LOS. The *Caltrans Traffic Impact Study Guidelines dated December 2002* does state that if an existing state owned facility operates at less than LOS D, the existing service level should be maintained.

TABLE 3-2

LEVEL OF SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS (HCM METHODOLOGY)[9]

Level of Service (LOS)	Highway Capacity Manual (HCM) Delay Per Vehicle (seconds/vehicle)	Level of Service Description
A	≤ 10.0	Little or no delay
B	> 10.0 and ≤ 15.0	Short traffic delays
C	> 15.0 and ≤ 25.0	Average traffic delays
D	> 25.0 and ≤ 35.0	Long traffic delays
E	> 35.0 and ≤ 50.0	Very long traffic delays
F	> 50.0	Severe congestion

9 Source: *Highway Capacity Manual 2000,* Chapter 17 (Unsignalized Intersections).

3.5 Existing Level of Service Results

Table 3-3 summarizes the existing AM and PM peak hour service level calculations for the study intersections based on existing traffic volumes and current street geometry. Review of *Table 3-3* indicates that four (4) of the thirty-six (36) key study intersections are forecast to operate at an unacceptable level of service during the PM peak hour when compared to the LOS standards defined in this report. The remaining thirty-two (32) key study intersections are forecast to operate at acceptable levels of service during the AM and PM peak hours. The intersections operating adversely are:

	AM Peak Hour			PM Peak Hour		
Key Intersection	**Delay (s/v)**	**V/C**	**LOS**	**Delay (s/v)**	**V/C**	**LOS**
14. I-10 EB Ramps at 4th Street	--	--	--	78.1	0.808	E
22. Hellman Avenue at 4th Street	--	--	--	*75.4*	--	*F*
26. Vineyard Avenue at Jay Street	--	--	--	*50.7*	--	*F*
30. Haven Avenue at Inland Empire Boulevard	--	--	--	102.8	0.742	F

**Italicized text* corresponds to unsignalized intersections.

Appendix C contains the Delay/LOS calculation worksheets for the Existing Traffic Conditions.

TABLE 3-3
EXISTING CONDITIONS PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY[10]

Key Intersection	Time Period	Jurisdiction	Minimum Acceptable LOS	Control Type	(1) Existing Traffic Conditions		
					Delay (s/v)	V/C	LOS
1. Vineyard Avenue at Arrow Route	AM	Rancho Cucamonga	D	8∅ Traffic Signal	36.2	0.722	D
	PM				33.5	0.771	C
2. Archibald Avenue at Arrow Route	AM	Rancho Cucamonga	D	8∅ Traffic Signal	35.2	0.804	D
	PM				44.6	0.927	D
3. Baker Avenue at 8th Street	*AM*	*Rancho Cucamonga/ Ontario*	*D*	*All-Way Stop*	*15.2*	*0.592*	*C*
	PM				*14.3*	*0.595*	*B*
4. Vineyard Avenue at 8th Street	AM	Rancho Cucamonga/ Ontario	D	5∅ Traffic Signal	19.0	0.511	B
	PM				18.7	0.445	B
5. Archibald Avenue at 8th Street	AM	Rancho Cucamonga	D	5∅ Traffic Signal	18.7	0.889	B
	PM				18.3	0.836	B
6. Grove Avenue at 6th Street	AM	Ontario	E	8∅ Traffic Signal	30.4	0.627	C
	PM				27.7	0.582	C
7. Baker Avenue at 6th Street	*AM*	*Ontario*	*E*	*All-Way Stop*	*13.1*	*0.502*	*B*
	PM				*12.6*	*0.525*	*B*
8. Vineyard Avenue at 6th Street	AM	Ontario	E	5∅ Traffic Signal	18.5	0.471	B
	PM				18.8	0.436	B
9. Hellman Avenue at 6th Street	*AM*	*Rancho Cucamonga*	*D*	*All-Way Stop*	*10.9*	*0.387*	*B*
	PM				*13.4*	*0.521*	*B*
10. Archibald Avenue at 6th Street	AM	Rancho Cucamonga	D	5∅ Traffic Signal	19.3	0.437	B
	PM				22.2	0.675	C
11. Hermosa Avenue at 6th Street	AM	Rancho Cucamonga	D	2∅ Traffic Signal	14.7	0.273	B
	PM				15.3	0.358	B
12. Haven Avenue at 6th Street	AM	Rancho Cucamonga	D	8∅ Traffic Signal	39.0	0.568	D
	PM				40.9	0.681	D
13. Grove Avenue at 4th Street	AM	Ontario	E	8∅ Traffic Signal	45.6	0.810	D
	PM				51.2	0.827	D

Notes:

- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions
- *Italicized text* corresponds to unsignalized intersections

[10] *Appendix C* contains the Delay/LOS calculation worksheets for all study intersections.

TABLE 3-3 (CONTINUED)
EXISTING CONDITIONS PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY[11]

Key Intersection	Time Period	Jurisdiction	Minimum Acceptable LOS	Control Type	(1) Existing Traffic Conditions		
					Delay (s/v)	V/C	LOS
14. I-10 EB Ramps at 4th Street	AM	Ontario/Caltrans	D	3∅ Traffic Signal	19.6	0.652	B
	PM				**78.1**	**0.808**	**E**
15. I-10 WB Ramps at 4th Street	AM	Ontario/Caltrans	D	3∅ Traffic Signal	22.4	0.709	C
	PM				25.2	0.748	C
16. Baker Avenue at 4th Street	AM	Ontario	E	5∅ Traffic Signal	28.1	0.472	C
	PM				24.0	0.591	C
17. Mariposa Avenue at 4th Street	*AM*	*Ontario*	*E*	*One-Way Stop*	*18.2*	--	*C*
	PM				*21.0*	--	*C*
18. Corona Avenue at 4th Street	AM	Ontario	E	2∅ Traffic Signal	11.2	0.240	B
	PM				8.1	0.248	A
19. Orange Avenue at 4th Street	*AM*	*Ontario*	*E*	*One-Way Stop*	*17.6*	--	*C*
	PM				*18.3*	--	*C*
20. Vineyard Avenue at 4th Street	AM	Ontario	E	8∅ Traffic Signal	32.8	0.705	C
	PM				44.4	0.807	D
21. Del Rio Place at 4th Street	*AM*	*Ontario*	*E*	*Two-Way Stop*	*20.8*	--	*C*
	PM				*16.6*	--	*C*
22. Hellman Avenue at 4th Street	*AM*	*Ontario*	*E*	*One-Way Stop*	*42.8*	--	*E*
	PM				***75.4***	--	***F***
23. Archibald Avenue at 4th Street	AM	Rancho Cucamonga/ Ontario	D	8∅ Traffic Signal	30.9	0.516	C
	PM				37.6	0.670	D
24. Turner Avenue at 4th Street	AM	Rancho Cucamonga/ Ontario	D	5∅ Traffic Signal	21.2	0.365	C
	PM				20.5	0.446	C
25. Haven Avenue at 4th Street	AM	Rancho Cucamonga/ Ontario	D	8∅ Traffic Signal	35.9	0.619	D
	PM				52.2	0.919	D
26. Vineyard Avenue at Jay Street	*AM*	*Ontario*	*E*	*One-Way Stop*	*28.6*	--	*D*
	PM				***50.7***	--	***F***

Notes:

- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions
- *Italicized text* corresponds to unsignalized intersections

[11] *Appendix C* contains the Delay/LOS calculation worksheets for all study intersections.

TABLE 3-3 (CONTINUED)
EXISTING CONDITIONS PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY[12]

Key Intersection		Time Period	Jurisdiction	Minimum Acceptable LOS	Control Type	(1) Existing Traffic Conditions		
						Delay (s/v)	V/C	LOS
27.	Vineyard Avenue at Inland Empire Boulevard	AM	Ontario	E	3∅ Traffic Signal	18.8	0.506	B
		PM				18.4	0.595	B
28.	Archibald Avenue at Inland Empire Boulevard	AM	Ontario	E	8∅ Traffic Signal	43.7	0.537	D
		PM				59.7	0.631	E
29.	Turner Avenue at Inland Empire Boulevard	AM	Ontario	E	5∅ Traffic Signal	22.2	0.237	C
		PM				22.7	0.345	C
30.	Haven Avenue at Inland Empire Boulevard	AM	Ontario	E	8∅ Traffic Signal	52.1	0.537	D
		PM				**102.8**	**0.742**	**F**
31.	Vineyard Avenue at I-10 WB Ramps	AM	Ontario/Caltrans	D	2∅ Traffic Signal	15.0	0.561	B
		PM				18.2	0.650	B
32.	Vineyard Avenue at I-10 EB Ramps	AM	Ontario/Caltrans	D	3∅ Traffic Signal	22.5	0.674	C
		PM				21.8	0.665	C
33.	Archibald Avenue at I-10 Freeway	AM	Ontario/Caltrans	D	8∅ Traffic Signal	23.6	0.589	C
		PM				30.7	0.607	C
34.	Vineyard Avenue at G Street	AM	Ontario	E	3∅ Traffic Signal	15.2	0.414	B
		PM				14.1	0.384	B
35.	Vineyard Avenue at D Street	AM	Ontario	E	5∅ Traffic Signal	22.3	0.340	C
		PM				22.0	0.387	C
36.	*Vineyard Avenue at 7th Street*	*AM*	*Ontario*	*E*	*Two-Way Stop*	*16.5*	--	*C*
		PM				*20.1*	--	*C*

Notes:

- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions
- *Italicized text* corresponds to unsignalized intersections

[12] *Appendix C* contains the Delay/LOS calculation worksheets for all study intersections.

4.0 TRAFFIC FORECASTING METHODOLOGY

In order to estimate the traffic impact characteristics of the Project, a multi-step process has been utilized. The first step is traffic generation, which estimates the total arriving and departing traffic on a peak hour and daily basis. The traffic generation potential is forecast by applying the appropriate vehicle trip generation equations or rates to the Project development tabulation.

The second step of the forecasting process is traffic distribution, which identifies the origins and destinations of inbound and outbound Project traffic. These origins and destinations are typically based on demographics and existing/expected future travel patterns in the study area.

The third step is traffic assignment, which involves the allocation of Project traffic to study area streets and intersections. Traffic assignment is typically based on minimization of travel time, which may or may not involve the shortest route, depending on prevailing operating conditions and travel speeds.

Traffic distribution patterns are indicated by general percentage orientation, while traffic assignment allocates specific volume forecasts to individual roadway links and intersection turning movements throughout the study area.

With the forecasting process complete and Project traffic assignments developed, the impact of the Project is isolated by comparing operational (LOS) conditions at selected key intersections using expected future traffic volumes with and without forecast Project traffic. If necessary, the need for site-specific and/or cumulative local area traffic improvements can then be evaluated.

5.0 PROJECT TRAFFIC CHARACTERISTICS

5.1 Project Trip Generation Forecast

Traffic generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. Generation rates used in the traffic forecasting procedure are found in the Ninth Edition of *Trip Generation*, published by the Institute of Transportation Engineers (ITE) [Washington D.C., 2012]. ***Table 5-1A s***ummarizes the trip generation rates used in forecasting the vehicular trips generated by the Project.

Based on the potential land use mix proposed for PA-1 of the Meredith International Centre Specific Plan Amendment, the average trip rates for ITE Land Use 110: General Light Industrial and ITE Land Use 152: High-Cube Warehouse will be utilized. ***Table 5-1B*** summarizes the trip generation rates used in forecasting the vehicular trips, both autos and trucks, generated by the proposed uses in PA-1 using recommended factors published in the *Truck Trip Generation Study - City of Fontana, August 2003.*

For PA-2 and PA-3, the trip generation potential of these planning areas is forecast using ITE Land Use 310: Hotel, ITE Land Use 710: General office and ITE Land Use 820: Shopping Center average trip rates.

For PA-4, ITE Land Use 220: Apartments average trips were used to determine the trip generation potential of this planning area.

Review of ***Table 5-2*** indicates that the four Planning Areas of the proposed Project have a combined trip generation potential totaling up to 42,057 daily trips (one half arriving, one half departing), with 2,802 trips (1,922 inbound, 880 outbound) produced during the AM peak hour and 3,660 trips (1,331 inbound, 2,329 outbound) produced during the PM peak hour on a "typical" weekday.

A summary of the trip generation potential of the Project, assuming development of PA-1 and up to 86,000 SF of retail space within PA-2 by Year 2017 is summarized in ***Table 5-3***. A review of *Table 5-3* indicates that PA-1 of the proposed Project plus 86,000 SF of retail spaces within PA-2 is forecast to generate 14,015 daily PCE trips (one half arriving, one half departing), with 1,337 PCE trips (1,088 inbound, 249 outbound) produced during the AM peak hour and 1,462 trips (305 inbound, 1,157 outbound) produced during the PM peak hour on a "typical" weekday.

Tables 5-4, 5-5 and ***5-6*** provided a detailed summary of the trip generation calculations for PA-2, PA-3 and PA-4, respectively, inclusive of pass-by rate assumptions of the retail components of the Planning Areas and internal capture rates.

5.1.1 *Project Traffic Generation Rates Comparison*

The Project trip generation rates for the ITE Land Use 152: High-Cube Warehouse, as presented in *Table 5-1A*, have been compared with the trip generation rates for High-Cube Warehouse Distribution Center land use, as presented in the *National Association of Industrial and Office*

Properties (NAIOP) Inland Empire Chapter Study, July 19, 2010, prepared by Kunzman Associates, Inc.

Based on the *NAIOP Study*, the trip generation rates for High-Cube Warehouse Distribution Center land use are listed below:

- Daily Vehicle Trips Per Thousand Square-Feet = 0.949
- Morning Peak Hour Vehicle Trips Per Thousand Square-Feet = 0.044
- Evening Peak Hour Vehicle Trips Per Thousand Square-Feet = 0.065

Based on the Ninth Edition of ITE *Trip Generation*, the trip generation rates used in this report for High-Cube Warehouse use are listed below:

- Daily Vehicle Trips Per Thousand Square-Feet = 1.68
- Morning Peak Hour Vehicle Trips Per Thousand Square-Feet = 0.11
- Evening Peak Hour Vehicle Trips Per Thousand Square-Feet = 0.12

The results after comparing the trip generation rates from the NAIOP Study with the trip generation rates in this report are listed below:

- Daily Vehicle Trips Per Thousand Square-Feet in this report are approximately **1.77 times more** than the NAIOP Study.
- Morning Peak Hour Vehicle Trips Per Thousand Square-Feet in this report are approximately **2.50 times more** than the NAIOP Study.
- Evening Peak Hour Vehicle Trips Per Thousand Square-Feet in this report are approximately **1.85 times more** than the NAIOP Study.

Hence, based on the above, it can be concluded that a more conservative traffic impact analysis has been conducted for this report as the trip generation rates utilized from the Ninth Edition of ITE *Trip Generation* are much higher than the *NAIOP Study*. The Daily, AM peak hour and PM peak hour trip generation rates used in this report for High-Curb Warehouse are 1.77 times, 2.50 times and 1.85 times **higher**, respectively, when compared to the NAIOP Study. Thus, because the NAIOP Study was performed to ITE standards looking at over 31 sites, and because other jurisdictions are using the NAIOP study as the source for project trip generation for projects such as this one, this traffic impact study likely greatly overstates project traffic impacts. Moreover, to the extent the project's traffic impacts are overstated, this means that the project's air, diesel particulate and noise impacts will also be overstated because these latter analyses are performed by converting the traffic report into tail pipe emissions equivalents. Thus, this traffic impact study conservatively overestimates project traffic, air, and noise impacts.

5.2 Project Trip Distribution and Assignment

The directional trip distribution patterns are presented in ***Figures 5-1A*** through ***5-6B***. Project traffic volumes, both entering and exiting the site, have been distributed and assigned to the adjacent street system based on the following considerations:

- Select zone model runs prepared for the Project by SANBAG using the San Bernardino Traffic Analysis Model (SBTAM).
- the site's proximity to major traffic carriers (i.e. I-10 Freeway, etc.),
- expected localized traffic flow patterns based on adjacent street channelization and presence of traffic signals,
- the traffic-carrying capacity and travel speed available on roadways serving the Project site,
- existing intersection traffic volumes,
- ingress/egress availability at the Project site, including orientation and layout of industrial buildings, and
- input from City staff.

As noted earlier, the two potential "right-turn only" driveways on Inland Empire Boulevard have been ignored to provide a conservative assessment and worse-case evaluation of the two proposed signalized driveways that will serve PA-2 as no site-related trips were assigned to these driveways.

The anticipated AM and PM peak hour Project traffic volumes at the key study intersections for PA-1 and PA-2 (Interim) are presented in ***Figures 5-7A*** and ***5-8B***, respectively. ***Figures 5-9A*** and ***5-10B*** present the AM and PM peak hour Project traffic volumes for all planning areas (PA-1, PA-2, PA-3 & PA-4), respectively. The traffic volume assignments presented in *Figures 5-7A* through *5-10B* reflect the traffic distribution characteristics shown in *Figures 5-1A* through *5-6B* and the traffic generation forecast presented in *Table 5-2.*

TABLE 5-1A
PROJECT TRIP GENERATION RATES[13]

Project Description	Daily	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
Trip Generation Factors:							
▪ 110: General Light Industrial (TE/1000 SF)	6.97	0.81	0.11	0.92	0.12	0.85	0.97
▪ 152: High-Cube Warehouse (TE/1000 SF)	1.68	0.08	0.03	0.11	0.04	0.08	0.12
▪ 220: Apartments (TE/DU)	6.65	0.10	0.41	0.51	0.40	0.22	0.62
▪ 310: Hotel (TE/Room)	8.17	0.31	0.22	0.53	0.31	0.29	0.60
▪ 710: General Office	11.03	1.37	0.19	1.56	0.25	1.24	1.49
▪ 820: Shopping Center (TE/1000 SF)	42.70	0.60	0.36	0.96	1.78	1.93	3.71

[13] Source: *Trip Generation, 9th Edition, Institute of Transportation Engineers (ITE), Washington, D.C. (2012)*. The trip generation potential of the uses in PA-1 will be converted to passenger car equivalents (PCE) based recommended factors published in the *Truck Trip Generation Study – City of Fontana, August 2003.* All 2-axle, 3-axle and 4+-axles trucks will be converted to PCE using a factor of 1.5 vehicle per truck, 2.0 vehicles per truck and 3.0 vehicles per truck, respectively.

TABLE 5-1B
PROJECT TRIP GENERATION RATES SUMMARY FOR PLANNING AREA (PA) 1
PASSENGER CAR EQUIVALENTS (PCE) CONVERSION FACTORS/RATES [14]

Project Description	Daily	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
Trip Generation Factors:							
▪ ***110: General Light Industrial - Total (TE/1000 SF)***	***6.97***	***0.81***	***0.11***	***0.92***	***0.12***	***0.85***	***0.97***
❑ Passenger Cars - 78.6% of Daily (TE/1000 SF)	5.48	0.49	0.07	0.56	0.09	0.66	0.75
❑ 2-Axle Trucks – 8.0% Daily/32.70% Peak Hour (TE/1000 SF)	0.56	0.11	0.01	0.12	0.01	0.06	0.07
❑ 3-Axle Trucks- 3.9% Daily/17.90% Peak Hour (TE/1000 SF)	0.27	0.05	0.01	0.06	0.00	0.04	0.04
❑ 4+ Axle Trucks – 9.5% Daily/49.40% Peak Hour (TE/1000 SF)	0.66	0.16	0.02	0.18	0.01	0.10	0.11
▪ ***152: High-Cube Warehouse - Total (TE/1000 SF)***	***1.68***	***0.08***	***0.03***	***0.11***	***0.04***	***0.08***	***0.12***
❑ Passenger Cars – 79.57% of Daily (TE/1000 SF)	1.34	0.05	0.02	0.07	0.02	0.05	0.07
❑ 2-Axle Trucks – 3.46% Daily/16.95% Peak Hour (TE/1000 SF)	0.06	0.01	0.00	0.01	0.00	0.01	0.01
❑ 3-Axle Trucks- 4.64% Daily/22.71% Peak Hour (TE/1000 SF)	0.08	0.01	0.00	0.01	0.00	0.01	0.01
❑ 4+ Axle Trucks – 12.33% of Daily/60.34% Peak Hour (TE/1000 SF)	0.20	0.01	0.01	0.02	0.01	0.02	0.03

[14] Source: Trip rates based on *Trip Generation, 9th Edition, Institute of Transportation Engineers (ITE), Washington, D.C. (2012).* Recommended mix of traffic, including mix of 2-axle, 3-axle and 4+axle trucks, based on *Truck Trip Generation Study – City of Fontana, August 2003.* All 2-axle, 3-axle and 4+axles trucks converted to passenger car equivalents using a factor of 1.5 vehicle per truck, 2.0 vehicles per truck and 3.0 vehicles per truck, respectively.

TABLE 5-2

TOTAL PROJECT TRIP GENERATION FORECAST [15]

Project Description	Daily	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
Proposed Project Trip Generation Forecast:							
▪ PA 1: Industrial/Warehouse in PCE's (3,007,000 SF)	10,710	1,041	221	1,262	204	1,047	1,251
▪ PA 2: Urban Commercial (650,000 SF including 200 overnight lodging rooms)	17,262	501	193	694	524	733	1,257
▪ PA 3: Urban Commercial (480,000 SF including 400 overnight lodging rooms)	10,135	342	156	498	325	432	757
▪ PA 4: Multi-Family Residential (800 DU)	5,320	80	328	408	320	176	496
Less Internal Capture for PA 2 & PA 3 (5%)	-1,370	-42	-18	-60	-42	-59	-101
Total Project Trip Generation Potential	**42,057**	**1,922**	**880**	**2,802**	**1,331**	**2,329**	**3,660**

[15] Source: *Trip Generation, 9th Edition, Institute of Transportation Engineers (ITE), Washington, D.C. (2012).*

TABLE 5-3

YEAR 2017 PROJECT TRIP GENERATION FORECAST – PLANNING AREA (PA) 1 & (PA) 2

Project Description	Daily	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
Trip Generation Forecast:							
Planning Area (PA) 1 Option B w/PCE							
▪ 110: General Light Industrial (620,027 SF)							
❑ Passenger Cars - 78.6% of Daily	3,398	304	43	347	56	409	465
❑ 2-Axle Trucks – 8.0% Daily/32.70% Peak Hour	521	102	10	112	9	56	65
❑ 3-Axle Trucks- 3.9% Daily/17.90% Peak Hour	335	62	12	74	0	50	50
❑ 4+ Axle Trucks – 9.5% Daily/49.40% Peak Hour	1,228	298	37	335	19	186	205
General Light Industrial Total PCE Trips	***5,482***	***766***	***102***	***868***	***84***	***701***	***785***
▪ 152: High-Cube Warehouse (2,386,973 SF)							
❑ Passenger Cars – 79.57% of Daily	3,199	119	48	167	48	119	167
❑ 2-Axle Trucks – 3.46% Daily/16.95% Peak Hour	215	36	0	36	0	36	36
❑ 3-Axle Trucks- 4.64% Daily/22.71% Peak Hour	382	48	0	48	0	48	48
❑ 4+ Axle Trucks – 12.33% of Daily/60.34% Peak Hour	1,432	72	71	143	72	143	215
High-cube Warehouse Total PCE Trips	***5,228***	***275***	***119***	***394***	***120***	***346***	***466***
Total Project Trip Generation (3,007,000 SF)							
Passenger Cars Trips	***6,597***	***423***	***91***	***514***	***104***	***528***	***632***
Truck PCE Trips	***4,113***	***618***	***130***	***748***	***100***	***519***	***619***
Total PA 1 Project PCE Trip Generation:	***10,710***	***1,041***	***221***	***1,262***	***204***	***1,047***	***1,251***
Planning Area (PA) 2 – Year 2017 Development							
▪ 820: Shopping Center (86,000 SF)	3,672	52	31	83	153	166	319
Less Pass-by Trips (10% Daily, 10% AM, 34% PM) [16]	-367	-5	-3	-8	-52	-56	-108
Total PA 2 Trip Generation Potential	**3,305**	**47**	**28**	**75**	**101**	**110**	**211**
Total Year 2017 Project Trip Generation Potential	**14,015**	**1,088**	**249**	**1,337**	**305**	**1,157**	**1,462**

[16] Source: *Trip Generation*, 9th Edition, Institute of Transportation Engineers (ITE), Washington, D.C. (2012). To account for trips which come directly from the everyday traffic stream, the appropriate pass-by factors were applied.

TABLE 5-4

PROJECT TRIP GENERATION FORECAST – PLANNING AREA (PA) 2[17]

Project Description	Daily	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
Trip Generation Forecast:							
Planning Area (PA) 2							
▪ 310: Hotel (200 Rooms)	1,634	62	44	106	62	58	120
▪ 710: General Office (180,000 SF)	1,985	247	34	281	45	223	268
▪ 820: Shopping Center (355,000 SF)	15,159	213	128	341	632	685	1,317
Less Pass-by Trips (10% Daily, 10% AM, 34% PM) [18]	-1,516	-21	-13	-34	-215	-233	-448
Total PA 2 Trip Generation Potential	**17,262**	**501**	**193**	**694**	**524**	**733**	**1,257**
Less Internal Capture (5%)	**-863**	**-25**	**-10**	**-35**	**-26**	**-37**	**-63**
Total PA 2 Net Trip Generation Potential	**16,399**	**476**	**183**	**659**	**498**	**696**	**1,194**

[17] Source: *Trip Generation, 9th Edition, Institute of Transportation Engineers (ITE), Washington, D.C. (2012)*.

[18] Source: *Trip Generation*, 9th Edition, Institute of Transportation Engineers (ITE), Washington, D.C. (2012). To account for trips which come directly from the everyday traffic stream, the appropriate pass-by factors were applied.

TABLE 5-5

PROJECT TRIP GENERATION FORECAST – PLANNING AREA (PA) 3[19]

Project Description	Daily	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
Trip Generation Forecast:							
Planning Area (PA) 3							
▪ 310: Hotel (400 Rooms)	3,268	124	88	212	124	116	240
▪ 710: General Office (100,000 SF)	1,103	137	19	156	25	124	149
▪ 820: Shopping Center (150,000 SF)	6,405	90	54	144	267	290	557
Less Pass-by Trips (10% Daily, 10% AM, 34% PM) [20]	-641	-9	-5	-14	-91	-98	-189
Total PA 3 Trip Generation Potential	**10,135**	**342**	**156**	**498**	**325**	**432**	**757**
Less Internal Capture (5%)	**-507**	**-17**	**-8**	**-25**	**-16**	**-22**	**-38**
Total PA 3 Net Trip Generation Potential	**9,628**	**325**	**148**	**473**	**309**	**410**	**719**

[19] Source: *Trip Generation, 9th Edition, Institute of Transportation Engineers (ITE), Washington, D.C. (2012)*.

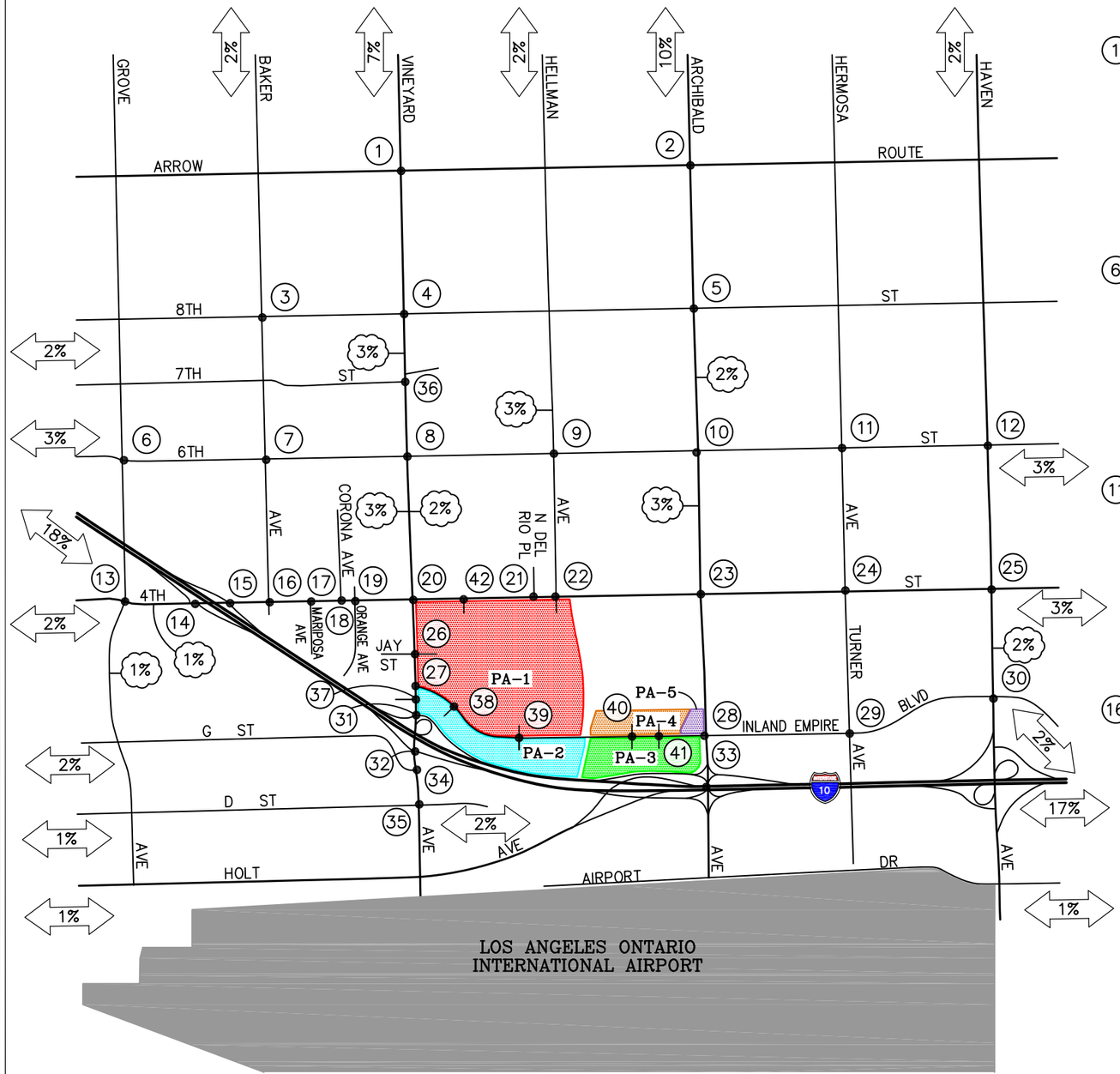
[20] Source: *Trip Generation*, 9th Edition, Institute of Transportation Engineers (ITE), Washington, D.C. (2012). To account for trips which come directly from the everyday traffic stream, the appropriate pass-by factors were applied.

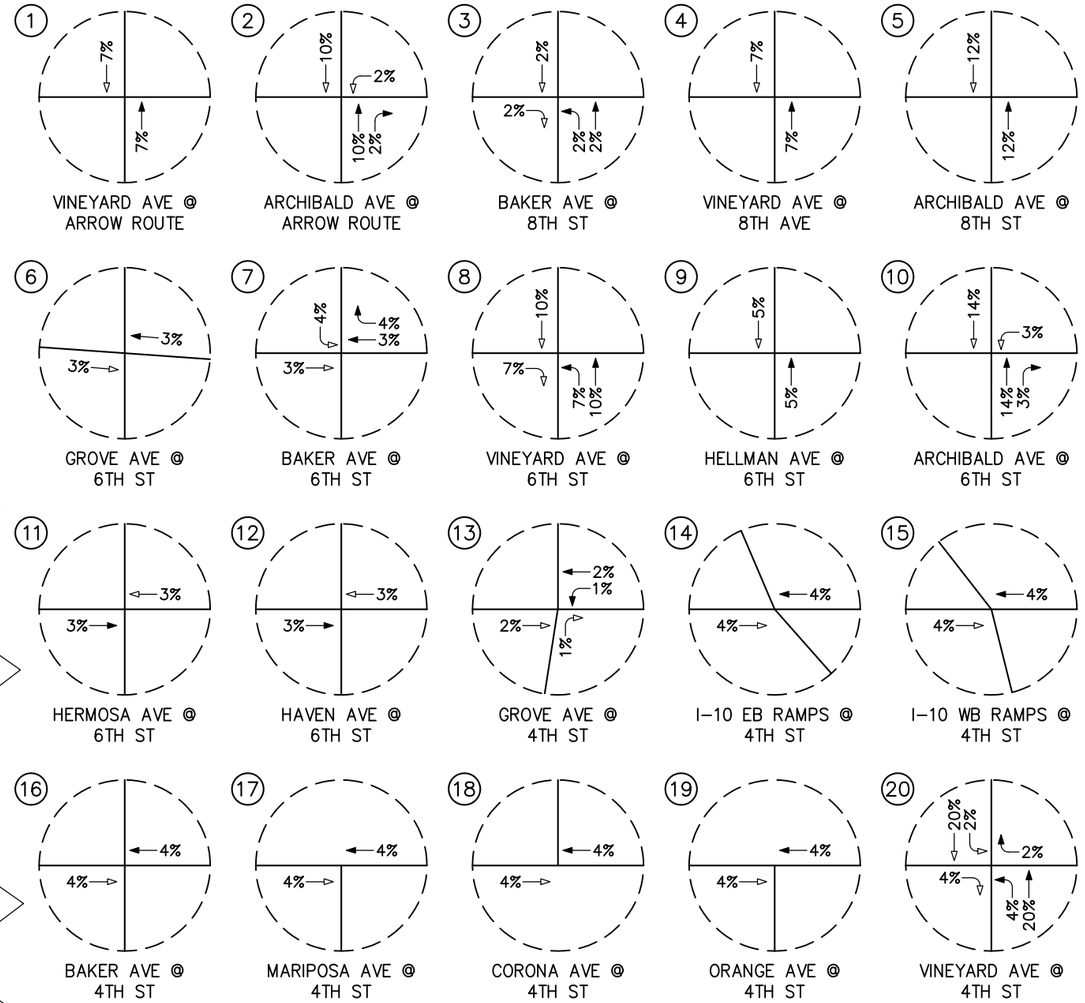
TABLE 5-6

PROJECT TRIP GENERATION FORECAST – PLANNING AREA (PA) 4[21]

Project Description	Daily	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
Trip Generation Factors:							
▪ 220: Apartments (TE/DU)	6.65	0.10	0.41	0.51	0.40	0.22	0.62
Trip Generation Forecast:							
Planning Area (PA) 4							
▪ 220: Apartments (800 DU)	5,320	80	328	408	320	176	496
Total PA 4 Trip Generation Potential	**5,320**	**80**	**328**	**408**	**320**	**176**	**496**

[21] Source: *Trip Generation, 9th Edition, Institute of Transportation Engineers (ITE), Washington, D.C. (2012).*





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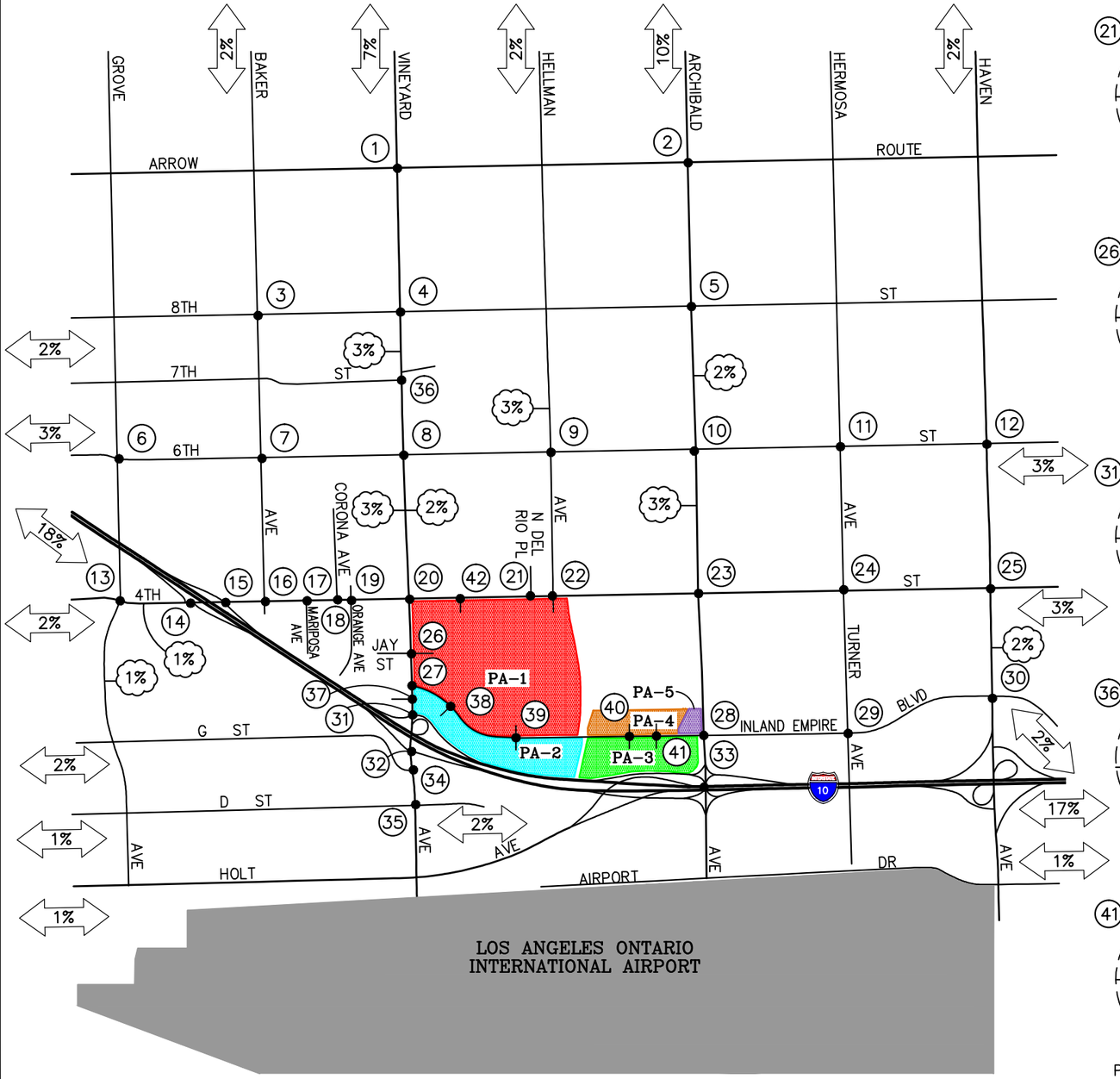
N NO SCALE

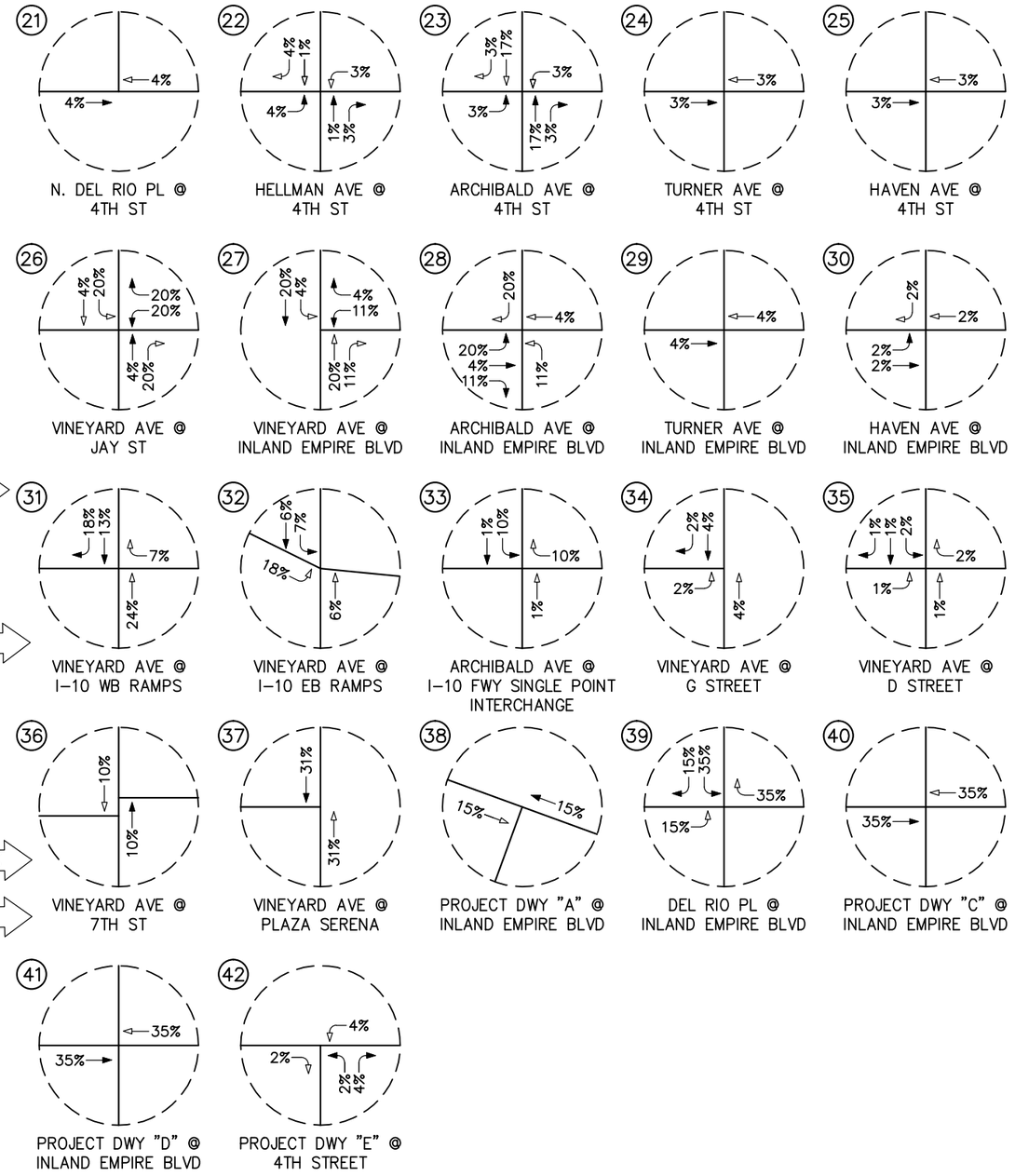
KEY

(#) = STUDY INTERSECTION
⇦ = INBOUND PERCENTAGE
⇦ = OUTBOUND PERCENTAGE
= PA-1
= PA-2
= PA-3
= PA-4
= PA-5

FIGURE 5-1A

PROJECT TRIP DISTRIBUTION PATTERN PA-1 (AUTO)
MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO





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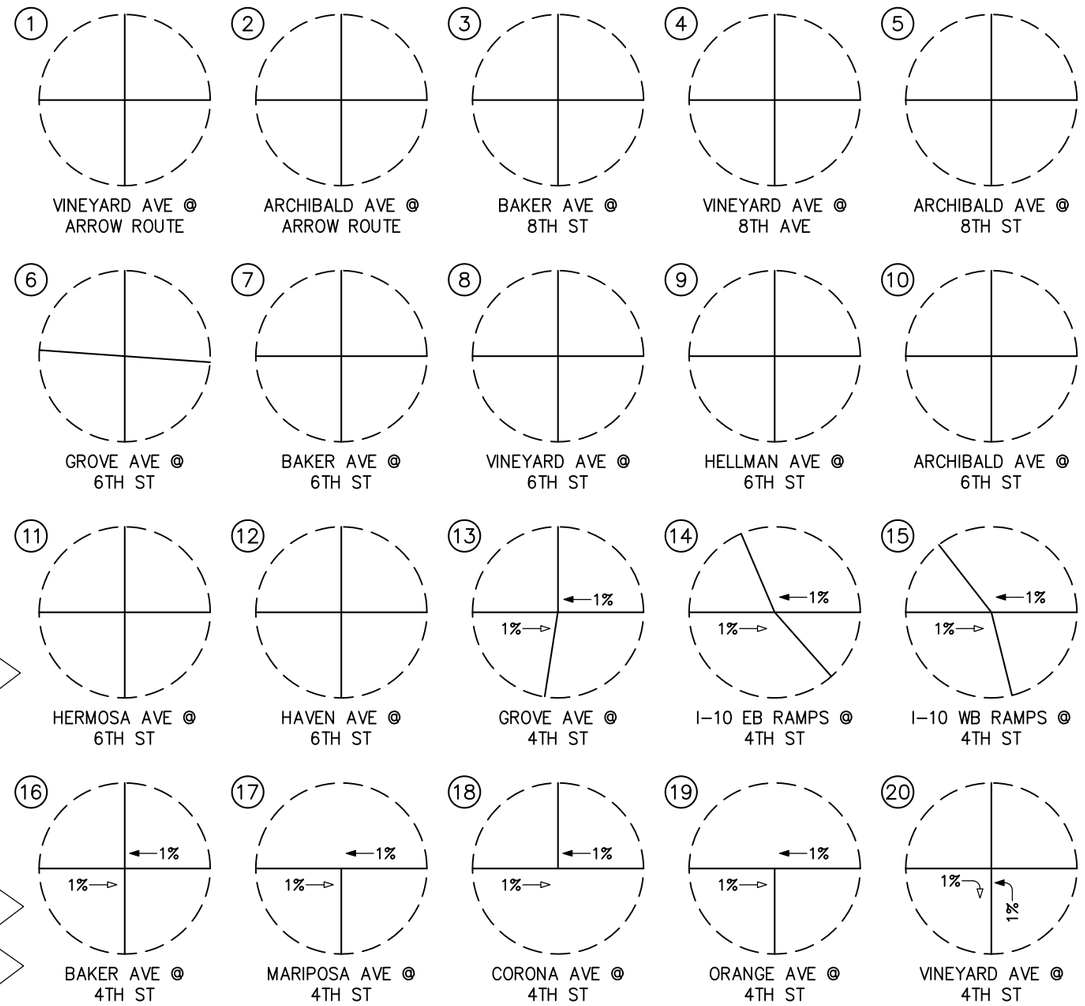
KEY

- (#) = STUDY INTERSECTION
- ⇦ = INBOUND PERCENTAGE
- ⇦ = OUTBOUND PERCENTAGE
- = PA-1
- = PA-2
- = PA-3
- = PA-4
- = PA-5

FIGURE 5-1B

PROJECT TRIP DISTRIBUTION PATTERN PA-1 (AUTO)

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



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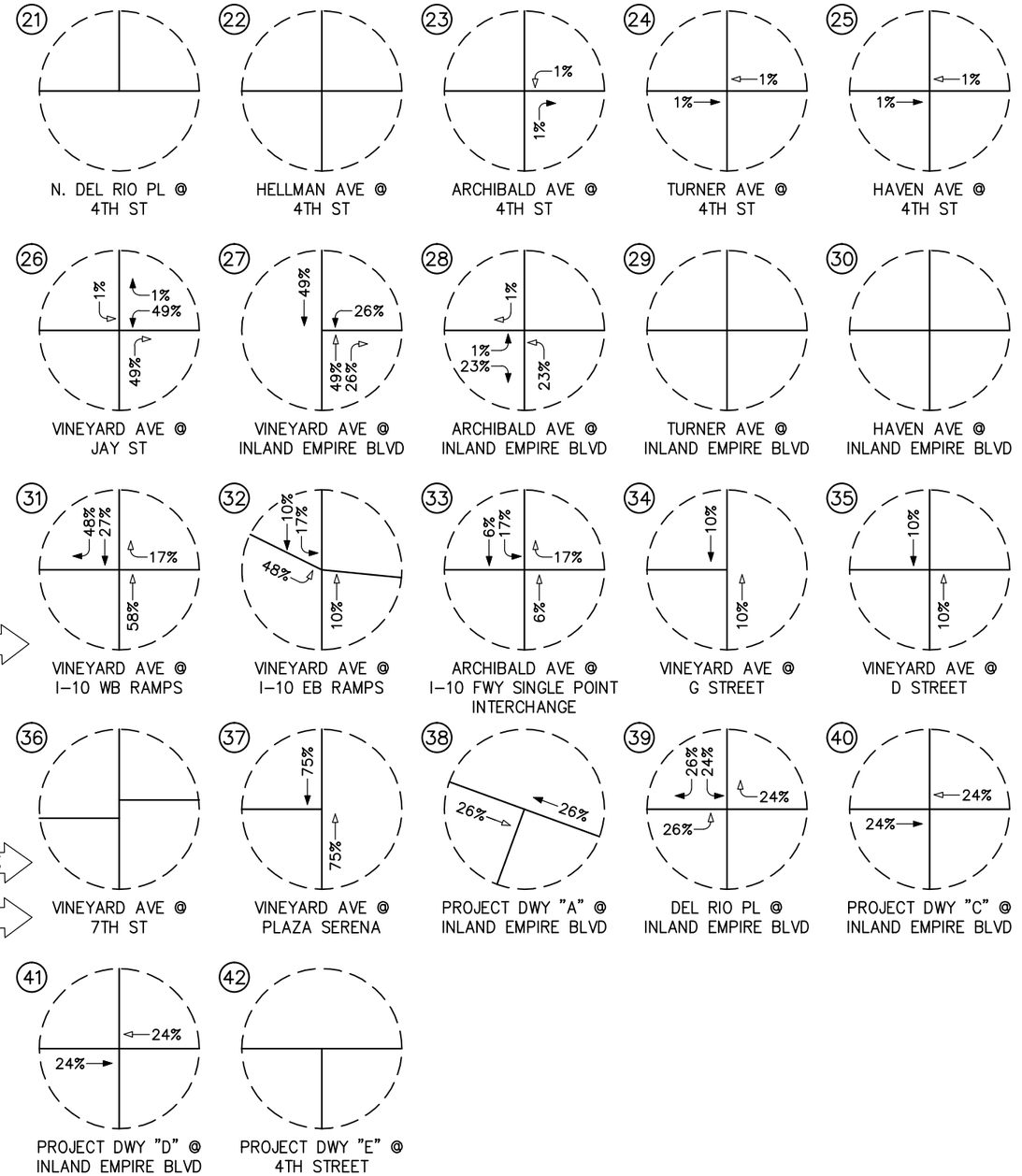
KEY

- (#) = STUDY INTERSECTION
- ⇦ = INBOUND PERCENTAGE
- ⇦ = OUTBOUND PERCENTAGE
- = PA-1
- = PA-2
- = PA-3
- = PA-4
- = PA-5

FIGURE 5-2A

PROJECT TRIP DISTRIBUTION PATTERN PA-1 (WAREHOUSING TRUCKS)

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



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KEY

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- ⟵ = INBOUND PERCENTAGE
- ⟵ = OUTBOUND PERCENTAGE
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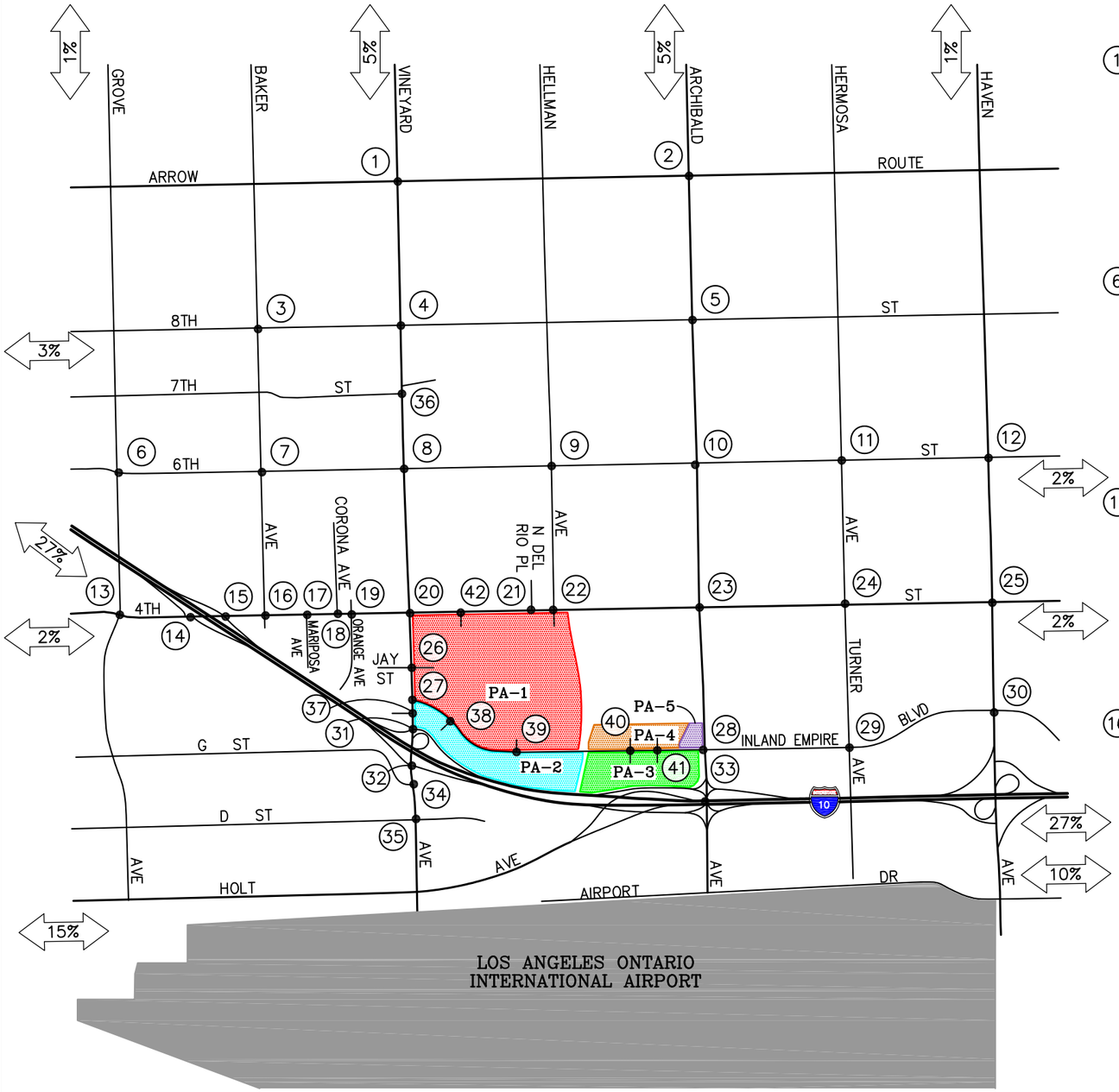
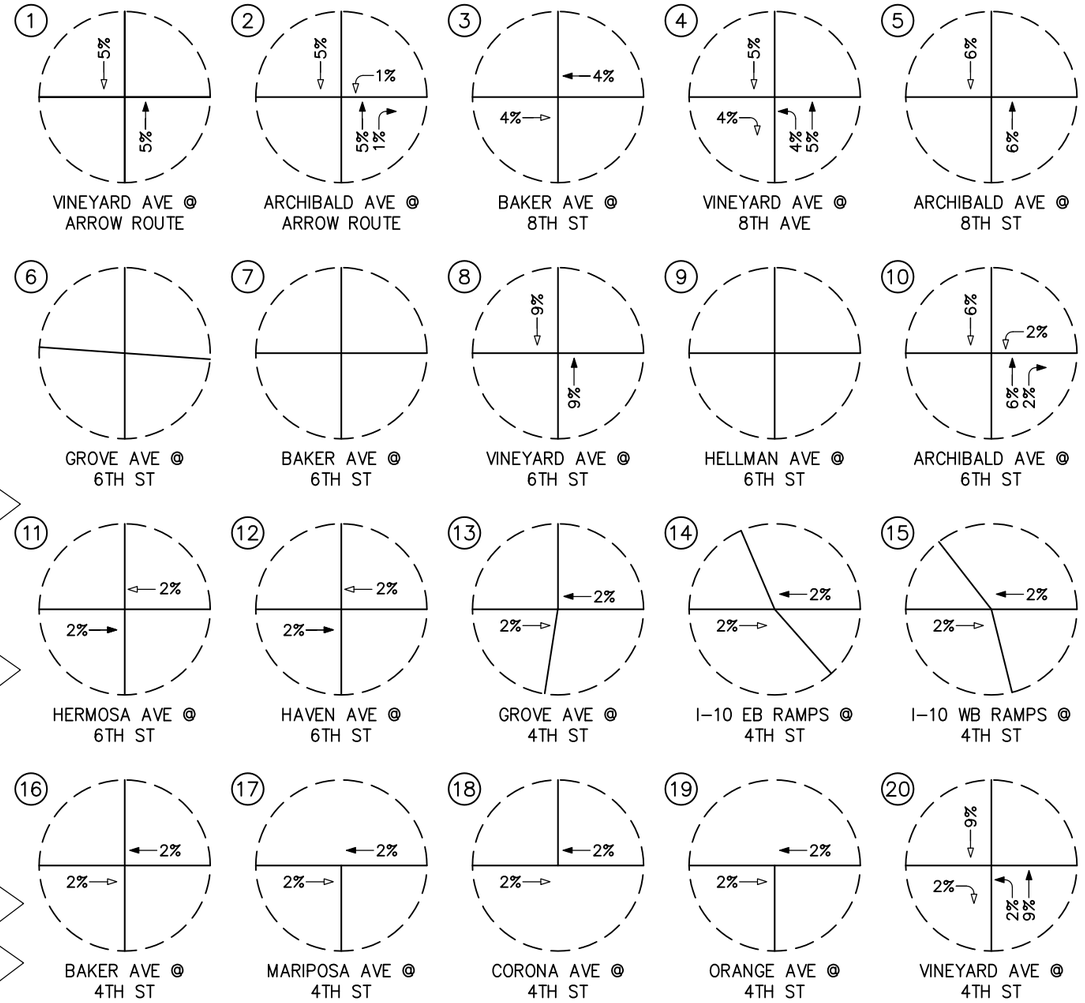
- = PA-2
- = PA-3
- = PA-4
- = PA-5

FIGURE 5-2B

PROJECT TRIP DISTRIBUTION PATTERN PA-1 (WAREHOUSING TRUCKS)

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO





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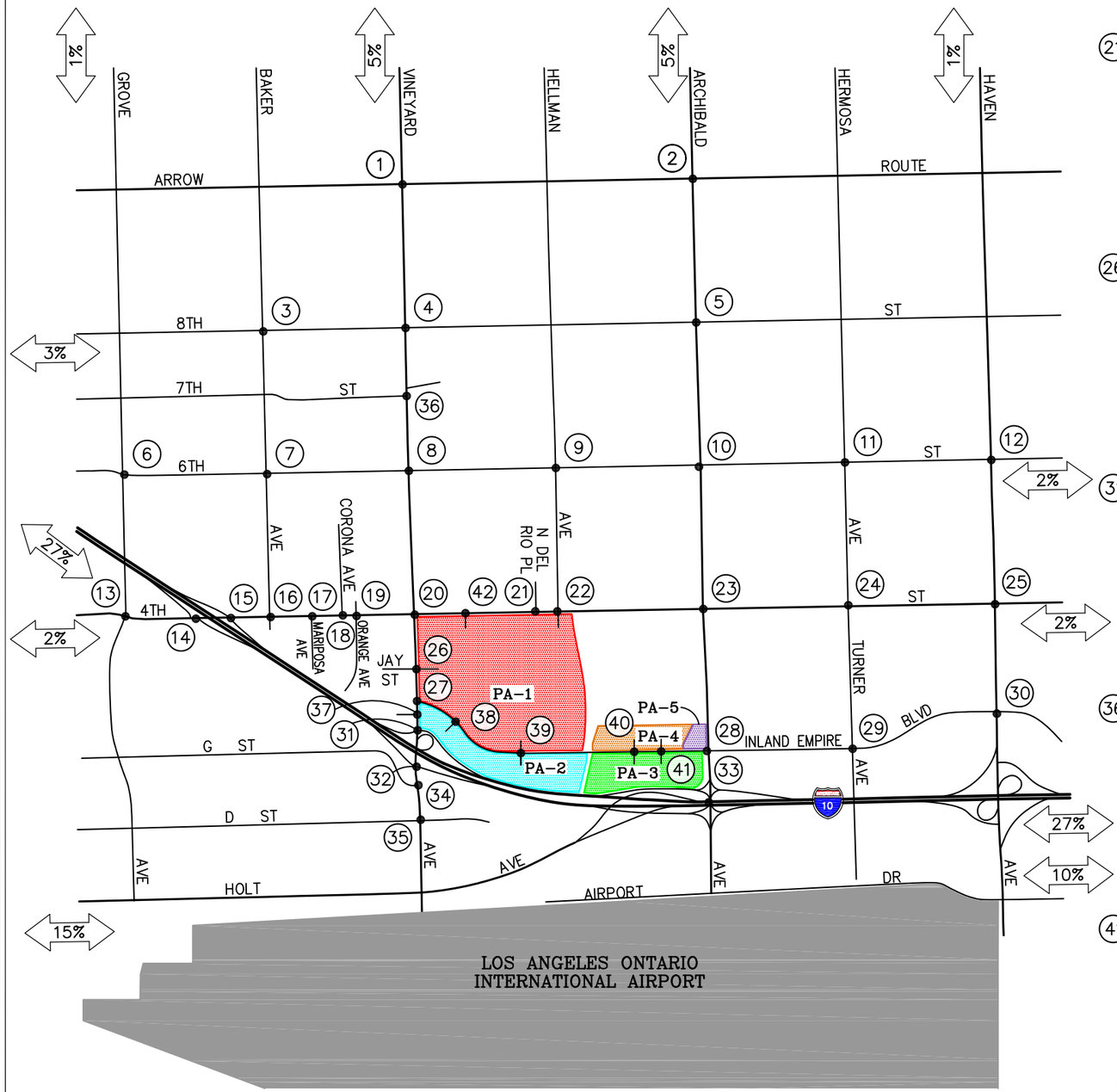
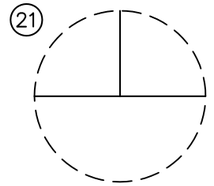
- = PA-1
- = PA-2
- = PA-3
- = PA-4
- = PA-5

FIGURE 5-3A

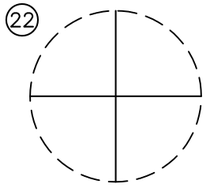
PROJECT TRIP DISTRIBUTION PATTERN PA-1 (LIGHT INDUSTRIAL TRUCKS)

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO

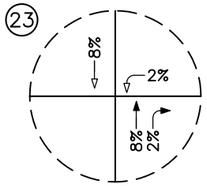




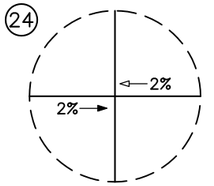
N. DEL RIO PL @ 4TH ST



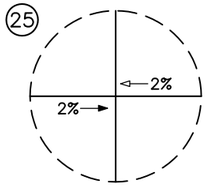
HELLMAN AVE @ 4TH ST



ARCHIBALD AVE @ 4TH ST



TURNER AVE @ 4TH ST



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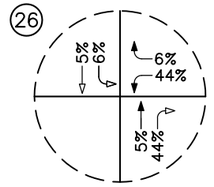
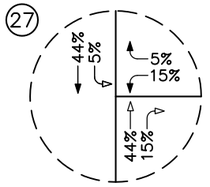
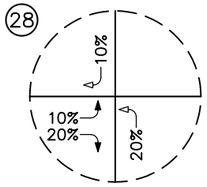


VINEYARD AVE @ JAY ST



VINEYARD AVE @ INLAND EMPIRE BLVD



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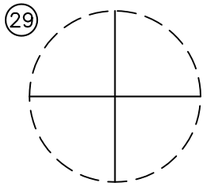

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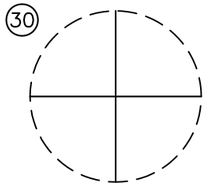

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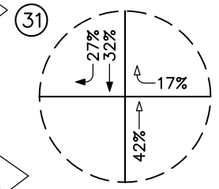
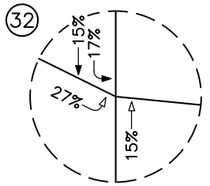
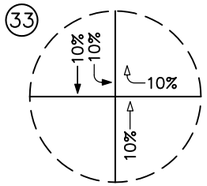


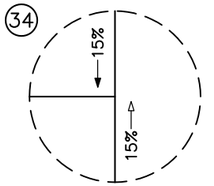
VINEYARD AVE @ I-10 WB RAMPS



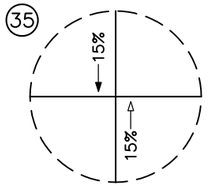
VINEYARD AVE @ I-10 EB RAMPS



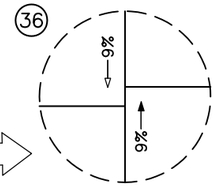
ARCHIBALD AVE @ I-10 FWY SINGLE POINT INTERCHANGE



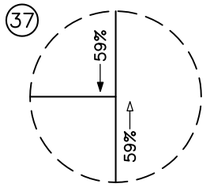
VINEYARD AVE @ G STREET



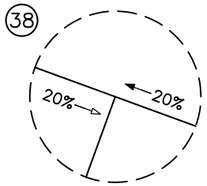
VINEYARD AVE @ D STREET



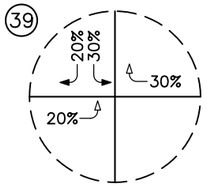
VINEYARD AVE @ 7TH ST



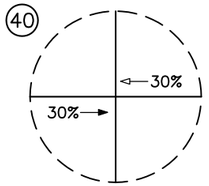
VINEYARD AVE @ PLAZA SERENA



PROJECT DWY "A" @ INLAND EMPIRE BLVD



DEL RIO PL @ INLAND EMPIRE BLVD



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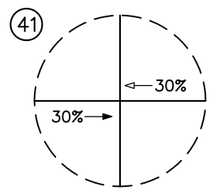

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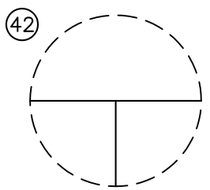

PROJECT DWY "E" @ 4TH STREET

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KEY

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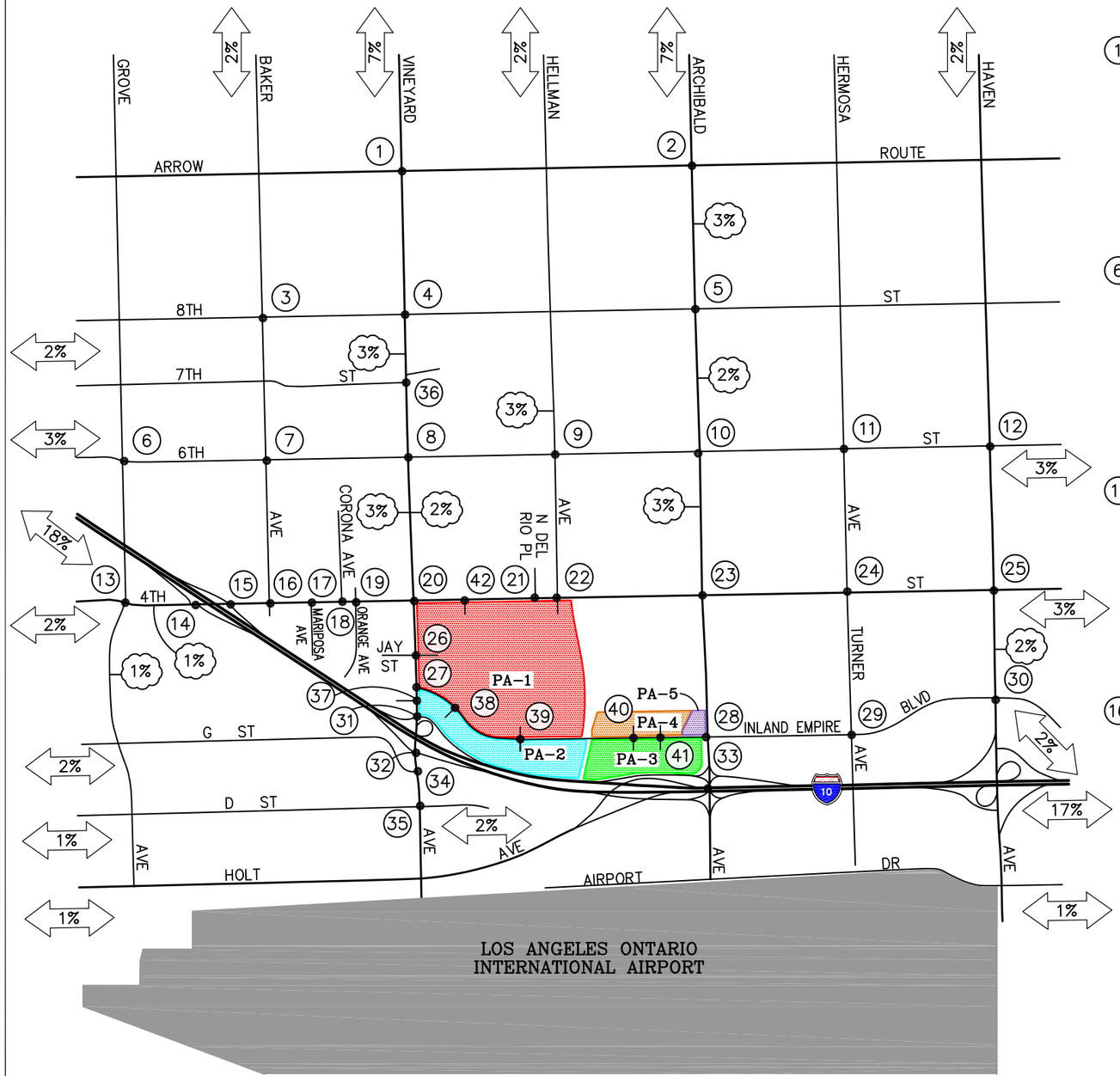
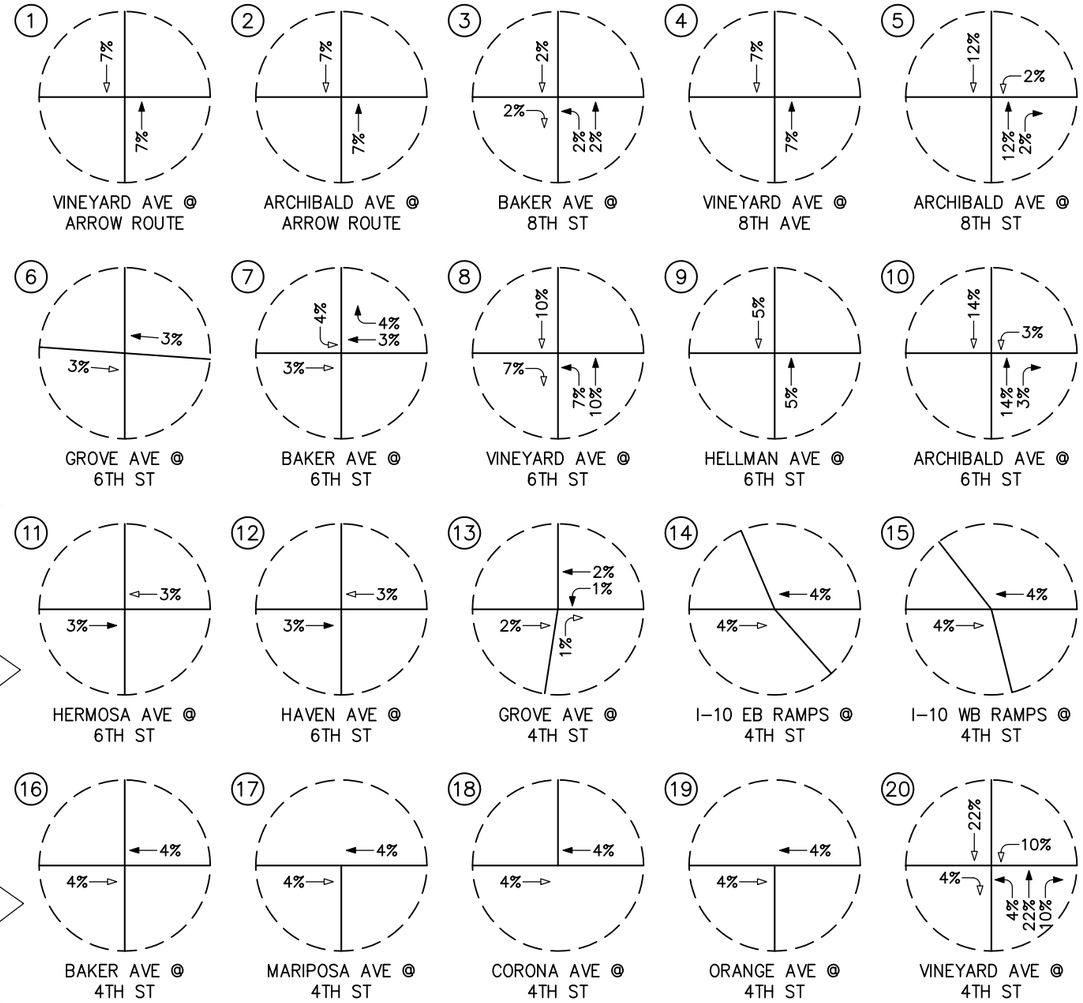
⇦ = INBOUND PERCENTAGE
⇦ = OUTBOUND PERCENTAGE
= PA-1
= PA-2
= PA-3
= PA-4
= PA-5

FIGURE 5-3B

PROJECT TRIP DISTRIBUTION PATTERN PA-1 (LIGHT INDUSTRIAL TRUCKS)

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO





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KEY

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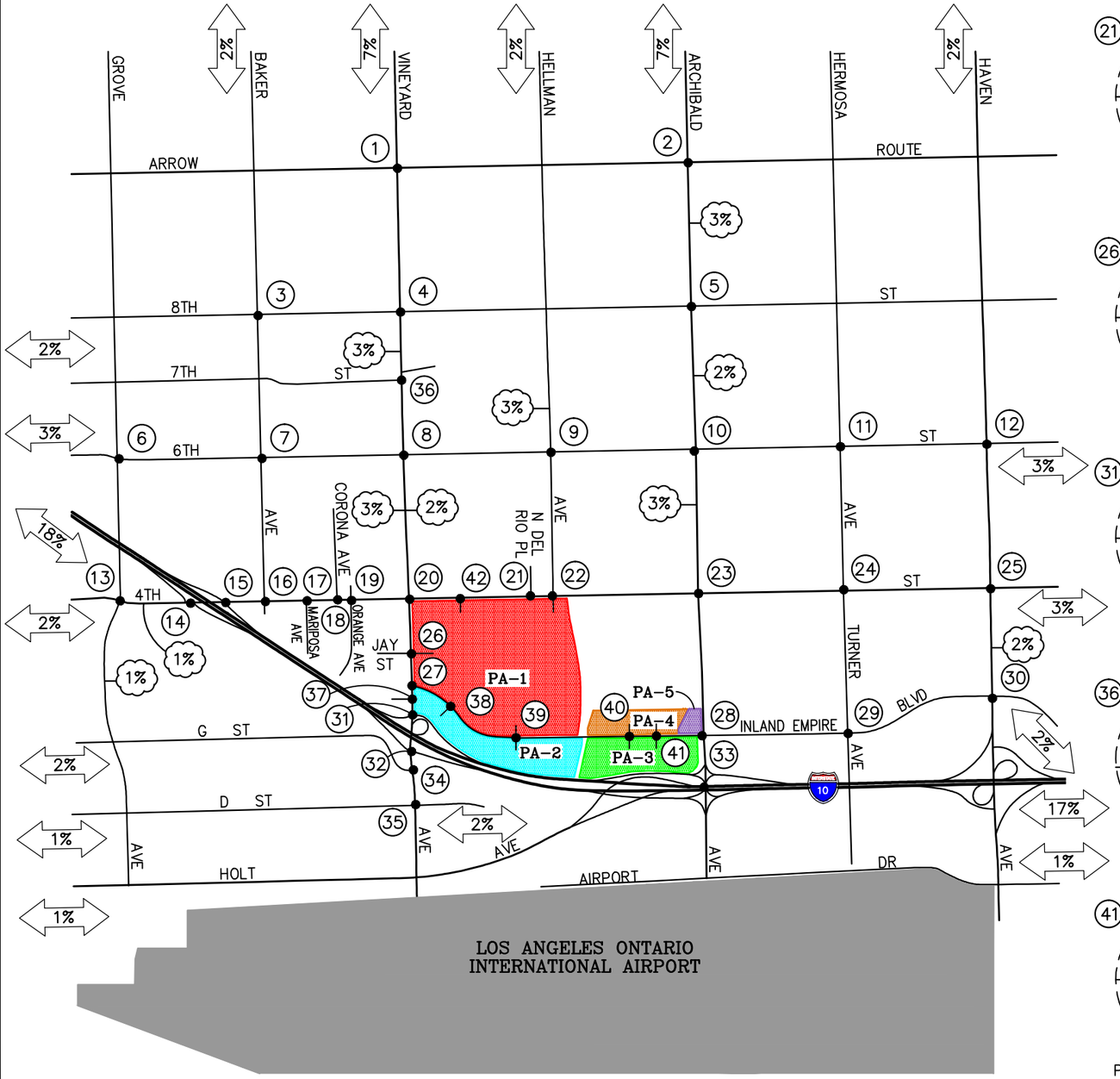
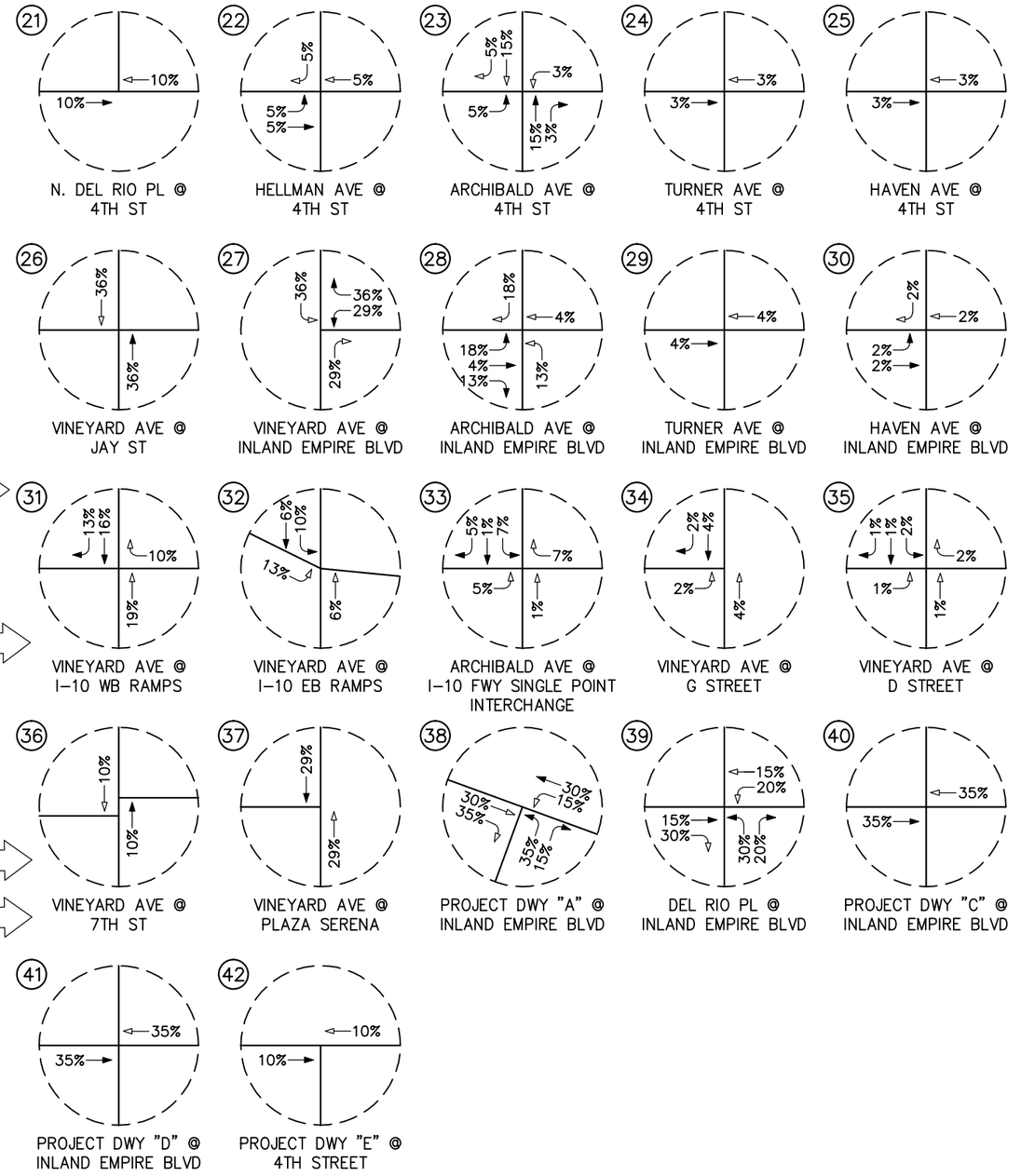
⇦ = INBOUND PERCENTAGE
⇦ = OUTBOUND PERCENTAGE
= PA-1
= PA-2
= PA-3
= PA-4
= PA-5

FIGURE 5-4A

PROJECT TRIP DISTRIBUTION PATTERN PA-2

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO





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N NO SCALE

KEY

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- ⇦ = INBOUND PERCENTAGE
- ⇦ = OUTBOUND PERCENTAGE
- = PA-1
- = PA-2
- = PA-3
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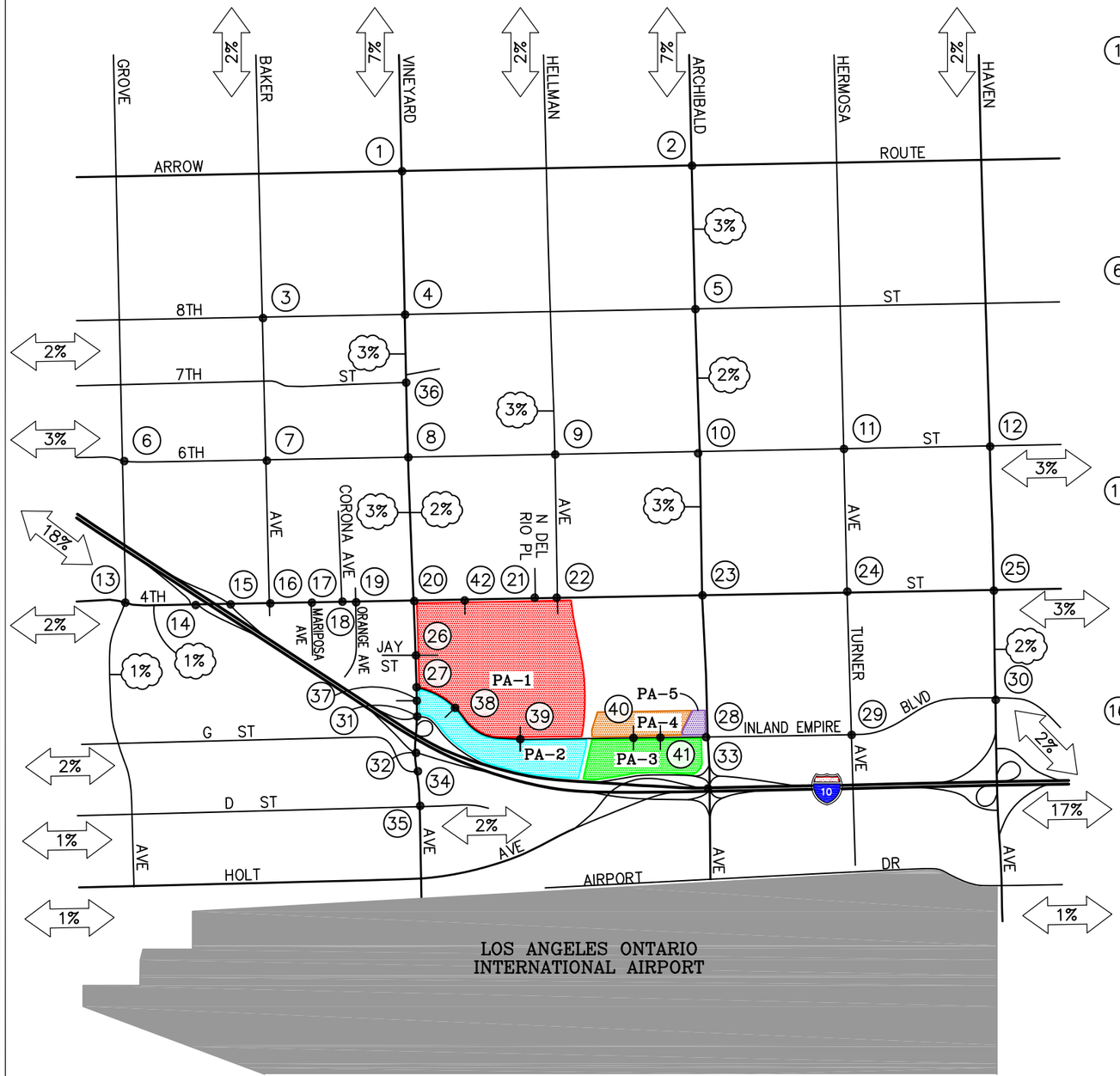
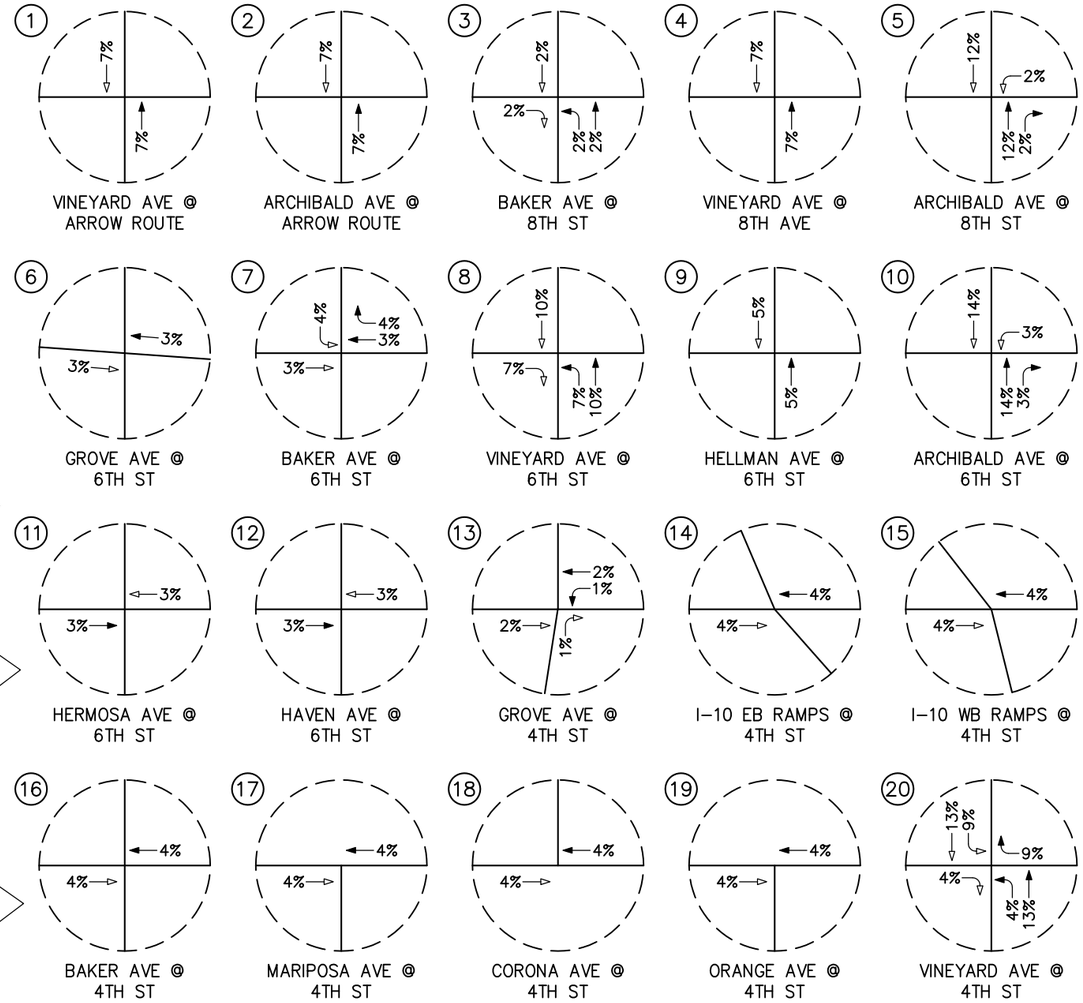
- = PA-5

FIGURE 5-4B

PROJECT TRIP DISTRIBUTION PATTERN PA-2

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO





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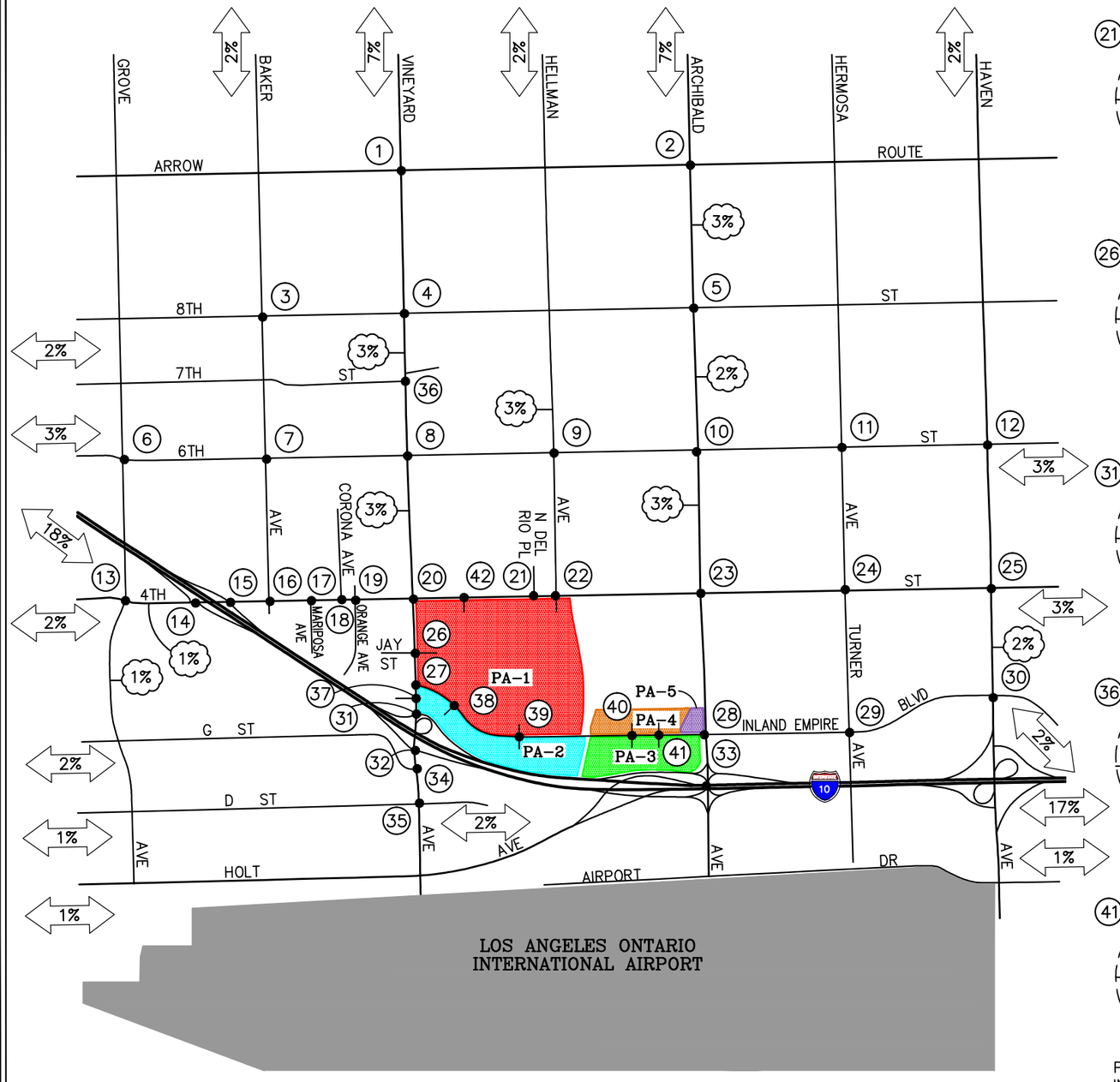
KEY

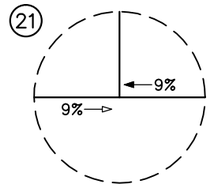
(#) = STUDY INTERSECTION
⇦ = INBOUND PERCENTAGE
⇦ = OUTBOUND PERCENTAGE
= PA-1
= PA-2
= PA-3
= PA-4
= PA-5

FIGURE 5-5A

PROJECT TRIP DISTRIBUTION PATTERN PA-3

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO





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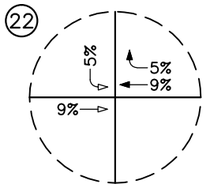
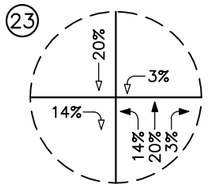
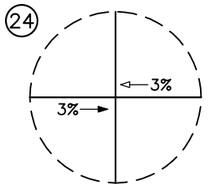


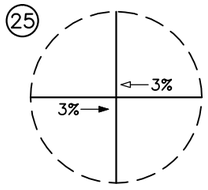
HELLMAN AVE @ 4TH ST



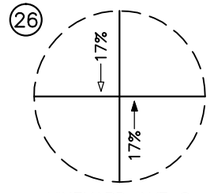
ARCHIBALD AVE @ 4TH ST



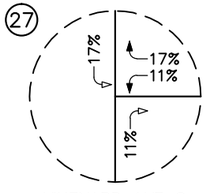
TURNER AVE @ 4TH ST



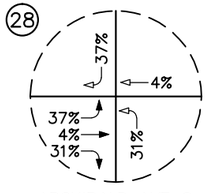
HAVEN AVE @ 4TH ST



VINEYARD AVE @ JAY ST



VINEYARD AVE @ INLAND EMPIRE BLVD



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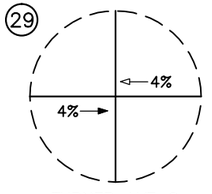
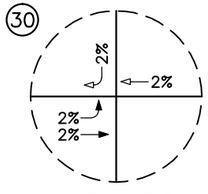
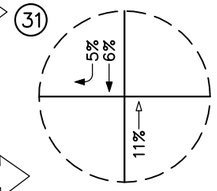


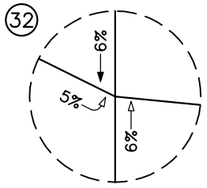
TURNER AVE @ INLAND EMPIRE BLVD



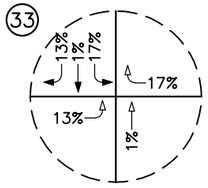
HAVEN AVE @ INLAND EMPIRE BLVD



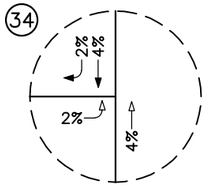
VINEYARD AVE @ I-10 WB RAMPS



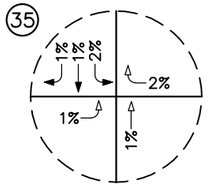
VINEYARD AVE @ I-10 EB RAMPS



ARCHIBALD AVE @ I-10 FWY SINGLE POINT INTERCHANGE



VINEYARD AVE @ G STREET



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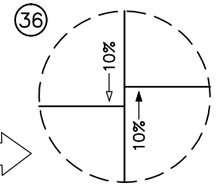
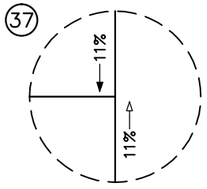
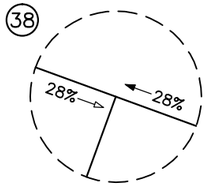


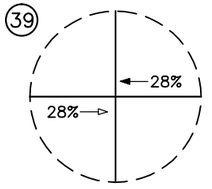
VINEYARD AVE @ 7TH ST



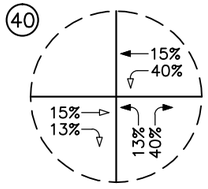
VINEYARD AVE @ PLAZA SERENA



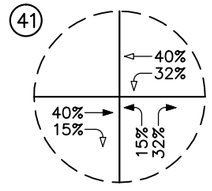
PROJECT DWY "A" @ INLAND EMPIRE BLVD



DEL RIO PL @ INLAND EMPIRE BLVD



PROJECT DWY "C" @ INLAND EMPIRE BLVD



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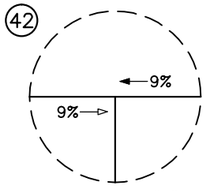

PROJECT DWY "E" @ 4TH STREET

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N NO SCALE

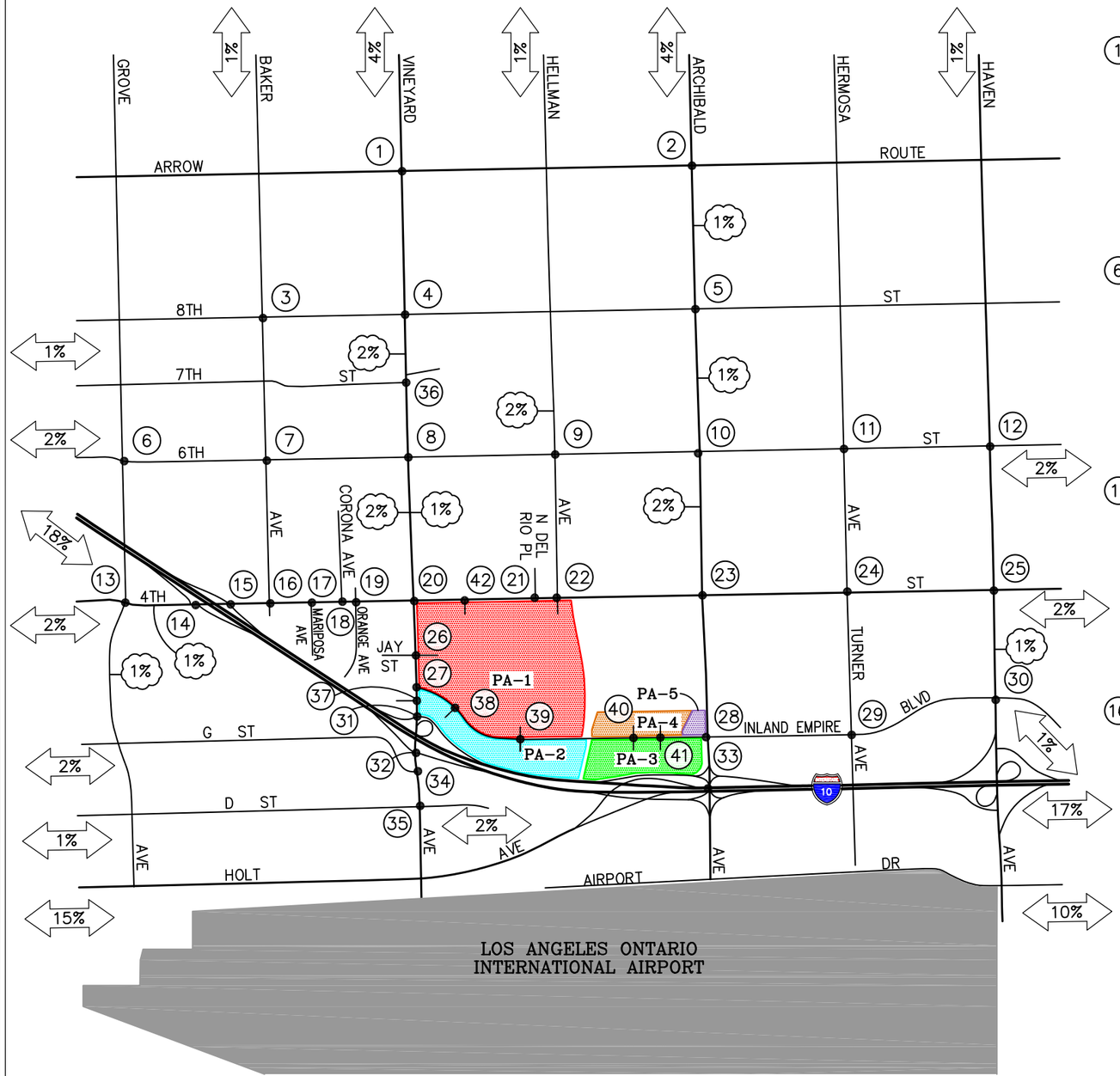
KEY

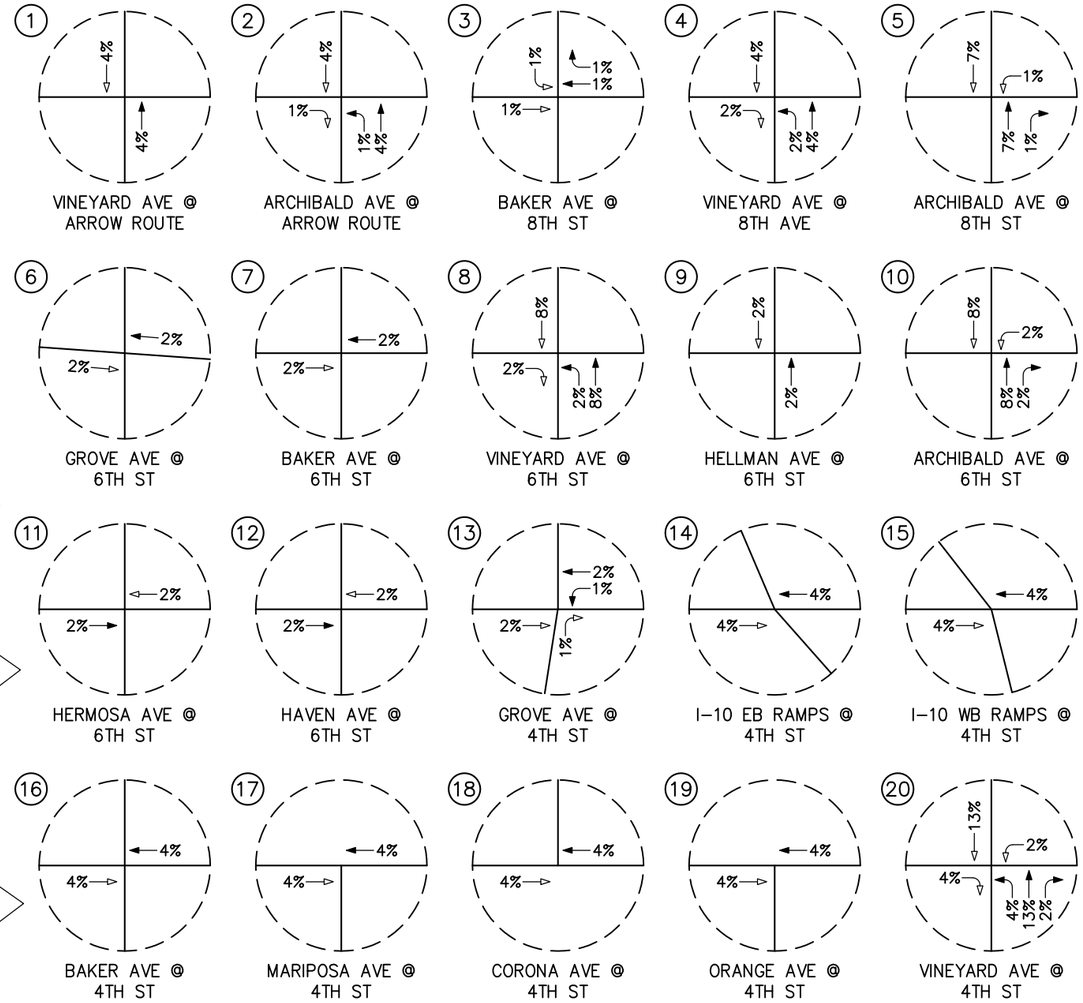
(#) = STUDY INTERSECTION
⇦ = INBOUND PERCENTAGE
⇦ = OUTBOUND PERCENTAGE
= PA-1
= PA-2
= PA-3
= PA-4
= PA-5

FIGURE 5-5B

PROJECT TRIP DISTRIBUTION PATTERN PA-3

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO





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⇦ = INBOUND PERCENTAGE
⇦ = OUTBOUND PERCENTAGE
= PA-1
= PA-2
= PA-3
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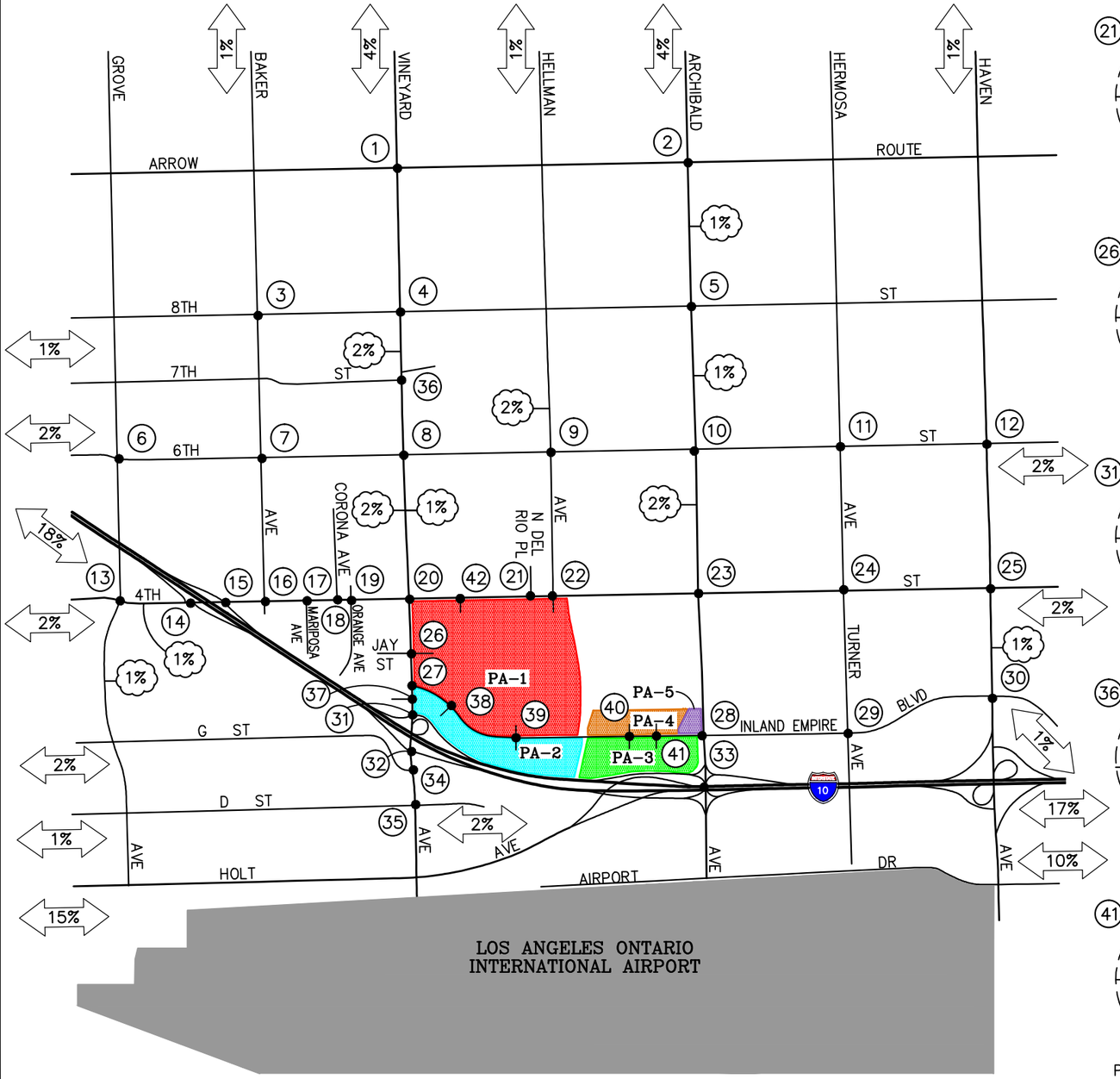
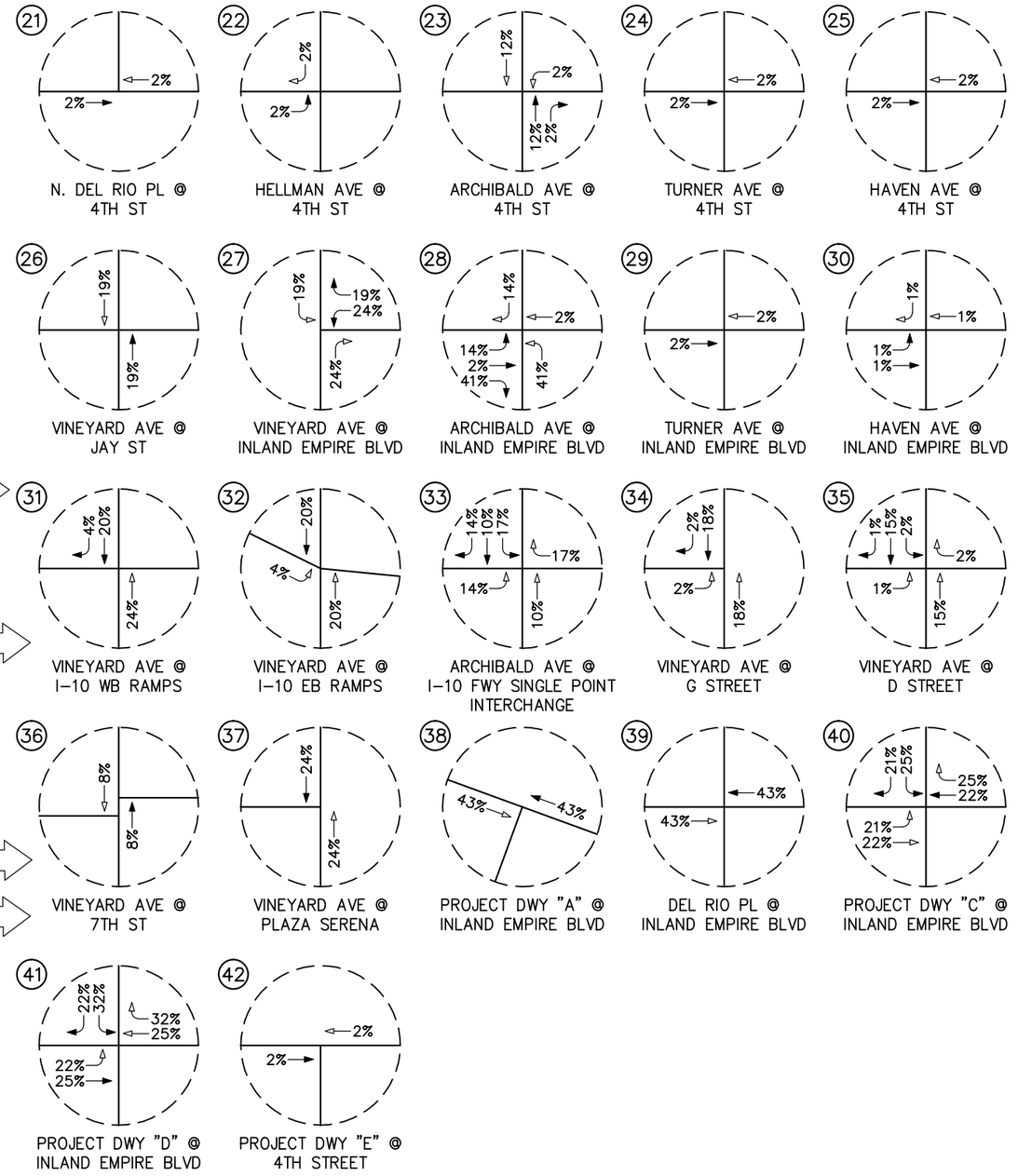
FIGURE 5-6A

PROJECT TRIP DISTRIBUTION PATTERN PA-4

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO





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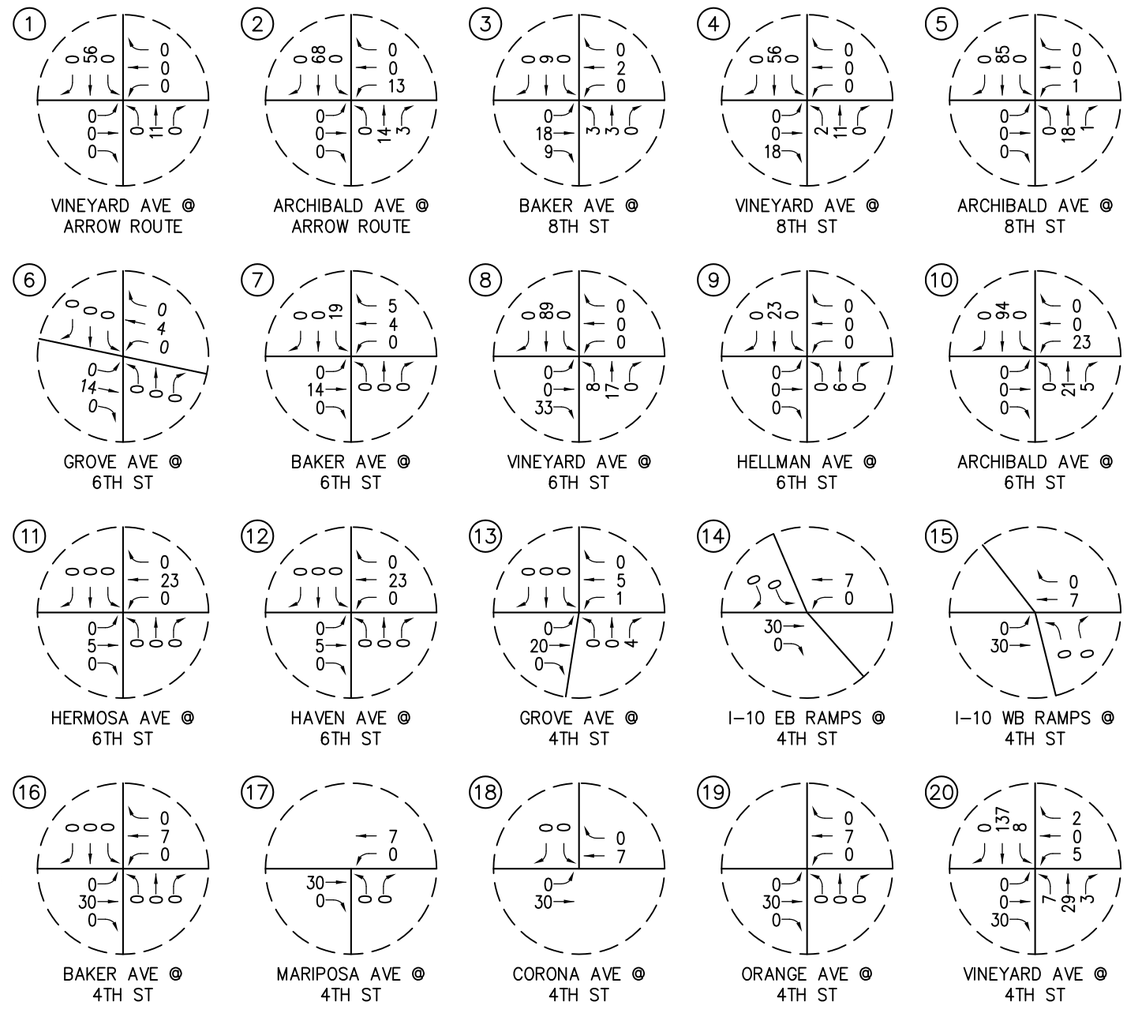
- = PA-5

FIGURE 5-6B

PROJECT TRIP DISTRIBUTION PATTERN PA-4

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



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KEY

(#) = STUDY INTERSECTION
= PA-1
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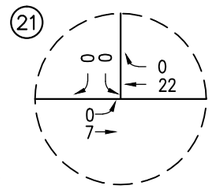
= PA-4
= PA-5

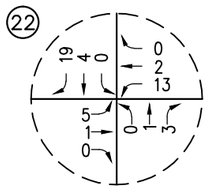
FIGURE 5-7A

AM PEAK HOUR PROJECT PA-1 AND PA-2 (INTERIM) TRAFFIC VOLUMES

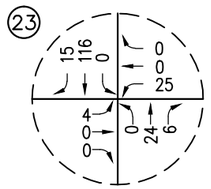
MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



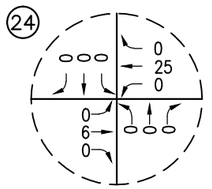
N. DEL RIO PL @
4TH ST



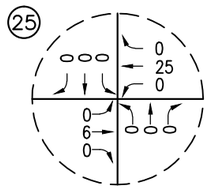
HELLMAN AVE @
4TH ST



ARCHIBALD AVE @
4TH ST



TURNER AVE @
4TH ST



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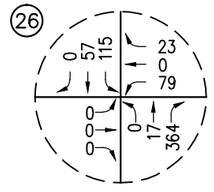
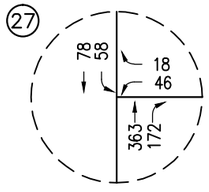
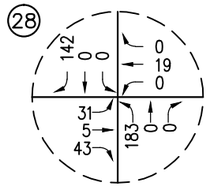


VINEYARD AVE @
JAY ST



VINEYARD AVE @
INLAND EMPIRE BLVD



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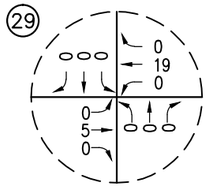
INLAND EMPIRE BLVD



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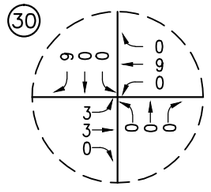
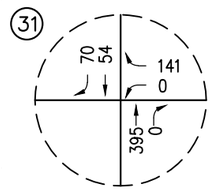
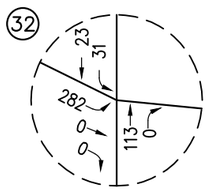
INLAND EMPIRE BLVD



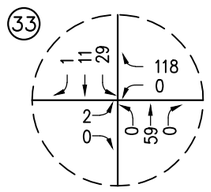
HAVEN AVE @
INLAND EMPIRE BLVD



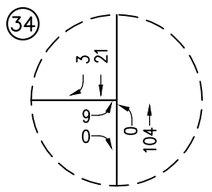
VINEYARD AVE @
I-10 WB RAMPS



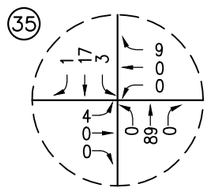
VINEYARD AVE @
I-10 EB RAMPS



ARCHIBALD AVE @
I-10 FWY SINGLE POINT
INTERCHANGE



VINEYARD AVE @
G STREET



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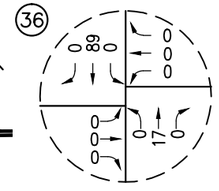
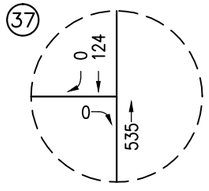
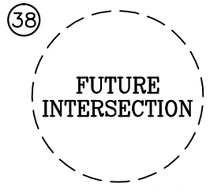
D STREET



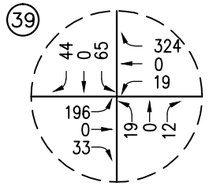
VINEYARD AVE @
7TH ST



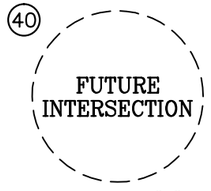
VINEYARD AVE @
PLAZA SERENA



PROJECT DWY "A" @
INLAND EMPIRE BLVD



DEL RIO PL @
INLAND EMPIRE BLVD



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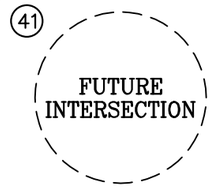
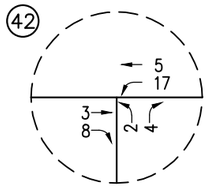
INLAND EMPIRE BLVD



PROJECT DWY "D" @
INLAND EMPIRE BLVD



PROJECT DWY "E" @
4TH STREET

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N NO SCALE

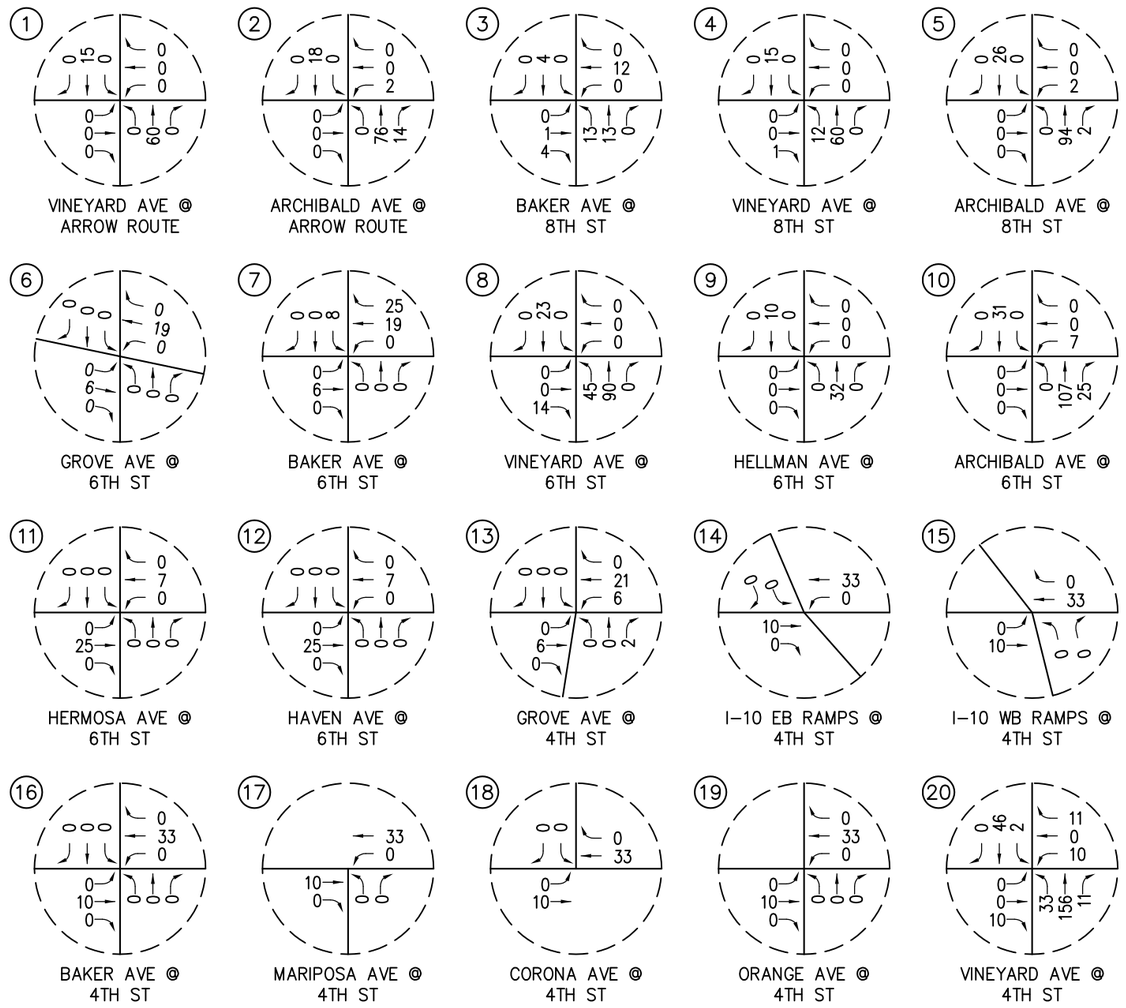
KEY

(#) = STUDY INTERSECTION
= PA-1
= PA-2
= PA-3
= PA-4
= PA-5

FIGURE 5-7B

AM PEAK HOUR PROJECT PA-1 AND PA-2 (INTERIM) TRAFFIC VOLUMES

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



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N NO SCALE

KEY

(#) = STUDY INTERSECTION
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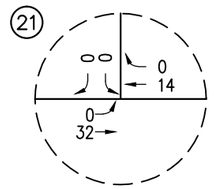
= PA-2
= PA-3
= PA-4
= PA-5

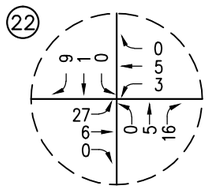
FIGURE 5-8A

PM PEAK HOUR PROJECT PA-1 AND PA-2 (INTERIM) TRAFFIC VOLUMES

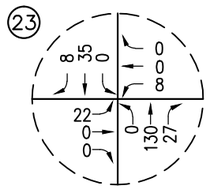
MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



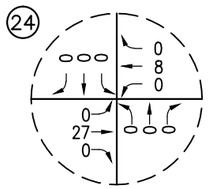
N. DEL RIO PL @ 4TH ST



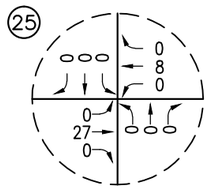
HELLMAN AVE @ 4TH ST



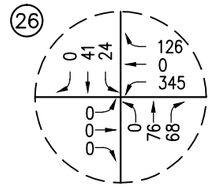
ARCHIBALD AVE @ 4TH ST



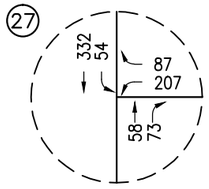
TURNER AVE @ 4TH ST



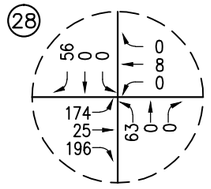
HAVEN AVE @ 4TH ST



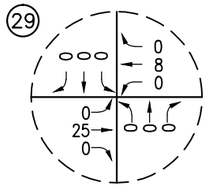
VINEYARD AVE @ JAY ST



VINEYARD AVE @ INLAND EMPIRE BLVD



ARCHIBALD AVE @ INLAND EMPIRE BLVD



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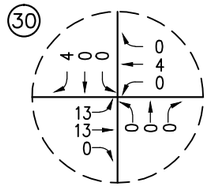
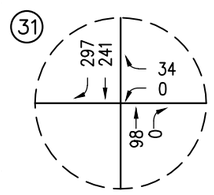
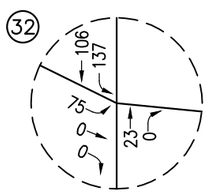


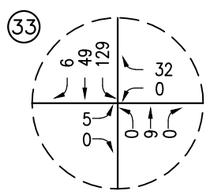
HAVEN AVE @ INLAND EMPIRE BLVD



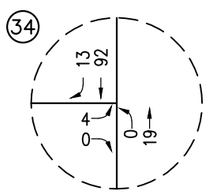
VINEYARD AVE @ I-10 WB RAMPS



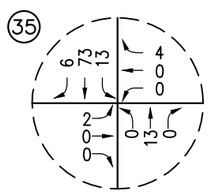
VINEYARD AVE @ I-10 EB RAMPS



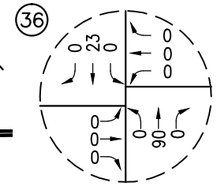
ARCHIBALD AVE @ I-10 FWY SINGLE POINT INTERCHANGE



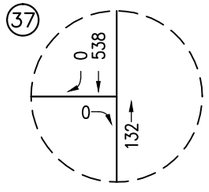
VINEYARD AVE @ G STREET



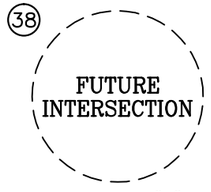
VINEYARD AVE @ D STREET



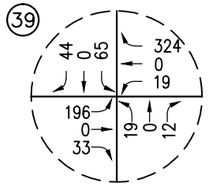
VINEYARD AVE @ 7TH ST



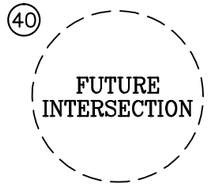
VINEYARD AVE @ PLAZA SERENA



PROJECT DWY "A" @ INLAND EMPIRE BLVD



DEL RIO PL @ INLAND EMPIRE BLVD



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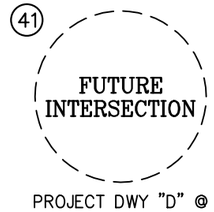

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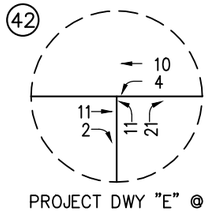

PROJECT DWY "E" @ 4TH STREET

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N NO SCALE

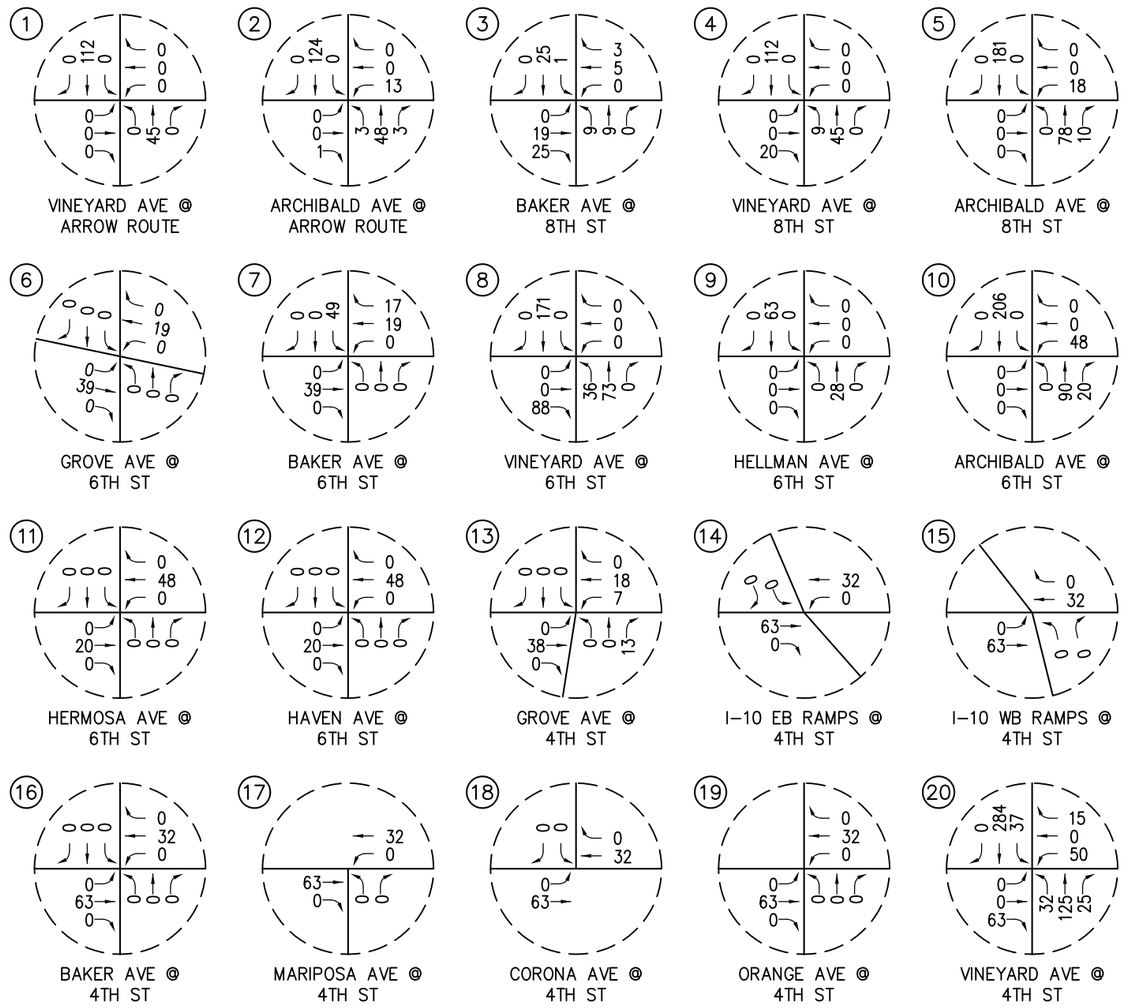
KEY

(#) = STUDY INTERSECTION
= PA-1
= PA-2
= PA-3
= PA-4
= PA-5

FIGURE 5-8B

PM PEAK HOUR PROJECT PA-1 AND PA-2 (INTERIM) TRAFFIC VOLUMES

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

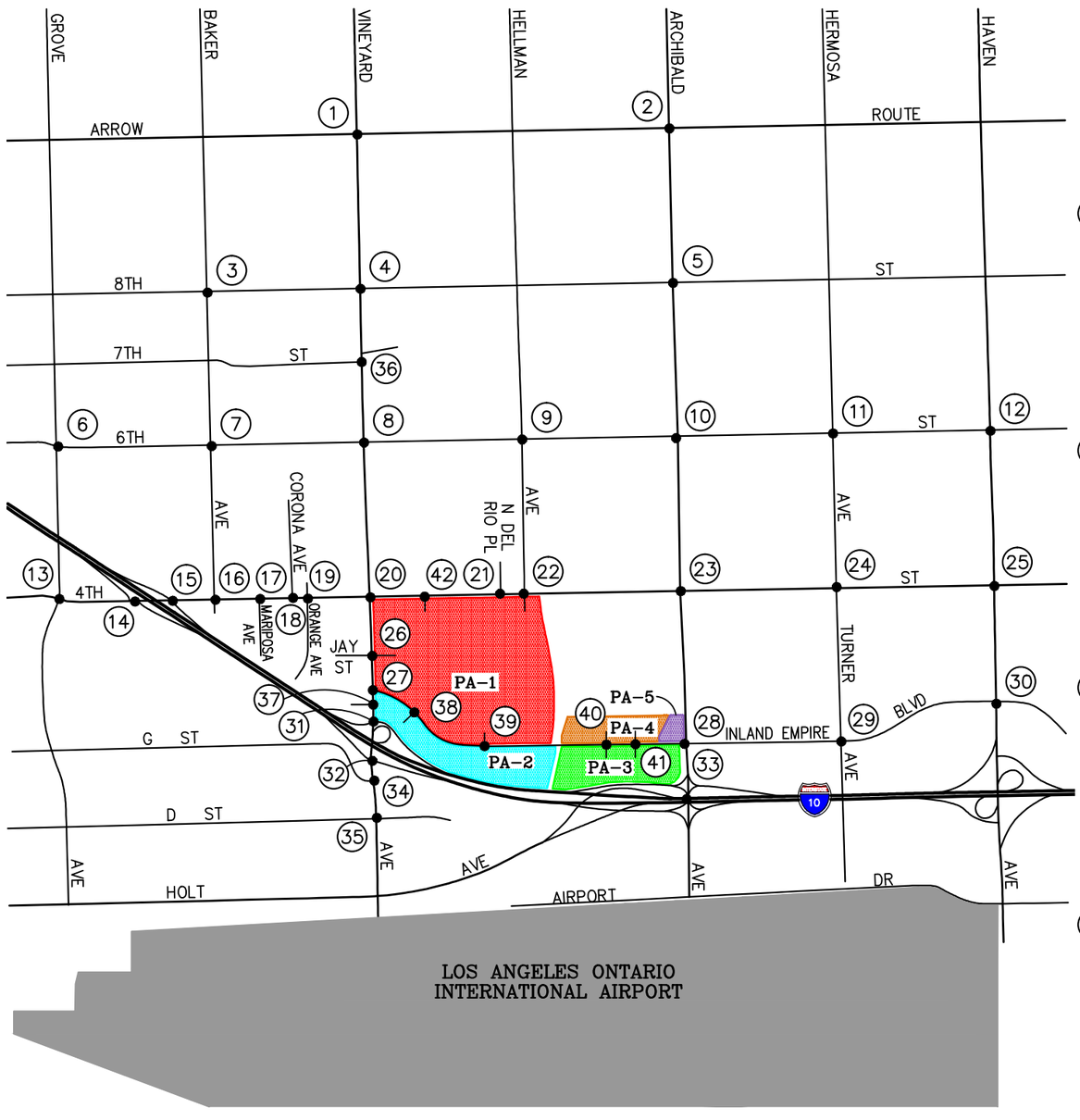
KEY

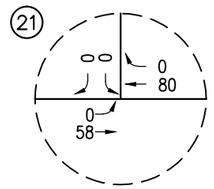
(#) = STUDY INTERSECTION
= PA-1
= PA-2
= PA-3
= PA-4
= PA-5

FIGURE 5-9A

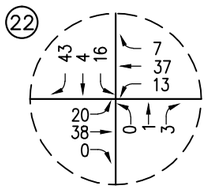
AM PEAK HOUR PROJECT PA-1, PA-2, PA-3 AND PA-4 TRAFFIC VOLUMES

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO

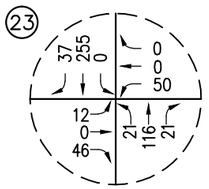




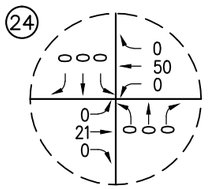
21 N. DEL RIO PL @ 4TH ST



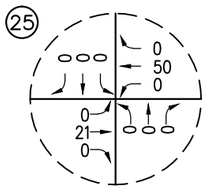
22 HELLMAN AVE @ 4TH ST



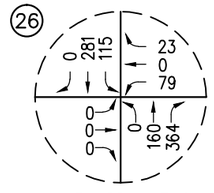
23 ARCHIBALD AVE @ 4TH ST



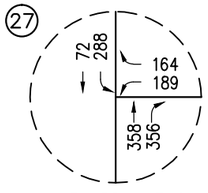
24 TURNER AVE @ 4TH ST



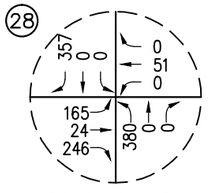
25 HAVEN AVE @ 4TH ST



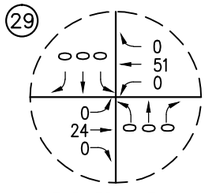
26 VINEYARD AVE @ JAY ST



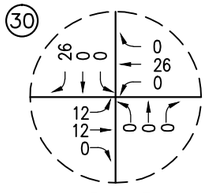
27 VINEYARD AVE @ INLAND EMPIRE BLVD



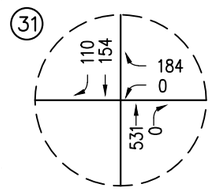
28 ARCHIBALD AVE @ INLAND EMPIRE BLVD



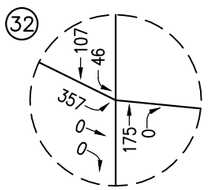
29 TURNER AVE @ INLAND EMPIRE BLVD



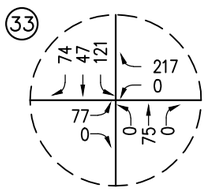
30 HAVEN AVE @ INLAND EMPIRE BLVD



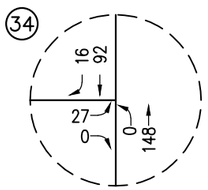
31 VINEYARD AVE @ I-10 WB RAMPS



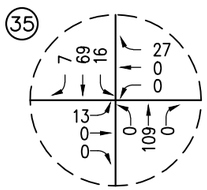
32 VINEYARD AVE @ I-10 EB RAMPS



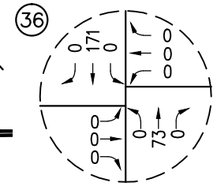
33 ARCHIBALD AVE @ I-10 FWY SINGLE POINT INTERCHANGE



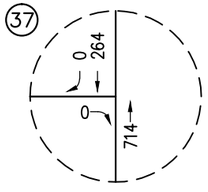
34 VINEYARD AVE @ G STREET



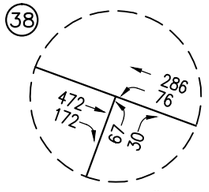
35 VINEYARD AVE @ D STREET



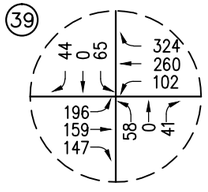
36 VINEYARD AVE @ 7TH ST



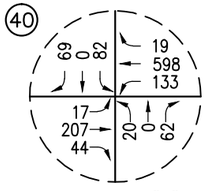
37 VINEYARD AVE @ PLAZA SERENA



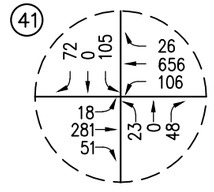
38 PROJECT DWY "A" @ INLAND EMPIRE BLVD



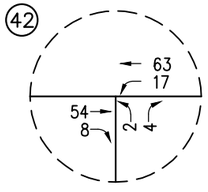
39 DEL RIO PL @ INLAND EMPIRE BLVD



40 PROJECT DWY "C" @ INLAND EMPIRE BLVD



41 PROJECT DWY "D" @ INLAND EMPIRE BLVD



42 PROJECT DWY "E" @ 4TH STREET

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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

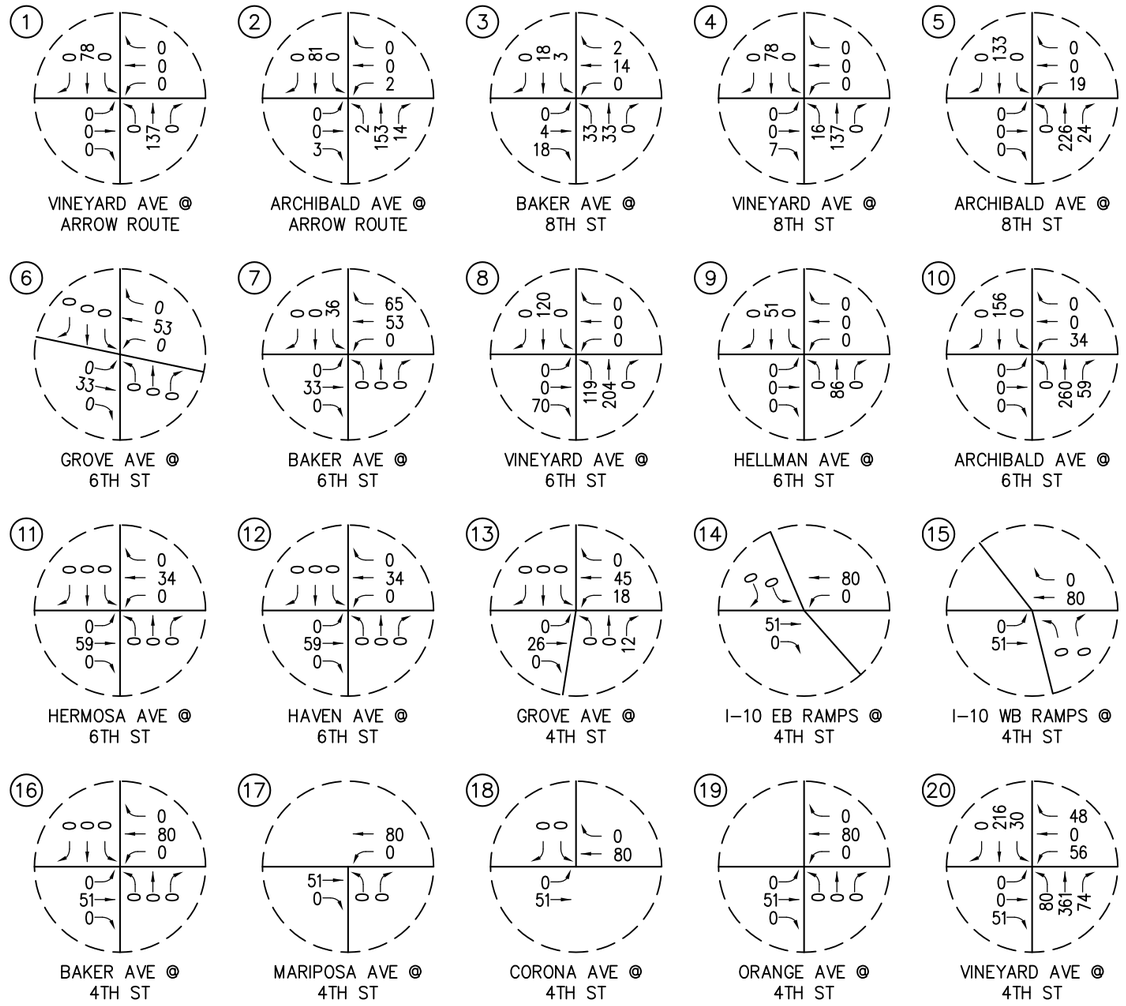
KEY

(#) = STUDY INTERSECTION
= PA-1
= PA-2
= PA-3
= PA-4
= PA-5

FIGURE 5-9B

AM PEAK HOUR PROJECT PA-1, PA-2, PA-3 AND PA-4 TRAFFIC VOLUMES

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

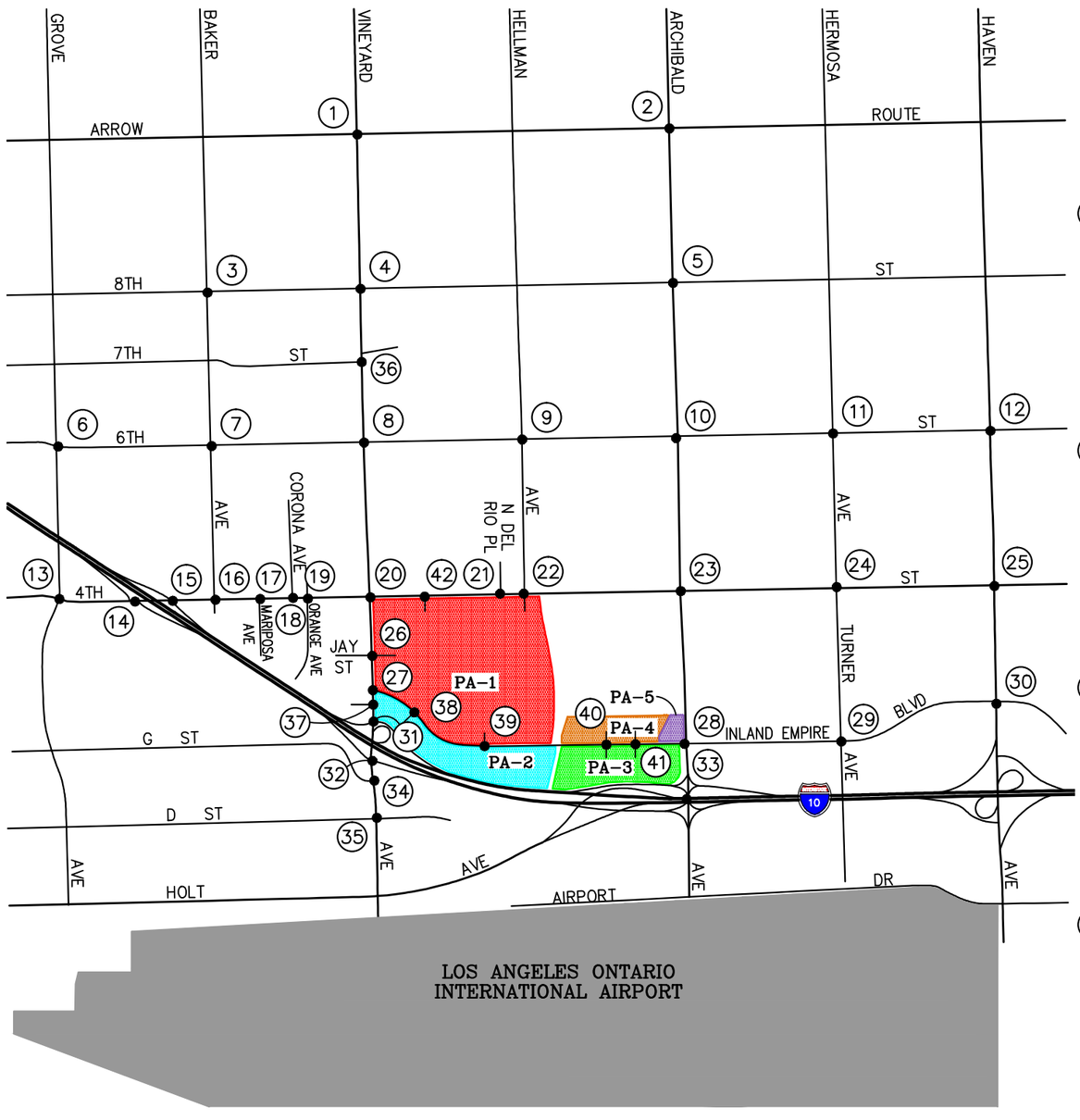
KEY

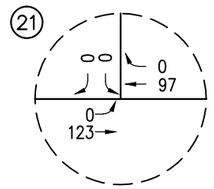
(#) = STUDY INTERSECTION
= PA-1
= PA-2
= PA-3
= PA-4
= PA-5

FIGURE 5-10A

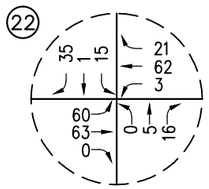
PM PEAK HOUR PROJECT PA-1, PA-2, PA-3 AND PA-4 TRAFFIC VOLUMES

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO

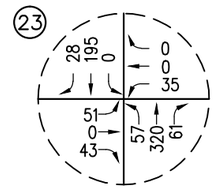




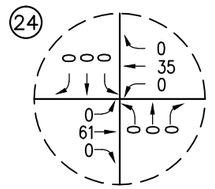
N. DEL RIO PL @
4TH ST



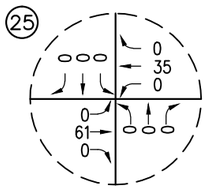
HELLMAN AVE @
4TH ST



ARCHIBALD AVE @
4TH ST



TURNER AVE @
4TH ST



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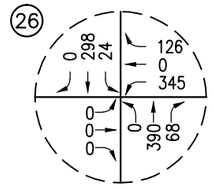

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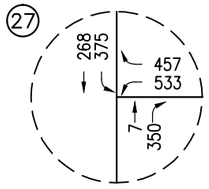

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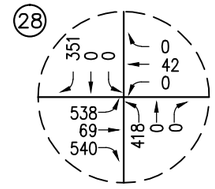

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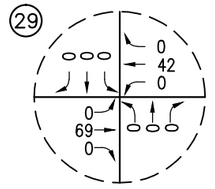

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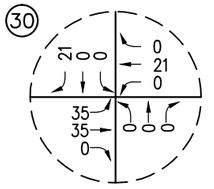

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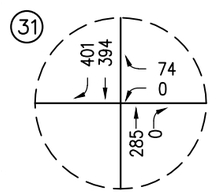
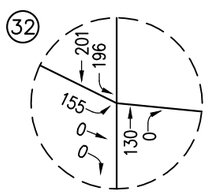
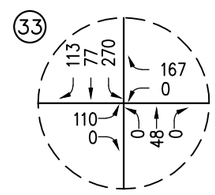
INLAND EMPIRE BLVD



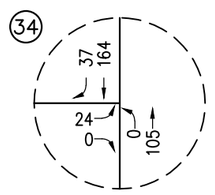
VINEYARD AVE @
I-10 WB RAMPS



VINEYARD AVE @
I-10 EB RAMPS



ARCHIBALD AVE @
I-10 FWY SINGLE POINT
INTERCHANGE



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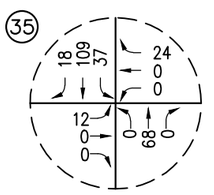
G STREET



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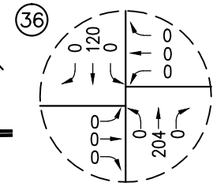
D STREET



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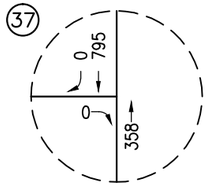

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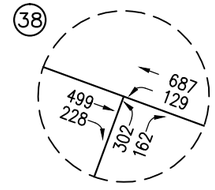
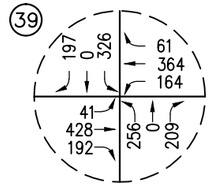
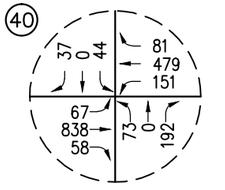
PLAZA SERENA



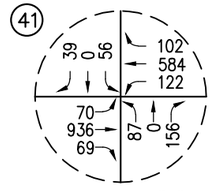
PROJECT DWY "A" @
INLAND EMPIRE BLVD



DEL RIO PL @
INLAND EMPIRE BLVD



PROJECT DWY "C" @
INLAND EMPIRE BLVD



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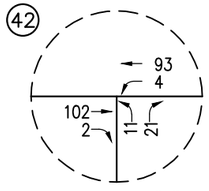

PROJECT DWY "E" @
4TH STREET

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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

(#) = STUDY INTERSECTION
= PA-1
= PA-2
= PA-3
= PA-4
= PA-5

FIGURE 5-10B

PM PEAK HOUR PROJECT PA-1, PA-2, PA-3 AND PA-4 TRAFFIC VOLUMES

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO

6.0 FUTURE TRAFFIC CONDITIONS

6.1 Existing Plus Project Traffic

Existing Plus Project traffic forecasts and analyses of the key study intersections have been conducted by adding forecast Project traffic volumes to existing baseline traffic counts. These forecast traffic conditions have been prepared to evaluate the potential impacts of the Project upon the circulation system as it currently exists. While this analytical scenario is typically not utilized by transportation planners because project plus existing conditions never materialize in "real world" conditions, this analytical scenario is provided here to comply with the requirements of the California Environmental Quality Act (CEQA). This existing/baseline plus project scenario and the related intersection capacity analyses will identify the roadway improvements necessary to mitigate the direct traffic impacts of the Project, if any.

The anticipated AM and PM peak hour Existing Plus Project (PA-1 and PA-2 Interim) traffic volumes at the key study intersections are presented in ***Figures 6-1A*** through ***6-2B***, respectively. ***Figures 6-3A*** through ***6-4B,*** present the AM and PM peak hour Existing Plus Project (PA-1, PA-2, PA-3 & PA-4) traffic volumes at the key study intersections, respectively. It is noted that the traffic volume forecasts illustrated in *Figure 6-1A* through *Figure 6-4B* reflect the reassignment of neighborhood trips as a result of the turn restrictions at Vineyard Avenue and Plaza Serena with its conversion from signalized access to unsignalized right-turn in/out only access with the realignment of Inland Empire Boulevard.

6.2 Ambient Traffic Growth

Horizon year, background traffic growth estimates have been calculated using an ambient traffic growth factor. The ambient traffic growth factor is intended to include unknown and future related projects in the study area, as well as account for regular growth in traffic volumes due to the development of projects outside the study area. The future growth in traffic volumes has been calculated at two percent (2.0%) per year. Opening year (Year 2017) for PA-1 and PA-2 Interim would result in a total growth of 6.0%. PA-1, PA-2, PA-3 and PA-4 are anticipated to be completed by Year 2020 and would result in a total growth of 12.0%.

6.3 Related Projects Traffic Characteristics

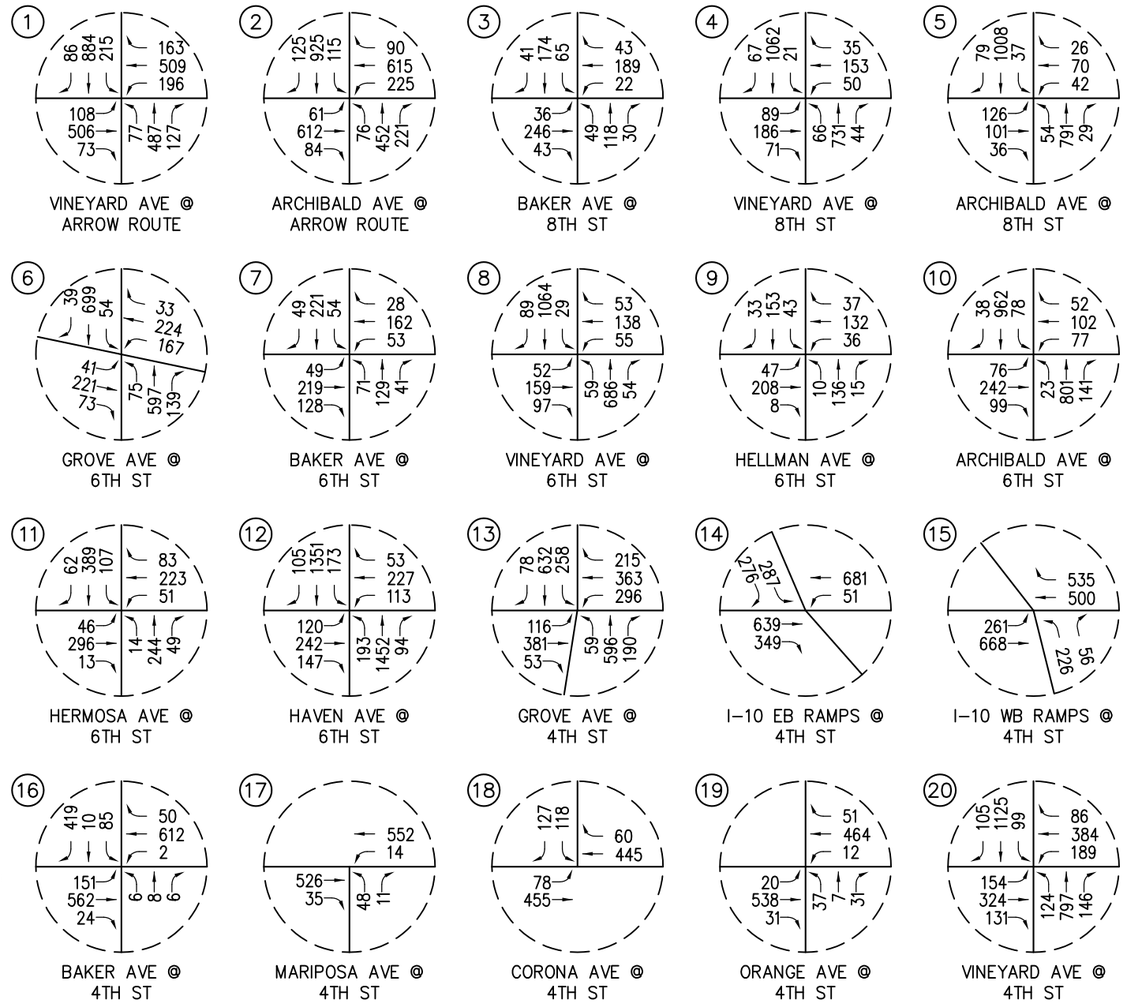
In order to make a realistic estimate of future on-street conditions prior to implementation of the proposed Project, the status of other known development projects (related projects) within the vicinity of the proposed project has been researched at the City of Ontario, City of Rancho Cucamonga, City of Chino, City of Fontana, City of Upland, City of Eastvale, and City of Montclair in August 2014. With this information, the potential impact of the proposed Project can be evaluated within the context of the cumulative impact of all ongoing development.

Based on our research, there are seven (7) related projects located in the City of Ontario, eight (8) related projects located in the City of Rancho Cucamonga, twenty-six (26) related projects located in the City of Chino, fifteen (15) related projects located in the City of Fontana, three (3) related projects located in the City of Upland, seven (7) related projects located in the City of Eastvale, and

two (2) related projects located in the City of Montclair. These sixty-eight (68) related projects have been included as part of the cumulative background setting.

Table 6-1 provides a brief description for each of the sixty-eight (68) related projects. ***Figure 6-5*** graphically illustrates the location of the sixty-eight (68) projects. Although sixty-eight (68) related projects have been identified eleven (11) are within the sphere of influence and had explicit assignments to the key study intersections. The two percent annual growth rate will accommodate any potential added volumes from the remaining fifty-seven (57) related projects.

The AM and PM peak hour traffic volumes associated with the related projects in the Year 2017 and Year 2020 are presented in ***Figures 6-6A*** through ***6-7B***, respectively. ***Table 6-2*** presents the trip generation estimates for the eleven (11) related projects with trips explicitly assigned to key study intersections assessed in this report.



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LINSCOTT LAW & GREENSPAN engineers

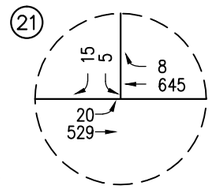
N NO SCALE

KEY

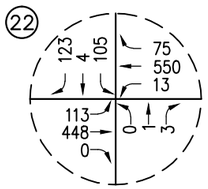
(#) = STUDY INTERSECTION
= PA-1
= PA-2
= PA-3
= PA-4
= PA-5

FIGURE 6-1A

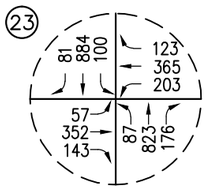
EXISTING PLUS PROJECT PA-1 AND PA-2
(INTERIM) AM PEAK HOUR TRAFFIC VOLUMES
MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



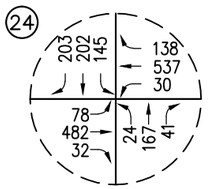
21 N. DEL RIO PL @ 4TH ST



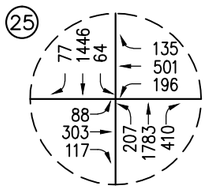
22 HELLMAN AVE @ 4TH ST



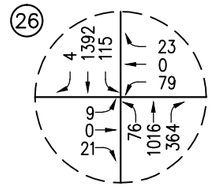
23 ARCHIBALD AVE @ 4TH ST



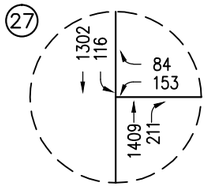
24 TURNER AVE @ 4TH ST



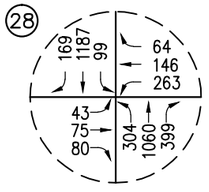
25 HAVEN AVE @ 4TH ST



26 VINEYARD AVE @ JAY ST



27 VINEYARD AVE @ INLAND EMPIRE BLVD



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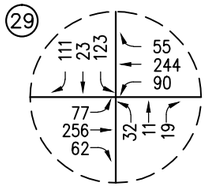

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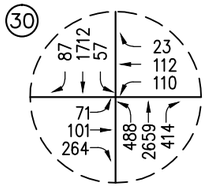
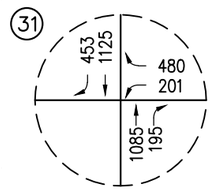
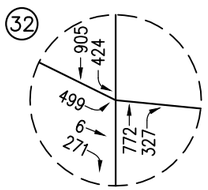


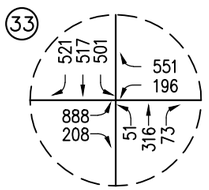
30 HAVEN AVE @ INLAND EMPIRE BLVD



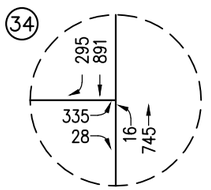
31 VINEYARD AVE @ I-10 WB RAMPS



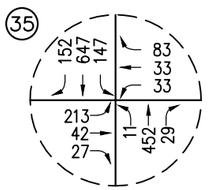
32 VINEYARD AVE @ I-10 EB RAMPS



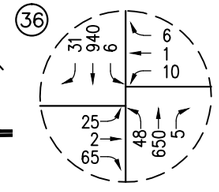
33 ARCHIBALD AVE @ I-10 FWY SINGLE POINT INTERCHANGE



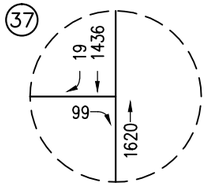
34 VINEYARD AVE @ G STREET



35 VINEYARD AVE @ D STREET

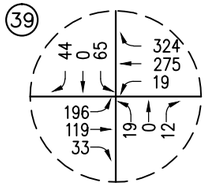


36 VINEYARD AVE @ 7TH ST



37 VINEYARD AVE @ PLAZA SERENA

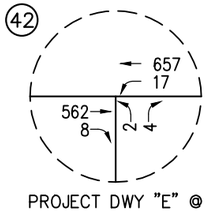
38 PROJECT DWY "A" @ INLAND EMPIRE BLVD



39 DEL RIO PL @ INLAND EMPIRE BLVD

40 PROJECT DWY "C" @ INLAND EMPIRE BLVD

41 PROJECT DWY "D" @ INLAND EMPIRE BLVD



42 PROJECT DWY "E" @ 4TH STREET

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N NO SCALE

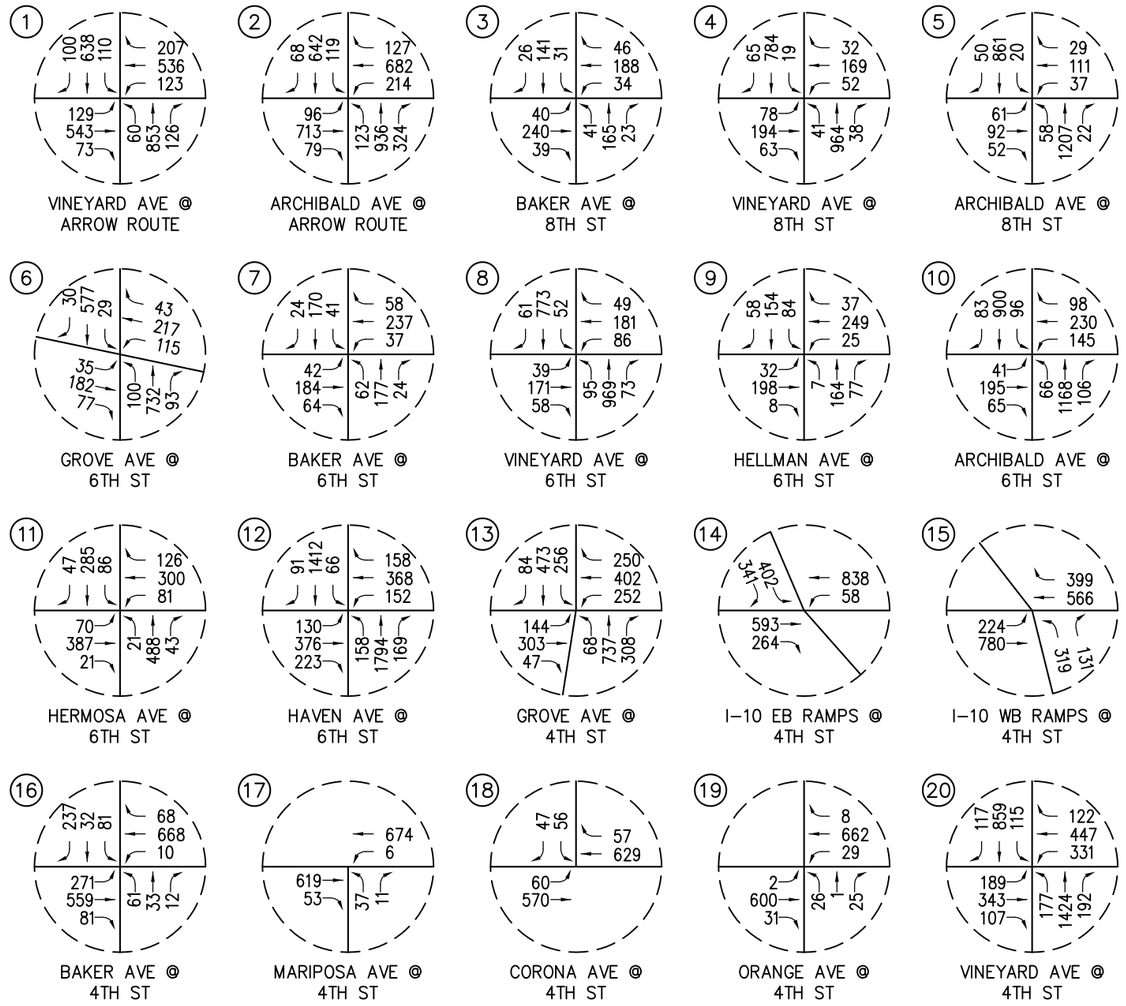
KEY

(#) = STUDY INTERSECTION
= PA-1
= PA-2
= PA-3
= PA-4
= PA-5

FIGURE 6-1B

EXISTING PLUS PROJECT PA-1 AND PA-2 (INTERIM) AM PEAK HOUR TRAFFIC VOLUMES

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



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LINSCOTT LAW & GREENSPAN engineers

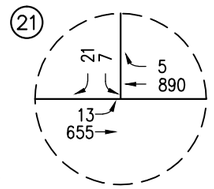
N NO SCALE

KEY

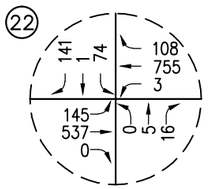
(#) = STUDY INTERSECTION
= PA-1
= PA-2
= PA-3
= PA-4
= PA-5

FIGURE 6-2A

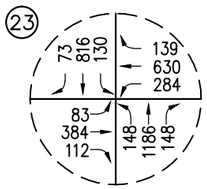
EXISTING PLUS PROJECT PA-1 AND PA-2
(INTERIM) PM PEAK HOUR TRAFFIC VOLUMES
MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



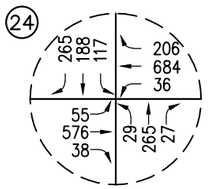
(21) N. DEL RIO PL @ 4TH ST



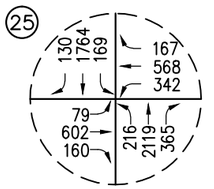
(22) HELLMAN AVE @ 4TH ST



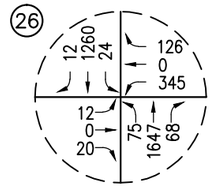
(23) ARCHIBALD AVE @ 4TH ST



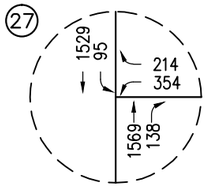
(24) TURNER AVE @ 4TH ST



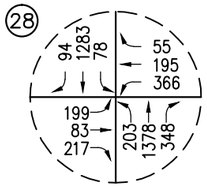
(25) HAVEN AVE @ 4TH ST



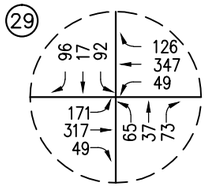
(26) VINEYARD AVE @ JAY ST



(27) VINEYARD AVE @ INLAND EMPIRE BLVD



(28) ARCHIBALD AVE @ INLAND EMPIRE BLVD



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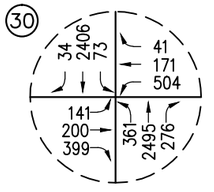
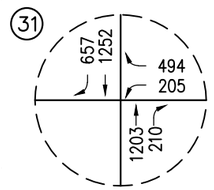
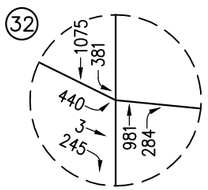


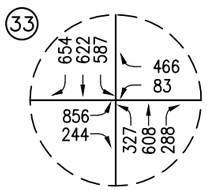
(30) HAVEN AVE @ INLAND EMPIRE BLVD



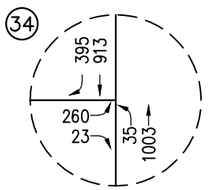
(31) VINEYARD AVE @ I-10 WB RAMPS



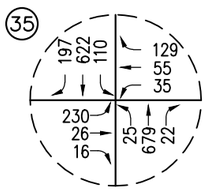
(32) VINEYARD AVE @ I-10 EB RAMPS



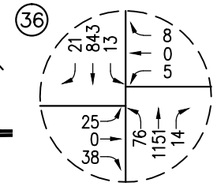
(33) ARCHIBALD AVE @ I-10 FWY SINGLE POINT INTERCHANGE



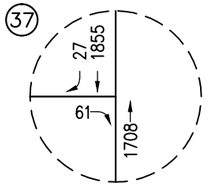
(34) VINEYARD AVE @ G STREET



(35) VINEYARD AVE @ D STREET

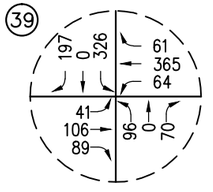


(36) VINEYARD AVE @ 7TH ST



(37) VINEYARD AVE @ PLAZA SERENA

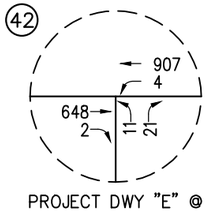
(38) PROJECT DWY "A" @ INLAND EMPIRE BLVD



(39) DEL RIO PL @ INLAND EMPIRE BLVD

(40) PROJECT DWY "C" @ INLAND EMPIRE BLVD

(41) PROJECT DWY "D" @ INLAND EMPIRE BLVD



(42) PROJECT DWY "E" @ 4TH STREET

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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

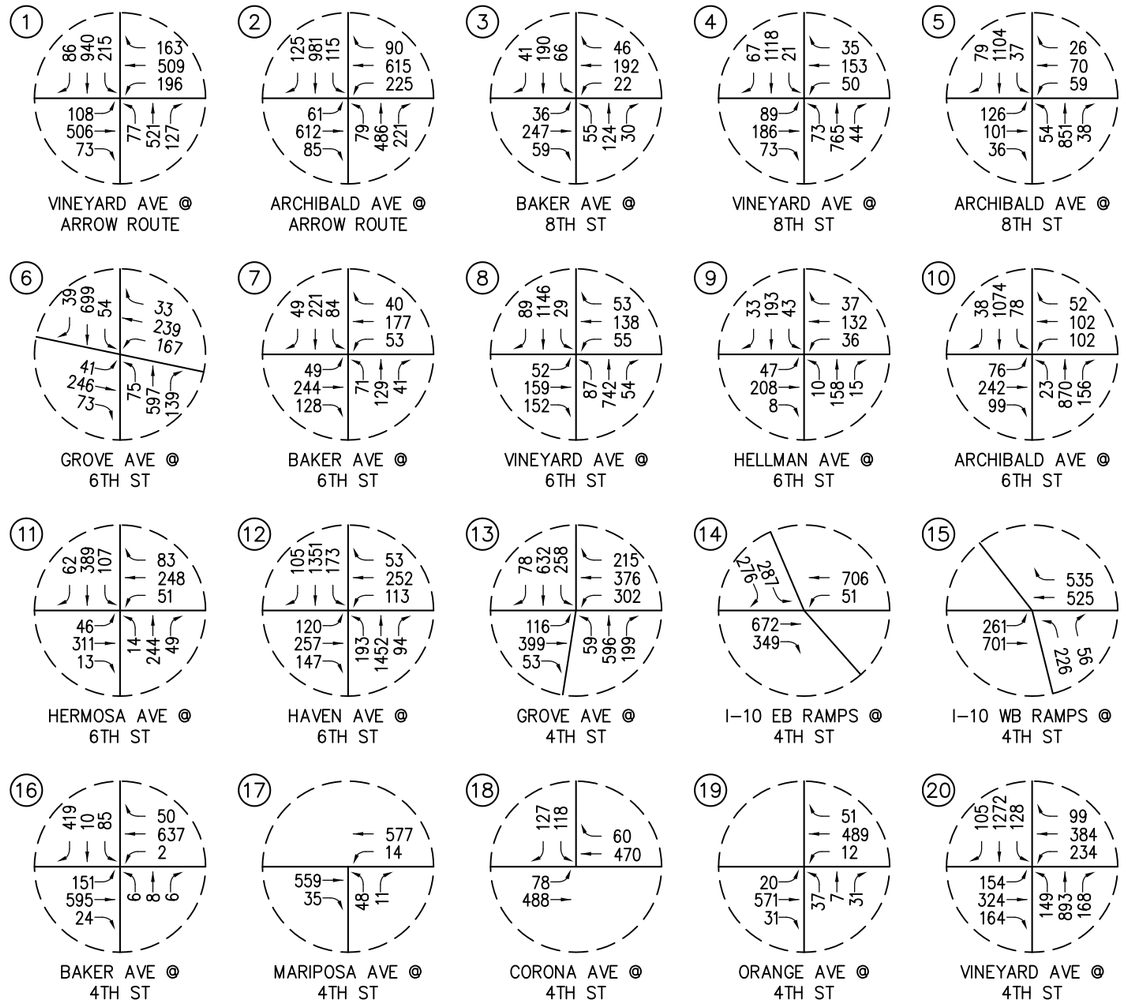
KEY

(#) = STUDY INTERSECTION
= PA-1
= PA-2
= PA-3
= PA-4
= PA-5

FIGURE 6-2B

EXISTING PLUS PROJECT PA-1 AND PA-2 (INTERIM) PM PEAK HOUR TRAFFIC VOLUMES

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



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N NO SCALE

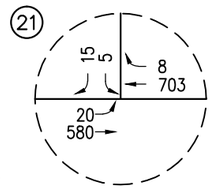
KEY

(#) = STUDY INTERSECTION
= PA-1
= PA-2
= PA-3
= PA-4
= PA-5

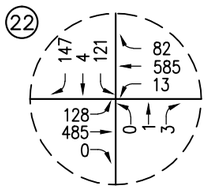
FIGURE 6-3A

EXISTING PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4
AM PEAK HOUR TRAFFIC VOLUMES

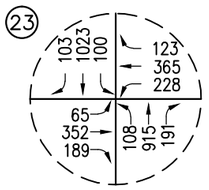
MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



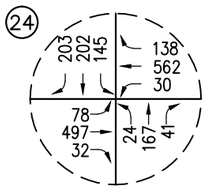
21 N. DEL RIO PL @ 4TH ST



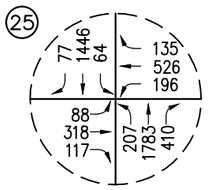
22 HELLMAN AVE @ 4TH ST



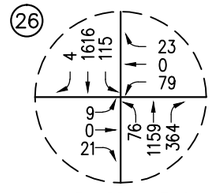
23 ARCHIBALD AVE @ 4TH ST



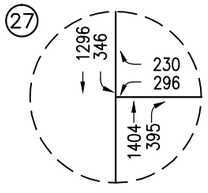
24 TURNER AVE @ 4TH ST



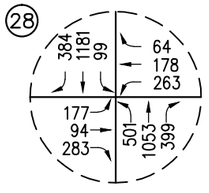
25 HAVEN AVE @ 4TH ST



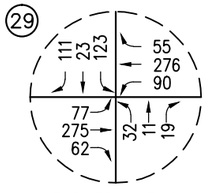
26 VINEYARD AVE @ JAY ST



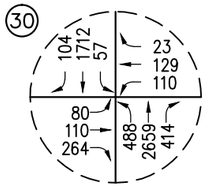
27 VINEYARD AVE @ INLAND EMPIRE BLVD



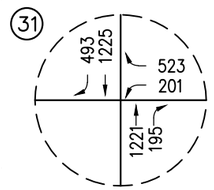
28 ARCHIBALD AVE @ INLAND EMPIRE BLVD



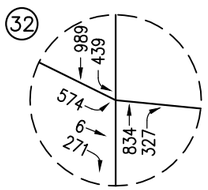
29 TURNER AVE @ INLAND EMPIRE BLVD



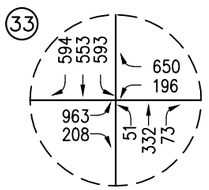
30 HAVEN AVE @ INLAND EMPIRE BLVD



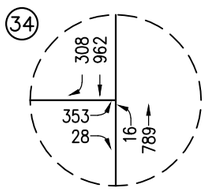
31 VINEYARD AVE @ I-10 WB RAMPS



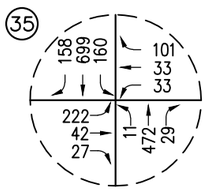
32 VINEYARD AVE @ I-10 EB RAMPS



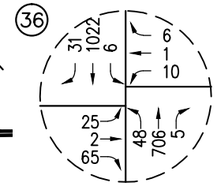
33 ARCHIBALD AVE @ I-10 FWY SINGLE POINT INTERCHANGE



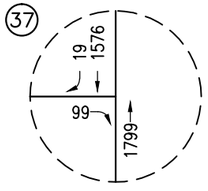
34 VINEYARD AVE @ G STREET



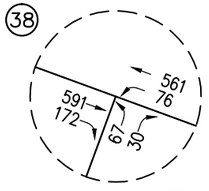
35 VINEYARD AVE @ D STREET



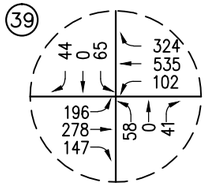
36 VINEYARD AVE @ 7TH ST



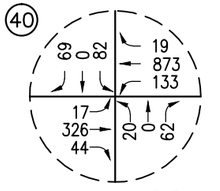
37 VINEYARD AVE @ PLAZA SERENA



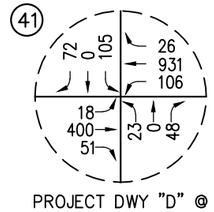
38 PROJECT DWY "A" @ INLAND EMPIRE BLVD



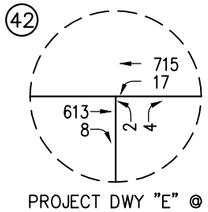
39 DEL RIO PL @ INLAND EMPIRE BLVD



40 PROJECT DWY "C" @ INLAND EMPIRE BLVD



41 PROJECT DWY "D" @ INLAND EMPIRE BLVD



42 PROJECT DWY "E" @ 4TH STREET

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N NO SCALE

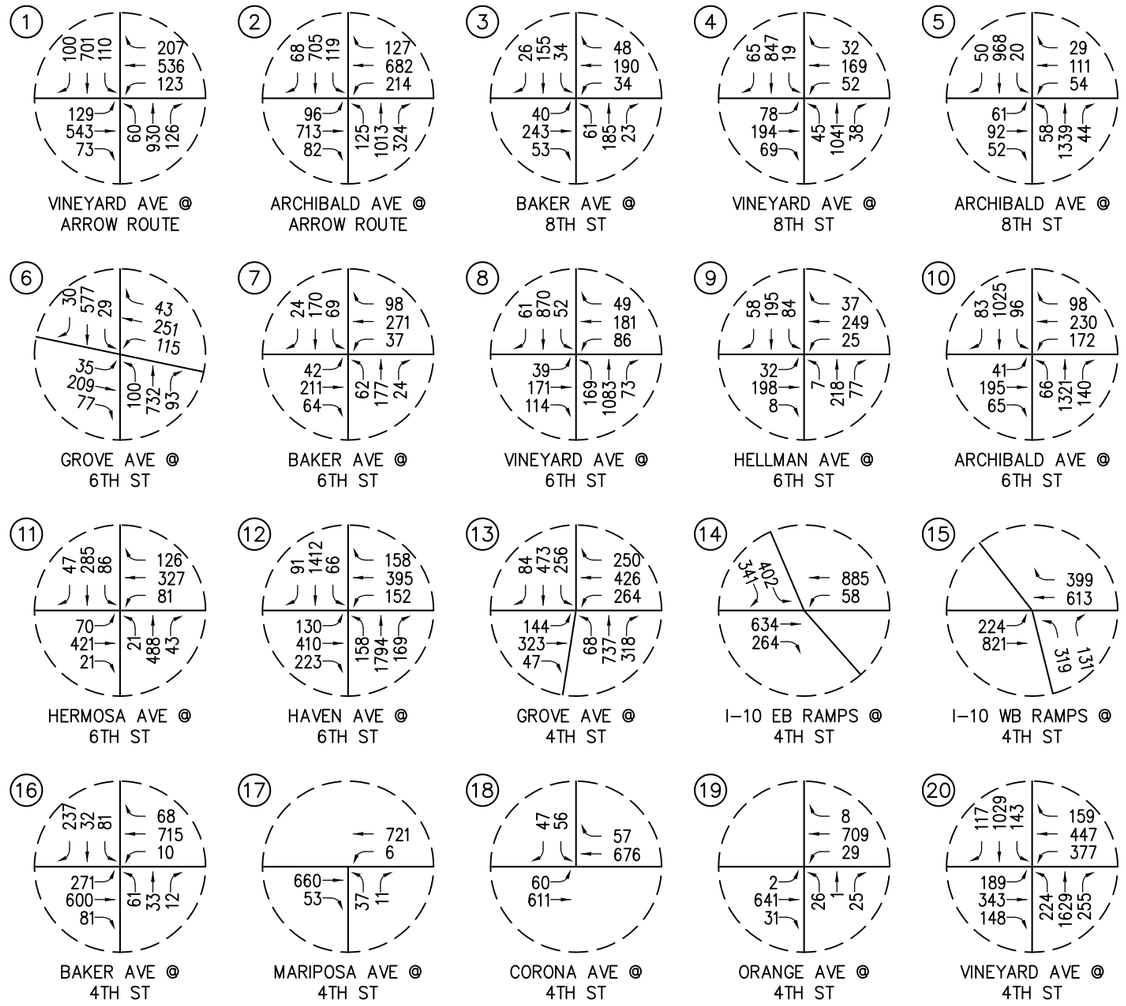
KEY

(#) = STUDY INTERSECTION
= PA-1
= PA-2
= PA-3
= PA-4
= PA-5

FIGURE 6-3B

EXISTING PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4 AM PEAK HOUR TRAFFIC VOLUMES

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



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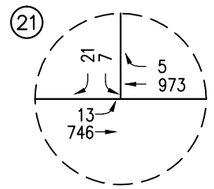
N NO SCALE

KEY

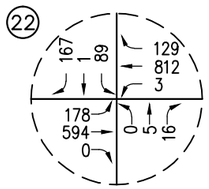
(#) = STUDY INTERSECTION
= PA-1
= PA-2
= PA-3
= PA-4
= PA-5

FIGURE 6-4A

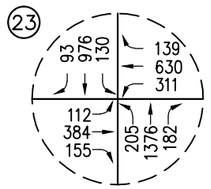
EXISTING PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4
PM PEAK HOUR TRAFFIC VOLUMES
MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



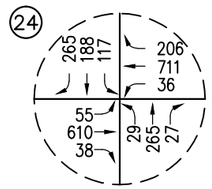
N. DEL RIO PL @ 4TH ST



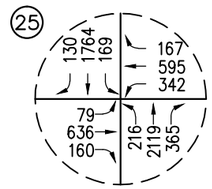
HELLMAN AVE @ 4TH ST



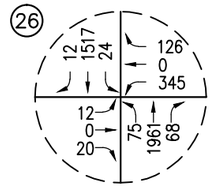
ARCHIBALD AVE @ 4TH ST



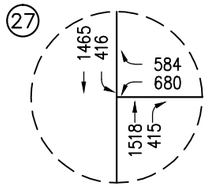
TURNER AVE @ 4TH ST



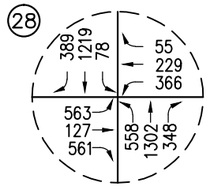
HAVEN AVE @ 4TH ST



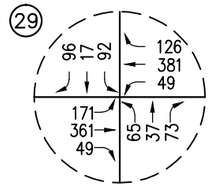
VINEYARD AVE @ JAY ST



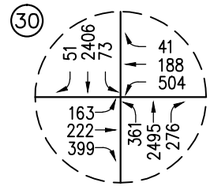
VINEYARD AVE @ INLAND EMPIRE BLVD



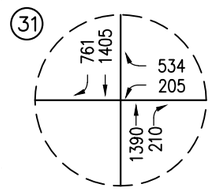
ARCHIBALD AVE @ INLAND EMPIRE BLVD



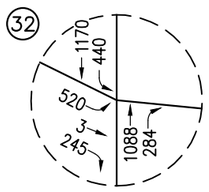
TURNER AVE @ INLAND EMPIRE BLVD



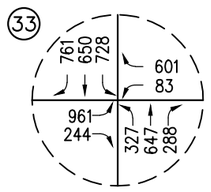
HAVEN AVE @ INLAND EMPIRE BLVD



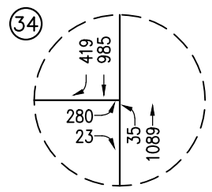
VINEYARD AVE @ I-10 WB RAMPS



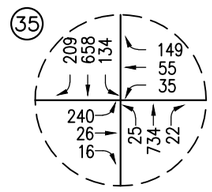
VINEYARD AVE @ I-10 EB RAMPS



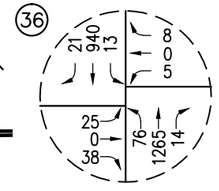
ARCHIBALD AVE @ I-10 FWY SINGLE POINT INTERCHANGE



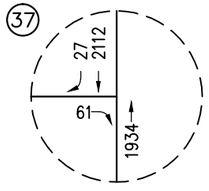
VINEYARD AVE @ G STREET



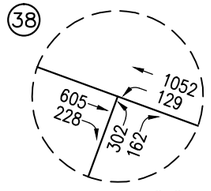
VINEYARD AVE @ D STREET



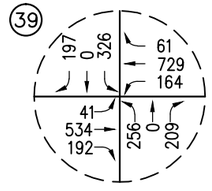
VINEYARD AVE @ 7TH ST



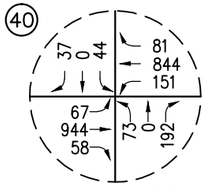
VINEYARD AVE @ PLAZA SERENA



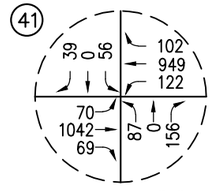
PROJECT DWY "A" @ INLAND EMPIRE BLVD



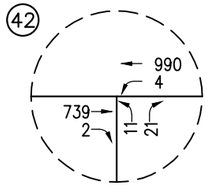
DEL RIO PL @ INLAND EMPIRE BLVD



PROJECT DWY "C" @ INLAND EMPIRE BLVD



PROJECT DWY "D" @ INLAND EMPIRE BLVD



PROJECT DWY "E" @ 4TH STREET

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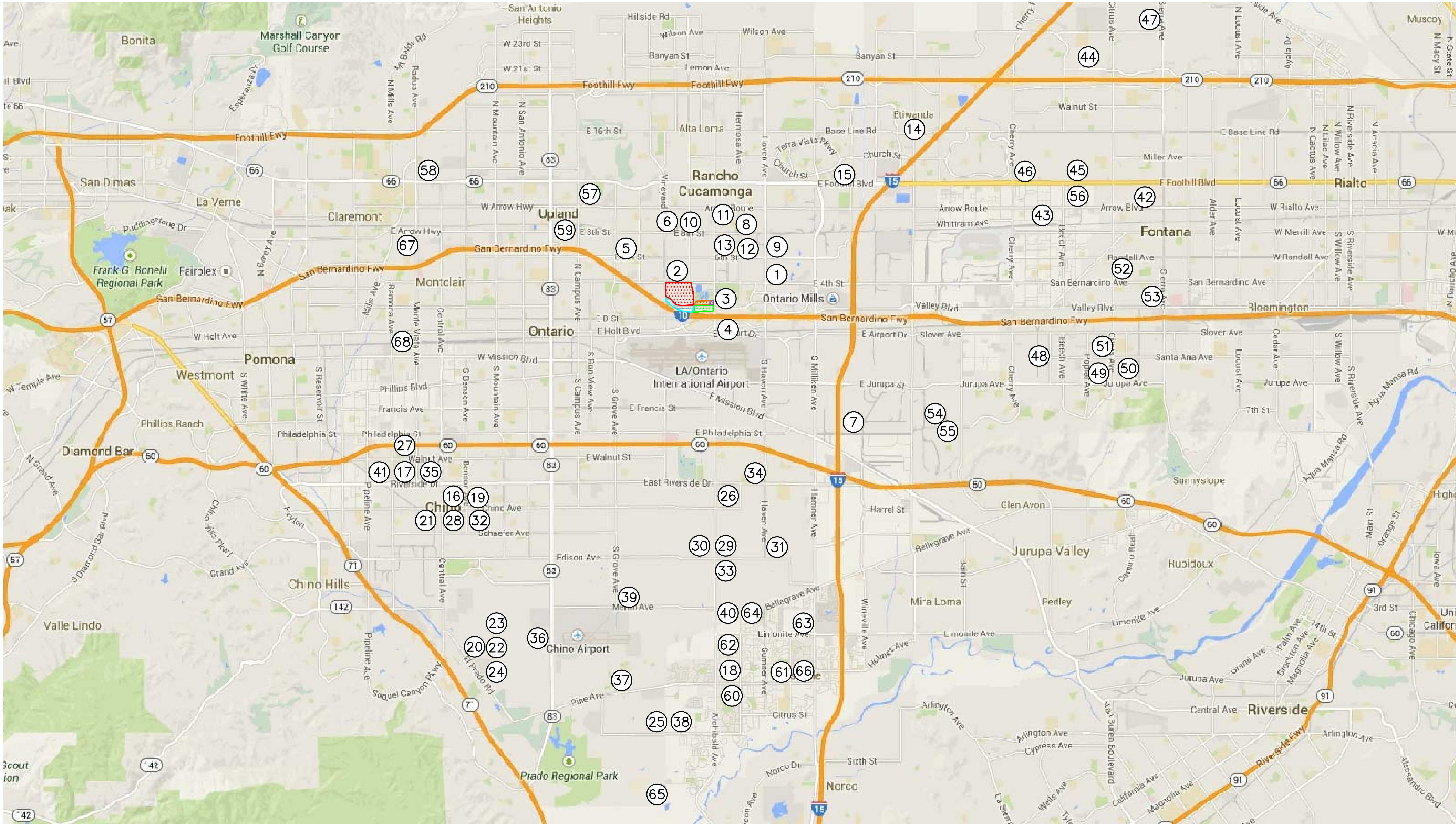
KEY

(#) = STUDY INTERSECTION
= PA-1
= PA-2
= PA-3
= PA-4
= PA-5

FIGURE 6-4B

EXISTING PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4
PM PEAK HOUR TRAFFIC VOLUMES
MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



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KEY

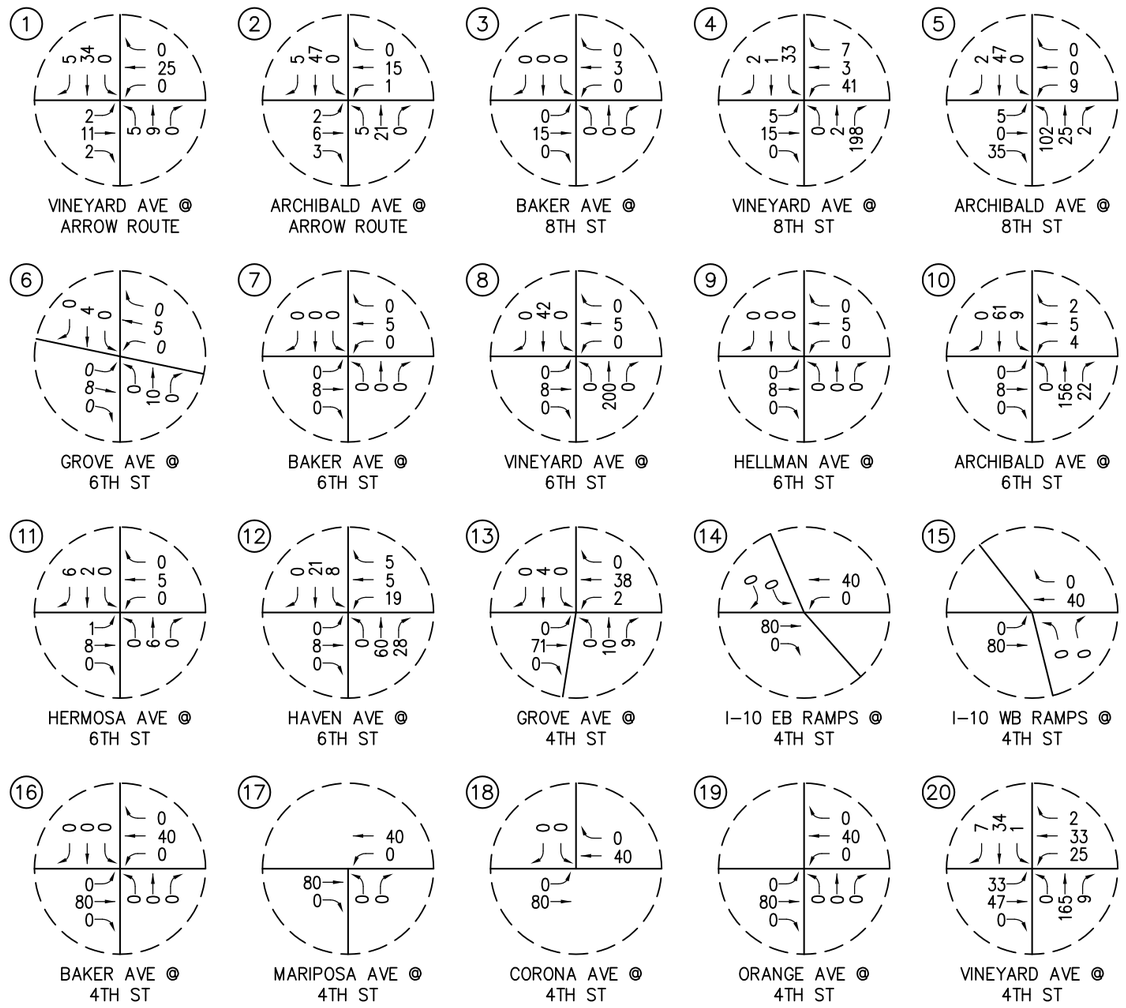
# = RELATED PROJECT LOCATION	= PA-3
= PA-1	= PA-4
= PA-2	= PA-5

*NOTE: REFER TO TABLE 6-1 FOR A FULL LIST OF RELATED PROJECTS.

FIGURE 6-5

LOCATION OF RELATED PROJECTS

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



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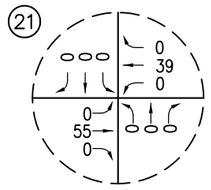
KEY

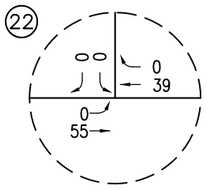
(#) = STUDY INTERSECTION
= PA-1
= PA-2
= PA-3
= PA-4
= PA-5

FIGURE 6-6A

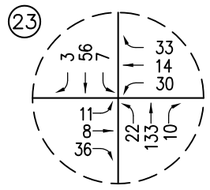
AM PEAK HOUR RELATED PROJECTS TRAFFIC VOLUMES
MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



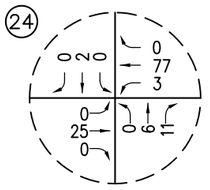
N. DEL RIO PL @ 4TH ST



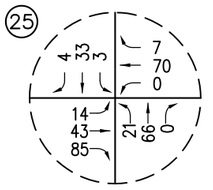
HELLMAN AVE @ 4TH ST



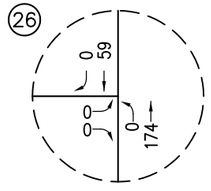
ARCHIBALD AVE @ 4TH ST



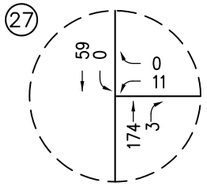
TURNER AVE @ 4TH ST



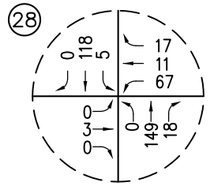
HAVEN AVE @ 4TH ST



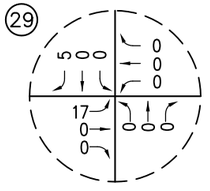
VINEYARD AVE @ JAY ST



VINEYARD AVE @ INLAND EMPIRE BLVD



ARCHIBALD AVE @ INLAND EMPIRE BLVD



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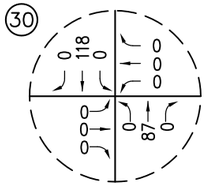
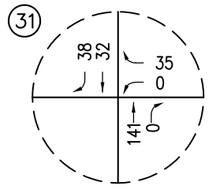
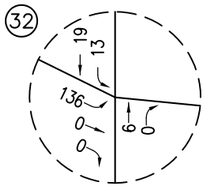


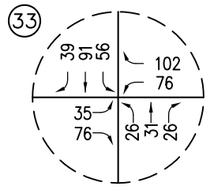
HAVEN AVE @ INLAND EMPIRE BLVD



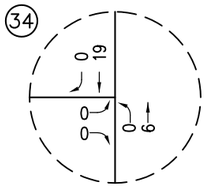
VINEYARD AVE @ I-10 WB RAMPS



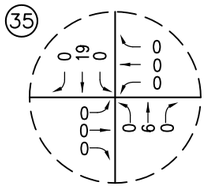
VINEYARD AVE @ I-10 EB RAMPS



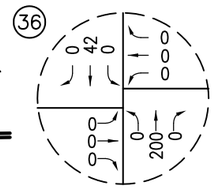
ARCHIBALD AVE @ I-10 FWY SINGLE POINT INTERCHANGE



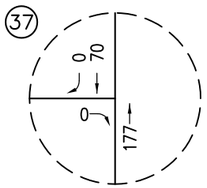
VINEYARD AVE @ G STREET



VINEYARD AVE @ D STREET



VINEYARD AVE @ 7TH ST



VINEYARD AVE @ PLAZA SERENA

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(#) = STUDY INTERSECTION
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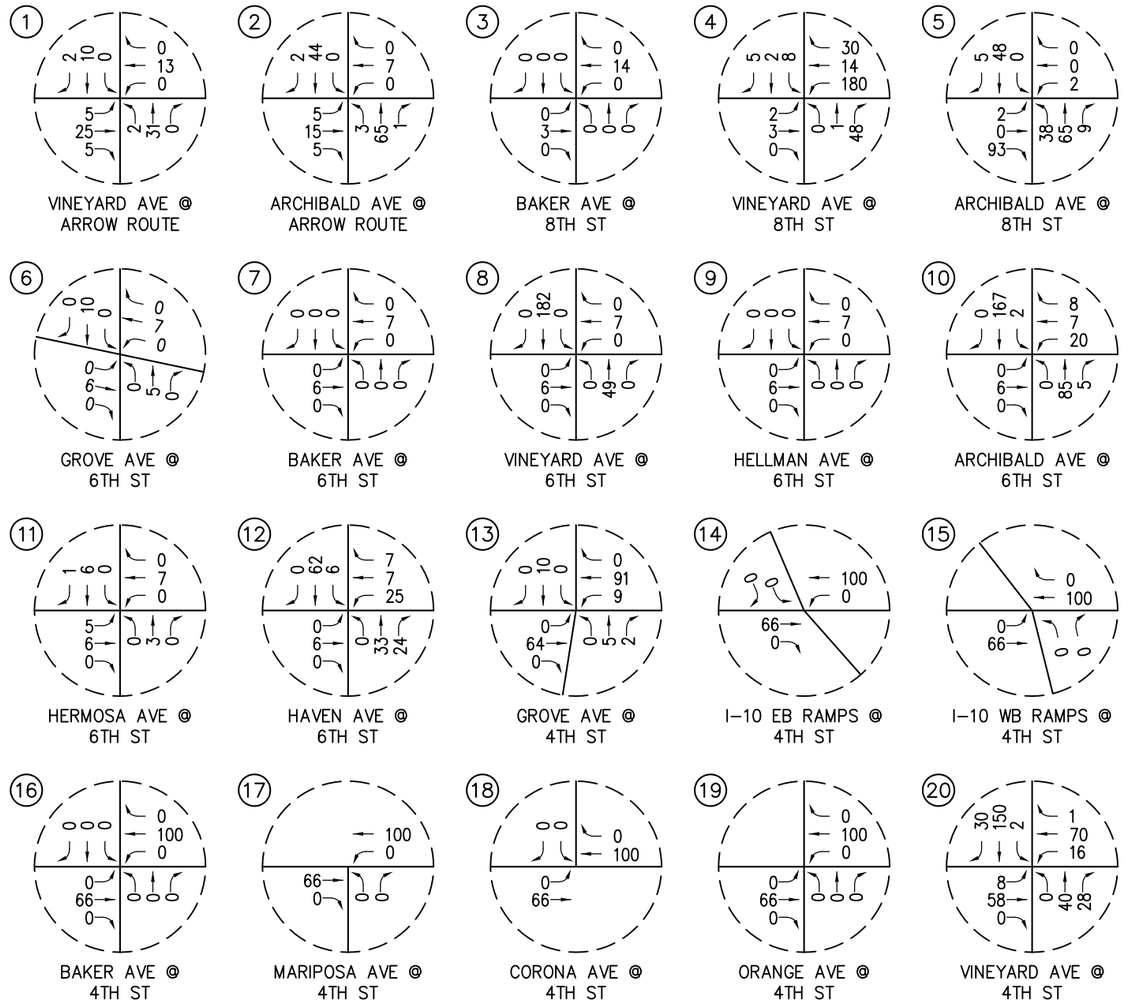
= PA-3
= PA-4
= PA-5

FIGURE 6-6B

AM PEAK HOUR RELATED PROJECTS TRAFFIC VOLUMES
MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



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(#) = STUDY INTERSECTION
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= PA-4
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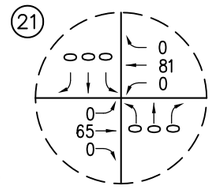
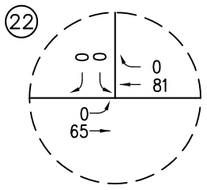
FIGURE 6-7A

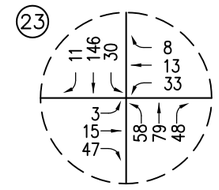
PM PEAK HOUR RELATED PROJECTS TRAFFIC VOLUMES
MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



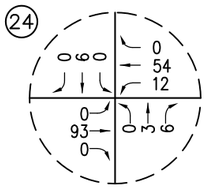
N. DEL RIO PL @ 4TH ST



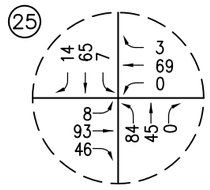
HELLMAN AVE @ 4TH ST



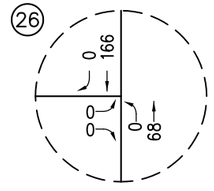
ARCHIBALD AVE @ 4TH ST



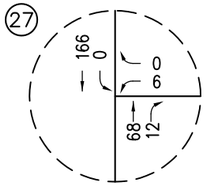
TURNER AVE @ 4TH ST



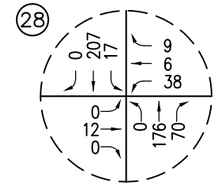
HAVEN AVE @ 4TH ST



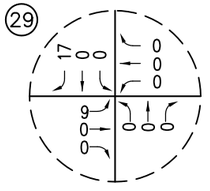
VINEYARD AVE @ JAY ST



VINEYARD AVE @ INLAND EMPIRE BLVD



ARCHIBALD AVE @ INLAND EMPIRE BLVD



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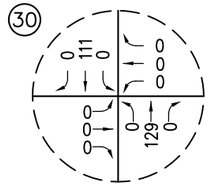

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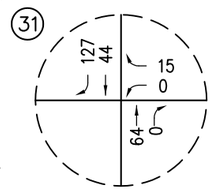
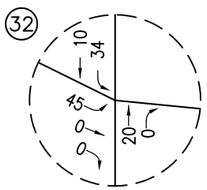
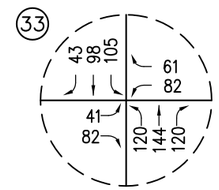


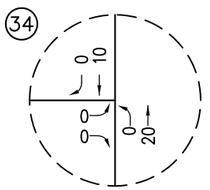
VINEYARD AVE @ I-10 WB RAMPS



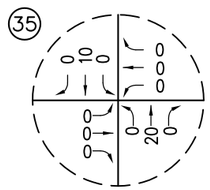
VINEYARD AVE @ I-10 EB RAMPS



ARCHIBALD AVE @ I-10 FWY SINGLE POINT INTERCHANGE



VINEYARD AVE @ G STREET



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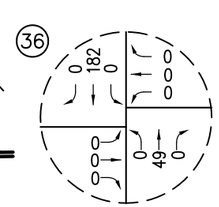
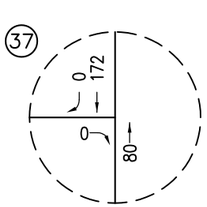


VINEYARD AVE @ 7TH ST



VINEYARD AVE @ PLAZA SERENA

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= PA-2
= PA-3
= PA-4
= PA-5

FIGURE 6-7B

PM PEAK HOUR RELATED PROJECTS TRAFFIC VOLUMES
MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO

TABLE 6-1

LOCATION AND DESCRIPTION OF RELATED PROJECTS[22]

No.	Related Project	Location/Address	Description
City of Ontario Development			
1.	The Picerne Group	Haven Ave at 4th Street	298 DU Apartments
2.	Warmington Residential	2041 E. 4th St	57 DU Single-Family Residential
3.	Parkside	Inland Empire Blvd at Archibald Ave	152 DU Condominiums 100 DU Single-Family Residential
4.	Guasti	Guasti Rd at Archibald Ave	197.820 TSF Shopping Center 114.654 TSF Office Building
5.	Family Practice Medical Office	1435 South Grove Avenue, Unit 8	1.19 Acres Medical Office Building
6.	Ambulance Service	2324 South Vineyard Avenue	Suite within building on 4.69 Acres
7.	Industrial	NE Corner of Philadelphia St and Wineville Ave	910.119 TSF Industrial Building
City of Rancho Cucamonga Development			
8.	Biane Business Park	8th Street at Hermosa Ave	122.304 TSF Industrial Warehouse
9.	Consolidated Consulting	6th Street at Haven Ave	126 Room Hotel 3.0 TSF Office
10.	DDCT 8th & Vineyard LLC	Hellman Ave at 8th Street	904 TSF Industrial
11.	Rancho Tech	9th St at Archibald Ave	16.616 TSF addition to Industrial
12.	Phelan Dev. Company	9212 Hermosa Ave	100 TSF Industrial
13.	Scheu Management Corp.	Archibald Ave at 7th Street	173.340 TSF Industrial
14.	Goodman Rancho SPE, LLC	SW Corner of Arrow Route and Etiwanda Ave	555.664 TSF Industrial Warehouse 1,033.565 TSF Industrial Warehouse
15.	Walmart Stores, Inc.	NE Corner of Foothill Blvd and Mayten Ave	189.411 TSF Retail Building 62.120 TSF Commercial/Office
City of Chino Development			
16.	Eastvale Commerce Center	NW Corner of Bellegrave Ave. and the I-15 Freeway	249.0 TSF Shopping Center, 130 Room Hotel, 3,100.0 TSF High Cube Warehouse, and 610.0 TSF Business Park
17.	Arco Gas Station	SE Corner of Milliken Ave and Riverside Dr.	18 VFP Gas Station with Store and Car Wash, 2.8 TSF Fast-Food without Drive-Thru, 2.1 TSF Fast-Food with Drive-Thru
18.	The Marketplace at Enclave	SW Corner of Archibald Ave. and Schleisman Rd.	1.6 TSF Coffee/Donut Shop 82.671 TSF Shopping Center

[22] Source: City of Ontario, City of Rancho Cucamonga, City of Chino, City of Fontana, City of Upland, City of Eastvale, and City of Montclair Planning Department staff.

TABLE 6-1 (CONTINUED)
LOCATION AND DESCRIPTION OF RELATED PROJECTS [23]

No.	Related Project	Location/Address	Description
19.	The Ranch at Eastvale	SE Corner of Hellman Ave. and Bellegrave Ave.	267.2 TSF Shopping Center, 801.5 TSF General Light Industrial, 1,121 TSF Business Park
20.	The Commons	NE Corner of El Prado Rd. and Kimball Ave.	150.0 DU Shopping Center
21.	Industrial Building	SW Corner of Archibald Ave. and Bellegrave Ave.	738.43 TSF General Light Industrial
22.	The Golden Triangle	SW Corner of Magnolia Ave. and Kimball Ave.	106.7 TSF Shopping Center
23.	Heritage Professional Center	SW Corner of Magnolia Ave. and Kimball Ave.	55 TSF Hospital, 86.952 TSF Medical Office Building, 120 Room Hotel, 38.848 TSF Shopping Center, and 7.2 TSF Restaurant
24.	Higgins Business Park	SW Corner of Magnolia Ave. and Kimball Ave.	338.682 TSF Business Park, 40 TSF Business Park, 10 TSF Specialty Retail, 2 TSF Bank, 3 TSF Fast-Food with Drive-Thru, and 10 VHP Gas Station with Store and Car Wash
25.	Retail/Residential	SE Corner of Hellman Ave. and Chandler St.	122 DU SFDR 124.36 TSF Shopping Center
26.	Countryside	SW Corner of Archibald Ave. and Riverside Dr.	819 DU SFDR
27.	Edenglen	SW Corner of Hamner Ave. and Riverside Dr.	310 DU SFDR, 274 DU Multi-Family Attached, 217.52 TSF Shopping Center, 550 TSF Business Park
28.	Esperanza	NW Corner of Hamner Ave. and Bellegrave Ave.	914 DU SFDR 496 DU SFDR
29.	Grand Park	SE Corner of Archibald Ave. and Edison Ave.	484 DU SFDR 843 DU Multi-Family Attached
30.	Parkside	SW Corner of Archibald Ave. and Edison Ave.	437 DU SFDR, 1,510 DU Multi-Family Attached, and 115 TSF Shopping Center
31.	Rich Haven	NE Corner of Haven Ave. and Edison Ave.	2,372 DU SFDR, 1,524 DU Multi-Family Attached, 115 TSF Shopping Center
32.	Retail/Residential	NE Corner of Archibald Ave. and Bellegrave Ave.	2,865 DU SFDR, 87 TSF Shopping Center

[23] Source: City of Ontario, City of Rancho Cucamonga, City of Chino, City of Fontana, City of Upland, City of Eastvale, and City of Montclair Planning Department staff.

TABLE 6-1 (CONTINUED)
LOCATION AND DESCRIPTION OF RELATED PROJECTS [24]

No.	Related Project	Location/Address	Description
33.	The Avenue	NE Corner of Archibald Ave. and Edison Ave.	2,020 DU SFDR, 586 DU Multi-Family Attached, 250 TSF Shopping Center
34.	West Haven	SW Corner of Haven Ave. and Riverside Dr.	753 DU SFDR, 87 TSF Shopping Center
35.	Tuscana Village	NW Corner of Hamner Ave. and Riverside Dr.	176 DU SFDR, and 26 TSF Shopping Center
36.	Majestic Airport Center	NW Corner of Kimball Ave. and Euclid Ave.	2,890.4 TSF High-Cube Warehouse, 180 TSF Warehousing, 25 TSF Specialty retail, 13 TSF Pharmacy/Drugstore, 8.6 TSF Fast-Food with Drive-Thru
37.	Falloncrest at the Preserve	NW Corner of W Preserve Loop and Pine Ave.	204 DU SFDR, 786 DU Condo/Townhome, 412 DU Apartments, 77.597 TSF Shopping Center, 77.597 General Office
38.	Mill Creek	SW Corner of Hellman Ave. and Chandler St.	1,074 DU SFDR
39.	Chino East Industrial	SE Corner of Grove Ave. and Merrill Ave.	1,593.5 TSF General Light Industrial
40.	Eastvale Shopping Center	SE Corner of Archibald Ave. and Limonite Ave.	192 TSF Free-Standing Discount Superstore, 9.2 TSF Specialty Retail, 7.2 TSF Fast-Food without Drive-Thru, 2 TSF Coffee/Donut Shop, 3.5 TSF Fast-Food with Drive-Thru, and 16 VFP Gas Station with Store and Car Wash
41.	Grainger Site	NE Corner of Hamner Ave. and Cantu- Galleano Ranch Rd.	546 TSF Industrial
City of Fontana Development			
42.	Commercial Retail Center	16697 Arrow Blvd.	1.8 Acres Commercial Retail Buildings
43.	Truck Repair Shop	11123 Banana Ave.	4 Acres Truck Repair Shop
44.	Fontana Sports Park	S/S Sierra Lakes, E/O Knox	27 Acre Sports Park
45.	Department of Motor Vehicles	8026 Hemlock Ave.	24.689 TSF DMV Buildings
46.	Farmer Boys	14505 Foothill Blvd.	21.8 TSF Farmer Boys Restaurant
47.	Industrial	NEC Summit/Sierra	741.325 TSF Industrial Building

[24] Source: City of Ontario, City of Rancho Cucamonga, City of Chino, City of Fontana, City of Upland, City of Eastvale, and City of Montclair Planning Department staff.

TABLE 6-1 (CONTINUED)
LOCATION AND DESCRIPTION OF RELATED PROJECTS [25]

No.	Related Project	Location/Address	Description
48.	Hemlock Business Park	10990 Hemlock Ave.	344.891 TSF Industrial Building
49.	Industrial	15750 Jurupa Ave.	967.2 TSF Industrial Building
50.	Industrial	11092 Oleander Ave.	1,800.0 TSF Industrial Warehousing
51.	Industrial	16005 Santa Ana Ave.	639.473 TSF Industrial Building
52.	Commercial/Industrial	N/S Jurupa between Catawba/Citrus	212.2 TSF Commercial/Industrial
53.	Cardenas Market	16721 Valley Blvd.	30.0 TSF Addition to Existing Market
54.	Industry Avenue Distribution Center	11751 Industry Avenue	245.24 TSF Industrial
55.	Warehouse	NEC of Marlay Avenue and Pacific Avenue	326.945 TSF Warehouse
56.	Sultana Distribution Center	8375 Sultana Avenue	700.712 Distribution Center
City of Upland Development			
57.	Hospital	999 San Bernardino Rd	104 Beds Hospital Addition
58.	Upland Crossing/Harvest	South of Foothill, East of Monte Vista Ave	193 Units Single-Family Residential
59.	Citrus Grove	North of 8th St and East of Sultana	209 Units Residential
City of Eastvale Development			
60.	The Enclave	SWC of Schleisman Rd and Archibald Ave	490 Units SFDR
61.	Copper Sky	SEC of Schleisman RD and Scholar Way	224 Units SFDR
62.	The Trails	NEC of Archibald Ave and 65th St	224 Units SFDR
63.	San Antonio Medical Center	S of Limonite Ave, W of I-15, E of Hamner Ave	69.562 TSF Commercial Retail
64.	Eastvale Business Park	SWC of Limonite Ave and Archibald Ave	33.6 TSF Business Park 10.6 TSF Commercial Retail 694.77 TSF Light Industrial
65.	The Ranch	W of end of 65th Street, E of Hellman Ave	1,546.38 TSF Business Park 196.02 TSF Commercial Retail 2,334.816 TSF Light Industrial
66.	Goodman Commerce Center	NEC of Bellgrave Ave and Hammer Ave	1,507.176 TSF Business Park 1,102.068 TSF Commercial Retail 6,333.624 TSF Light Industrial

[25] Source: City of Ontario, City of Rancho Cucamonga, City of Chino, City of Fontana, City of Upland, City of Eastvale, and City of Montclair Planning Department staff.

TABLE 6-1 (CONTINUED)
LOCATION AND DESCRIPTION OF RELATED PROJECTS [26]

No.	Related Project	Location/Address	Description
City of Montclair Development			
67.	The Paseos at Montclair North	NEC of Monte Vista Ave and Moreno Street	385 Unit Residential
68.	Brooks Street Industrial Building	4545 Brooks Street	130.0 TSF Industrial

[26] Source: City of Ontario, City of Rancho Cucamonga, City of Chino, City of Fontana, City of Upland, City of Eastvale, and City of Montclair Planning Department staff.

TABLE 6-2

RELATED PROJECTS TRAFFIC GENERATION FORECAST[27]

Related Project Description		Daily 2-Way	AM Peak Hour			PM Peak Hour		
			Enter	Exit	Total	Enter	Exit	Total
1.	The Picerne Group	1,982	30	122	152	120	65	185
2.	Warmington Residential	543	11	32	43	36	21	57
3.	Parkside	1,835	30	112	142	116	63	179
4.	Guasti	10,431	302	102	404	327	480	807
8.	Biane Business Park	476	45	17	62	25	47	72
9.	Consolidated Consulting	1,134	50	35	85	43	46	89
10.	DDCT 8th & Vineyard LLC	2,730	330	68	398	80	300	380
11.	Rancho Tech	50	6	1	7	1	6	7
12.	Phelan Dev. Company	302	37	7	44	9	33	42
13.	Scheu Management Corp.	523	63	13	76	15	58	73
57.	Hospital Expansion	1,346	99	38	137	49	99	148
Related Projects Total Trip Generation Potential		**21,352**	**1,003**	**547**	**1,550**	**821**	**1,218**	**2,039**

[27] Unless otherwise noted, Source: *Trip Generation, 9th Edition*, Institute of Transportation Engineers, (ITE) [Washington, D.C. (2012)].

6.4 Year 2035 Traffic Conditions

6.4.1 *Travel Demand Model Methodology*

The Year 2008 (traffic model base year) and Year 2035 (future year) traffic volume forecasts, assuming the Project site as vacant, were obtained through utilization of the San Bernardino Traffic Analysis Model (SBTAM) travel demand model developed by SANBAG. It should be noted that this is the most current model data available.

6.4.2 *Volume Adjustment*

Using the San Bernardino Traffic Analysis Model (SBTAM), projected traffic volumes were developed for each of the study intersections. The first step is to obtain the approach and departure volumes from the model for Year 2008 base year and Year 2035 future conditions for each leg of the analyzed intersections. The next step is to determine the difference between the base year peak hour model volumes and the build-out peak hour model volumes. This "difference" represents the projected growth in traffic on each approach from the base year to the build-out using the SBTAM. This is discussed in detail in the sections below.

6.4.3 *B-turn Methodology*

The base year turning movement counts (traffic counts) for each intersection were converted to approach and departure volumes for each leg of the intersection. Once the base counts are in this format, the difference between the Buildout model and base model are then added to the base year counts for each corresponding approach and departure volume. This step provides the adjusted volumes that will be used to determine the Buildout turning movement volumes. As noted above, the long-term (Year 2035) traffic volumes forecasts were determined through utilization of the San Bernardino Traffic Analysis Model (SBTAM) plots prepared by the San Bernardino Association of Governments (SANBAG) staff. The next process in the forecasting of future turning volumes applies the B-turn methodology. The B-turn methodology is generally described in the *"National Cooperative Highway Research Program Report (NCHRP) 255: Highway Traffic Data for Urbanized Area Project Planning and Design", Chapter 8*. The B-turn method uses the base year turning percentages (from traffic counts) and proceeds through an iterative computational technique to produce a final set of future year turning volumes. The computations involve alternatively balancing the rows (approaches) and the columns (departures) of a turning movement matrix until an acceptable convergence is obtained. Future year link volumes are fixed using this method and the turning movements are adjusted to match. The results must be checked for reasonableness, and manual adjustments are sometimes necessary. The Post Processing methodology is consistent with that which is published in *Appendix H of the San Bernardino County CMP.*

Copies of the traffic model post-processing worksheets and a detailed description of the traffic volume derivation for Year 2035 are contained in ***Appendix E***. Please note that the post-processing methodology utilized in this report is consistent with SCAG/SANBAG requirements.

6.4.4 *Volume Development Methodology*

The steps summarized below detail the methodology utilized to forecast the Year 2035 volumes:

- Obtain Base Year (Year 2008) traffic model plots for Autos and Trucks.
- Obtain Future Year (Year 2035 Buildout Without Project [assuming site as vacant]) traffic model plots for Autos and Trucks.
- Estimate the model growth between Base Year (Year 2008) and Future Year (Year 2035 Buildout Without Project) using the model plots. This model growth is for 27 years.
- Estimate the model growth between Existing Year (Year 2014) and Future Year (Year 2035 Buildout Without Project) for 21 years (Year 2035 - Year 2014) by multiplying by a factor of 0.78 (21/27).
- Convert the existing ground truck classification turning movement traffic counts (Year 2014) to Passenger Car Equivalents (PCEs) using the PCE factors contained in the San Bernardino CMP.
- Convert the PCE existing ground turning movement traffic counts (Year 2014) to approach and departure link volumes.
- Add the PCE existing ground turning movement traffic counts (Year 2014) approach and departure link volumes to the estimated model growth over a 21-year period (Year 2035 - Year 2014).
- Post-process the Future Year (Year 2035 Buildout Without Project) approach and departure link volumes utilizing the B-Turn methodology described in *Section 6.4.3* to estimate the Year 2035 Without Project (assuming site as vacant) turning movement traffic volumes.
- Obtain Select-Zone traffic model plots for Year 2035 General Plan Buildout "No Project" TOP traffic conditions. Determine a refined trip distribution pattern using these Select-Zone traffic model plots.
- Obtain Select-Zone traffic model plots for Year 2035 "Proposed Project" traffic conditions. Determine a refined trip distribution pattern using these Select-Zone traffic model plots.
- Assign the Year 2035 General Plan Buildout "No Project" TOP traffic volumes using the trip distribution obtained from the Year 2035 General Plan Buildout "No Project" TOP Select-Zone traffic model plots and the TOP trip generation, which was estimated based on applicable ITE trip generation rates and adjusted accordingly for pass-by and internal capture, to obtain the Year 2035 General Plan Buildout "No Project" TOP only traffic volumes.
- Assign the Year 2035 "Proposed Project" traffic volumes using the distribution obtained from the Year 2035 "Proposed Project" Select-Zone traffic model plots and the "Proposed Project" trip generation to obtain the Year 2035 "Proposed Project" only traffic volumes.
- Superimpose the Year 2035 General Plan Buildout "No Project" TOP only traffic volumes on to the Year 2035 Without Project (assuming site as vacant) traffic volumes to obtain the

Year 2035 General Plan Buildout Without Project (With TOP) turning movement traffic volumes.

- Superimpose the Year 2035 "Proposed Project" only traffic volumes on to the Year 2035 Without Project (assuming site as vacant) traffic volumes to obtain the Year 2035 With Project turning movement traffic volumes.

The long-term volume development and post-processing methodology, developed in collaboration with the City of Ontario, is illustrated in the flowchart provided on the following page.

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6.5 Future Network

6.5.1 *Neighborhood Community*

As mentioned earlier in this report, the realignment of Inland Empire Boulevard to the north is proposed as part of the Project. This realignment results in shifts in driving patterns within the neighborhood community just west of the project site, generally located west of Vineyard Avenue and south of 4th Street. This realignment results in the conversion of Plaza Serena from full signalized access to unsignalized right-turn in/out only access (left-turn in/out movements will be prohibited under Project conditions). As such, residents/motorists entering and exiting the residential community would be required to utilize other entry and exit points along 4th Street and Vineyard Avenue. 4th Street currently has and will continue to have three full access intersections at Mariposa Avenue, Orange Avenue and Sacramento Avenue. Along Vineyard Avenue there are three access points, of which, two are will be full access (Jay Street and Rosewood Court) and one will be right-turn in/out only (Plaza Serena). Due to the multiple entries and exits ways to the residential community along with the extensive internal residential network, vehicular access to and from this community is expected to be adequate and can be accommodated with the proposed realignment of Inland Empire Boulevard to the north.

6.5.2 *Local Network Changes*

The shifting of Inland Empire Boulevard to the north along with the proposed driveway improvements (i.e. signalization, lane improvements, etc.) is assumed for the Existing plus Project (PA-1 and PA-2 Interim), Year 2017 Plus Project (PA-1 and PA-2 Interim), Year 2020 Plus Project (PA-1, PA-2, PA-3 and PA-4) and Year 2035 General Plan Buildout "No Project" TOP and Year 2035 General Plan Buildout Plus Project. Further, based on information provided by the City of Ontario, the intersection of Baker Street at 6th Street is programmed for a future traffic signal in the City's Capital Improvement Program, and therefore is assumed to be signalized under Year 2020 and Year 2035 traffic conditions.

6.5.3 *Regional Improvements*

There are extensive regional improvements along the I-10 corridor as well as the Gold Line Extension that may enhance vehicle flow and/or additional modes of travel within the area. As a part of the I-10 Corridor Project, the I-10 Freeway could be improved to add an additional HOV/HOT lane along the I-10 between Ford Street and Garey Avenue. As part of the Nexus Study, the I-10/Vineyard Interchange project and the I-10/Grove Interchange project are expected to be completed by Year 2035 along with the demolition/removal of the I-10 Freeway/4th Street Interchange. These network adjustments are included as part of the Year 2035 traffic conditions.

The Phase 1 of the Metro Gold Line extension will extend the line from Pasadena to Azusa and construction will be completed in 2015. Phase 2 will run from Azusa to Montclair and has entered the Environmental Phase with an unknown construction completion date. A final proposed phase would connect Montclair to the Ontario International Airport. This final phase is still in discussion.

There are currently three alternatives proposed for the I-10 Corridor Project that are under review. The first is the No Build Alternative, in which the existing lane configuration would be maintained.

The High Occupancy Vehicle (HOV) Alternative includes extending the existing HOV lane 25 miles from Haven Avenue to Ford Street. Modifications would be made to auxiliary lanes and inside and outside shoulders. A total of 57 existing bridges and 102 ramp facilities would be modified and additional right-of-way would be required.

The third alternative is the Express Lanes Alternative, which would add two Express Lanes from 2 miles west of the San Bernardino/Los Angeles County line to Ford Street, a total distance of 35 miles. Restriping of the existing HOV lane into transitional lanes would begin near Garey Avenue and continue east for 2 miles. An Express Lane would be added in each direction at the county line. Two Express Lanes in each direction would be added from 0.2 miles west of Haven Avenue to the I-10/SR-210 interchange. A single Express Lane would be added in each direction from SR-210 to Ford Street. This alternative would require modifications of 81 existing bridges and 140 ramp facilities, as well as additional right-of-way. The environmental assessment, including the technical studies, is expected to be completed by August 2015.

6.6 Year 2017, Year 2020 and Year 2035 Traffic Volumes

6.6.1 *Year 2017 Traffic Volumes*

Figures 6-8A through ***6-9B*** present the AM and PM peak hour cumulative traffic volumes (existing traffic + ambient growth + related projects) at the key study intersections for the Year 2017, respectively. ***Figures 6-10A*** through ***6-11B*** illustrate the Year 2017 forecast AM and PM peak hour traffic volumes, with the inclusion of the trips generated by PA-1 and 86,000 SF of retail space within PA-2 of the proposed Project, respectively. It is noted that the traffic volume forecasts illustrated in *Figure 6-10A* through *Figure 6-11B* reflect the reassignment of neighborhood trips as a result of the turn restrictions at Vineyard Avenue and Plaza Serena with its conversion from signalized access to unsignalized right-turn in/out only access with the realignment of Inland Empire Boulevard.

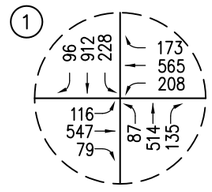
6.6.2 *Year 2020 Traffic Volumes*

Figures 6-12A through ***6-13B*** present the AM and PM peak hour cumulative traffic volumes (existing traffic + ambient growth + related projects) at the key study intersections for the Year 2020, respectively. ***Figures 6-14A*** through ***6-15B*** illustrate the Year 2020 forecast AM and PM peak hour traffic volumes, with the inclusion of the trips generated by the proposed Project (PA-1, PA-2, PA-3 & PA-4), respectively. It is noted that the traffic volume forecasts illustrated in *Figure 6-14A* through *Figure 6-15B* reflect the reassignment of neighborhood trips as a result of the turn restrictions at Vineyard Avenue and Plaza Serena with its conversion from signalized access to unsignalized right-turn in/out only access with the realignment of Inland Empire Boulevard.

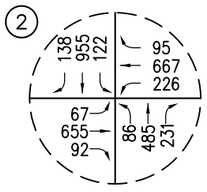
6.6.3 *Year 2035 Traffic Volumes*

Figures 6-16A through ***6-17B*** present the Year 2035 AM and PM peak hour "No Project" traffic volumes at the key study intersections, respectively. The traffic volumes shown in these figures represent a condition (No Project), which assumes that the development would revert back to the General Plan placeholder identified in The Ontario Plan (TOP).

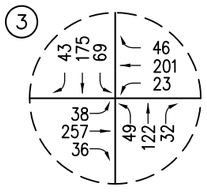
Figures 6-18A through ***6-19B*** illustrate the Year 2035 forecast AM and PM peak hour traffic volumes, with the inclusion of the trips generated by the proposed Project (PA-1, PA-2, PA-3 & PA-4), respectively. It is noted that the traffic volume forecasts illustrated in *Figure 6-16A* through *Figure 6-19B* reflect the reassignment of neighborhood trips as a result of the turn restrictions at Vineyard Avenue and Plaza Serena with its conversion from signalized access to unsignalized right-turn in/out only access with the realignment of Inland Empire Boulevard as currently envisioned in the City's Master Plan of Streets and Highways. Relative to regional improvements, the I-10/Vineyard Interchange project and the I-10/Grove Interchange project, plus the demolition/removal of the I-10 Freeway/4th Street Interchange was assumed in both Year 2035 General Plan Buildout "No Project" TOP conditions and the Year 2035 General Plan Buildout Plus Project conditions.



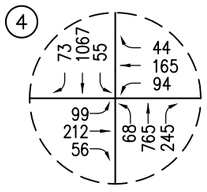
VINEYARD AVE @
ARROW ROUTE



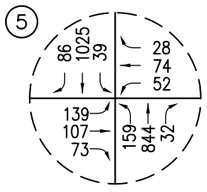
ARCHIBALD AVE @
ARROW ROUTE



BAKER AVE @
8TH ST



VINEYARD AVE @
8TH ST



ARCHIBALD AVE @
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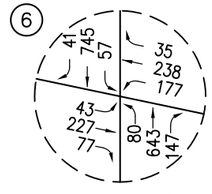
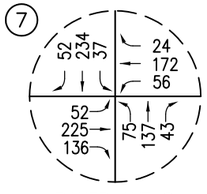


GROVE AVE @
6TH ST



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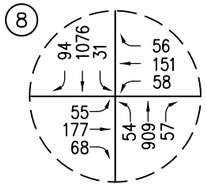
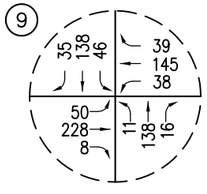
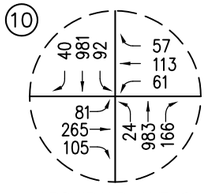


VINEYARD AVE @
6TH ST



HELLMAN AVE @
6TH ST



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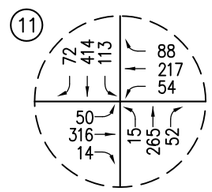

HERMOSA AVE @
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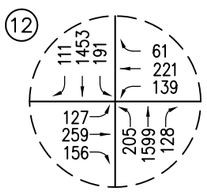
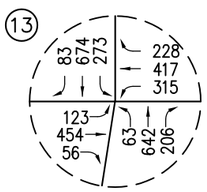
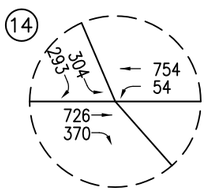


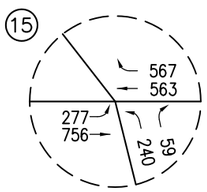
HAVEN AVE @
6TH ST



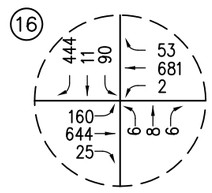
GROVE AVE @
4TH ST



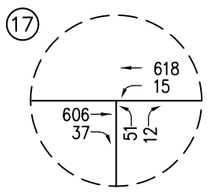
I-10 EB RAMPS @
4TH ST



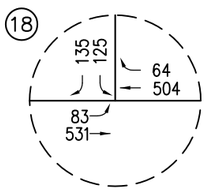
I-10 WB RAMPS @
4TH ST



BAKER AVE @
4TH ST



MARIPOSA AVE @
4TH ST



CORONA AVE @
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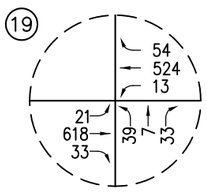
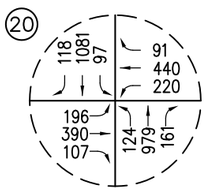


ORANGE AVE @
4TH ST



VINEYARD AVE @
4TH ST

LINSCOTT LAW & GREENSPAN engineers

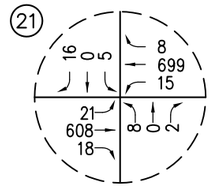
N NO SCALE

KEY

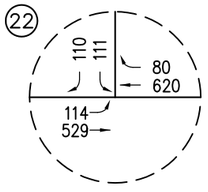
(#) = STUDY INTERSECTION
= PA-1
= PA-2
= PA-3
= PA-4
= PA-5

FIGURE 6-8A

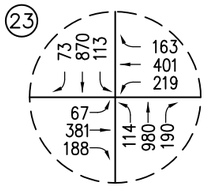
YEAR 2017 CUMULATIVE AM PEAK HOUR TRAFFIC VOLUMES
MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



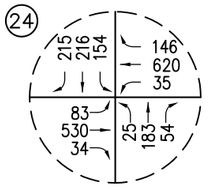
N. DEL RIO PL @ 4TH ST



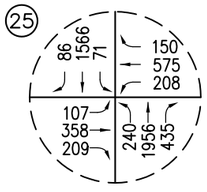
HELLMAN AVE @ 4TH ST



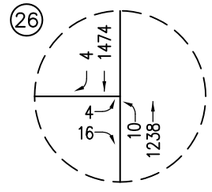
ARCHIBALD AVE @ 4TH ST



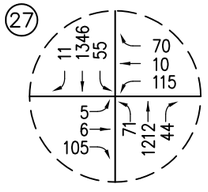
TURNER AVE @ 4TH ST



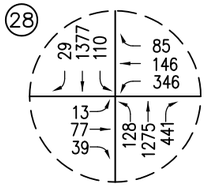
HAVEN AVE @ 4TH ST



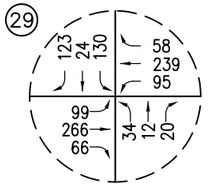
VINEYARD AVE @ JAY ST



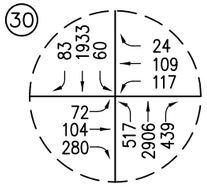
VINEYARD AVE @ INLAND EMPIRE BLVD



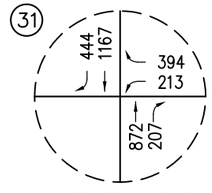
ARCHIBALD AVE @ INLAND EMPIRE BLVD



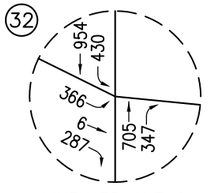
TURNER AVE @ INLAND EMPIRE BLVD



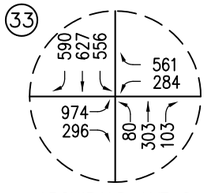
HAVEN AVE @ INLAND EMPIRE BLVD



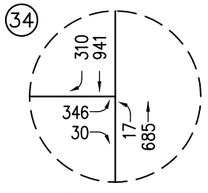
VINEYARD AVE @ I-10 WB RAMPS



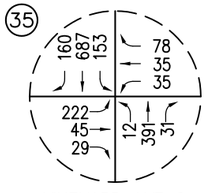
VINEYARD AVE @ I-10 EB RAMPS



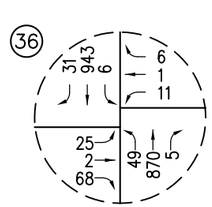
ARCHIBALD AVE @ I-10 FWY SINGLE POINT INTERCHANGE



VINEYARD AVE @ G STREET



VINEYARD AVE @ D STREET



VINEYARD AVE @ 7TH ST

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

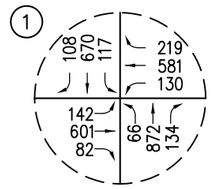
KEY

- (#) = STUDY INTERSECTION
- = PA-1
- = PA-2
- = PA-3
- = PA-4
- = PA-5

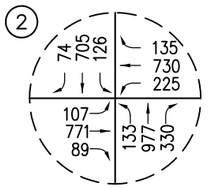
FIGURE 6-8B

YEAR 2017 CUMULATIVE AM PEAK HOUR TRAFFIC VOLUMES

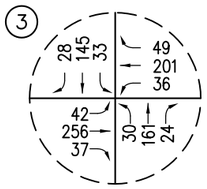
MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



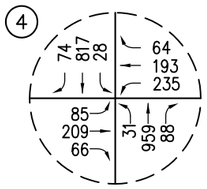
VINEYARD AVE @ ARROW ROUTE



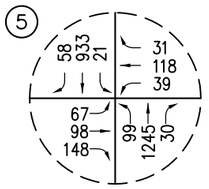
ARCHIBALD AVE @ ARROW ROUTE



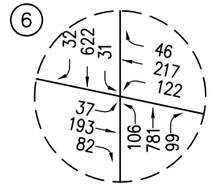
BAKER AVE @ 8TH ST



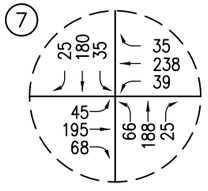
VINEYARD AVE @ 8TH ST



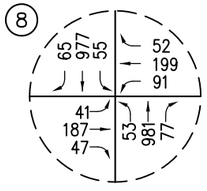
ARCHIBALD AVE @ 8TH ST



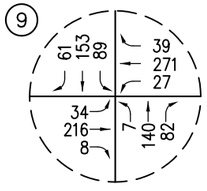
GROVE AVE @ 6TH ST



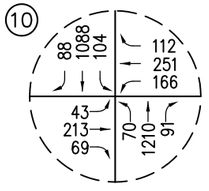
BAKER AVE @ 6TH ST



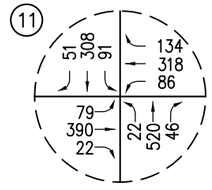
VINEYARD AVE @ 6TH ST



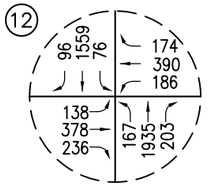
HELLMAN AVE @ 6TH ST



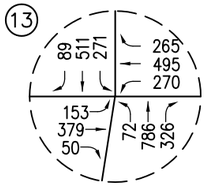
ARCHIBALD AVE @ 6TH ST



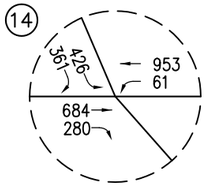
HERMOSA AVE @ 6TH ST



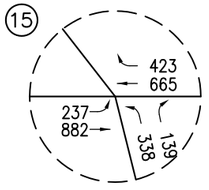
HAVEN AVE @ 6TH ST



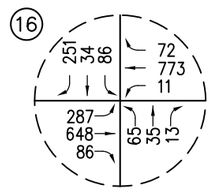
GROVE AVE @ 4TH ST



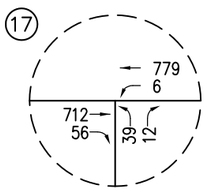
I-10 EB RAMPS @ 4TH ST



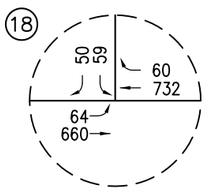
I-10 WB RAMPS @ 4TH ST



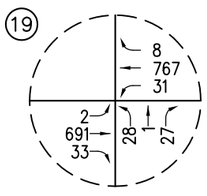
BAKER AVE @ 4TH ST



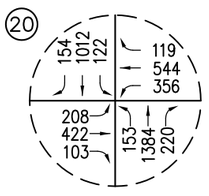
MARIPOSA AVE @ 4TH ST



CORONA AVE @ 4TH ST



ORANGE AVE @ 4TH ST



VINEYARD AVE @ 4TH ST

LINSCOTT LAW & GREENSPAN engineers

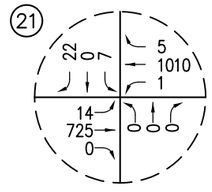
N NO SCALE

KEY

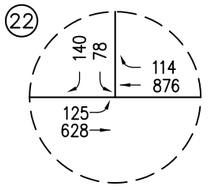
(#) = STUDY INTERSECTION
= PA-1
= PA-2
= PA-3
= PA-4
= PA-5

FIGURE 6-9A

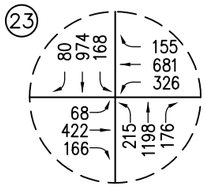
YEAR 2017 CUMULATIVE PM PEAK HOUR TRAFFIC VOLUMES
MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



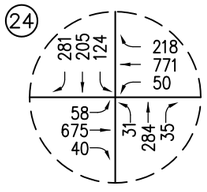
N. DEL RIO PL @ 4TH ST



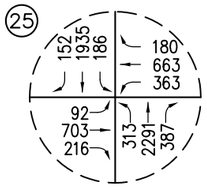
HELLMAN AVE @ 4TH ST



ARCHIBALD AVE @ 4TH ST



TURNER AVE @ 4TH ST



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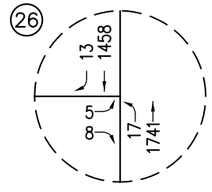
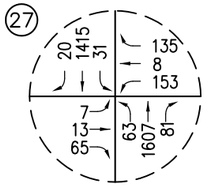
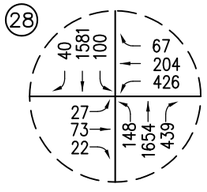


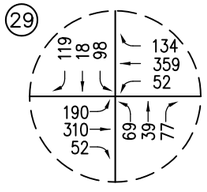
VINEYARD AVE @ JAY ST



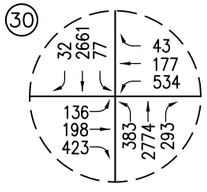
VINEYARD AVE @ INLAND EMPIRE BLVD



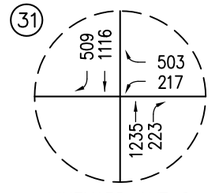
ARCHIBALD AVE @ INLAND EMPIRE BLVD



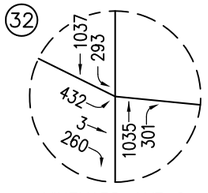
TURNER AVE @ INLAND EMPIRE BLVD



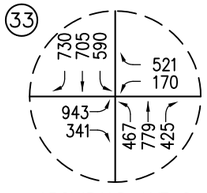
HAVEN AVE @ INLAND EMPIRE BLVD



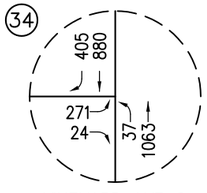
VINEYARD AVE @ I-10 WB RAMPS



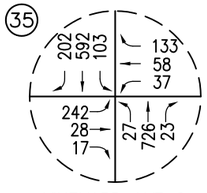
VINEYARD AVE @ I-10 EB RAMPS



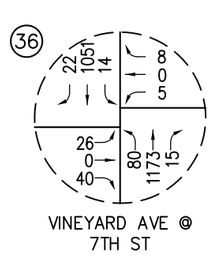
ARCHIBALD AVE @ I-10 FWY SINGLE POINT INTERCHANGE



VINEYARD AVE @ G STREET



VINEYARD AVE @ D STREET



VINEYARD AVE @ 7TH ST

LINSCOTT LAW & GREENSPAN engineers

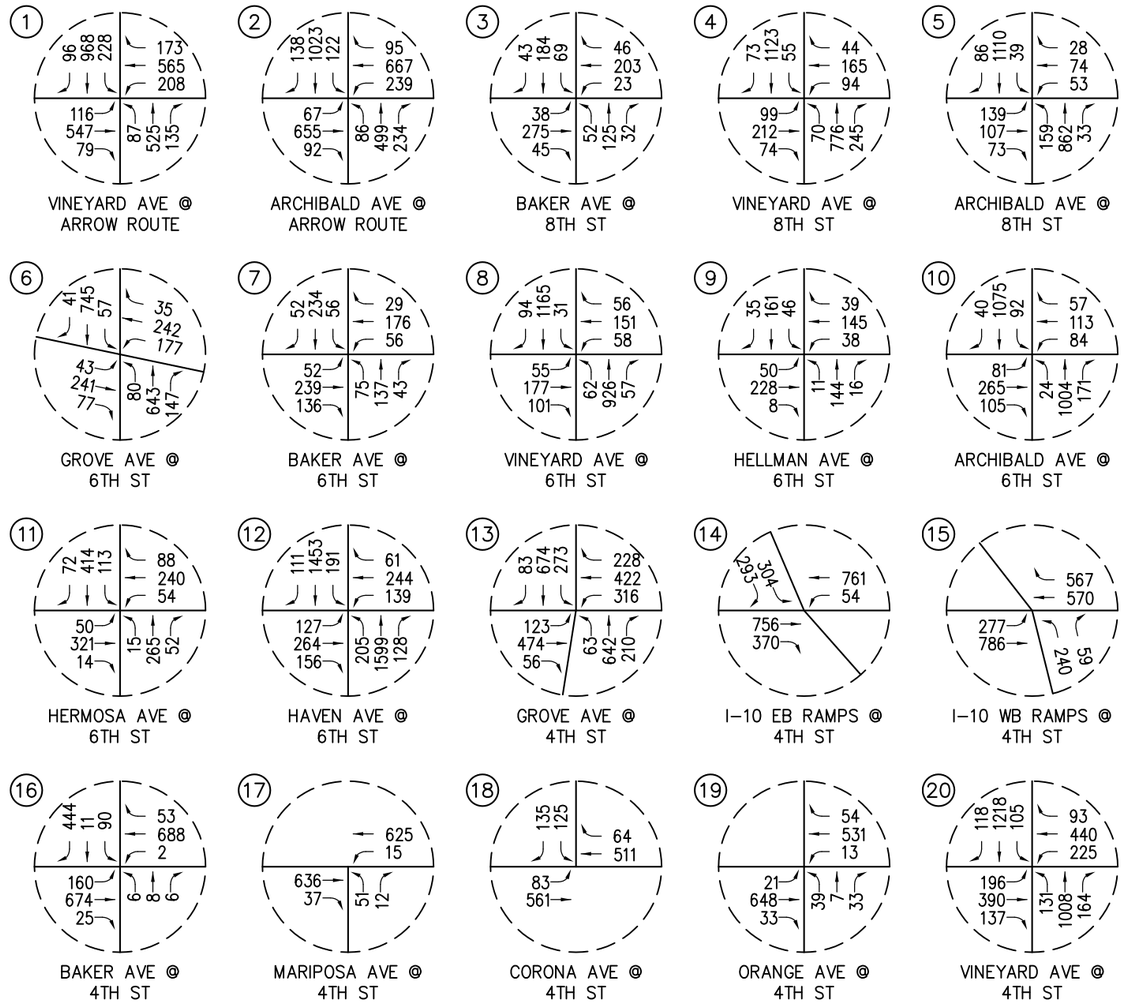
N NO SCALE

KEY

(#) = STUDY INTERSECTION
= PA-1
= PA-2
= PA-3
= PA-4
= PA-5

FIGURE 6-9B

YEAR 2017 CUMULATIVE PM PEAK HOUR TRAFFIC VOLUMES
MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

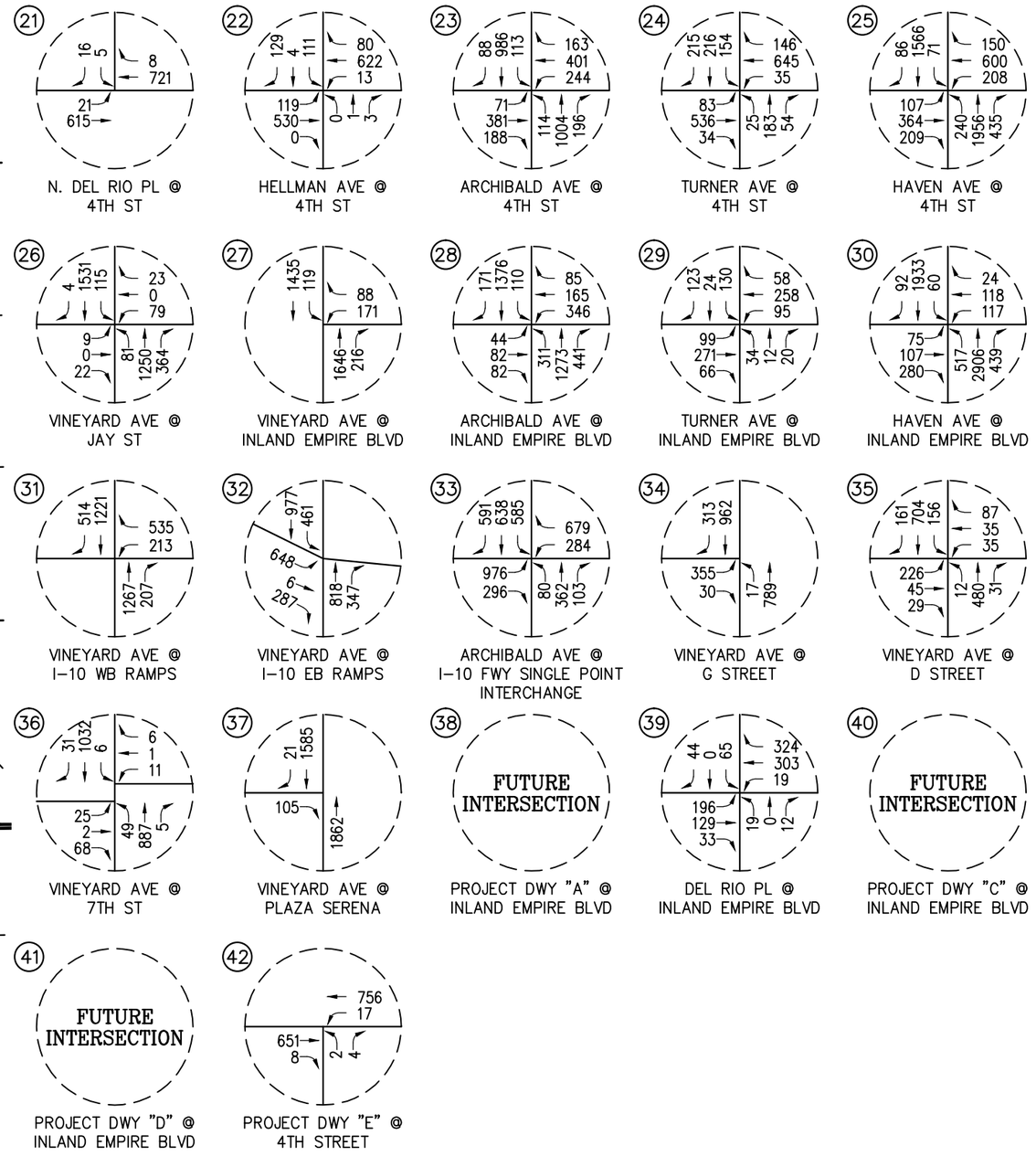
KEY

(#) = STUDY INTERSECTION
= PA-1
= PA-2
= PA-3
= PA-4
= PA-5

FIGURE 6-10A

YEAR 2017 CUMULATIVE PLUS PROJECT PA-1 AND PA-2 (INTERIM) AM PEAK HOUR TRAFFIC VOLUMES

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

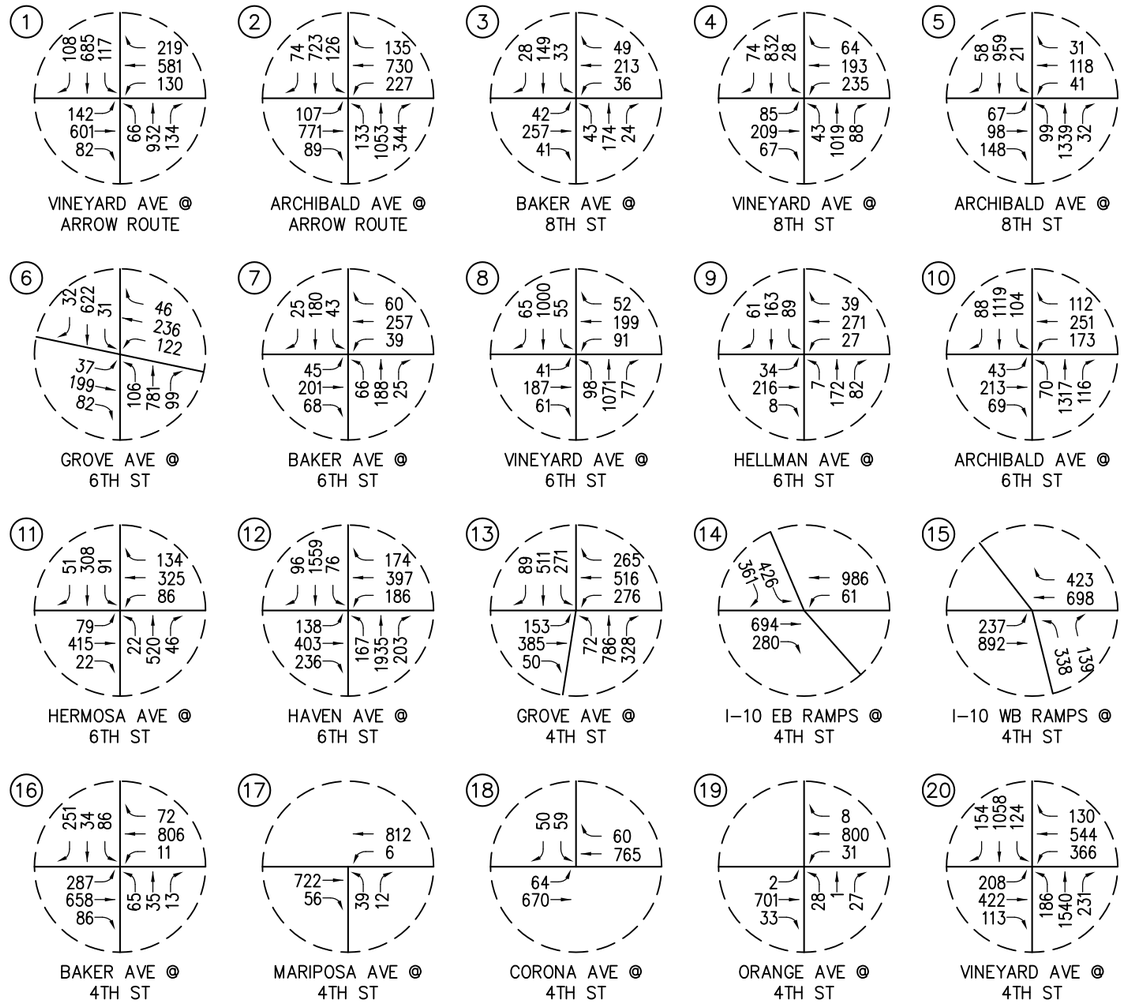
KEY

(#) = STUDY INTERSECTION
= PA-1
= PA-2
= PA-3
= PA-4
= PA-5

FIGURE 6-10B

YEAR 2017 CUMULATIVE PLUS PROJECT PA-1 AND PA-2 (INTERIM) AM PEAK HOUR TRAFFIC VOLUMES

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

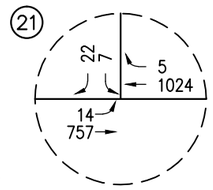
KEY

(#) = STUDY INTERSECTION
= PA-1
= PA-2
= PA-3
= PA-4
= PA-5

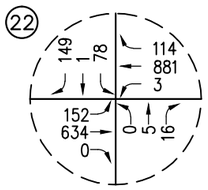
FIGURE 6-11A

YEAR 2017 CUMULATIVE PLUS PROJECT PA-1 AND PA-2 (INTERIM) PM PEAK HOUR TRAFFIC VOLUMES

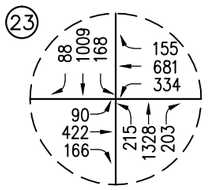
MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



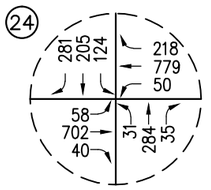
21 N. DEL RIO PL @ 4TH ST



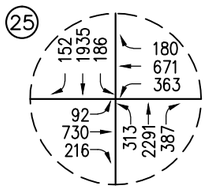
22 HELLMAN AVE @ 4TH ST



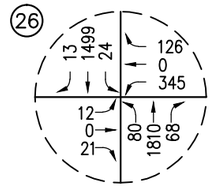
23 ARCHIBALD AVE @ 4TH ST



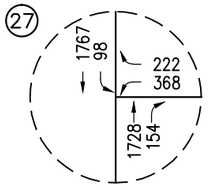
24 TURNER AVE @ 4TH ST



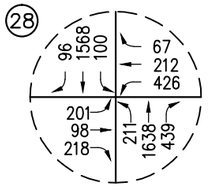
25 HAVEN AVE @ 4TH ST



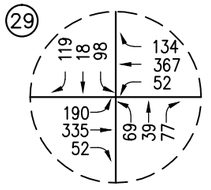
26 VINEYARD AVE @ JAY ST



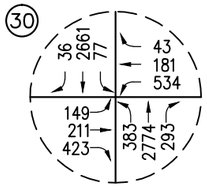
27 VINEYARD AVE @ INLAND EMPIRE BLVD



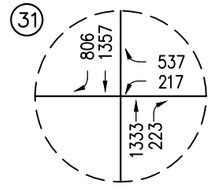
28 ARCHIBALD AVE @ INLAND EMPIRE BLVD



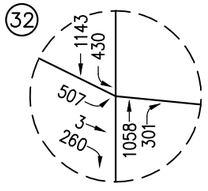
29 TURNER AVE @ INLAND EMPIRE BLVD



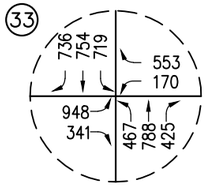
30 HAVEN AVE @ INLAND EMPIRE BLVD



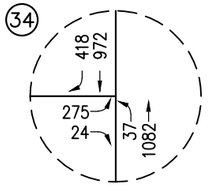
31 VINEYARD AVE @ I-10 WB RAMPS



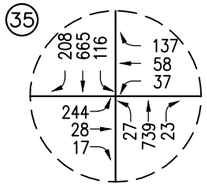
32 VINEYARD AVE @ I-10 EB RAMPS



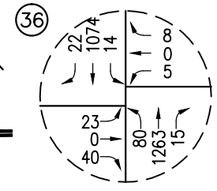
33 ARCHIBALD AVE @ I-10 FWY SINGLE POINT INTERCHANGE



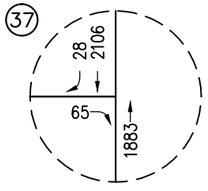
34 VINEYARD AVE @ G STREET



35 VINEYARD AVE @ D STREET

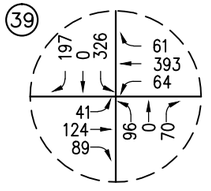


36 VINEYARD AVE @ 7TH ST



37 VINEYARD AVE @ PLAZA SERENA

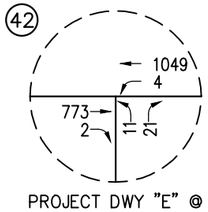
38 PROJECT DWY "A" @ INLAND EMPIRE BLVD



39 DEL RIO PL @ INLAND EMPIRE BLVD

40 PROJECT DWY "C" @ INLAND EMPIRE BLVD

41 PROJECT DWY "D" @ INLAND EMPIRE BLVD



42 PROJECT DWY "E" @ 4TH STREET

KEY

(#) = STUDY INTERSECTION
= PA-1
= PA-2
= PA-3
= PA-4
= PA-5

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

FIGURE 6-11B

YEAR 2017 CUMULATIVE PLUS PROJECT PA-1 AND PA-2 (INTERIM) PM PEAK HOUR TRAFFIC VOLUMES

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO

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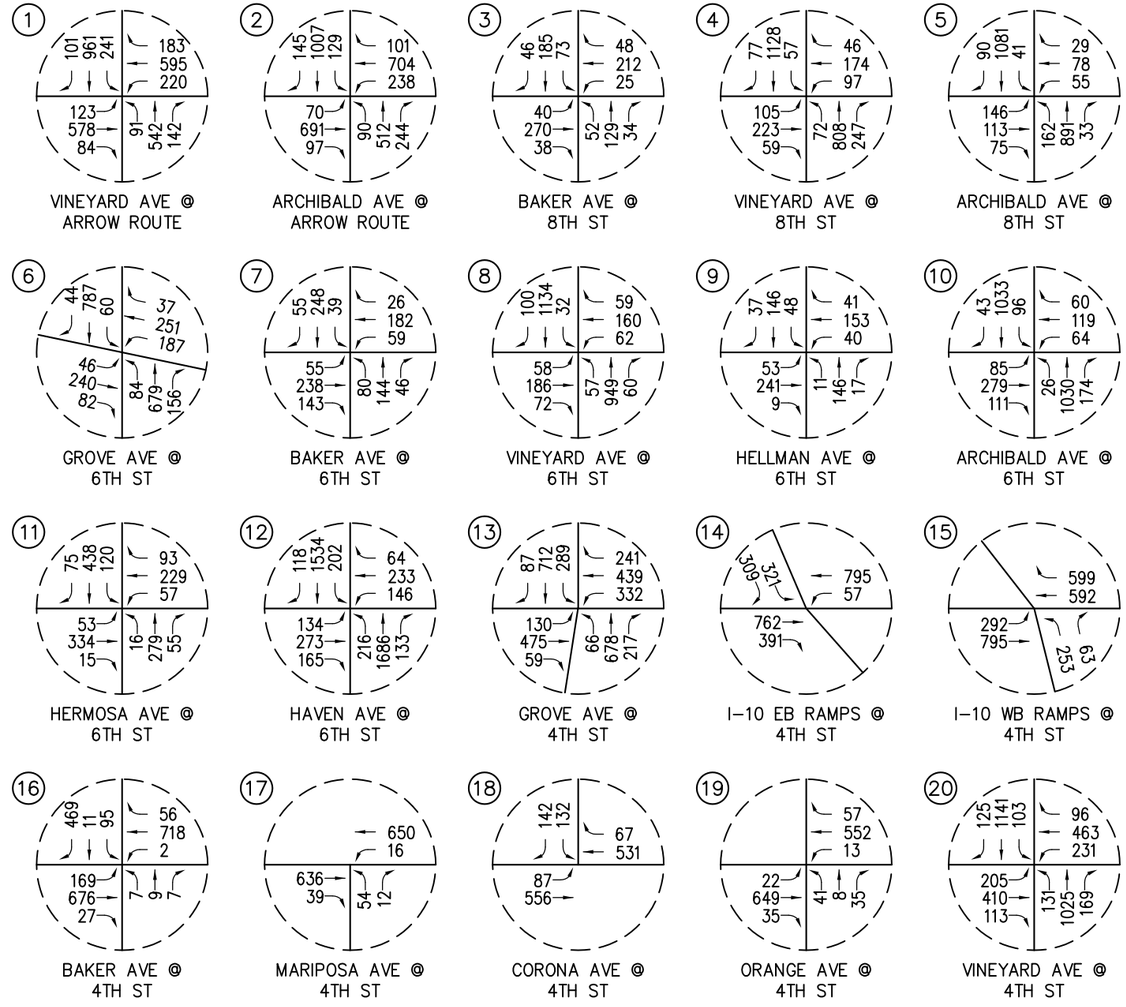

KEY

(#) = STUDY INTERSECTION
= PA-1
= PA-2
= PA-3
= PA-4
= PA-5

N NO SCALE

LINSCOTT LAW & GREENSPAN engineers

FIGURE 6-12A

YEAR 2020 CUMULATIVE AM PEAK HOUR TRAFFIC VOLUMES
MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO

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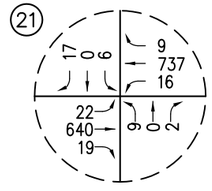
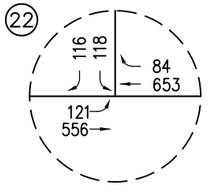
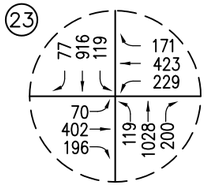


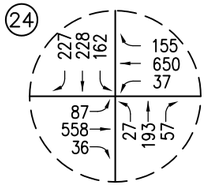
N. DEL RIO PL @ 4TH ST



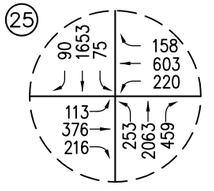
HELLMAN AVE @ 4TH ST



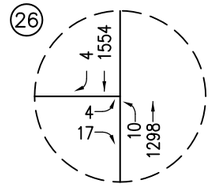
ARCHIBALD AVE @ 4TH ST



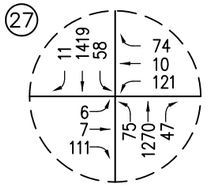
TURNER AVE @ 4TH ST



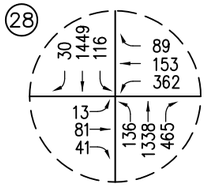
HAVEN AVE @ 4TH ST



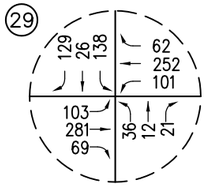
VINEYARD AVE @ JAY ST



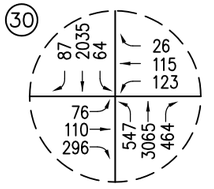
VINEYARD AVE @ INLAND EMPIRE BLVD



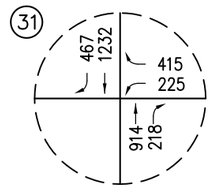
ARCHIBALD AVE @ INLAND EMPIRE BLVD



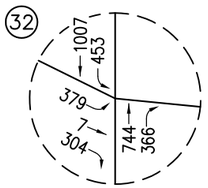
TURNER AVE @ INLAND EMPIRE BLVD



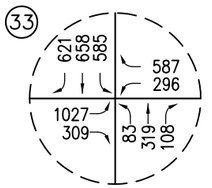
HAVEN AVE @ INLAND EMPIRE BLVD



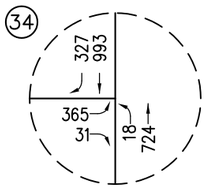
VINEYARD AVE @ I-10 WB RAMPS



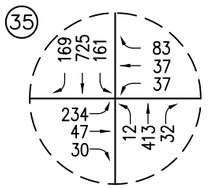
VINEYARD AVE @ I-10 EB RAMPS



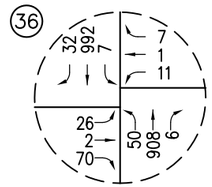
ARCHIBALD AVE @ I-10 FWY SINGLE POINT INTERCHANGE



VINEYARD AVE @ G STREET



VINEYARD AVE @ D STREET



VINEYARD AVE @ 7TH ST

LINSCOTT LAW & GREENSPAN engineers

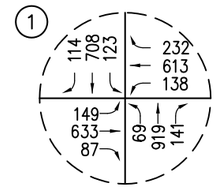
N NO SCALE

KEY

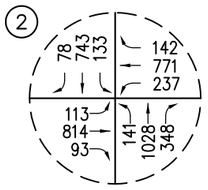
(#) = STUDY INTERSECTION
= PA-1
= PA-2
= PA-3
= PA-4
= PA-5

FIGURE 6-12B

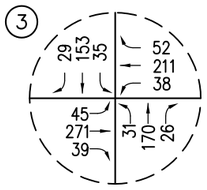
YEAR 2020 CUMULATIVE AM PEAK HOUR TRAFFIC VOLUMES
MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



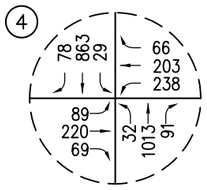
VINEYARD AVE @ ARROW ROUTE



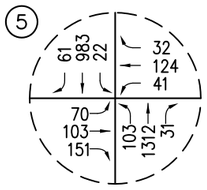
ARCHIBALD AVE @ ARROW ROUTE



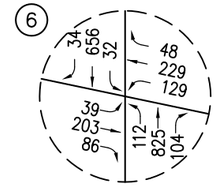
BAKER AVE @ 8TH ST



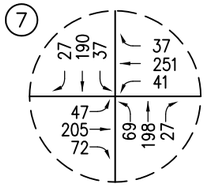
VINEYARD AVE @ 8TH ST



ARCHIBALD AVE @ 8TH ST



GROVE AVE @ 6TH ST



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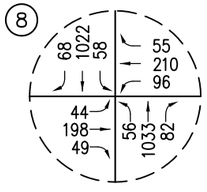

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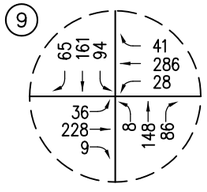
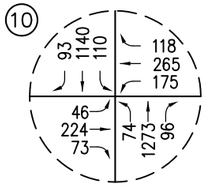
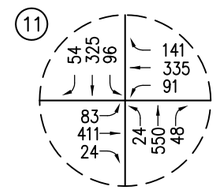


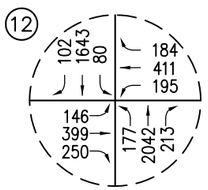
HELLMAN AVE @ 6TH ST



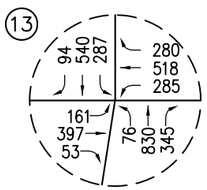
ARCHIBALD AVE @ 6TH ST



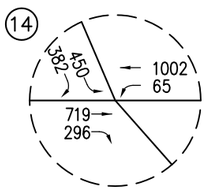
HERMOSA AVE @ 6TH ST



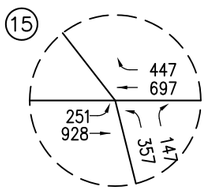
HAVEN AVE @ 6TH ST



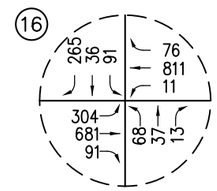
GROVE AVE @ 4TH ST



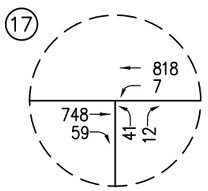
I-10 EB RAMPS @ 4TH ST



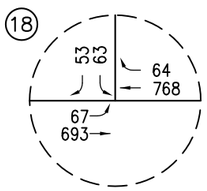
I-10 WB RAMPS @ 4TH ST



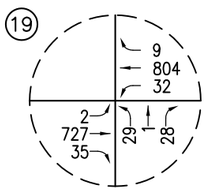
BAKER AVE @ 4TH ST



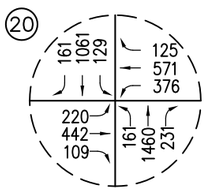
MARIPOSA AVE @ 4TH ST



CORONA AVE @ 4TH ST



ORANGE AVE @ 4TH ST



VINEYARD AVE @ 4TH ST

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LINSCOTT LAW & GREENSPAN engineers

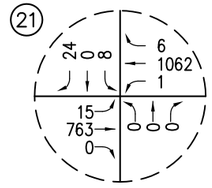
N NO SCALE

KEY

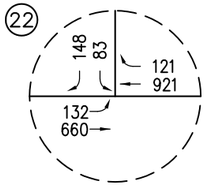
(#) = STUDY INTERSECTION
= PA-1
= PA-2
= PA-3
= PA-4
= PA-5

FIGURE 6-13A

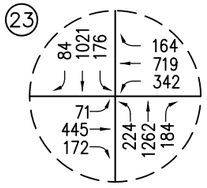
YEAR 2020 CUMULATIVE PM PEAK HOUR TRAFFIC VOLUMES
MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



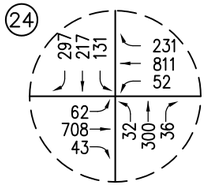
N. DEL RIO PL @ 4TH ST



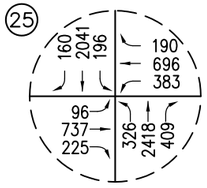
HELLMAN AVE @ 4TH ST



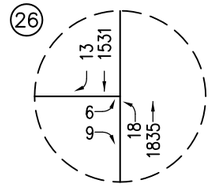
ARCHIBALD AVE @ 4TH ST



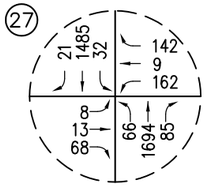
TURNER AVE @ 4TH ST



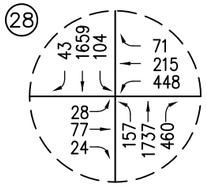
HAVEN AVE @ 4TH ST



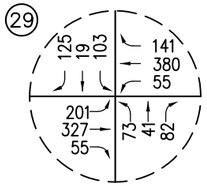
VINEYARD AVE @ JAY ST



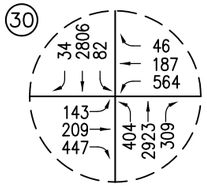
VINEYARD AVE @ INLAND EMPIRE BLVD



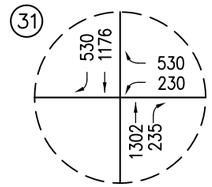
ARCHIBALD AVE @ INLAND EMPIRE BLVD



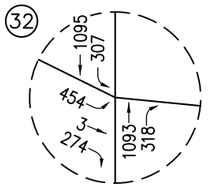
TURNER AVE @ INLAND EMPIRE BLVD



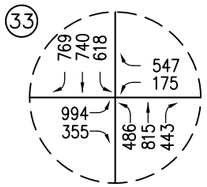
HAVEN AVE @ INLAND EMPIRE BLVD



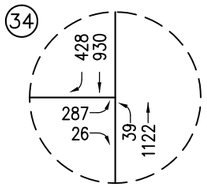
VINEYARD AVE @ I-10 WB RAMPS



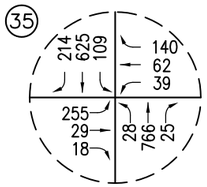
VINEYARD AVE @ I-10 EB RAMPS



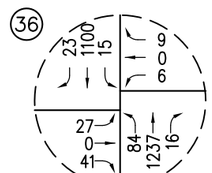
ARCHIBALD AVE @ I-10 FWY SINGLE POINT INTERCHANGE



VINEYARD AVE @ G STREET



VINEYARD AVE @ D STREET



VINEYARD AVE @ 7TH ST

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

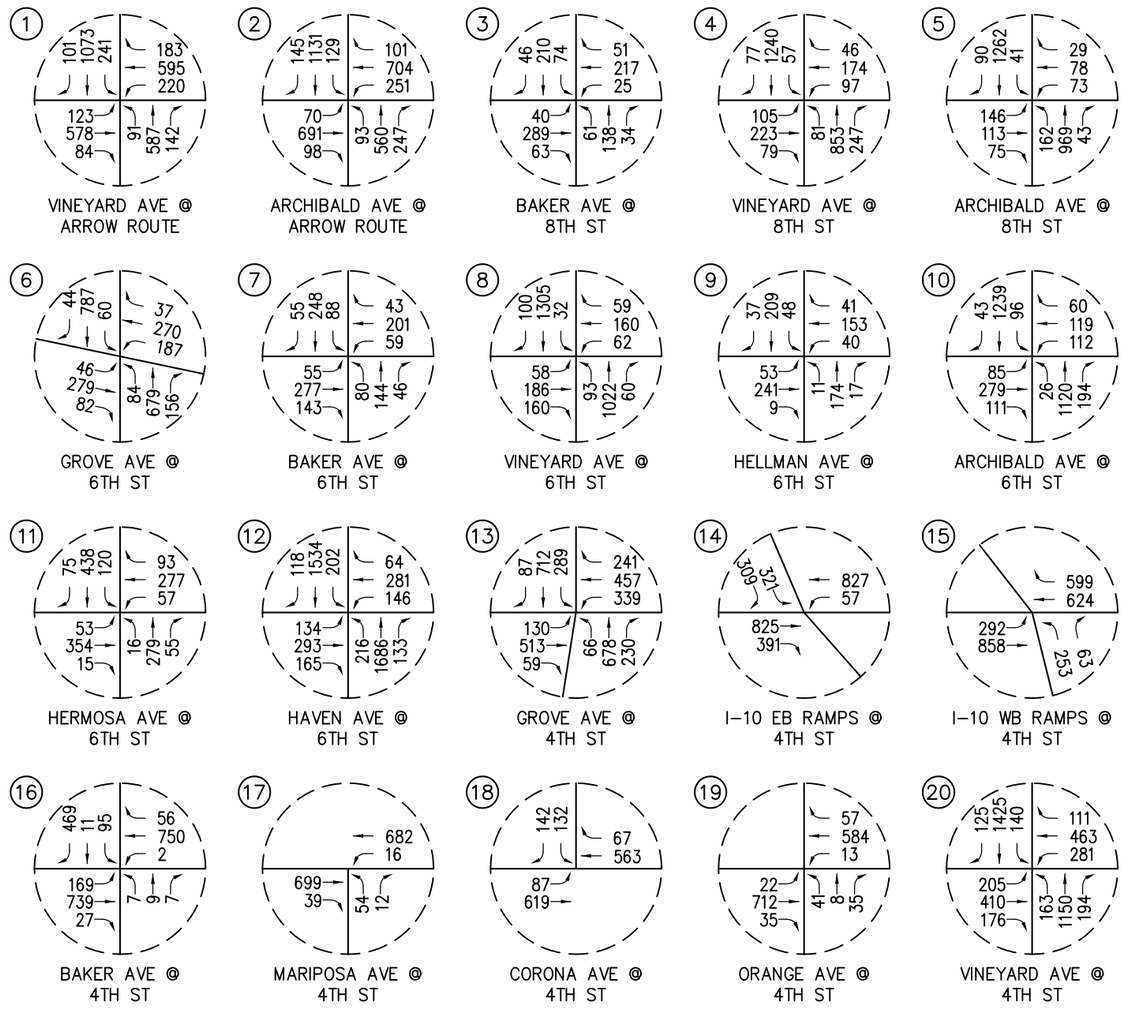
KEY

(#) = STUDY INTERSECTION	= PA-3
= PA-1	= PA-4
= PA-2	= PA-5

FIGURE 6-13B

YEAR 2020 CUMULATIVE PM PEAK HOUR TRAFFIC VOLUMES

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

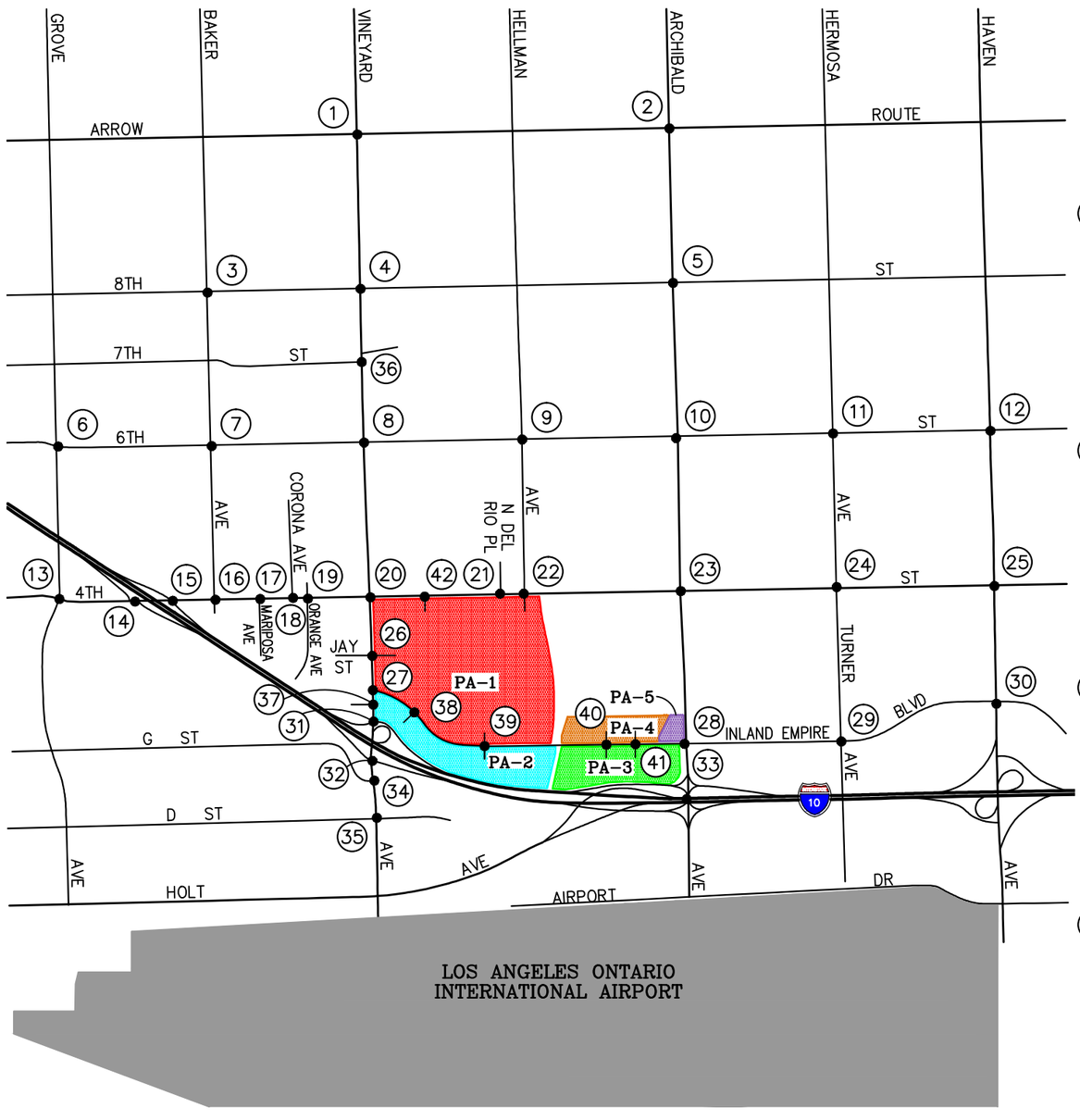
KEY

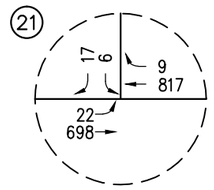
(#) = STUDY INTERSECTION
= PA-1
= PA-2
= PA-3
= PA-4
= PA-5

FIGURE 6-14A

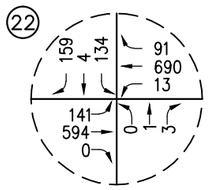
YEAR 2020 CUMULATIVE PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4
AM PEAK HOUR TRAFFIC VOLUMES

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO

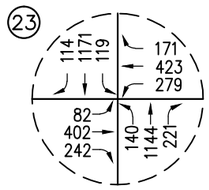




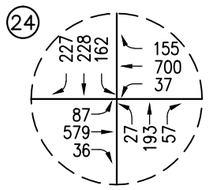
21 N. DEL RIO PL @ 4TH ST



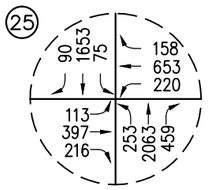
22 HELLMAN AVE @ 4TH ST



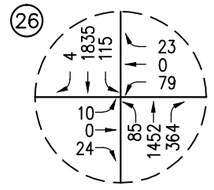
23 ARCHIBALD AVE @ 4TH ST



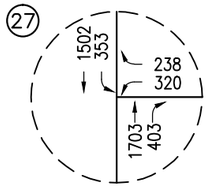
24 TURNER AVE @ 4TH ST



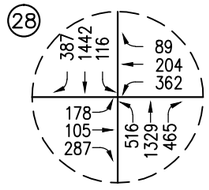
25 HAVEN AVE @ 4TH ST



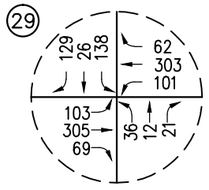
26 VINEYARD AVE @ JAY ST



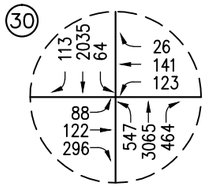
27 VINEYARD AVE @ INLAND EMPIRE BLVD



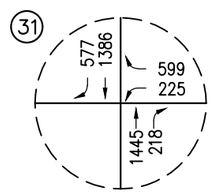
28 ARCHIBALD AVE @ INLAND EMPIRE BLVD



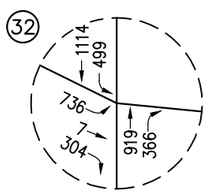
29 TURNER AVE @ INLAND EMPIRE BLVD



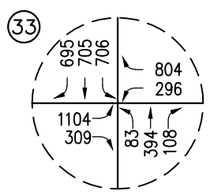
30 HAVEN AVE @ INLAND EMPIRE BLVD



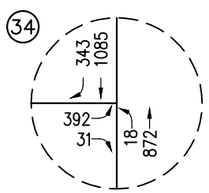
31 VINEYARD AVE @ I-10 WB RAMPS



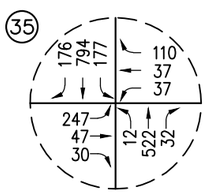
32 VINEYARD AVE @ I-10 EB RAMPS



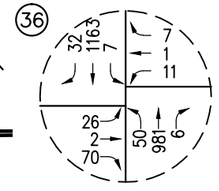
33 ARCHIBALD AVE @ I-10 FWY SINGLE POINT INTERCHANGE



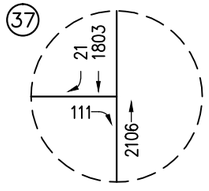
34 VINEYARD AVE @ G STREET



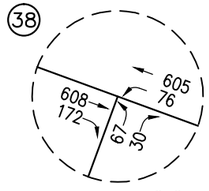
35 VINEYARD AVE @ D STREET



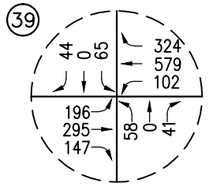
36 VINEYARD AVE @ 7TH ST



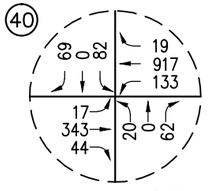
37 VINEYARD AVE @ PLAZA SERENA



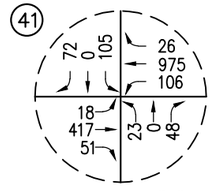
38 PROJECT DWY "A" @ INLAND EMPIRE BLVD



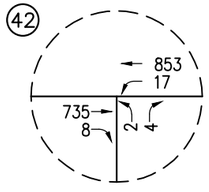
39 DEL RIO PL @ INLAND EMPIRE BLVD



40 PROJECT DWY "C" @ INLAND EMPIRE BLVD



41 PROJECT DWY "D" @ INLAND EMPIRE BLVD



42 PROJECT DWY "E" @ 4TH STREET

n:\3300\2123334-2 - meredith international project, ontario\dwg\3334f6-14b.dwg LDP 15:57:06 12-02-2014 besa

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

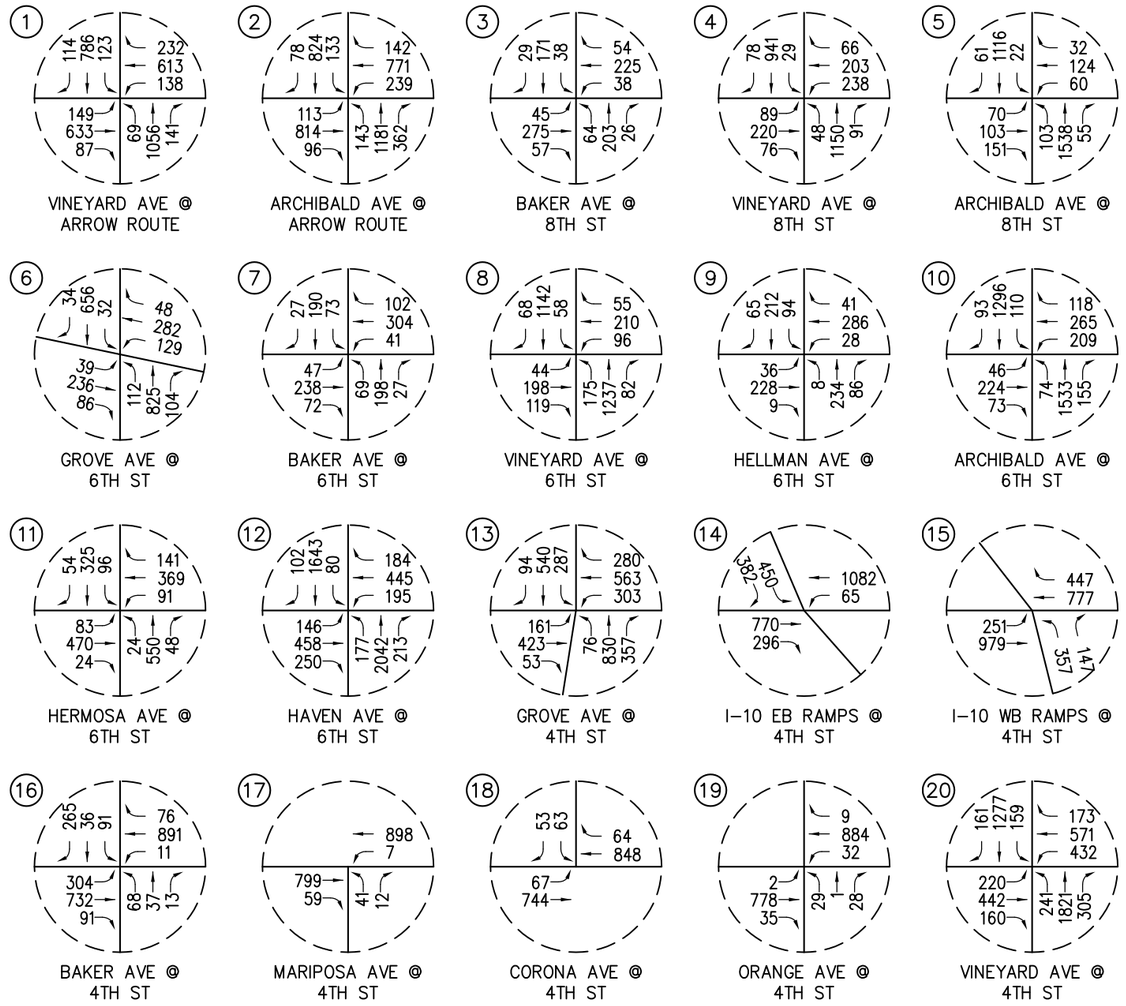
KEY

(#) = STUDY INTERSECTION
= PA-1
= PA-2
= PA-3
= PA-4
= PA-5

FIGURE 6-14B

YEAR 2020 CUMULATIVE PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4
AM PEAK HOUR TRAFFIC VOLUMES

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

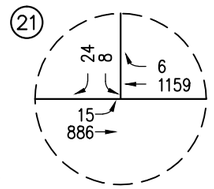
KEY

- (#) = STUDY INTERSECTION
- = PA-1
- = PA-2
- = PA-3
- = PA-4
- = PA-5

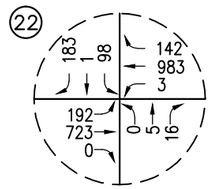
FIGURE 6-15A

YEAR 2020 CUMULATIVE PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4
PM PEAK HOUR TRAFFIC VOLUMES

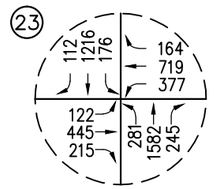
MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



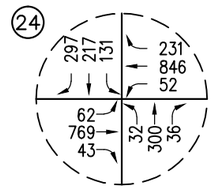
N. DEL RIO PL @ 4TH ST



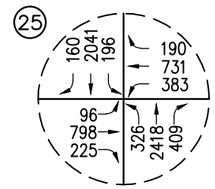
HELLMAN AVE @ 4TH ST



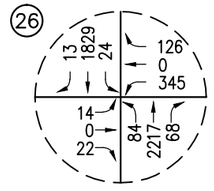
ARCHIBALD AVE @ 4TH ST



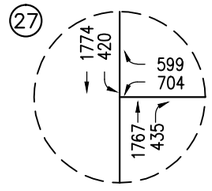
TURNER AVE @ 4TH ST



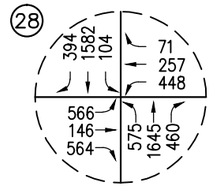
HAVEN AVE @ 4TH ST



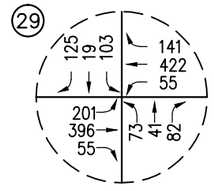
VINEYARD AVE @ JAY ST



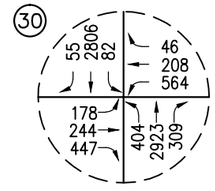
VINEYARD AVE @ INLAND EMPIRE BLVD



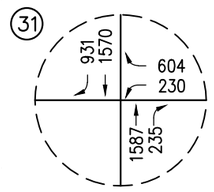
ARCHIBALD AVE @ INLAND EMPIRE BLVD



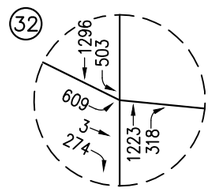
TURNER AVE @ INLAND EMPIRE BLVD



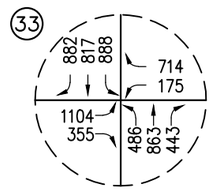
HAVEN AVE @ INLAND EMPIRE BLVD



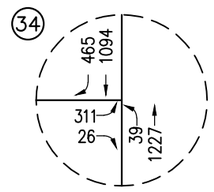
VINEYARD AVE @ I-10 WB RAMPS



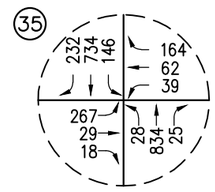
VINEYARD AVE @ I-10 EB RAMPS



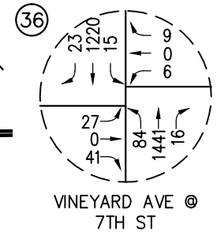
ARCHIBALD AVE @ I-10 FWY SINGLE POINT INTERCHANGE



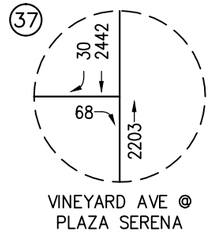
VINEYARD AVE @ G STREET



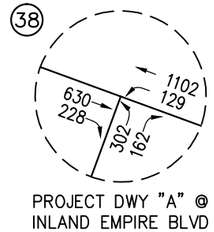
VINEYARD AVE @ D STREET



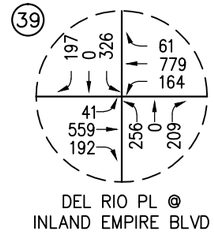
VINEYARD AVE @ 7TH ST



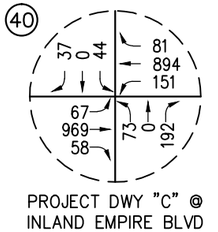
VINEYARD AVE @ PLAZA SERENA



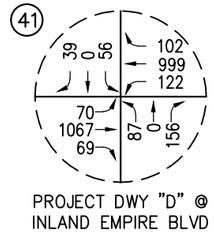
PROJECT DWY "A" @ INLAND EMPIRE BLVD



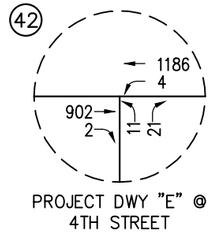
DEL RIO PL @ INLAND EMPIRE BLVD



PROJECT DWY "C" @ INLAND EMPIRE BLVD



PROJECT DWY "D" @ INLAND EMPIRE BLVD



PROJECT DWY "E" @ 4TH STREET

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

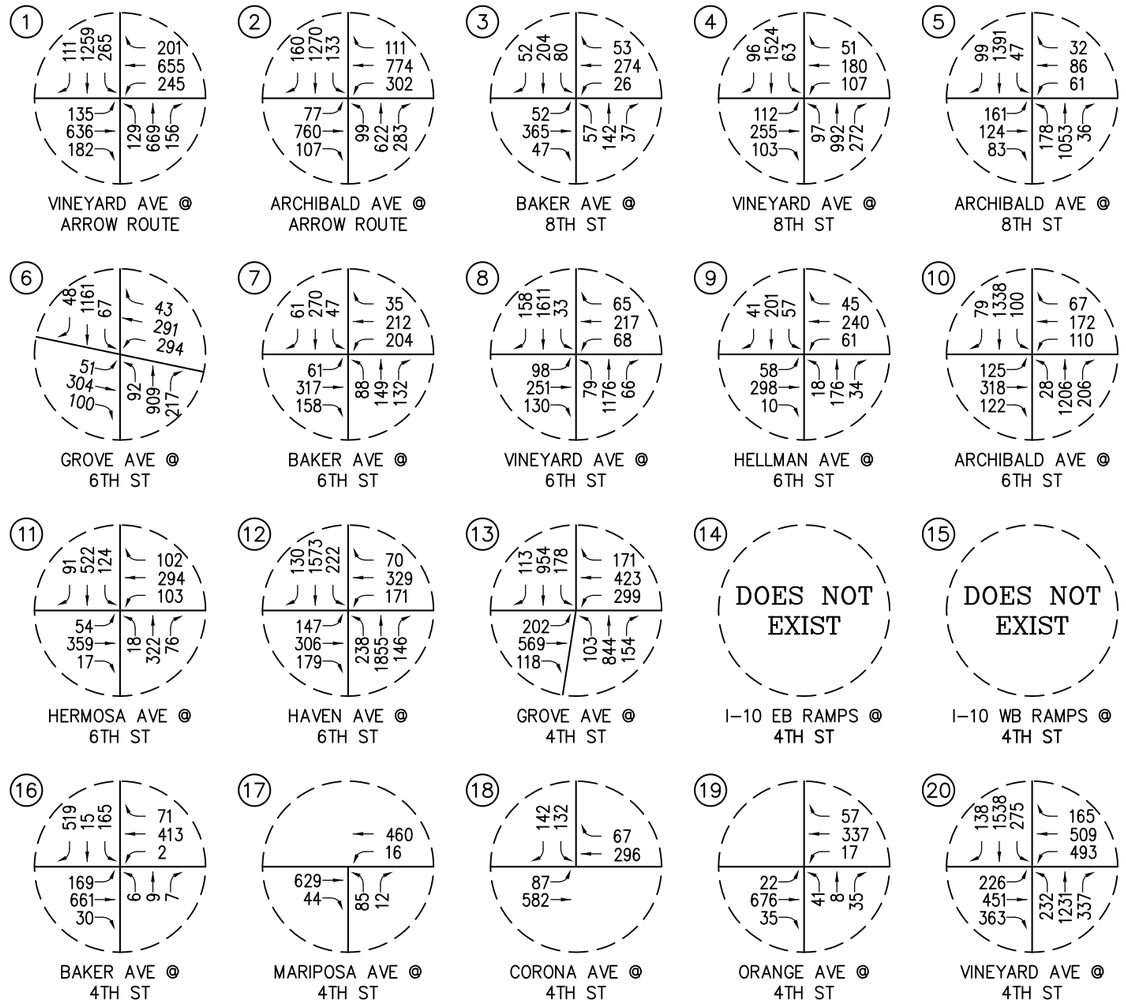
KEY

(#) = STUDY INTERSECTION
= PA-1
= PA-2
= PA-3
= PA-4
= PA-5

FIGURE 6-15B

YEAR 2020 CUMULATIVE PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4
PM PEAK HOUR TRAFFIC VOLUMES

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

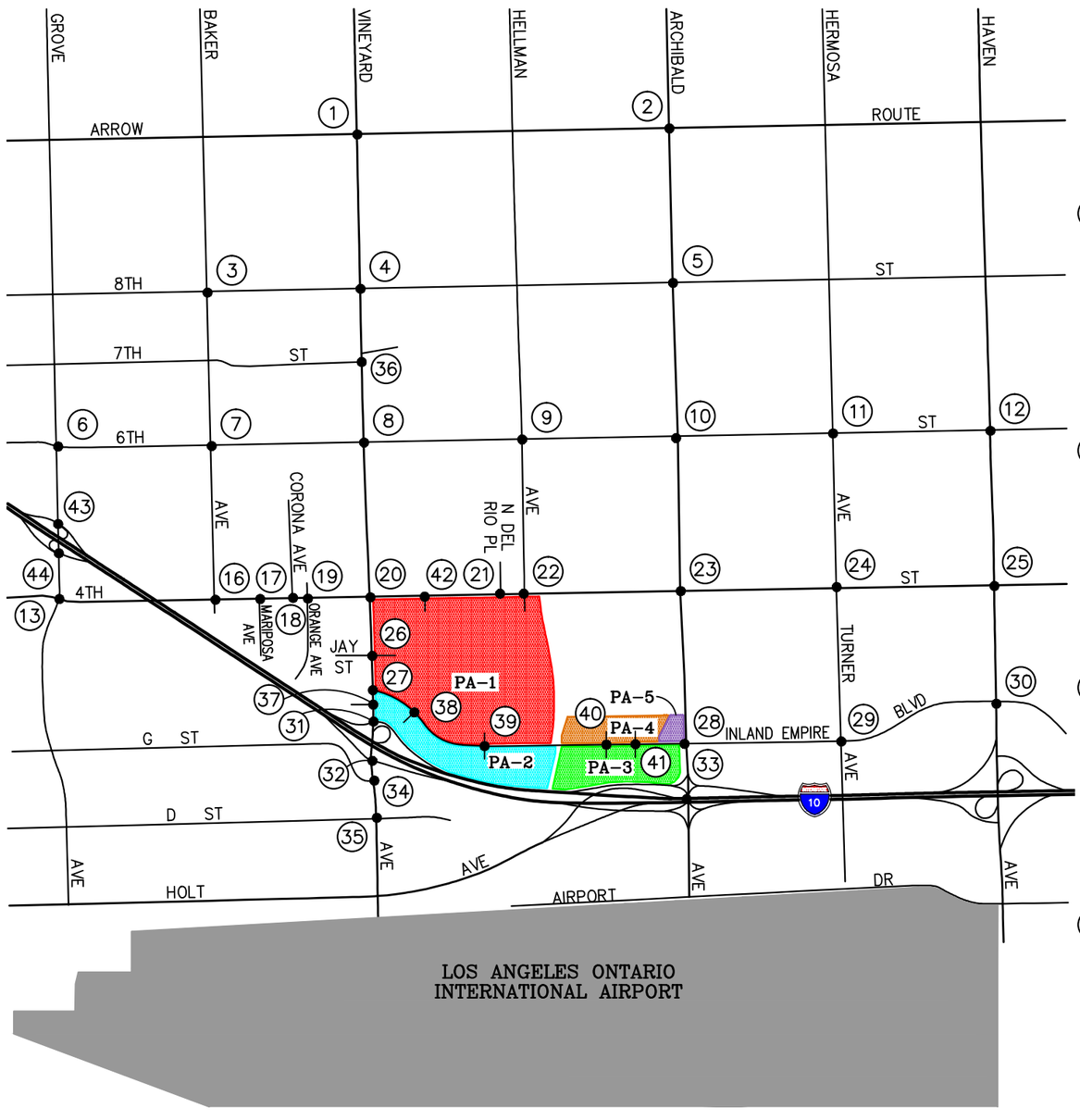
KEY

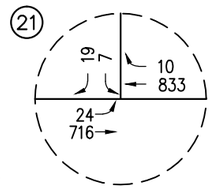
(#) = STUDY INTERSECTION
= PA-1
= PA-2
= PA-3
= PA-4
= PA-5

FIGURE 6-16A

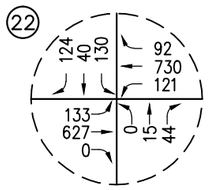
YEAR 2035 GENERAL PLAN BUILDOUT "NO PROJECT" (TOP)
AM PEAK HOUR TRAFFIC VOLUMES

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO

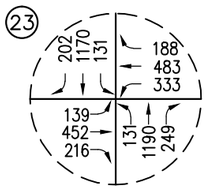




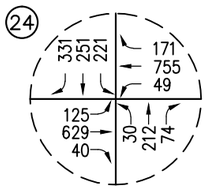
(21) N. DEL RIO PL @ 4TH ST



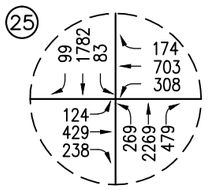
(22) HELLMAN AVE @ 4TH ST



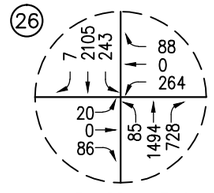
(23) ARCHIBALD AVE @ 4TH ST



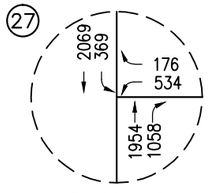
(24) TURNER AVE @ 4TH ST



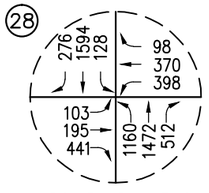
(25) HAVEN AVE @ 4TH ST



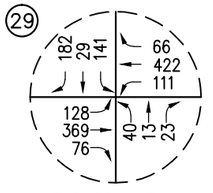
(26) VINEYARD AVE @ JAY ST



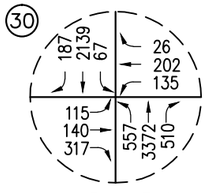
(27) VINEYARD AVE @ INLAND EMPIRE BLVD



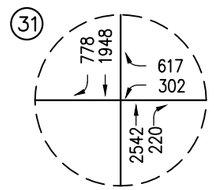
(28) ARCHIBALD AVE @ INLAND EMPIRE BLVD



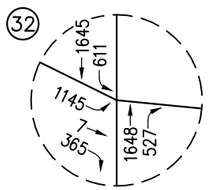
(29) TURNER AVE @ INLAND EMPIRE BLVD



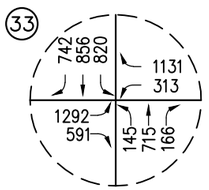
(30) HAVEN AVE @ INLAND EMPIRE BLVD



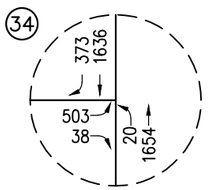
(31) VINEYARD AVE @ I-10 WB RAMPS



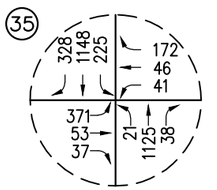
(32) VINEYARD AVE @ I-10 EB RAMPS



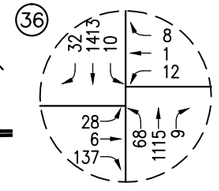
(33) ARCHIBALD AVE @ I-10 FWY SINGLE POINT INTERCHANGE



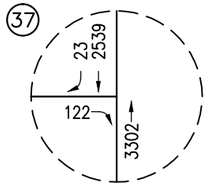
(34) VINEYARD AVE @ G STREET



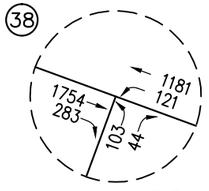
(35) VINEYARD AVE @ D STREET



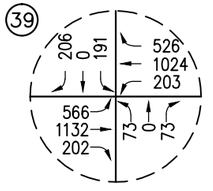
(36) VINEYARD AVE @ 7TH ST



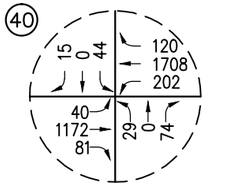
(37) VINEYARD AVE @ PLAZA SERENA



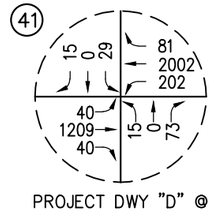
(38) PROJECT DWY "A" @ INLAND EMPIRE BLVD



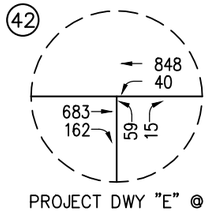
(39) DEL RIO PL @ INLAND EMPIRE BLVD



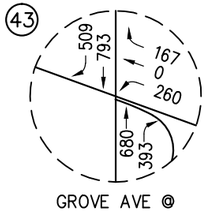
(40) PROJECT DWY "C" @ INLAND EMPIRE BLVD



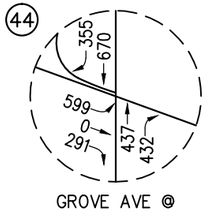
(41) PROJECT DWY "D" @ INLAND EMPIRE BLVD



(42) PROJECT DWY "E" @ 4TH STREET



(43) GROVE AVE @ I-10 WB RAMPS



(44) GROVE AVE @ I-10 EB RAMPS

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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

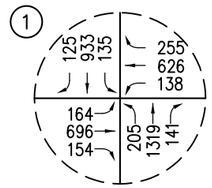
KEY

(#) = STUDY INTERSECTION
= PA-1
= PA-2
= PA-3
= PA-4
= PA-5

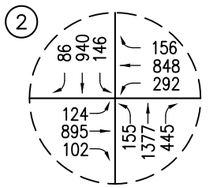
FIGURE 6-16B

YEAR 2035 GENERAL PLAN BUILDOUT "NO PROJECT" (TOP)
AM PEAK HOUR TRAFFIC VOLUMES

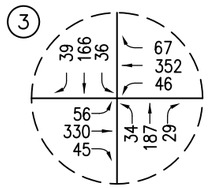
MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



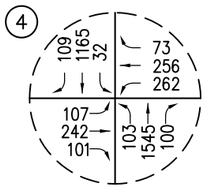
VINEYARD AVE @
ARROW ROUTE



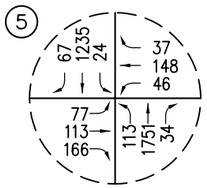
ARCHIBALD AVE @
ARROW ROUTE



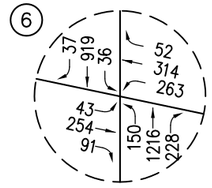
BAKER AVE @
8TH ST



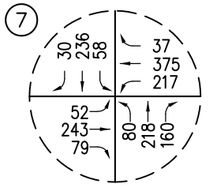
VINEYARD AVE @
8TH ST



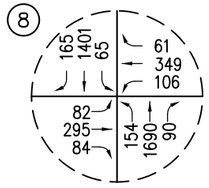
ARCHIBALD AVE @
8TH ST



GROVE AVE @
6TH ST



BAKER AVE @
6TH ST



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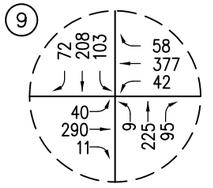
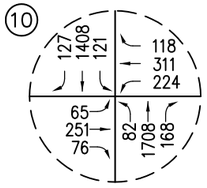
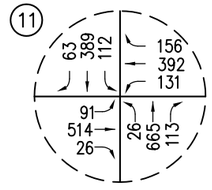
6TH ST



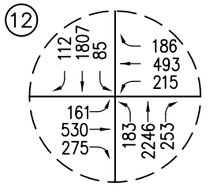
HELLMAN AVE @
6TH ST



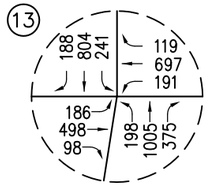
ARCHIBALD AVE @
6TH ST



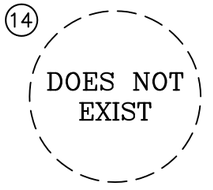
HERMOSA AVE @
6TH ST



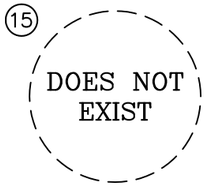
HAVEN AVE @
6TH ST



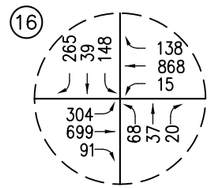
GROVE AVE @
4TH ST



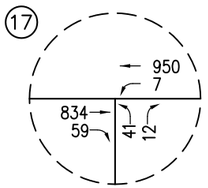
I-10 EB RAMPS @
4TH ST



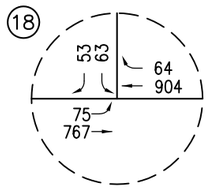
I-10 WB RAMPS @
4TH ST



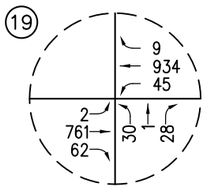
BAKER AVE @
4TH ST



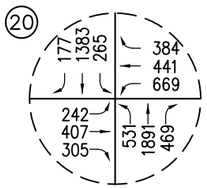
MARIPOSA AVE @
4TH ST



CORONA AVE @
4TH ST



ORANGE AVE @
4TH ST



VINEYARD AVE @
4TH ST

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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

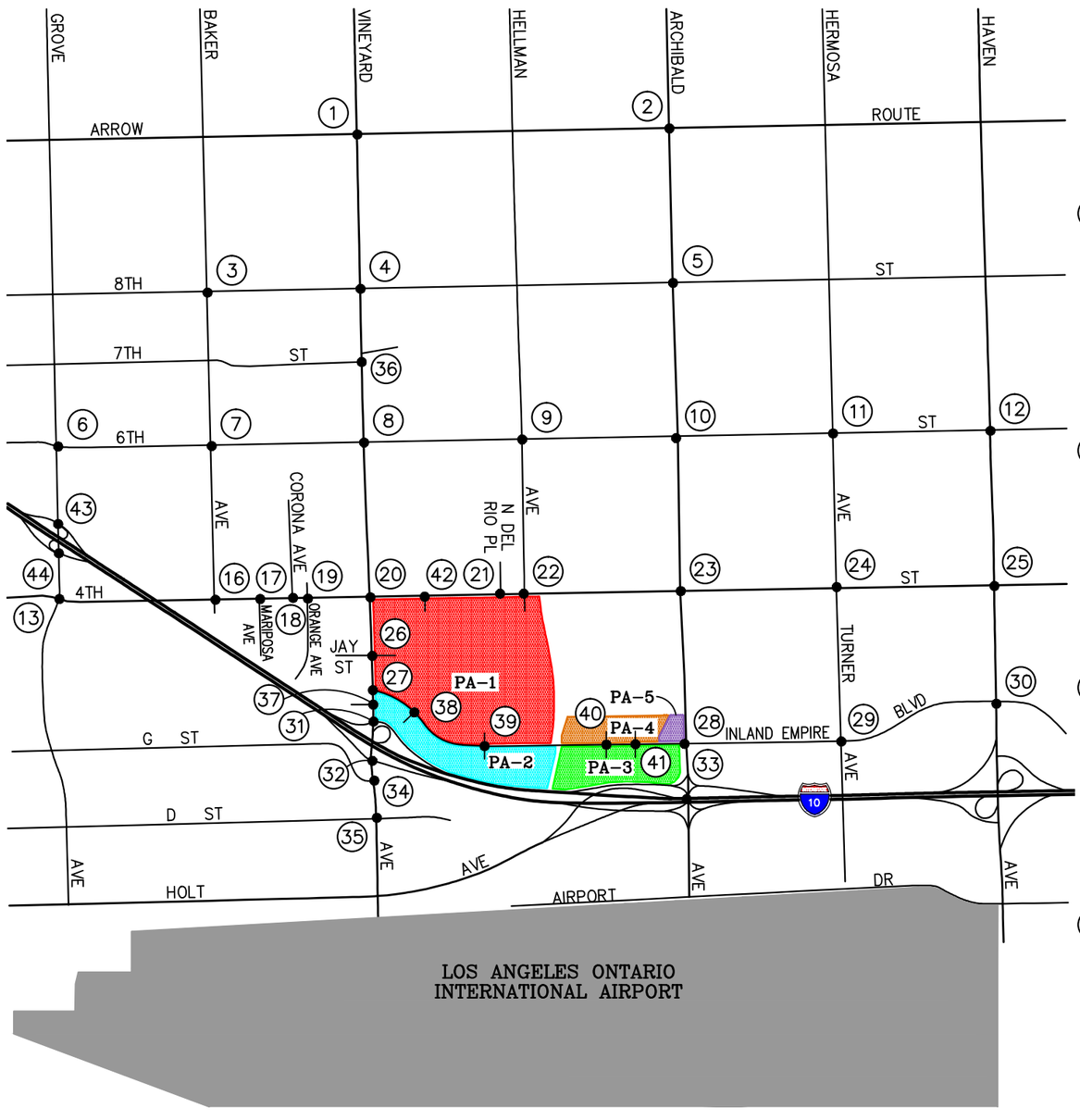
KEY

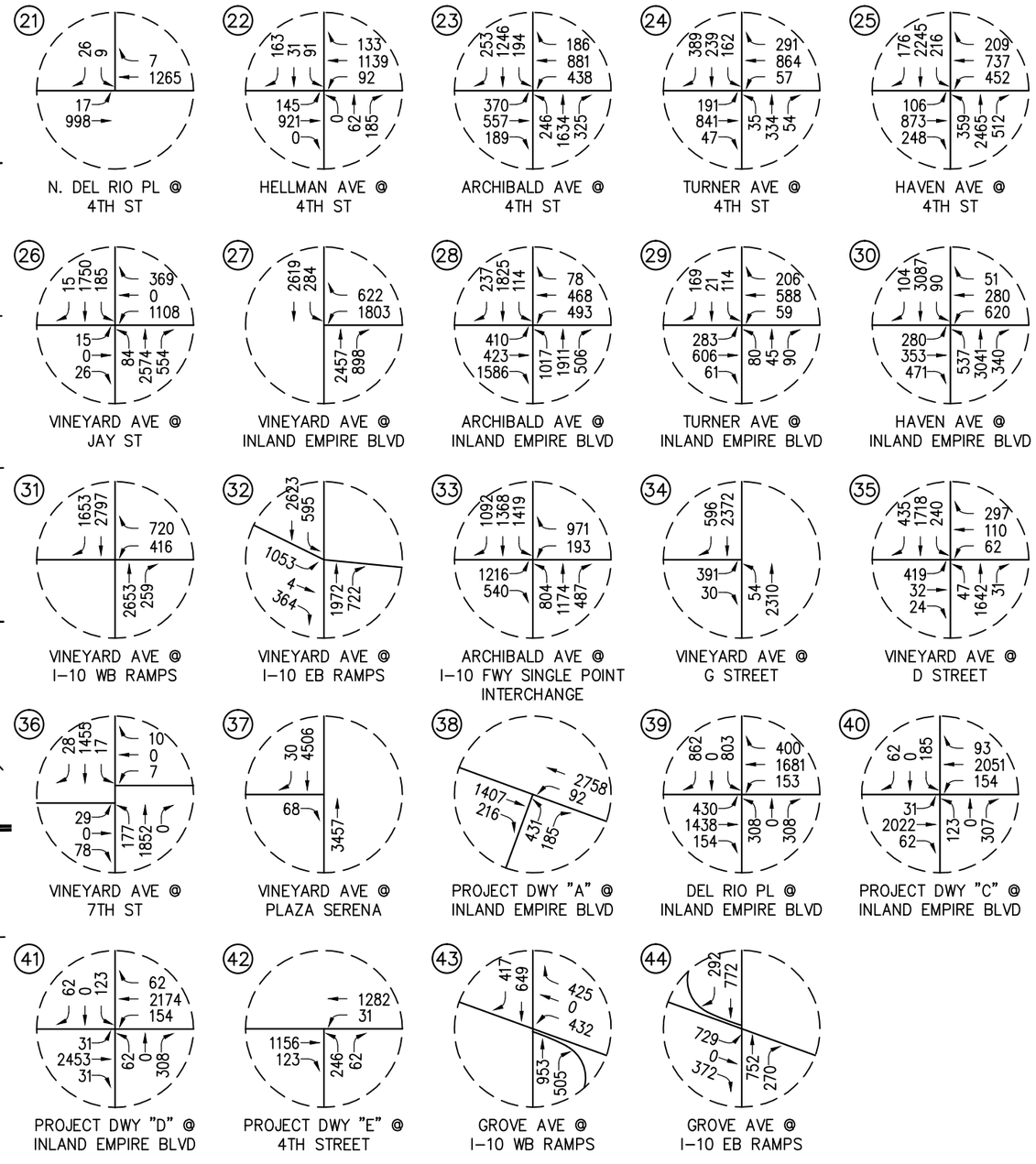
(#) = STUDY INTERSECTION
= PA-1
= PA-2
= PA-3
= PA-4
= PA-5

FIGURE 6-17A

YEAR 2035 GENERAL PLAN BUILDOUT "NO PROJECT" (TOP)
PM PEAK HOUR TRAFFIC VOLUMES

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO





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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

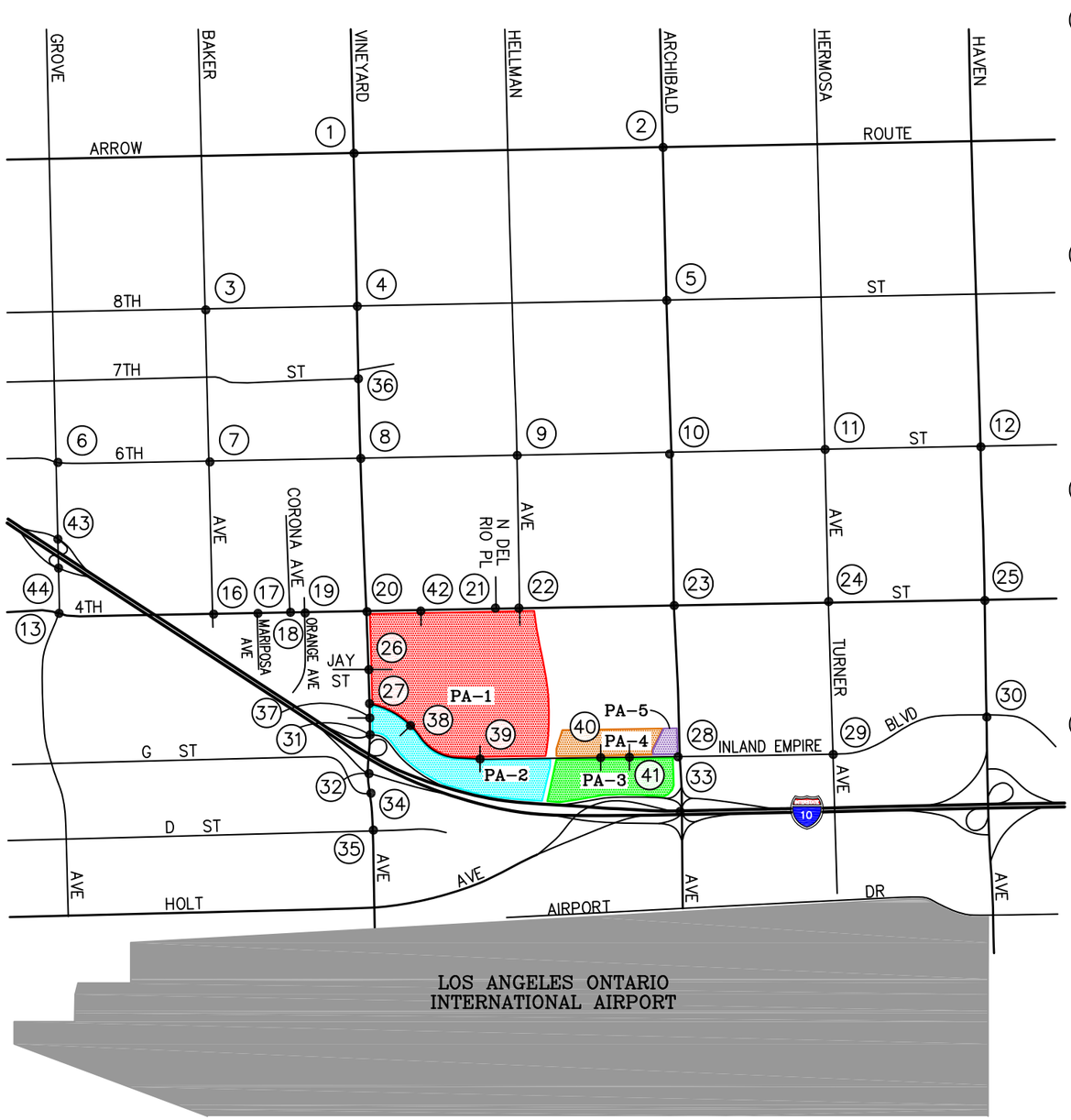
KEY

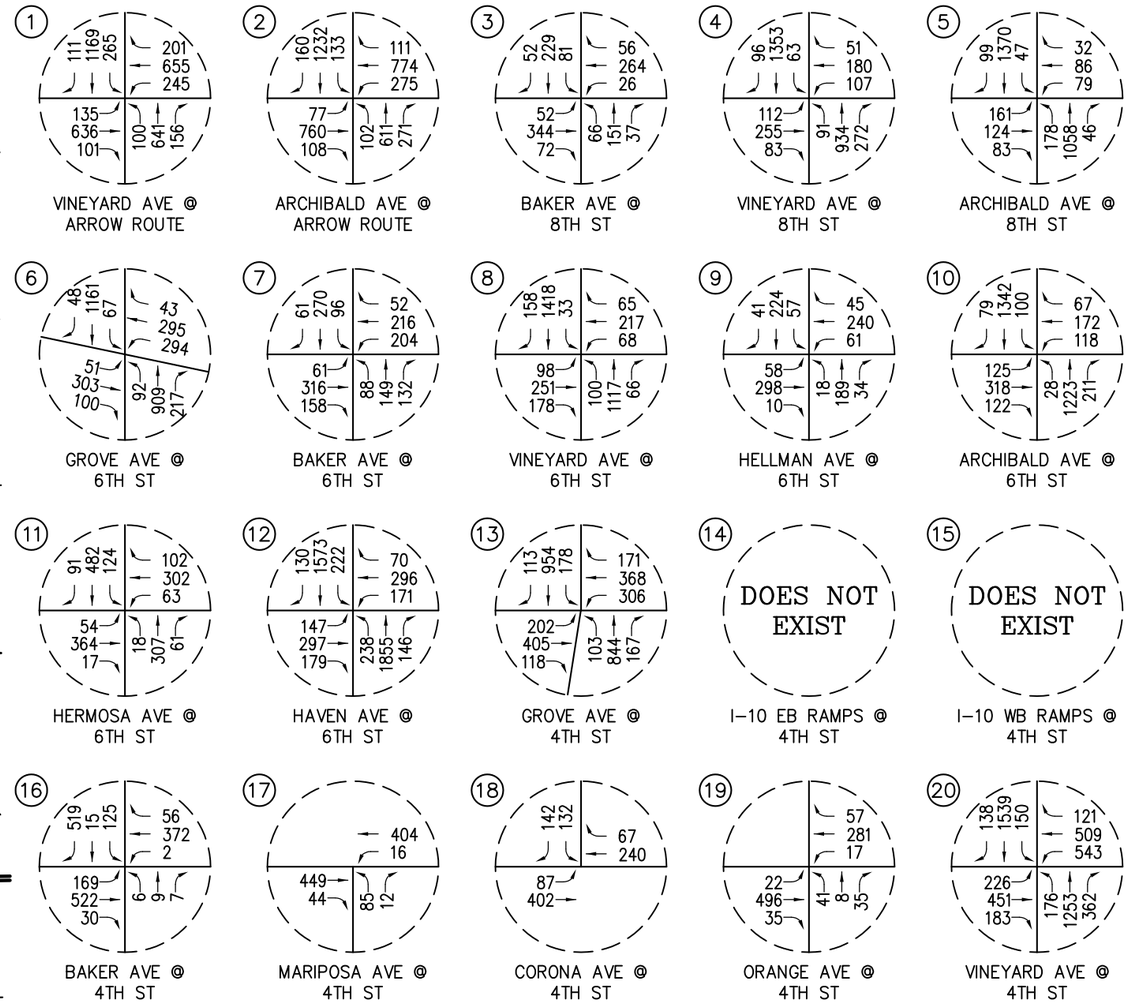
(#) = STUDY INTERSECTION
= PA-1
= PA-2
= PA-3
= PA-4
= PA-5

FIGURE 6-17B

YEAR 2035 GENERAL PLAN BUILDOUT "NO PROJECT" (TOP)
PM PEAK HOUR TRAFFIC VOLUMES

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO





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LINSCOTT LAW & GREENSPAN engineers

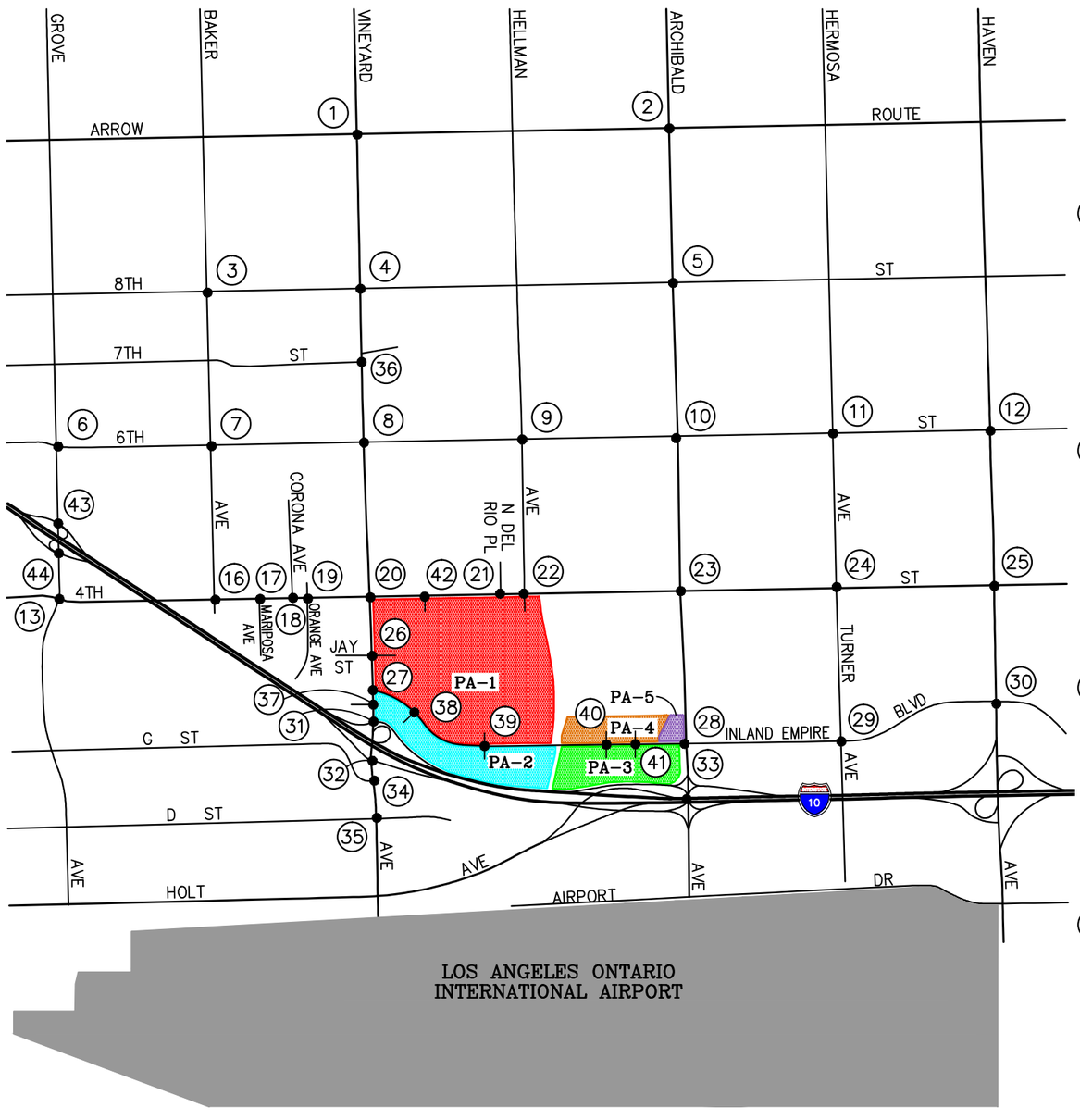
N NO SCALE

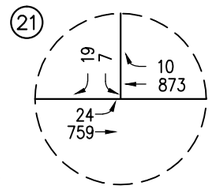
KEY

- (#) = STUDY INTERSECTION
- = PA-1
- = PA-2
- = PA-3
- = PA-4
- = PA-5

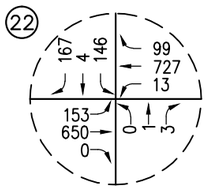
FIGURE 6-18A

YEAR 2035 GENERAL PLAN BUILDOUT PLUS PROJECT
PA-1, PA-2, PA-3 AND PA-4 AM PEAK HOUR TRAFFIC VOLUMES
MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO

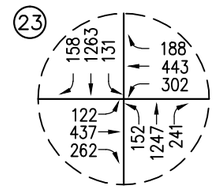




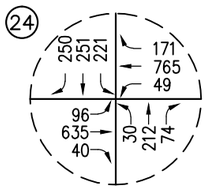
21 N. DEL RIO PL @ 4TH ST



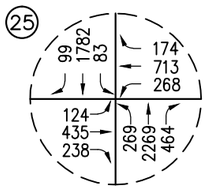
22 HELLMAN AVE @ 4TH ST



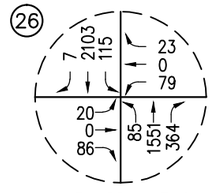
23 ARCHIBALD AVE @ 4TH ST



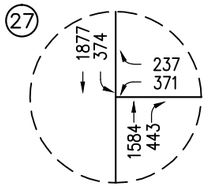
24 TURNER AVE @ 4TH ST



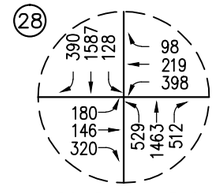
25 HAVEN AVE @ 4TH ST



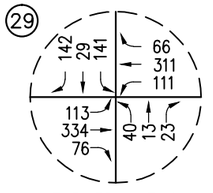
26 VINEYARD AVE @ JAY ST



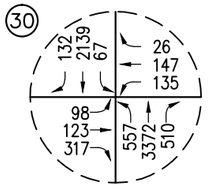
27 VINEYARD AVE @ INLAND EMPIRE BLVD



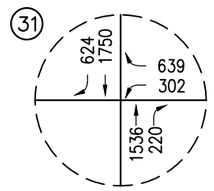
28 ARCHIBALD AVE @ INLAND EMPIRE BLVD



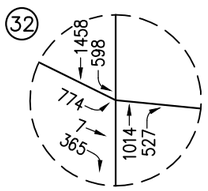
29 TURNER AVE @ INLAND EMPIRE BLVD



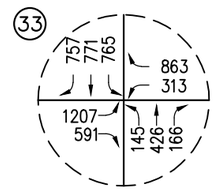
30 HAVEN AVE @ INLAND EMPIRE BLVD



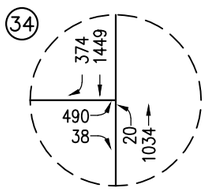
31 VINEYARD AVE @ I-10 WB RAMPS



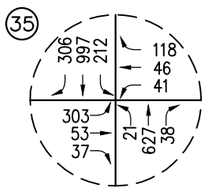
32 VINEYARD AVE @ I-10 EB RAMPS



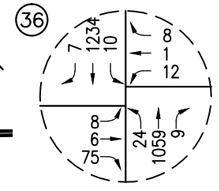
33 ARCHIBALD AVE @ I-10 FWY SINGLE POINT INTERCHANGE



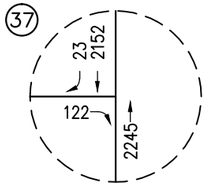
34 VINEYARD AVE @ G STREET



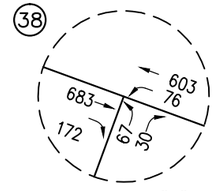
35 VINEYARD AVE @ D STREET



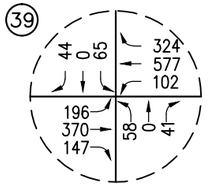
36 VINEYARD AVE @ 7TH ST



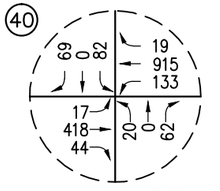
37 VINEYARD AVE @ PLAZA SERENA



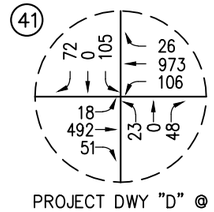
38 PROJECT DWY "A" @ INLAND EMPIRE BLVD



39 DEL RIO PL @ INLAND EMPIRE BLVD



40 PROJECT DWY "C" @ INLAND EMPIRE BLVD



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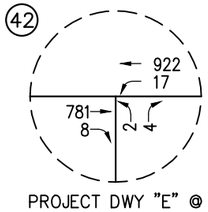

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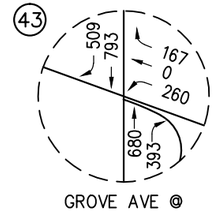
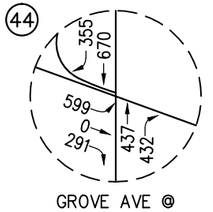


43 GROVE AVE @ I-10 WB RAMPS



44 GROVE AVE @ I-10 EB RAMPS

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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

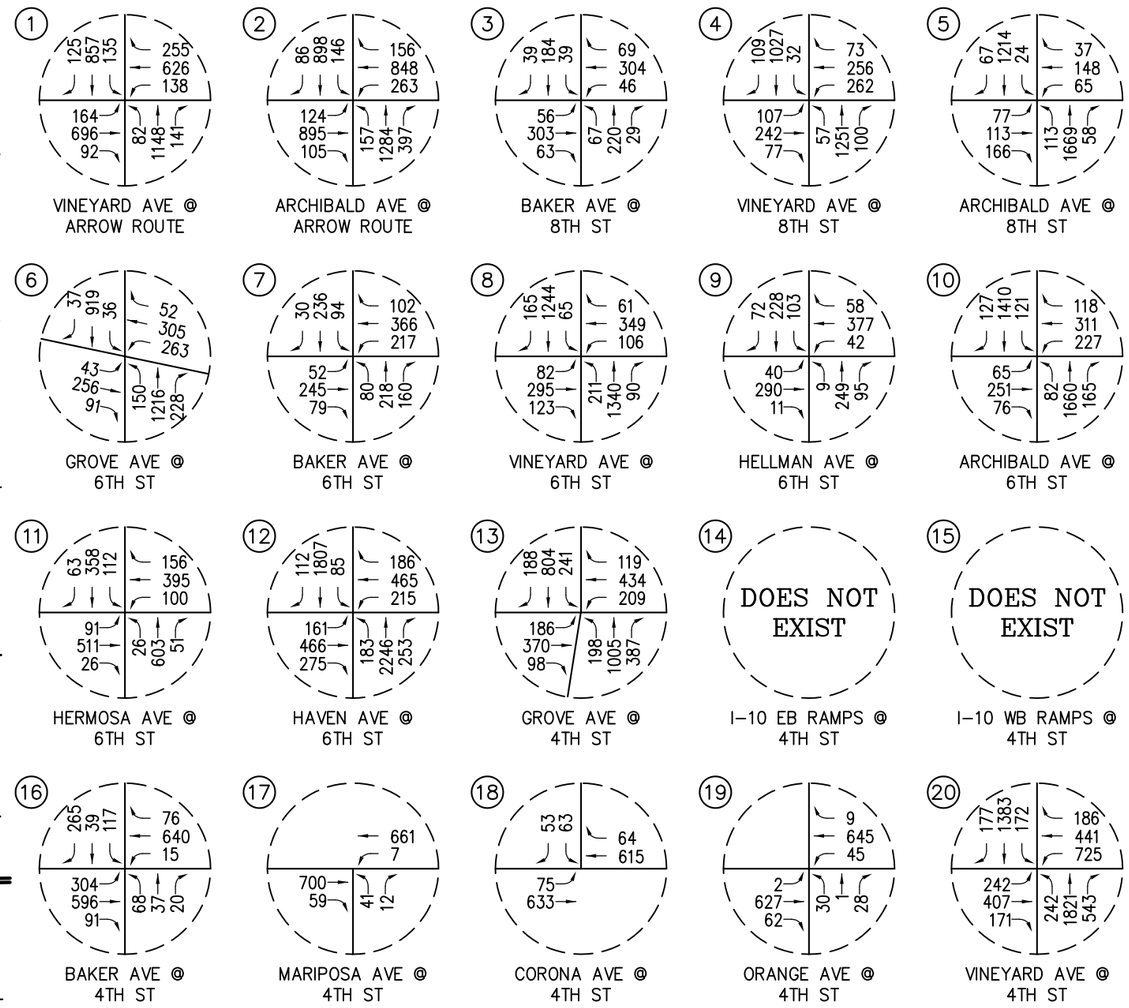
KEY

(#) = STUDY INTERSECTION
= PA-1
= PA-2
= PA-3
= PA-4
= PA-5

FIGURE 6-18B

YEAR 2035 GENERAL PLAN BUILDOUT PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4 AM PEAK HOUR TRAFFIC VOLUMES

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO



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LINSCOTT LAW & GREENSPAN engineers

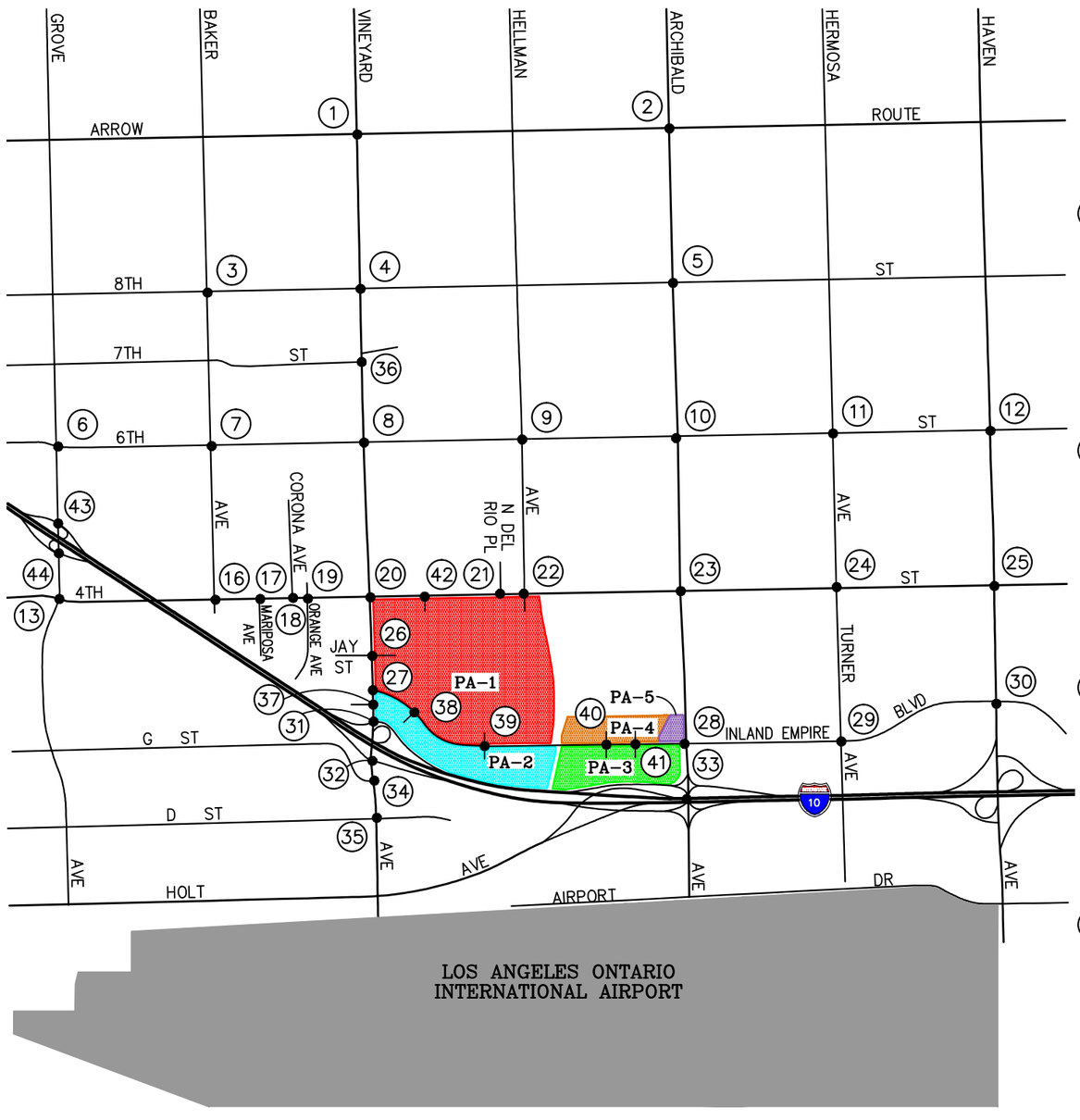
N NO SCALE

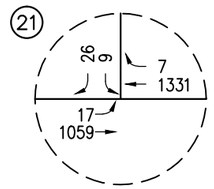
KEY

(#) = STUDY INTERSECTION
= PA-1
= PA-2
= PA-3
= PA-4
= PA-5

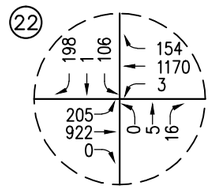
FIGURE 6-19A

YEAR 2035 GENERAL PLAN BUILDOUT PLUS PROJECT
PA-1, PA-2, PA-3 AND PA-4 PM PEAK HOUR TRAFFIC VOLUMES
MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO

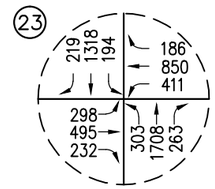




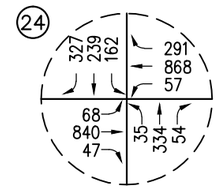
N. DEL RIO PL @ 4TH ST



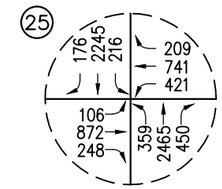
HELLMAN AVE @ 4TH ST



ARCHIBALD AVE @ 4TH ST



TURNER AVE @ 4TH ST



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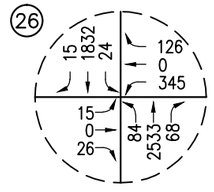
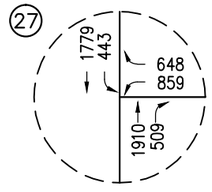
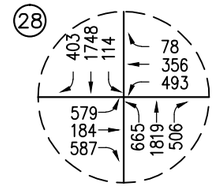


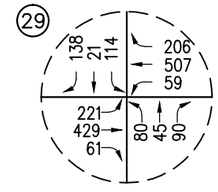
VINEYARD AVE @ JAY ST



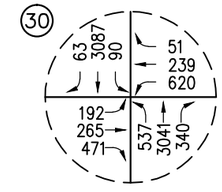
VINEYARD AVE @ INLAND EMPIRE BLVD



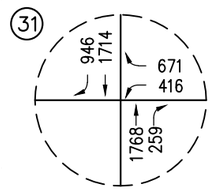
ARCHIBALD AVE @ INLAND EMPIRE BLVD



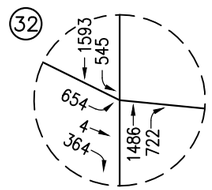
TURNER AVE @ INLAND EMPIRE BLVD



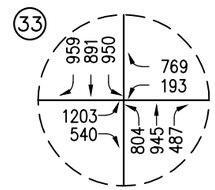
HAVEN AVE @ INLAND EMPIRE BLVD



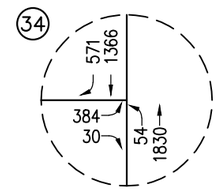
VINEYARD AVE @ I-10 WB RAMPS



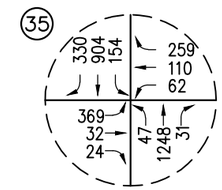
VINEYARD AVE @ I-10 EB RAMPS



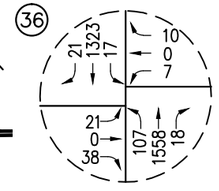
ARCHIBALD AVE @ I-10 FWY SINGLE POINT INTERCHANGE



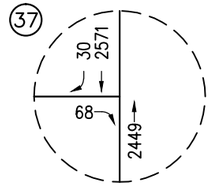
VINEYARD AVE @ G STREET



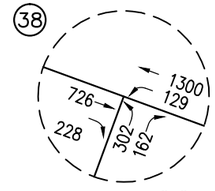
VINEYARD AVE @ D STREET



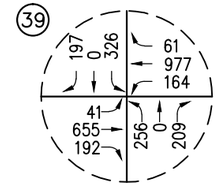
VINEYARD AVE @ 7TH ST



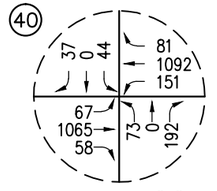
VINEYARD AVE @ PLAZA SERENA



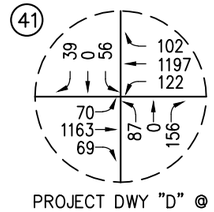
PROJECT DWY "A" @ INLAND EMPIRE BLVD



DEL RIO PL @ INLAND EMPIRE BLVD



PROJECT DWY "C" @ INLAND EMPIRE BLVD



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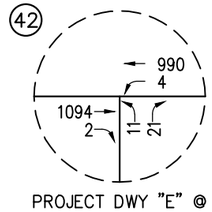

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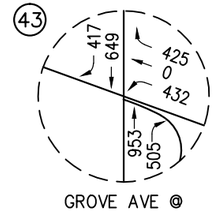
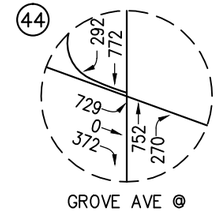


GROVE AVE @ I-10 WB RAMPS



GROVE AVE @ I-10 EB RAMPS

KEY

(#) = STUDY INTERSECTION
= PA-1
= PA-2
= PA-3
= PA-4
= PA-5

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

FIGURE 6-19B

YEAR 2035 GENERAL PLAN BUILDOUT PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4 PM PEAK HOUR TRAFFIC VOLUMES

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO

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7.0 TRAFFIC IMPACT ANALYSIS

The relative impact of the proposed Project during the AM peak hour and PM peak hour was evaluated based on analysis of future operating conditions at the key study intersections, without, then with, the proposed Project. The previously discussed capacity analysis procedures were utilized to investigate the future volume-to-capacity relationships and service level characteristics at each study intersection. The significance of the potential impacts of the Project at each key intersection was then evaluated using the following traffic impact criteria.

7.1 Impact Criteria and Thresholds

As noted earlier, the City of Ontario General Plan Infrastructure Element indicates that Level of Service (LOS) D is to be used for the sizing of roadway segments while LOS E should be maintained at intersections. The County of San Bernardino CMP definition of deficiency is based on maintaining a level of service standard of LOS E or better, except where an existing LOS F condition is identified in the CMP document.

The City of Rancho Cucamonga considers LOS D to be the minimum acceptable LOS for all intersections.

Caltrans has established that LOS D is the operating standard for all Caltrans facilities. Caltrans has determined that all state owned facilities that operate below LOS D should be identified and improved to an acceptable LOS. The *Caltrans Traffic Impact Study Guidelines dated December 2002* does state that if an existing state owned facility operates at less than LOS D, the existing service level should be maintained.

7.2 Traffic Impact Analysis Scenarios

The following scenarios are those for which delay and corresponding LOS calculations have been performed at the key intersections for existing plus project, near-term (Year 2017 and 2020) and long-term (Year 2035) traffic conditions:

1. Existing Traffic,
2. Existing Plus PA-1 and PA-2 (Interim) Project Traffic,
3. Scenario (2) with Recommended Improvements, if any,
4. Existing Plus Total Project (PA-1 through PA-4) Traffic,
5. Scenario (4) with Recommended Improvements, if any,
6. Year 2017 Cumulative Traffic Conditions,
7. Year 2017 With PA-1 and PA-2 (Interim) Project Traffic, and
8. Scenario (7) With Recommended Improvements, if any.
9. Year 2020 Cumulative Traffic Conditions,
10. Year 2020 Cumulative Plus Total Project (PA-1 through PA-4) Traffic,
11. Scenario (10) With Recommended Improvements, if any.
12. Year 2035 General Plan Buildout (No-Project) Traffic (assuming the Project site develops per The Ontario Plan,
13. Year 2035 General Plan Buildout With Project Traffic (assuming the Project site develops per The current proposal (Project)),
14. Scenario (13) With Recommended Improvements, if any.

8.0 PEAK HOUR INTERSECTION CAPACITY ANALYSIS

8.1 Existing Plus Project Traffic Conditions

8.1.0 *Existing Traffic Conditions*

Tables 8-1 and ***8-2*** summarize the AM and PM peak hour Level of Service results at the key study intersections during a typical weekday for "Existing Plus Project" traffic conditions. The first column (1) of Delay/LOS values in *Tables 8-1* and *8-2* presents a summary of existing AM and PM peak hour traffic conditions (which were also presented in *Table 3-3*). A review of this column indicates that four (4) of the thirty-six (36) key study intersections are forecast to operate at an unacceptable level of service during the PM peak hour when compared to the LOS standards defined in this report. The remaining thirty-two (32) key study intersections are forecast to operate at acceptable levels of service during the AM and PM peak hours. The intersections operating adversely under existing conditions are:

	AM Peak Hour			PM Peak Hour		
Key Intersection	**Delay (s/v)**	**V/C**	**LOS**	**Delay (s/v)**	**V/C**	**LOS**
14. I-10 EB Ramps at 4th Street	--	--	--	78.1	0.808	E
22. Hellman Avenue at 4th Street	--	--	--	*75.4*	--	*F*
26. Vineyard Avenue at Jay Street	--	--	--	*50.7*	--	*F*
30. Haven Avenue at Inland Empire Boulevard	--	--	--	102.8	0.742	F

**Italicized text* corresponds to unsignalized intersections.

The second column (2) of *Table 8-1* lists forecast Existing plus PA-1 and PA-2 (Interim) traffic conditions and the third column (3) indicates whether the traffic associated with the PA-1 and PA-2 (Interim) component of the Project will have a significant impact based on the significant traffic impact criteria defined in this report. The fourth column (4) presents the resultant level of service with the inclusion of recommended traffic improvements, where needed, to achieve an acceptable level of service.

The second column (2) of *Table 8-2* lists forecast Existing plus PA-1, PA-2, PA-3 and PA-4 traffic conditions and the third column (3) indicates whether the traffic associated with the development of the entire Meredith International site (PA-1, PA-2, PA-3 and PA-4) will have a significant impact based on the significant traffic impact criteria defined in this report. The fourth column (4) presents the resultant level of service with the inclusion of recommended traffic improvements, where needed, to achieve an acceptable level of service.

8.1.1 *Existing Plus Project PA-1 and PA-2 (Interim) Traffic Conditions*

Review of column (2) of *Table 8-1* indicates that for Existing Plus Project PA-1and PA-2 (Interim) traffic conditions, two (2) of the key study intersections are forecast to operate at unacceptable levels of service during the PM peak hours when compared to the LOS standards defined in this report. The intersections forecast to operate adversely with the addition of PA-1 and PA-2 (Interim) traffic are:

	AM Peak Hour			PM Peak Hour		
Key Intersection	**Delay (s/v)**	**V/C**	**LOS**	**Delay (s/v)**	**V/C**	**LOS**
14. I-10 EB Ramps at 4th Street	--	--	--	83.2	0.821	F
30. Haven Avenue at Inland Empire Boulevard	--	--	--	102.7	0.746	F

**Italicized text* corresponds to unsignalized intersections.

However, a review of column (4) of *Table 8-1* indicates that these intersections are forecast to operate at an acceptable level of service with the implementation of the mitigations recommended in this report. The remaining key study intersections are forecast to operate at acceptable levels of service during the AM and PM peak hours. Note, the resulting service levels for key intersections No. 17, No. 18, No. 19, No. 26 and No. 27, all of which provide access to the residential neighborhood located west of the project site, west of Vineyard Avenue, are representative of future conditions with the conversion of Plaza Serena to a "right-turn only" unsignalized intersection with the realignment of Inland Empire Boulevard to the north. Further, with the installation of traffic signals at intersection No. 22 (Hellman Avenue at 4th Street) and No. 26 (Vineyard Avenue at Jay Street), both these intersections are forecast to operate at an acceptable service level with the Project.

8.1.2 *Existing Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions*

Review of column (5) of *Table 8-2* indicates that for Existing Plus Project PA-1, PA-2, PA-3 and PA-4 traffic conditions, two (2) of the key study intersections are forecast to operate at unacceptable levels of service during the PM peak hour when compared to the LOS standards defined in this report. The intersections operating adversely with the addition of PA-1, PA-2, PA-3 and PA-4 traffic are:

	AM Peak Hour			PM Peak Hour		
Key Intersection	**Delay (s/v)**	**V/C**	**LOS**	**Delay (s/v)**	**V/C**	**LOS**
14. I-10 EB Ramps at 4th Street	--	--	--	94.2	0.852	F
30. Haven Avenue at Inland Empire Boulevard	--	--	--	102.3	0.754	F

**Italicized text* corresponds to unsignalized intersections.

However, a review of column (7) of *Table 8-2* indicates that these intersections are forecast to operate at an acceptable level of service with the implementation of the mitigations recommended in this report. The remaining key study intersections are forecast to operate at acceptable levels of service during the AM and PM peak hours. Note, the resulting service levels for key intersections No. 17, No. 18, No. 19, No. 26 and No. 27, all of which provide access to the residential neighborhood located west of the project site, west of Vineyard Avenue, are representative of future

conditions with the conversion of Plaza Serena to a "right-turn only" unsignalized intersection with the realignment of Inland Empire Boulevard to the north. Further, with the installation of traffic signals at intersection No. 22 (Hellman Avenue at 4th Street) and No. 26 (Vineyard Avenue at Jay Street), both these intersections are forecast to operate at an acceptable service level with the Project.

Appendix F contains the Delay/LOS calculation worksheets for the Existing Plus Project Traffic Conditions.

TABLE 8-1
EXISTING PLUS PROJECT PA-1 AND PA-2 (INTERIM)
PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY[28]

Key Intersection	Time Period	Minimum Acceptable LOS	(1) Existing Traffic Conditions			(2) Existing Plus Project PA-1 and PA-2 (Interim) Traffic Conditions			(3) Significant Impact	(4) Existing Plus Project PA-1 and PA-2 (Interim) Plus Improvements		
			Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Yes/No	Delay (s/v)	V/C	LOS
1. Vineyard Avenue at Arrow Route	AM	D	36.2	0.722	D	36.7	0.726	D	No	--	--	--
	PM		33.5	0.771	C	34.1	0.792	C	No	--	--	--
2. Archibald Avenue at Arrow Route	AM	D	35.2	0.804	D	37.1	0.830	D	No	--	--	--
	PM		44.6	0.927	D	48.1	0.960	D	No	--	--	--
3. Baker Avenue at 8th Street	*AM*	*D*	*15.2*	--	*C*	*16.6*	--	*C*	*No*	--	--	--
	PM		*14.3*	--	*B*	*15.2*	--	*C*	*No*	--	--	--
4. Vineyard Avenue at 8th Street	AM	D	19.0	0.511	B	19.3	0.531	B	No	--	--	--
	PM		18.7	0.445	B	18.8	0.466	B	No	--	--	--
5. Archibald Avenue at 8th Street	AM	D	18.7	0.889	B	18.8	0.850	B	No	--	--	--
	PM		18.3	0.836	B	18.4	0.842	B	No	--	--	--
6. Grove Avenue at 6th Street	AM	E	30.4	0.627	C	30.5	0.637	C	No	--	--	--
	PM		27.7	0.582	C	27.7	0.586	C	No	--	--	--
7. Baker Avenue at 6th Street	*AM*	*E*	*13.1*	--	*B*	*13.6*	--	*B*	*No*	--	--	--
	PM		*12.6*	--	*B*	*13.1*	--	*B*	*No*	--	--	--
8. Vineyard Avenue at 6th Street	AM	E	18.5	0.471	B	19.1	0.518	B	No	--	--	--
	PM		18.8	0.436	B	19.4	0.466	B	No	--	--	--

Notes:

- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions
- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report
- *Italicized text* corresponds to unsignalized intersections

[28] *Appendix F* contains the Delay/LOS calculation worksheets for all study intersections.

TABLE 8-1 (CONTINUED)
EXISTING PLUS PROJECT PA-1 AND PA-2 (INTERIM)
PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY[29]

Key Intersection	Time Period	Minimum Acceptable LOS	(1) Existing Traffic Conditions			(2) Existing Plus Project PA-1 and PA-2 (Interim) Traffic Conditions			(3) Significant Impact	(4) Existing Plus Project PA-1 and PA-2 (Interim) Plus Improvements		
			Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Yes/No	Delay (s/v)	V/C	LOS
9. Hellman Avenue at	*AM*	*D*	*10.9*	--	*B*	*11.2*	--	*B*	*No*	--	--	--
6th Street	*PM*		*13.4*	--	*B*	*13.9*	--	*B*	*No*	--	--	--
10. Archibald Avenue at	AM	D	19.3	0.437	B	19.4	0.469	B	No	--	--	--
6th Street	PM		22.2	0.675	C	22.6	0.720	C	No	--	--	--
11. Hermosa Avenue at	AM	D	14.7	0.273	B	14.9	0.288	B	No	--	--	--
6th Street	PM		15.3	0.358	B	15.4	0.363	B	No	--	--	--
12. Haven Avenue at	AM	D	39.0	0.568	D	38.9	0.576	D	No	--	--	--
6th Street	PM		40.9	0.681	D	40.9	0.684	D	No	--	--	--
13. Grove Avenue at	AM	E	45.6	0.810	D	45.8	0.813	D	No	--	--	--
4th Street	PM		51.2	0.827	D	51.9	0.834	D	No	--	--	--
14. I-10 EB Ramps at	AM	D	19.6	0.652	B	19.7	0.673	B	No	18.5	0.673	B
4th Street	PM		**78.1**	**0.808**	**E**	**83.2**	**0.821**	**F**	**Yes**	25.9	0.702	C
15. I-10 WB Ramps at	AM	D	22.4	0.709	C	22.3	0.709	C	No	--	--	--
4th Street	PM		25.2	0.748	C	25.4	0.770	C	No	--	--	--
16. Baker Avenue at	AM	E	28.1	0.472	C	27.5	0.482	C	No	--	--	--
4th Street	PM		24.0	0.591	C	24.2	0.602	C	No	--	--	--

Notes:

- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions
- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report
- *Italicized text* corresponds to unsignalized intersections

[29] *Appendix F* contains the Delay/LOS calculation worksheets for all study intersections.

TABLE 8-1 (CONTINUED)
EXISTING PLUS PROJECT PA-1 AND PA-2 (INTERIM)
PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY[30]

Key Intersection	Time Period	Minimum Acceptable LOS	(1) Existing Traffic Conditions			(2) Existing Plus Project PA-1 and PA-2 (Interim) Traffic Conditions			(3) Significant Impact	(4) Existing Plus Project PA-1 and PA-2 (Interim) Plus Improvements		
			Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Yes/No	Delay (s/v)	V/C	LOS
17. Mariposa Avenue at 4th Street	*AM*	*E*	*18.2*	--	*C*	*19.1*	--	*C*	*No*	--	--	--
	PM		*21.0*	--	*C*	*21.7*	--	*C*	*No*	--	--	--
18. Corona Avenue at 4th Street	AM	E	11.2	0.240	B	11.1	0.242	B	No	--	--	--
	PM		8.1	0.248	A	8.0	0.258	A	No	--	--	--
19. Orange Avenue at 4th Street	*AM*	*E*	*17.6*	--	*C*	*18.4*	--	*C*	*No*	--	--	--
	PM		*18.3*	--	*C*	*18.8*	--	*C*	*No*	--	--	--
20. Vineyard Avenue at 4th Street	AM	E	32.8	0.705	C	35.7	0.694	D	No	--	--	--
	PM		44.4	0.807	D	52.1	0.869	D	No	--	--	--
21. Del Rio Place at 4th Street	*AM*	*E*	*20.8*	--	*C*	*13.3*	--	*B*	*No*	--	--	--
	PM		*16.6*	--	*C*	*17.0*	--	*C*	*No*	--	--	--
22. Hellman Avenue at 4th Street	AM	E	*42.8*	--	*E*	24.1[31]	0.377	C	No	--	--	--
	PM		***75.4***	--	***F***	25.7	0.483	C	No	--	--	--
23. Archibald Avenue at 4th Street	AM	D	30.9	0.516	C	31.9	0.528	C	No	--	--	--
	PM		37.6	0.670	D	40.5	0.721	D	No	--	--	--
24. Turner Avenue at 4th Street	AM	D	21.2	0.365	C	21.1	0.373	C	No	--	--	--
	PM		20.5	0.446	C	20.6	0.449	C	No	--	--	--

Notes:

- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions
- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report
- *Italicized text* corresponds to unsignalized intersections

[30] *Appendix F* contains the Delay/LOS calculation worksheets for all study intersections.

[31] As part of the Project, Hellman Avenue at 4th Street is anticipated to be converted to a signalized intersection.

TABLE 8-1 (CONTINUED)
EXISTING PLUS PROJECT PA-1 AND PA-2 (INTERIM)
PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY[32]

Key Intersection	Time Period	Minimum Acceptable LOS	(1) Existing Traffic Conditions			(2) Existing Plus Project PA-1 and PA-2 (Interim) Traffic Conditions			(3) Significant Impact	(4) Existing Plus Project PA-1 and PA-2 (Interim) Plus Improvements		
			Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Yes/No	Delay (s/v)	V/C	LOS
25. Haven Avenue at 4th Street	AM	D	35.9	0.619	D	35.9	0.628	D	No	--	--	--
	PM		52.2	0.919	D	52.2	0.928	D	No	--	--	--
26. Vineyard Avenue at Jay Street	AM	E	*28.6*	--	*D*	25.8[33]	0.576	C	No	--	--	--
	PM		***50.7***	--	***F***	29.1	0.730	C	No	--	--	--
27. Vineyard Avenue at Inland Empire Boulevard	AM	E	18.8	0.506	B	19.4	0.662	B[34]	No	--	--	--
	PM		18.4	0.595	B	21.5	0.749	B	No	--	--	--
28. Archibald Avenue at Inland Empire Boulevard	AM	E	43.7	0.537	D	47.6	0.624	D	No	--	--	--
	PM		59.7	0.631	E	63.0	0.774	E	No	--	--	--
29. Turner Avenue at Inland Empire Boulevard	AM	E	22.2	0.237	C	22.0	0.244	C	No	--	--	--
	PM		22.7	0.345	C	22.6	0.347	C	No	--	--	--
30. Haven Avenue at Inland Empire Boulevard	AM	E	52.1	0.537	D	52.1	0.538	D	No	31.6	0.534	C
	PM		**102.8**	**0.742**	**F**	**102.7**	**0.746**	**F**	**Yes**	46.0	0.746	D
31. Vineyard Avenue at I-10 WB Ramps	AM	D	15.0	0.561	B	18.9	0.669	B	No	--	--	--
	PM		18.2	0.650	B	19.5	0.719	B	No	--	--	--
32. Vineyard Avenue at I-10 EB Ramps	AM	D	22.5	0.674	C	27.0	0.819	C	No	--	--	--
	PM		21.8	0.665	C	25.0	0.794	C	No	--	--	--

Notes:

- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions
- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report
- *Italicized text* corresponds to unsignalized intersections

[32] *Appendix F* contains the Delay/LOS calculation worksheets for all study intersections.

[33] As part of the Project, Vineyard Avenue at Jay Street is anticipated to be converted to a signalized intersection.

[34] Project enhancements consist of the realignment of Vineyard Avenue with two NBT lanes, two SBT lanes and an exclusive left-turn lane. The WB approach consists of two left-turn lanes and an exclusive right-turn lane. Figures 11A through H provided a graphical representation of the project enhancements and cumulative improvements.

TABLE 8-1 (CONTINUED)
EXISTING PLUS PROJECT PA-1 AND PA-2 (INTERIM)
PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY[35]

Key Intersection	Time Period	Minimum Acceptable LOS	(1) Existing Traffic Conditions			(2) Existing Plus Project PA-1 and PA-2 (Interim) Traffic Conditions			(3) Significant Impact	(4) Existing Plus Project PA-1 and PA-2 (Interim) Plus Improvements		
			Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Yes/No	Delay (s/v)	V/C	LOS
33. Archibald Avenue at I-10 Freeway	AM	D	23.6	0.589	C	23.9	0.612	C	No	--	--	--
	PM		30.7	0.607	C	30.4	0.685	C	No	--	--	--
34. Vineyard Avenue at G Street	AM	E	15.2	0.414	B	15.1	0.424	B	No	--	--	--
	PM		14.1	0.384	B	14.1	0.414	B	No	--	--	--
35. Vineyard Avenue at D Street	AM	E	22.3	0.340	C	22.6	0.365	C	No	--	--	--
	PM		22.0	0.387	C	22.2	0.401	C	No	--	--	--
36. Vineyard Avenue at 7th Street	*AM*	*E*	*16.5*	--	*C*	*17.9*	--	*C*	*No*	--	--	--
	PM		*20.1*	--	*C*	*22.0*	--	*C*	*No*	--	--	--
37. Vineyard Avenue at Plaza Serena	*AM*	*E*	--	--	--	*19.6*	--	*C*	*No*	--	--	--
	PM		--	--	--	*24.4*	--	*C*	*No*	--	--	--
38. Project Driveway A at Inland Empire Boulevard	AM	E	**FUTURE INTERSECTION**									
	PM											
39. Del Rio Place at Inland Empire Boulevard	AM	E	--	--	--	28.9	0.417	C	No	--	--	--
	PM		--	--	--	29.5	0.363	C	No	--	--	--
40. Project Driveway C at Inland Empire Boulevard	AM	E	**FUTURE INTERSECTION**									
	PM											

Notes:

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- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report
- *Italicized text* corresponds to unsignalized intersections

[35] *Appendix F* contains the Delay/LOS calculation worksheets for all study intersections.

TABLE 8-1 (CONTINUED)
EXISTING PLUS PROJECT PA-1 AND PA-2 (INTERIM)
PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY[36]

Key Intersection	Time Period	Minimum Acceptable LOS	(1) Existing Traffic Conditions			(2) Existing Plus Project PA-1 and PA-2 (Interim) Traffic Conditions			(3) Significant Impact	(4) Existing Plus Project PA-1 and PA-2 (Interim) Plus Improvements		
			Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Yes/No	Delay (s/v)	V/C	LOS
41. Project Driveway D at Inland Empire Boulevard	AM PM	E	**FUTURE INTERSECTION**									
42. Project Driveway E at 4th Street	*AM* *PM*	*E*	-- --	-- --	-- --	*13.4* *16.2*	-- --	*B* *C*	*No* *No*	-- --	-- --	-- --

Notes:

- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions
- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report
- *Italicized text* corresponds to unsignalized intersections

[36] *Appendix F* contains the Delay/LOS calculation worksheets for all study intersections.

TABLE 8-2

EXISTING PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4

PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY[37]

Key Intersection		Time Period	Minimum Acceptable LOS	(1) Existing Traffic Conditions			(2) Existing Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions			(3) Significant Impact	(4) Existing Plus Project PA-1, PA-2, PA-3 and PA-4 Plus Improvements		
				Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Yes/No	Delay (s/v)	V/C	LOS
1.	Vineyard Avenue at Arrow Route	AM	D	36.2	0.722	D	37.4	0.737	D	No	--	--	--
		PM		33.5	0.771	C	35.2	0.820	D	No	--	--	--
2.	Archibald Avenue at Arrow Route	AM	D	35.2	0.804	D	38.1	0.852	D	No	--	--	--
		PM		44.6	0.927	D	51.8	0.979	D	No	--	--	--
3.	*Baker Avenue at 8th Street*	*AM*	*D*	*15.2*	--	*C*	*18.3*	--	*C*	*No*	--	--	--
		PM		*14.3*	--	*B*	*17.3*	--	*C*	*No*	--	--	--
4.	Vineyard Avenue at 8th Street	AM	D	19.0	0.511	B	19.7	0.555	B	No	--	--	--
		PM		18.7	0.445	B	19.0	0.492	B	No	--	--	--
5.	Archibald Avenue at 8th Street	AM	D	18.7	0.889	B	19.0	0.853	B	No	--	--	--
		PM		18.3	0.836	B	18.7	0.847	B	No	--	--	--
6.	Grove Avenue at 6th Street	AM	E	30.4	0.627	C	30.7	0.655	C	No	--	--	--
		PM		27.7	0.582	C	28.0	0.605	C	No	--	--	--
7.	*Baker Avenue at 6th Street*	*AM*	*E*	*13.1*	--	*B*	*14.5*	--	*B*	*No*	--	--	--
		PM		*12.6*	--	*B*	*14.4*	--	*B*	*No*	--	--	--
8.	Vineyard Avenue at 6th Street	AM	E	18.5	0.471	B	20.6	0.584	C	No	--	--	--
		PM		18.8	0.436	B	21.7	0.523	C	No	--	--	--

Notes:

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- LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions
- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report
- *Italicized text* corresponds to unsignalized intersections

[37] *Appendix F* contains the Delay/LOS calculation worksheets for all study intersections.

TABLE 8-2 (CONTINUED)
EXISTING PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4
PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY[38]

Key Intersection	Time Period	Minimum Acceptable LOS	(1) Existing Traffic Conditions			(2) Existing Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions			(3) Significant Impact	(4) Existing Plus Project PA-1, PA-2, PA-3 and PA-4 Plus Improvements		
			Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Yes/No	Delay (s/v)	V/C	LOS
9. Hellman Avenue at	*AM*	*D*	*10.9*	--	*B*	*11.9*	--	*B*	*No*	--	--	--
6th Street	*PM*		*13.4*	--	*B*	*15.5*	--	*C*	*No*	--	--	--
10. Archibald Avenue at	AM	D	19.3	0.437	B	19.8	0.507	B	No	--	--	--
6th Street	PM		22.2	0.675	C	23.9	0.777	C	No	--	--	--
11. Hermosa Avenue at	AM	D	14.7	0.273	B	15.1	0.304	B	No	--	--	--
6th Street	PM		15.3	0.358	B	15.4	0.380	B	No	--	--	--
12. Haven Avenue at	AM	D	39.0	0.568	D	38.9	0.584	D	No	--	--	--
6th Street	PM		40.9	0.681	D	40.8	0.693	D	No	--	--	--
13. Grove Avenue at	AM	E	45.6	0.810	D	46.5	0.826	D	No	--	--	--
4th Street	PM		51.2	0.827	D	53.5	0.852	D	No	--	--	--
14. I-10 EB Ramps at	AM	D	19.6	0.652	B	20.0	0.695	B	No	18.6	0.695	B
4th Street	PM		**78.1**	**0.808**	**E**	**94.2**	**0.852**	**F**	**Yes**	21.8	0.756	C
15. I-10 WB Ramps at	AM	D	22.4	0.709	C	22.6	0.702	C	No	--	--	--
4th Street	PM		25.2	0.748	C	26.2	0.802	C	No	--	--	--
16. Baker Avenue at	AM	E	28.1	0.472	C	27.2	0.493	C	No	--	--	--
4th Street	PM		24.0	0.591	C	24.3	0.618	C	No	--	--	--

Notes:

- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions
- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report
- *Italicized text* corresponds to unsignalized intersections

[38] *Appendix F* contains the Delay/LOS calculation worksheets for all study intersections.

TABLE 8-2 (CONTINUED)
EXISTING PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4
PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY[39]

Key Intersection	Time Period	Minimum Acceptable LOS	(1) Existing Traffic Conditions			(2) Existing Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions			(3) Significant Impact	(4) Existing Plus Project PA-1, PA-2, PA-3 and PA-4 Plus Improvements		
			Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Yes/No	Delay (s/v)	V/C	LOS
17. Mariposa Avenue at	*AM*	*E*	*18.2*	--	*C*	*20.3*	--	*C*	*No*	--	--	--
4th Street	*PM*		*21.0*	--	*C*	*23.8*	--	*C*	*No*	--	--	--
18. Corona Avenue at	AM	E	11.2	0.240	B	10.8	0.250	B	No	--	--	--
4th Street	PM		8.1	0.248	A	8.0	0.274	A	No	--	--	--
19. Orange Avenue at	*AM*	*E*	*17.6*	--	*C*	*19.6*	--	*C*	*No*	--	--	--
4th Street	*PM*		*18.3*	--	*C*	*20.4*	--	*C*	*No*	--	--	--
20. Vineyard Avenue at	AM	E	32.8	0.705	C	42.3	0.761	D	No	--	--	--
4th Street	PM		44.4	0.807	D	75.7	0.985	E	No	--	--	--
21. Del Rio Place at	*AM*	*E*	*20.8*	--	*C*	*14.1*	--	*B*	*No*	--	--	--
4th Street	*PM*		*16.6*	--	*C*	*19.1*	--	*C*	*No*	--	--	--
22. Hellman Avenue at	AM	E	*42.8*	--	*E*	24.5[40]	0.418	C	No	--	--	--
4th Street	PM		***75.4***	--	***F***	26.9	0.550	C	No	--	--	--
23. Archibald Avenue at	AM	D	30.9	0.516	C	34.4	0.564	C	No	--	--	--
4th Street	PM		37.6	0.670	D	48.2	0.918	D	No	--	--	--
24. Turner Avenue at	AM	D	21.2	0.365	C	21.0	0.382	C	No	--	--	--
4th Street	PM		20.5	0.446	C	20.5	0.458	C	No	--	--	--

Notes:

- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions
- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report
- *Italicized text* corresponds to unsignalized intersections

[39] *Appendix F* contains the Delay/LOS calculation worksheets for all study intersections.

[40] As part of the Project, Hellman Avenue at 4th Street is anticipated to be converted to a signalized intersection.

TABLE 8-2 (CONTINUED)
EXISTING PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4
PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY[41]

Key Intersection		Time Period	Minimum Acceptable LOS	(1) Existing Traffic Conditions			(2) Existing Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions			(3) Significant Impact	(4) Existing Plus Project PA-1, PA-2, PA-3 and PA-4 Plus Improvements		
				Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Yes/No	Delay (s/v)	V/C	LOS
25.	Haven Avenue at	AM	D	35.9	0.619	D	35.9	0.636	D	No	--	--	--
	4th Street	PM		52.2	0.919	D	52.3	0.939	D	No	--	--	--
26.	Vineyard Avenue at	AM	E	*28.6*	--	*D*	28.3[42]	0.651	C	No	--	--	--
	Jay Street	PM		***50.7***	--	***F***	41.9	0.831	D	No	--	--	--
27.	Vineyard Avenue at	AM	E	18.8	0.506	B	25.4	0.670	C[43]	No	--	--	--
	Inland Empire Boulevard	PM		18.4	0.595	B	49.5	0.994	D	No	--	--	--
28.	Archibald Avenue at	AM	E	43.7	0.537	D	46.0	0.747	D[44]	No	--	--	--
	Inland Empire Boulevard	PM		59.7	0.631	E	74.0	0.795	E	No	--	--	--
29.	Turner Avenue at	AM	E	22.2	0.237	C	21.7	0.255	C	No	--	--	--
	Inland Empire Boulevard	PM		22.7	0.345	C	22.4	0.359	C	No	--	--	--
30.	Haven Avenue at	AM	E	52.1	0.537	D	52.0	0.541	D	No	31.7	0.544	C
	Inland Empire Boulevard	PM		**102.8**	**0.742**	**F**	**102.3**	**0.754**	**F**	**Yes**	46.2	0.754	D
31.	Vineyard Avenue at	AM	D	15.0	0.561	B	20.5	0.729	C	No	--	--	--
	I-10 WB Ramps	PM		18.2	0.650	B	21.5	0.794	C	No	--	--	--
32.	Vineyard Avenue at	AM	D	22.5	0.674	C	29.2	0.876	C	No	--	--	--
	I-10 EB Ramps	PM		21.8	0.665	C	28.9	0.894	C	No	--	--	--

Notes:

- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions
- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report
- *Italicized text* corresponds to unsignalized intersections

[41] *Appendix F* contains the Delay/LOS calculation worksheets for all study intersections.
[42] As part of the Project, Vineyard Avenue at Jay Street is anticipated to be converted to a signalized intersection.
[43] Project enhancements consist of the realignment of Vineyard Avenue with three NBT lanes and an exclusive right-turn lane, two SBT lanes and an exclusive left. The WB approach consists of two left-turn lanes and an exclusive right-turn lane. Figures 11A through H provided a graphical representation of the project enhancements and cumulative improvements.
[44] Project enhancements consist of a 2nd EB left-turn lane and a 2nd WB left-turn lane. Figures 11A through H provided a graphical representation of the project enhancements and cumulative improvements.

TABLE 8-2 (CONTINUED)
EXISTING PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4
PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY[45]

Key Intersection		Time Period	Minimum Acceptable LOS	(1) Existing Traffic Conditions			(2) Existing Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions			(3) Significant Impact	(4) Existing Plus Project PA-1, PA-2, PA-3 and PA-4 Plus Improvements		
				Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Yes/No	Delay (s/v)	V/C	LOS
33.	Archibald Avenue at I-10 Freeway	AM	D	23.6	0.589	C	24.5	0.682	C	No	--	--	--
		PM		30.7	0.607	C	32.0	0.791	C	No	--	--	--
34.	Vineyard Avenue at G Street	AM	E	15.2	0.414	B	15.3	0.454	B	No	--	--	--
		PM		14.1	0.384	B	14.3	0.444	B	No	--	--	--
35.	Vineyard Avenue at D Street	AM	E	22.3	0.340	C	22.8	0.386	C	No	--	--	--
		PM		22.0	0.387	C	22.6	0.437	C	No	--	--	--
36.	*Vineyard Avenue at 7th Street*	*AM*	*E*	*16.5*	--	*C*	*19.6*	--	*C*	*No*	--	--	--
		PM		*20.1*	--	*C*	*25.0*	--	*D*	*No*	--	--	--
37.	*Vineyard Avenue at Plaza Serena*	*AM*	*E*	--	--	--	*22.1*	--	*C*	*No*	--	--	--
		PM		--	--	--	*30.9*	--	*D*	*No*	--	--	--
38.	Project Driveway A at Inland Empire Boulevard	AM	E	--	--	--	7.8	0.283	A	No	--	--	--
		PM		--	--	--	14.0	0.543	B	No	--	--	--
39.	Del Rio Place at Inland Empire Boulevard	AM	E	--	--	--	31.6	0.508	C	No	--	--	--
		PM		--	--	--	36.7	0.661	D	No	--	--	--
40.	Project Driveway C at Inland Empire Boulevard	AM	E	--	--	--	23.9	0.364	C	No	--	--	--
		PM		--	--	--	26.9	0.567	C	No	--	--	--

Notes:

- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions
- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report
- *Italicized text* corresponds to unsignalized intersections

[45] *Appendix F* contains the Delay/LOS calculation worksheets for all study intersections.

TABLE 8-2 (CONTINUED)
EXISTING PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4
PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY[46]

Key Intersection	Time Period	Minimum Acceptable LOS	(1) Existing Traffic Conditions			(2) Existing Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions			(3) Significant Impact	(4) Existing Plus Project PA-1, PA-2, PA-3 and PA-4 Plus Improvements		
			Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Yes/No	Delay (s/v)	V/C	LOS
41. Project Driveway D at Inland Empire Boulevard	AM	E	--	--	--	24.3	0.391	C	No	--	--	--
	PM		--	--	--	27.5	0.549	C	No	--	--	--
42. Project Driveway E at 4th Street	*AM*	*E*	--	--	--	*14.2*	--	*B*	*No*	--	--	--
	PM		--	--	--	*18.4*	--	*C*	*No*	--	--	--

Notes:

- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions
- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report
- *Italicized text* corresponds to unsignalized intersections

[46] *Appendix F* contains the Delay/LOS calculation worksheets for all study intersections.

8.2 Year 2017 Cumulative Traffic Conditions

Table 8-3 summarizes the AM and PM peak hour Level of Service results at the key study intersections during a typical weekday for "Year 2017 Cumulative Plus Project" traffic conditions. The first column (1) of Delay/LOS values in *Table 8-3* presents a summary of existing AM and PM peak hour traffic conditions (which were also presented in *Table 3-3*). The second column (2) presents forecast Year 2017 Cumulative traffic conditions. The third column (3) lists forecast Cumulative plus Project PA-1 and PA-2 (interim) traffic conditions and the fourth column (4) indicates whether the traffic associated with the PA-1 and PA-2 components of the Project will have a significant impact based on the significant traffic impact criteria defined in this report. The fifth column (5) presents the resultant level of service with the inclusion of recommended traffic improvements, where needed, to achieve an acceptable level of service.

8.2.1 *Year 2017 Cumulative Traffic Conditions*

Review of column (2) of *Table 8-3* indicates that for Year 2017 Cumulative traffic conditions, seven (7) of the key study intersections are forecast to operate at an unacceptable level of service during the AM and/or PM peak hours when compared to the LOS standards defined in this report. The remaining key study intersections are forecast to operate at acceptable levels of service during the AM and PM peak hours. The intersections operating adversely are:

	AM Peak Hour			PM Peak Hour		
Key Intersection	**Delay (s/v)**	**V/C**	**LOS**	**Delay (s/v)**	**V/C**	**LOS**
2. Archibald Avenue at Arrow Route	--	--	--	56.5	1.013	F
14. I-10 EB Ramps at 4th Street	--	--	--	113.5	0.912	F
22. Hellman Avenue at 4th Street	*79.9*	--	*F*	*193.4*	--	*F*
25. Haven Avenue at 4th Street	--	--	--	73.1	1.034	F
26. Vineyard Avenue at Jay Street	--	--	--	*89.2*	--	*F*
28. Archibald Avenue at Inland Empire Boulevard	--	--	--	106.7	0.746	F
30. Haven Avenue at Inland Empire Boulevard	--	--	--	141.6	0.805	F

**Italicized text* corresponds to unsignalized intersections.

8.2.2 *Year 2017 Cumulative Plus Project PA-1 and PA-2 (Interim) Traffic Conditions*

Review of column (3) of *Table 8-3* indicates that for Year 2017 Cumulative Plus Project PA-1 and PA-2 (Interim) traffic conditions, four (4) of the key study intersections are forecast to operate at unacceptable levels of service during the PM peak hour when compared to the LOS standards defined in this report. The remaining key study intersections are forecast to operate at acceptable levels of service during the AM and PM peak hours. The intersections operating adversely are:

	AM Peak Hour			PM Peak Hour		
Key Intersection	**Delay (s/v)**	**V/C**	**LOS**	**Delay (s/v)**	**V/C**	**LOS**
2. Archibald Avenue at Arrow Route	--	--	--	61.8	1.028	F
14. I-10 EB Ramps at 4th Street	--	--	--	123.7	0.970	F
25. Haven Avenue at 4th Street	--	--	--	73.5	1.043	F
30. Haven Avenue at Inland Empire Boulevard	--	--	--	141.4	0.810	F

**Italicized text* corresponds to unsignalized intersections.

Review of column (5) of *Table 8-3* indicates that these intersections are forecast to operate at an acceptable level of service with the implementation of the mitigations recommended in this report. The remaining key study intersections are forecast to operate at acceptable levels of service during the AM and PM peak hours. Note, the resulting service levels for key intersections No. 17, No. 18, No. 19, No. 26 and No. 27, all of which provide access to the residential neighborhood located west of the project site, west of Vineyard Avenue, are representative of future conditions with the conversion of Plaza Serena to a "right-turn only" unsignalized intersection with the realignment of Inland Empire Boulevard to the north. Further, with the installation of traffic signals at intersection No. 22 (Hellman Avenue at 4th Street) and No. 26 (Vineyard Avenue at Jay Street), both these intersections are forecast to operate at an acceptable service level with the Project.

Appendix G contains the Delay/LOS calculation worksheets for the Year 2017 Traffic Conditions.

TABLE 8-3
YEAR 2017 CUMULATIVE PLUS PROJECT PA-1 AND PA-2 (INTERIM)
PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY[47]

Key Intersection	Time Period	Minimum Acceptable LOS	(1) Existing Traffic Conditions			(2) Year 2017 Cumulative Traffic Conditions			(3) Year 2017 Cumulative Plus Project PA-1 and PA-2 (Interim) Traffic Conditions			(4) Significant Impact	(5) Year 2017 Cumulative Plus Project PA-1 and PA-2 (Interim) Plus Improvements		
			Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Yes/No	Delay (s/v)	V/C	LOS
1. Vineyard Avenue at Arrow Route	AM	D	36.2	0.722	D	39.0	0.773	D	39.8	0.769	D	No	--	--	--
	PM		33.5	0.771	C	36.2	0.837	D	37.2	0.859	D	No	--	--	--
2. Archibald Avenue at Arrow Route	AM	D	35.2	0.804	D	39.2	0.879	D	41.7	0.904	D	No	42.6	0.888	D
	PM		44.6	0.927	D	**56.5**	**1.013**	**F**	**61.8**	**1.028**	**F**	**Yes**	44.5	0.926	D
3. Baker Avenue at 8th Street	*AM*	*D*	*15.2*	--	*C*	*17.5*	--	*C*	*19.5*	--	*C*	*No*	--	--	--
	PM		*14.3*	--	*B*	*15.9*	--	*C*	*17.1*	--	*C*	*No*	--	--	--
4. Vineyard Avenue at 8th Street	AM	D	19.0	0.511	B	20.1	0.545	C	20.4	0.565	C	No	--	--	--
	PM		18.7	0.445	B	19.9	0.541	B	20.1	0.561	C	No	--	--	--
5. Archibald Avenue at 8th Street	AM	D	18.7	0.889	B	22.8	0.926	C	23.3	0.886	C	No	--	--	--
	PM		18.3	0.836	B	20.1	0.912	C	20.4	0.944	C	No	--	--	--
6. Grove Avenue at 6th Street	AM	E	30.4	0.627	C	31.5	0.673	C	31.6	0.683	C	No	--	--	--
	PM		27.7	0.582	C	28.6	0.624	C	28.6	0.628	C	No	--	--	--
7. Baker Avenue at 6th Street	*AM*	*E*	*13.1*	--	*B*	*14.1*	--	*B*	*14.6*	--	*B*	*No*	--	--	--
	PM		*12.6*	--	*B*	*13.5*	--	*B*	*14.1*	--	*B*	*No*	--	--	--
8. Vineyard Avenue at 6th Street	AM	E	18.5	0.471	B	19.3	0.512	B	20.0	0.554	B	No	--	--	--
	PM		18.8	0.436	B	19.5	0.481	B	20.2	0.511	C	No	--	--	--

Notes:

- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions
- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report
- *Italicized text* corresponds to unsignalized intersections

[47] *Appendix G* contains the Delay/LOS calculation worksheets for all study intersections.

TABLE 8-3 (CONTINUED)
YEAR 2017 CUMULATIVE PLUS PROJECT PA-1 AND PA-2 (INTERIM)
PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY[48]

Key Intersection	Time Period	Minimum Acceptable LOS	(1) Existing Traffic Conditions			(2) Year 2017 Cumulative Traffic Conditions			(3) Year 2017 Cumulative Plus Project PA-1 and PA-2 (Interim) Traffic Conditions			(4) Significant Impact	(5) Year 2017 Cumulative Plus Project PA-1 and PA-2 (Interim) Plus Improvements		
			Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Yes/No	Delay (s/v)	V/C	LOS
9. Hellman Avenue at 6th Street	*AM*	*D*	*10.9*	--	*B*	*11.5*	--	*B*	*11.8*	--	*B*	*No*	--	--	--
	PM		*13.4*	--	*B*	*14.7*	--	*B*	*15.3*	--	*C*	*No*	--	--	--
10. Archibald Avenue at 6th Street	AM	D	19.3	0.437	B	20.9	0.578	C	21.1	0.587	C	No	--	--	--
	PM		22.2	0.675	C	23.7	0.758	C	24.7	0.803	C	No	--	--	--
11. Hermosa Avenue at 6th Street	AM	D	14.7	0.273	B	14.9	0.295	B	15.0	0.310	B	No	--	--	--
	PM		15.3	0.358	B	15.5	0.386	B	15.5	0.390	B	No	--	--	--
12. Haven Avenue at 6th Street	AM	D	39.0	0.568	D	42.2	0.626	D	42.1	0.634	D	No	--	--	--
	PM		40.9	0.681	D	48.8	0.740	D	48.7	0.742	D	No	--	--	--
13. Grove Avenue at 4th Street	AM	E	45.6	0.810	D	50.5	0.878	D	50.8	0.887	D	No	--	--	--
	PM		51.2	0.827	D	59.9	0.906	E	60.9	0.913	E	No	--	--	--
14. I-10 EB Ramps at 4th Street	AM	D	19.6	0.652	B	21.4	0.746	C	21.8	0.766	C	No	20.2	0.766	C
	PM		**78.1**	**0.808**	**E**	**113.5**	**0.912**	**F**	**123.7**	**0.970**	**F**	**Yes**	23.6	0.816	C
15. I-10 WB Ramps at 4th Street	AM	D	22.4	0.709	C	24.1	0.749	C	24.2	0.754	C	No	--	--	--
	PM		25.2	0.748	C	29.5	0.860	C	30.6	0.882	C	No	--	--	--
16. Baker Avenue at 4th Street	AM	E	28.1	0.472	C	26.7	0.656	C	26.8	0.659	C	No	--	--	--
	PM		24.0	0.591	C	25.1	0.660	C	25.3	0.671	C	No	--	--	--

Notes:

- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions
- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report
- *Italicized text* corresponds to unsignalized intersections

[48] *Appendix G* contains the Delay/LOS calculation worksheets for all study intersections.

TABLE 8-3 (CONTINUED)
YEAR 2017 CUMULATIVE PLUS PROJECT PA-1 AND PA-2 (INTERIM)
PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY[49]

Key Intersection	Time Period	Minimum Acceptable LOS	(1) Existing Traffic Conditions			(2) Year 2017 Cumulative Traffic Conditions			(3) Year 2017 Cumulative Plus Project PA-1 and PA-2 (Interim) Traffic Conditions			(4) Significant Impact	(5) Year 2017 Cumulative Plus Project PA-1 and PA-2 (Interim) Plus Improvements		
			Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Yes/No	Delay (s/v)	V/C	LOS
17. Mariposa Avenue at 4th Street	*AM*	*E*	*18.2*	--	*C*	*22.8*	--	*C*	*24.0*	--	*C*	*No*	--	--	--
	PM		*21.0*	--	*C*	*27.3*	--	*D*	*28.5*	--	*D*	*No*	--	--	--
18. Corona Avenue at 4th Street	AM	E	11.2	0.240	B	10.9	0.267	B	10.8	0.269	B	No	--	--	--
	PM		8.1	0.248	A	8.1	0.294	A	8.0	0.305	A	No	--	--	--
19. Orange Avenue at 4th Street	*AM*	*E*	*17.6*	--	*C*	*21.8*	--	*C*	*23.0*	--	*C*	*No*	--	--	--
	PM		*18.3*	--	*C*	*23.1*	--	*C*	*24.0*	--	*C*	*No*	--	--	--
20. Vineyard Avenue at 4th Street	AM	E	32.8	0.705	C	37.4	0.724	D	41.5	0.772	D[50]	No	--	--	--
	PM		44.4	0.807	D	54.5	0.906	D	59.1	0.889	E	No	--	--	--
21. Del Rio Place at 4th Street	*AM*	*E*	*20.8*	--	*C*	*25.0*	--	*D*	*14.3*	--	*B*	*No*	--	--	--
	PM		*16.6*	--	*C*	*19.6*	--	*C*	*20.1*	--	*C*	*No*	--	--	--
22. Hellman Avenue at 4th Street	AM	E	*42.8*	--	*E*	***79.9***	--	***F***	24.9[51]	0.408	C	No	--	--	--
	PM		***75.4***	--	***F***	***193.4***	--	***F***	26.5	0.534	C	No	--	--	--
23. Archibald Avenue at 4th Street	AM	D	30.9	0.516	C	39.2	0.584	D	40.0	0.596	D	No	--	--	--
	PM		37.6	0.670	D	47.8	0.895	D	52.4	0.950	D	No	--	--	--
24. Turner Avenue at 4th Street	AM	D	21.2	0.365	C	21.2	0.414	C	21.1	0.423	C	No	--	--	--
	PM		20.5	0.446	C	20.8	0.491	C	20.8	0.494	C	No	--	--	--

Notes:

- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions
- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report
- *Italicized text* corresponds to unsignalized intersections

[49] *Appendix G* contains the Delay/LOS calculation worksheets for all study intersections.

[50] Project enhancements consist of a NB free right-turn lane. Figures 11A through H provided a graphical representation of the project enhancements and cumulative improvements.

[51] As part of the Project, Hellman Avenue at 4th Street is anticipated to be converted to a signalized intersection.

TABLE 8-3 (CONTINUED)
YEAR 2017 CUMULATIVE PLUS PROJECT PA-1 AND PA-2 (INTERIM)
PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY[52]

Key Intersection		Time Period	Minimum Acceptable LOS	(1) Existing Traffic Conditions			(2) Year 2017 Cumulative Traffic Conditions			(3) Year 2017 Cumulative Plus Project PA-1 and PA-2 (Interim) Traffic Conditions			(4) Significant Impact	(5) Year 2017 Cumulative Plus Project PA-1 and PA-2 (Interim) Plus Improvements		
				Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Yes/No	Delay (s/v)	V/C	LOS
25.	Haven Avenue at	AM	D	35.9	0.619	D	38.3	0.702	D	38.3	0.710	D	No	37.5	0.686	D
	4th Street	PM		52.2	0.919	D	**73.1**	**1.034**	**F**	**73.5**	**1.043**	**F**	**Yes**	54.2	0.938	D
26.	Vineyard Avenue at	AM	E	*28.6*	--	*D*	*38.3*	--	*E*	29.8[53]	0.636	C	No	--	--	--
	Jay Street	PM		***50.7***	--	***F***	***89.2***	--	***F***	33.2	0.781	C	No	--	--	--
27.	Vineyard Avenue at	AM	E	18.8	0.506	B	19.9	0.559	B	25.0	0.757	C[54]	No	--	--	--
	Inland Empire Boulevard	PM		18.4	0.595	B	20.1	0.659	C	24.0	0.813	C	No	--	--	--
28.	Archibald Avenue at	AM	E	43.7	0.537	D	56.9	0.645	E	43.7	0.614	D[55]	No	--	--	--
	Inland Empire Boulevard	PM		59.7	0.631	E	**106.7**	**0.746**	**F**	51.0	0.742	D	No	--	--	--
29.	Turner Avenue at	AM	E	22.2	0.237	C	22.6	0.264	C	22.5	0.270	C	No	--	--	--
	Inland Empire Boulevard	PM		22.7	0.345	C	23.1	0.382	C	23.0	0.385	C	No	--	--	--
30.	Haven Avenue at	AM	E	52.1	0.537	D	71.6	0.580	E	71.5	0.581	E	No	33.7	0.581	C
	Inland Empire Boulevard	PM		**102.8**	**0.742**	**F**	**141.6**	**0.805**	**F**	**141.4**	**0.810**	**F**	**Yes**	58.6	0.810	E
31.	Vineyard Avenue at	AM	D	15.0	0.561	B	16.2	0.627	B	24.0	0.737	C	No	--	--	--
	I-10 WB Ramps	PM		18.2	0.650	B	19.4	0.719	B	26.1	0.762	C	No	--	--	--
32.	Vineyard Avenue at	AM	D	22.5	0.674	C	25.0	0.772	C	35.7	0.899	D	No	--	--	--
	I-10 EB Ramps	PM		21.8	0.665	C	23.6	0.750	C	33.5	0.846	C	No	--	--	--

Notes:

- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions
- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report
- *Italicized text* corresponds to unsignalized intersections

[52] *Appendix G* contains the Delay/LOS calculation worksheets for all study intersections.

[53] As part of the Project, Vineyard Avenue at Jay Street is anticipated to be converted to a signalized intersection.

[54] Project enhancements consist of the realignment of Vineyard Avenue with two NBT lanes, two SBT lanes and an exclusive left-turn lane. The WB approach consists of two left-turn lanes and an exclusive right-turn lane. Figures 11A through H provided a graphical representation of the project enhancements and cumulative improvements.

[55] Project enhancements consist of a 2nd WB left-turn lane. Figures 11A through H provided a graphical representation of the project enhancements and cumulative improvements.

TABLE 8-3 (CONTINUED)
YEAR 2017 CUMULATIVE PLUS PROJECT PA-1 AND PA-2 (INTERIM)
PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY[56]

Key Intersection	Time Period	Minimum Acceptable LOS	(1) Existing Traffic Conditions			(2) Year 2017 Cumulative Traffic Conditions			(3) Year 2017 Cumulative Plus Project PA-1 and PA-2 (Interim) Traffic Conditions			(4) Significant Impact	(5) Year 2017 Cumulative Plus Project PA-1 and PA-2 (Interim) Plus Improvements		
			Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Yes/No	Delay (s/v)	V/C	LOS
33. Archibald Avenue at I-10 Freeway	AM	D	23.6	0.589	C	24.8	0.666	C	25.3	0.696	C	No	--	--	--
	PM		30.7	0.607	C	32.9	0.731	C	33.0	0.807	C	No	--	--	--
34. Vineyard Avenue at G Street	AM	E	15.2	0.414	B	15.4	0.446	B	15.3	0.456	B	No	--	--	--
	PM		14.1	0.384	B	14.2	0.410	B	14.3	0.440	B	No	--	--	--
35. Vineyard Avenue at D Street	AM	E	22.3	0.340	C	22.6	0.363	C	27.5	0.377	C	No	--	--	--
	PM		22.0	0.387	C	22.1	0.415	C	28.1	0.413	C	No	--	--	--
36. Vineyard Avenue at 7th Street	*AM*	*E*	*16.5*	--	*C*	*20.4*	--	*C*	*21.3*	--	*C*	*No*	--	--	--
	PM		*20.1*	--	*C*	*23.4*	--	*C*	*25.8*	--	*D*	*No*	--	--	--
37. Vineyard Avenue at Plaza Serena	*AM*	*E*	--	--	--	--	--	--	*22.9*	--	*C*	*No*	--	--	--
	PM		--	--	--	--	--	--	*31.5*	--	*D*	*No*	--	--	--
38. Project Driveway A at Inland Empire Boulevard	AM	E	**FUTURE INTERSECTION**												
	PM														
39. Del Rio Place at Inland Empire Boulevard	AM	E	--	--	--	--	--	--	29.0	0.417	C	No	--	--	--
	PM		--	--	--	--	--	--	29.5	0.373	C	No	--	--	--
40. Project Driveway C at Inland Empire Boulevard	AM	E	**FUTURE INTERSECTION**												
	PM														

Notes:

- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions
- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report
- *Italicized text* corresponds to unsignalized intersections

[56] *Appendix G* contains the Delay/LOS calculation worksheets for all study intersections.

TABLE 8-3 (CONTINUED)
YEAR 2017 CUMULATIVE PLUS PROJECT PA-1 AND PA-2 (INTERIM)
PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY[57]

Key Intersection	Time Period	Minimum Acceptable LOS	(1) Existing Traffic Conditions			(2) Year 2017 Cumulative Traffic Conditions			(3) Year 2017 Cumulative Plus Project PA-1 and PA-2 (Interim) Traffic Conditions			(4) Significant Impact	(5) Year 2017 Cumulative Plus Project PA-1 and PA-2 (Interim) Plus Improvements		
			Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Yes/No	Delay (s/v)	V/C	LOS
41. Project Driveway D at Inland Empire Boulevard	AM PM	E	**FUTURE INTERSECTION**												
42. Project Driveway E at 4th Street	*AM* *PM*	*E*	-- --	-- --	-- --	-- --	-- --	-- --	*14.8* *19.7*	-- --	*B* *C*	*No* *No*	-- --	-- --	-- --

Notes:

- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions
- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report
- *Italicized text* corresponds to unsignalized intersections

[57] *Appendix G* contains the Delay/LOS calculation worksheets for all study intersections.

8.3 Year 2020 Cumulative Traffic Conditions

Table 8-4 summarizes the AM and PM peak hour Level of Service results at the key study intersections during a typical weekday for "Year 2020 Cumulative Plus Project" traffic conditions. The first column (1) of Delay/LOS values in *Table 8-4* presents a summary of existing AM and PM peak hour traffic conditions (which were also presented in *Table 3-3*). The second column (2) presents forecast Year 2020 Cumulative traffic conditions. The third column (3) forecast Cumulative plus PA-1, PA-2, PA-3 and PA-4 traffic conditions and the fourth column (4) indicates whether the traffic associated with the entire Meredith International site (PA-1, PA-2, PA-3 & PA-4) will have a significant impact based on the significant traffic impact criteria defined in this report. The fifth column (5) presents the resultant level of service with the inclusion of recommended traffic improvements, where needed, to achieve an acceptable level of service.

8.3.1 *Year 2020 Cumulative Traffic Conditions*

Review of column (2) of *Table 8-4* indicates that for Year 2020 Cumulative traffic conditions, seven (7) of the key study intersections are forecast to operate at an unacceptable level of service during the AM and/or PM peak hours when compared to the LOS standards defined in this report. The remaining key study intersections are forecast to operate at acceptable levels of service during the AM and PM peak hours. The intersections operating adversely are:

	AM Peak Hour			PM Peak Hour		
Key Intersection	**Delay (s/v)**	**V/C**	**LOS**	**Delay (s/v)**	**V/C**	**LOS**
2. Archibald Avenue at Arrow Route	--	--	--	66.2	1.042	F
14. I-10 EB Ramps at 4th Street	--	--	--	129.3	0.961	F
22. Hellman Avenue at 4th Street	*125.6*	--	*F*	*297.4*	--	*F*
25. Haven Avenue at 4th Street	--	--	--	89.6	1.088	F
26. Vineyard Avenue at Jay Street	--	--	--	*125.2*	--	*F*
28. Archibald Avenue at Inland Empire Boulevard	--	--	--	124.8	0.784	F
30. Haven Avenue at Inland Empire Boulevard	92.3	0.612	F	167.2	0.849	F

*****_Italicized text_ corresponds to unsignalized intersections.

Please note that the intersection of Baker Street at 6th Street is assumed to be signalized under Year 2020 traffic conditions since this intersection is programmed for a future traffic signal in the City's Capital Improvement Program.

8.3.2 *Year 2020 Cumulative Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions*

Review of column (3) of *Table 8-4* indicates that for Year 2020 Cumulative Plus Project PA-1, PA-2, PA-3 and PA-4 traffic conditions, seven (7) of the key study intersections are forecast to operate at unacceptable levels of service during the AM and/or PM peak hours when compared to the LOS standards defined in this report. The remaining key study intersections are forecast to operate at acceptable levels of service during the AM and PM peak hours. The intersections operating adversely are:

	AM Peak Hour			PM Peak Hour		
Key Intersection	**Delay (s/v)**	**V/C**	**LOS**	**Delay (s/v)**	**V/C**	**LOS**
2. Archibald Avenue at Arrow Route	--	--	--	78.3	1.093	F
14. I-10 EB ramps at 4th Street	--	--	--	151.3	1.036	F
23. Archibald Avenue at 4th Street	--	--	--	83.7	1.108	F
25. Haven Avenue at 4th Street	--	--	--	91.2	1.109	F
28. Archibald Avenue at Inland Empire Boulevard	--	--	--	94.0	0.900	F
30. Haven Avenue at Inland Empire Boulevard	91.9	0.616	F	166.0	0.861	F
32. Vineyard Avenue at I-10 EB Ramps	42.7	1.001	F	41.6	1.003	F

***** *Italicized text* corresponds to unsignalized intersections.

Review of column (5) of *Table 8-4* indicates that these intersections are forecast to operate at an acceptable level of service with the implementation of the mitigations recommended in this report. The remaining key study intersections are forecast to operate at acceptable levels of service during the AM and PM peak hours. Note, the resulting service levels for key intersections No. 17, No. 18, No. 19, No. 26 and No. 27, all of which provide access to the residential neighborhood located west of the project site, west of Vineyard Avenue, are representative of future conditions with the conversion of Plaza Serena to a "right-turn only" unsignalized intersection with the realignment of Inland Empire Boulevard to the north. Further, with the installation of traffic signals at intersection No. 22 (Hellman Avenue at 4th Street) and No. 26 (Vineyard Avenue at Jay Street), both these intersections are forecast to operate at an acceptable service level with the Project.

Appendix G contains the Delay/LOS calculation worksheets for the Year 2020 Cumulative Traffic Conditions.

TABLE 8-4

YEAR 2020 CUMULATIVE PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4

PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY[58]

Key Intersection	Time Period	Minimum Acceptable LOS	(1) Existing Traffic Conditions			(2) Year 2020 Cumulative Traffic Conditions			(3) Year 2020 Cumulative Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions			(4) Significant Impact	(5) Year 2020 Cumulative Plus Project PA-1, PA-2, PA-3 and PA-4 Plus Improvements		
			Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Yes/No	Delay (s/v)	V/C	LOS
1. Vineyard Avenue at Arrow Route	AM	D	36.2	0.722	D	41.5	0.808	D	43.9	0.861	D	No	--	--	--
	PM		33.5	0.771	C	38.9	0.882	D	42.8	0.921	D	No	--	--	--
2. Archibald Avenue at Arrow Route	AM	D	35.2	0.804	D	43.1	0.917	D	49.2	0.964	D	No	49.9	0.942	D
	PM		44.6	0.927	D	**66.2**	**1.042**	**F**	**78.3**	**1.093**	**F**	**Yes**	54.1	0.985	D
3. Baker Avenue at 8th Street	*AM*	*D*	*15.2*	--	*C*	*19.8*	--	*C*	*26.3*	--	*D*	*No*	--	--	--
	PM		*14.3*	--	*B*	*17.6*	--	*C*	*23.2*	--	*C*	*No*	--	--	--
4. Vineyard Avenue at 8th Street	AM	D	19.0	0.511	B	20.6	0.575	C	21.4	0.615	C	No	--	--	--
	PM		18.7	0.445	B	20.1	0.563	C	20.6	0.609	C	No	--	--	--
5. Archibald Avenue at 8th Street	AM	D	18.7	0.889	B	23.3	0.946	C	24.3	0.909	C	No	--	--	--
	PM		18.3	0.836	B	20.6	0.935	C	21.9	0.938	C	No	--	--	--
6. Grove Avenue at 6th Street	AM	E	30.4	0.627	C	32.7	0.712	C	33.2	0.740	C	No	--	--	--
	PM		27.7	0.582	C	29.5	0.657	C	29.9	0.681	C	No	--	--	--
7. Baker Avenue at 6th Street	AM	E	*13.1*	--	*B*	15.5	0.316	B[59]	15.6	0.329	B	No	--	--	--
	PM		*12.6*	--	*B*	16.4	0.297	B	16.0	0.336	B	No	--	--	--
8. Vineyard Avenue at 6th Street	AM	E	18.5	0.471	B	19.7	0.536	B	22.1	0.643	C	No	--	--	--
	PM		18.8	0.436	B	19.9	0.507	B	24.3	0.631	C	No	--	--	--

Notes:

- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions
- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report
- *Italicized text* corresponds to unsignalized intersections

[58] *Appendix G* contains the Delay/LOS calculation worksheets for all study intersections.

[59] As provided by the City of Ontario, analysis is based on the assumption that Baker Avenue at 6th Street becomes a signalized intersection in Year 2020.

TABLE 8-4 (CONTINUED)

YEAR 2020 CUMULATIVE PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4

PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY[60]

Key Intersection	Time Period	Minimum Acceptable LOS	(1) Existing Traffic Conditions			(2) Year 2020 Cumulative Traffic Conditions			(3) Year 2020 Cumulative Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions			(4) Significant Impact	(5) Year 2020 Cumulative Plus Project PA-1, PA-2, PA-3 and PA-4 Plus Improvements		
			Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Yes/No	Delay (s/v)	V/C	LOS
9. Hellman Avenue at 6th Street	*AM*	*D*	*10.9*	--	*B*	*12.0*	--	*B*	*13.2*	--	*B*	*No*	--	--	--
	PM		*13.4*	--	*B*	*16.0*	--	*C*	*19.1*	--	*C*	*No*	--	--	--
10. Archibald Avenue at 6th Street	AM	D	19.3	0.437	B	21.4	0.606	C	22.2	0.634	C	No	--	--	--
	PM		22.2	0.675	C	24.9	0.799	C	29.0	0.893	C	No	--	--	--
11. Hermosa Avenue at 6th Street	AM	D	14.7	0.273	B	15.0	0.312	B	15.3	0.342	B	No	--	--	--
	PM		15.3	0.358	B	15.7	0.407	B	15.8	0.429	B	No	--	--	--
12. Haven Avenue at 6th Street	AM	D	39.0	0.568	D	43.6	0.652	D	43.5	0.668	D	No	--	--	--
	PM		40.9	0.681	D	49.6	0.836	D	49.5	0.836	D	No	--	--	--
13. Grove Avenue at 4th Street	AM	E	45.6	0.810	D	55.7	0.926	E	57.5	0.948	E	No	--	--	--
	PM		51.2	0.827	D	68.7	0.957	E	72.7	0.983	E	No	--	--	--
14. I-10 EB Ramps at 4th Street	AM	D	19.6	0.652	B	23.0	0.784	C	24.5	0.827	C	No	22.5	0.827	C
	PM		**78.1**	**0.808**	**E**	**129.3**	**0.961**	**F**	**151.3**	**1.036**	**F**	**Yes**	27.3	0.888	C
15. I-10 WB Ramps at 4th Street	AM	D	22.4	0.709	C	26.0	0.789	C	26.3	0.810	C	No	--	--	--
	PM		25.2	0.748	C	33.6	0.905	C	38.6	0.944	D	No	--	--	--
16. Baker Avenue at 4th Street	AM	E	28.1	0.472	C	27.6	0.693	C	27.7	0.703	C	No	--	--	--
	PM		24.0	0.591	C	25.9	0.695	C	26.7	0.722	C	No	--	--	--

Notes:

- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions
- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report
- *Italicized text* corresponds to unsignalized intersections

[60] *Appendix G* contains the Delay/LOS calculation worksheets for all study intersections.

TABLE 8-4 (CONTINUED)

YEAR 2020 CUMULATIVE PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4

PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY[61]

Key Intersection	Time Period	Minimum Acceptable LOS	(1) Existing Traffic Conditions			(2) Year 2020 Cumulative Traffic Conditions			(3) Year 2020 Cumulative Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions			(4) Significant Impact	(5) Year 2020 Cumulative Plus Project PA-1, PA-2, PA-3 and PA-4 Plus Improvements		
			Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Yes/No	Delay (s/v)	V/C	LOS
17. Mariposa Avenue at	*AM*	*E*	*18.2*	--	*C*	*25.1*	--	*D*	*28.8*	--	*D*	*No*	--	--	--
4th Street	*PM*		*21.0*	--	*C*	*30.7*	--	*D*	*36.2*	--	*E*	*No*	--	--	--
18. Corona Avenue at	AM	E	11.2	0.240	B	11.0	0.282	B	10.7	0.292	B	No	--	--	--
4th Street	PM		8.1	0.248	A	8.2	0.310	A	8.2	0.336	A	No	--	--	--
19. Orange Avenue at	*AM*	*E*	*17.6*	--	*C*	*24.2*	--	*C*	*27.8*	--	*D*	*No*	--	--	--
4th Street	*PM*		*18.3*	--	*C*	*25.3*	--	*D*	*29.3*	--	*D*	*No*	--	--	--
20. Vineyard Avenue at	AM	E	32.8	0.705	C	39.5	0.757	D	48.4	0.911	D[62]	No	--	--	--
4th Street	PM		44.4	0.807	D	63.0	0.955	E	78.9	0.977	E	No	--	--	--
21. Del Rio Place at	*AM*	*E*	*20.8*	--	*C*	*27.8*	--	*D*	*16.4*	--	*C*	*No*	--	--	--
4th Street	*PM*		*16.6*	--	*C*	*21.6*	--	*C*	*25.7*	--	*D*	*No*	--	--	--
22. Hellman Avenue at	AM	E	*42.8*	--	*E*	***125.6***	**--**	***F***	25.6[63]	0.474	C	No	--	--	--
4th Street	PM		***75.4***	--	***F***	***297.4***	--	***F***	27.9	0.627	C	No	--	--	--
23. Archibald Avenue at	AM	D	30.9	0.516	C	36.6	0.635	D	41.6	0.676	D	No	36.7	0.777	D
4th Street	PM		37.6	0.670	D	51.4	0.952	D	**83.7**	**1.108**	**F**	**Yes**	51.8	0.902	D
24. Turner Avenue at	AM	D	21.2	0.365	C	21.4	0.435	C	21.3	0.452	C	No	--	--	--
4th Street	PM		20.5	0.446	C	21.1	0.518	C	21.0	0.530	C	No	--	--	--

Notes:

- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions
- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report
- *Italicized text* corresponds to unsignalized intersections

[61] *Appendix G* contains the Delay/LOS calculation worksheets for all study intersections.

[62] Project enhancements consist of an additional NB thru lane, a NB free right-turn lane and a third WB left-turn lane. Figures 11A through H provided a graphical representation of the project enhancements and cumulative improvements.

[63] As part of the Project, Hellman Avenue at 4th Street is anticipated to be converted to a signalized intersection.

TABLE 8-4 (CONTINUED)

YEAR 2020 CUMULATIVE PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4

PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY[64]

Key Intersection	Time Period	Minimum Acceptable LOS	(1) Existing Traffic Conditions			(2) Year 2020 Cumulative Traffic Conditions			(3) Year 2020 Cumulative Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions			(4) Significant Impact	(5) Year 2020 Cumulative Plus Project PA-1, PA-2, PA-3 and PA-4 Plus Improvements		
			Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Yes/No	Delay (s/v)	V/C	LOS
25. Haven Avenue at 4th Street	AM	D	35.9	0.619	D	40.1	0.739	D	40.2	0.756	D	No	37.4	0.640	D
	PM		52.2	0.919	D	**89.6**	**1.088**	**F**	**91.2**	**1.109**	**F**	**Yes**	53.4	0.883	D
26. Vineyard Avenue at Jay Street	AM	E	*28.6*	--	*D*	*43.8*	--	*E*	24.3[65]	0.520	C	No	--	--	--
	PM		***50.7***	--	***F***	*125.2*	--	*F*	24.8	0.671	C	No	--	--	--
27. Vineyard Avenue at Inland Empire Boulevard	AM	E	18.8	0.506	B	20.7	0.590	C	45.7	0.930	D[66]	No	--	--	--
	PM		18.4	0.595	B	21.4	0.695	C	34.7	0.925	C	No	--	--	--
28. Archibald Avenue at Inland Empire Boulevard	AM	E	43.7	0.537	D	64.6	0.677	E	58.9	0.693	E[67]	No	56.5	0.630	E
	PM		59.7	0.631	E	**124.8**	**0.784**	**F**	**94.0**	**0.900**	**F**	**Yes**	72.7	0.801	E
29. Turner Avenue at Inland Empire Boulevard	AM	E	22.2	0.237	C	22.7	0.278	C	22.3	0.295	C	No	--	--	--
	PM		22.7	0.345	C	23.3	0.404	C	23.0	0.418	C	No	--	--	--
30. Haven Avenue at Inland Empire Boulevard	AM	E	52.1	0.537	D	**92.3**	**0.612**	**F**	**91.9**	**0.616**	**F**	**Yes**	35.6	0.622	D
	PM		**102.8**	**0.742**	**F**	**167.2**	**0.849**	**F**	**166.0**	**0.861**	**F**	**Yes**	71.3	0.861	E
31. Vineyard Avenue at I-10 WB Ramps	AM	D	15.0	0.561	B	16.7	0.662	B	29.0	0.828	C	No	--	--	--
	PM		18.2	0.650	B	20.4	0.758	C	31.4	0.876	C	No	--	--	--
32. Vineyard Avenue at I-10 EB Ramps	AM	D	22.5	0.674	C	26.0	0.813	C	**42.7**	**1.001**	**F**	**Yes**	40.4	0.938	D
	PM		21.8	0.665	C	24.4	0.789	C	**41.6**	**1.003**	**F**	**Yes**	40.1	0.904	D

Notes:

- s/v = seconds per vehicle (delay), LOS = Level of Service; please refer to *Tables 3-1* and *3-2* for the LOS definitions
- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report*; Italicized text* corresponds to unsignalized intersections

[64] *Appendix G* contains the Delay/LOS calculation worksheets for all study intersections.

[65] As part of the Project, Vineyard Avenue at Jay Street is anticipated to be converted to a signalized intersection.

[66] Project enhancements consist of the realignment of Vineyard Avenue with three NBT lanes and an exclusive right-turn lane, three SBT lanes and two exclusive left-turn lanes. The WB approach consists of two left-turn lanes and an exclusive right-turn lane with overlap phasing. Figures 11A through H provided a graphical representation of the project enhancements and cumulative improvements.

[67] Project enhancements consist of a 2nd EB left-turn lane and an exclusive right-turn lane with overlap phasing. While the WB left consists of a 2nd turn lane. Figures 11A through H provided a graphical representation of the project enhancements and cumulative improvements.

TABLE 8-4 (CONTINUED)

YEAR 2020 CUMULATIVE PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4

PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY[68]

Key Intersection		Time Period	Minimum Acceptable LOS	(1) Existing Traffic Conditions			(2) Year 2020 Cumulative Traffic Conditions			(3) Year 2020 Cumulative Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions			(4) Significant Impact	(5) Year 2020 Cumulative Plus Project PA-1, PA-2, PA-3 and PA-4 Plus Improvements		
				Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Yes/No	Delay (s/v)	V/C	LOS
33.	Archibald Avenue at I-10 Freeway	AM	D	23.6	0.589	C	25.3	0.702	C	30.5	0.764	C	No	--	--	--
		PM		30.7	0.607	C	33.5	0.790	C	40.7	0.950	D	No	--	--	--
34.	Vineyard Avenue at G Street	AM	E	15.2	0.414	B	15.6	0.470	B	16.1	0.505	B	No	--	--	--
		PM		14.1	0.384	B	14.5	0.432	B	14.7	0.489	B	No	--	--	--
35.	Vineyard Avenue at D Street	AM	E	22.3	0.340	C	22.7	0.382	C	29.5	0.412	C	No	--	--	--
		PM		22.0	0.387	C	22.3	0.438	C	26.6	0.505	C	No	--	--	--
36.	*Vineyard Avenue at 7th Street*	*AM*	*E*	*16.5*	--	*C*	*21.1*	--	*C*	*24.2*	--	*C*	*No*	--	--	--
		PM		*20.1*	--	*C*	*26.3*	--	*D*	*33.9*	--	*D*	*No*	--	--	--
37.	*Vineyard Avenue at Plaza Serena*	*AM*	*E*	--	--	--	--	--	--	*16.8*	--	*C*	*No*	--	--	--
		PM		--	--	--	--	--	--	*20.9*	--	*C*	*No*	--	--	--
38.	Project Driveway A at Inland Empire Boulevard	AM	E	--	--	--	--	--	--	7.8	0.289	A	No	--	--	--
		PM		--	--	--	--	--	--	13.9	0.559	B	No	--	--	--
39.	Del Rio Place at Inland Empire Boulevard	AM	E	--	--	--	--	--	--	31.1	0.512	C	No	--	--	--
		PM		--	--	--	--	--	--	36.8	0.662	D	No	--	--	--
40.	Project Driveway C at Inland Empire Boulevard	AM	E	--	--	--	--	--	--	24.1	0.378	C	No	--	--	--
		PM		--	--	--	--	--	--	26.8	0.568	C	No	--	--	--

Notes:

- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions
- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report
- *Italicized text* corresponds to unsignalized intersections

[68] *Appendix G* contains the Delay/LOS calculation worksheets for all study intersections.

TABLE 8-4 (CONTINUED)

YEAR 2020 CUMULATIVE PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4

PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY[69]

Key Intersection	Time Period	Minimum Acceptable LOS	(1) Existing Traffic Conditions			(2) Year 2020 Cumulative Traffic Conditions			(3) Year 2020 Cumulative Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions			(4) Significant Impact	(5) Year 2020 Cumulative Plus Project PA-1, PA-2, PA-3 and PA-4 Plus Improvements		
			Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Yes/No	Delay (s/v)	V/C	LOS
41. Project Driveway D at Inland Empire Boulevard	AM	E	--	--	--	--	--	--	24.5	0.405	C	No	--	--	--
	PM		--	--	--	--	--	--	27.4	0.554	C	No	--	--	--
42. Project Driveway E at 4th Street	*AM*	*E*	--	--	--	--	--	--	*16.6*	--	*C*	*No*	--	--	--
	PM		--	--	--	--	--	--	*24.7*	--	*C*	*No*	--	--	--

Notes:

- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions
- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report
- *Italicized text* corresponds to unsignalized intersections

[69] *Appendix G* contains the Delay/LOS calculation worksheets for all study intersections.

8.4 Year 2035 Plus Project Traffic Conditions

Table 8-5 summarizes the AM and PM peak hour Level of Service results at the key study intersections during a typical weekday for "Year 2035 General Plan Buildout Plus Project" traffic conditions. The first column (1) of Delay/LOS values in *Table 8-5* presents a summary of existing AM and PM peak hour traffic conditions (which were also presented in *Table 3-3*). The second column (2) presents forecast Year 2035 traffic conditions for "No Project" TOP. The third column (3) presents forecast Year 2035 General Plan Buildout plus Project PA-1, PA-2, PA-3 and PA-4 traffic conditions and the fourth column (4) indicates whether the traffic associated with the entire Meredith International site (PA-1, PA-2, PA-3 and PA-4) will have a significant impact based on the significant traffic impact criteria defined in this report. The fifth column (5) presents the resultant level of service with the inclusion of recommended traffic improvements, where needed, to achieve an acceptable level of service.

Please note that for comparison purposes, column 2 presents a Year 2035 "No Project" condition which assumes that the development would revert back to the General Plan placeholder identified in The Ontario Plan (TOP). Further, the forecast service levels for the future I-10/Grove Avenue Interchange, which will replace the I-10/4th Street Interchange, are summarized in this table. ***Appendix H*** presents the detailed trip generation and distribution utilized in this assessment. In addition, the intersection of Baker Street at 6th Street is assumed to be signalized under Year 2035 traffic conditions since this intersection is programmed for a future traffic signal in the City's Capital Improvement Program. Lastly, Vineyard Avenue is assumed to have full buildout of the proposed I-10 interchange. It should be noted that the intersections adjoining the Project site under the TOP "No Project" conditions would be improved to acceptable levels of service, same as under the "With Project" conditions, and levels of service presented below are for TOP conditions without frontage improvements that would be implemented.

8.4.1 *Year 2035 General Plan Buildout "No Project" (TOP) Traffic Conditions*

Review of column (2) of *Table 8-5* indicates that for Year 2035 General Plan Buildout "No Project" (TOP) traffic conditions, nine (9) of the key study intersections are forecast to operate at an unacceptable level of service during the AM and/or PM peak hours when compared to the LOS standards defined in this report. Please note that intersections 20, 27, 28 and 37 would be improved to acceptable levels of service should the TOP plan move forward, and are therefore excluded from the total list of deficient intersections. The remaining key study intersections are forecast to operate at acceptable levels of service during the AM and PM peak hours. The intersections operating adversely are:

	AM Peak Hour			PM Peak Hour		
Key Intersection	**Delay (s/v)**	**V/C**	**LOS**	**Delay (s/v)**	**V/C**	**LOS**
2. Archibald Avenue at Arrow Route	58.9	1.005	F	103.6	1.197	F
3. Baker Avenue at 8th Street	*47.4*	--	*E*	*40.6*	--	*E*
12. Haven Avenue at 6th Street	--	--	--	55.3	0.867	E
20. Vineyard Avenue at 4th Street**	84.4	1.065	F	144.9	1.239	F
23. Archibald Avenue at 4th Street	--	--	--	100.0	1.077	F

25. Haven Avenue at 4th Street	--	--	--	102.5	1.122	F
27. Vineyard Avenue at Inland Empire Boulevard**	--	--	--	110.6	1.260	F
28. Archibald Avenue at Inland Empire Boulevard**	125.6	0.959	F	183.4	1.579	F
30. Haven Avenue at Inland Empire Boulevard	98.3	0.642	F	181.0	0.955	F
32. Vineyard Avenue at I-10 EB Ramps	50.7	1.028	F	--	--	--
33. Archibald Avenue at I-10 Freeway	--	--	--	79.0	1.129	F
36. Vineyard Avenue at 7th Street	*51.8*	--	*F*	*131.9*	--	*F*
*37. Vineyard Avenue at Plaza Serena**	--	--	--	*108.1*	--	*F*

**Italicized text* corresponds to unsignalized intersections.
**Intersection would be improved to acceptable levels of service should the TOP plan move forward.

8.4.2 *Year 2035 General Plan Buildout Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions*

Review of column (3) of *Table 8-5* indicates that for the Year 2035 General Plan Buildout Plus PA-1, PA-2, PA-3 and PA-4 traffic conditions, nine (9) of the key study intersections are forecast to operate at unacceptable levels of service during the AM and/or PM peak hours when compared to the LOS standards defined in this report. The remaining key study intersections are forecast to operate at acceptable levels of service during the AM and PM peak hours. The intersections operating adversely are:

	AM Peak Hour			PM Peak Hour		
Key Intersection	**Delay (s/v)**	**V/C**	**LOS**	**Delay (s/v)**	**V/C**	**LOS**
2. Archibald Avenue at Arrow Route	--	--	--	87.5	1.133	F
3. Baker Avenue at 8th Street	*54.4*	--	*F*	*43.6*	--	*E*
9. Hellman Avenue at 6th Street	--	--	--	*35.6*	--	*E*
12. Haven Avenue at 6th Street	--	--	--	55.4	0.873	E
20. Vineyard Avenue at 4th Street	--	--	--	92.2	1.017	F
23. Archibald Avenue at 4th Street	--	--	--	98.6	1.048	F
25. Haven Avenue at 4th Street	--	--	--	97.3	1.111	F
28. Archibald Avenue at Inland Empire Boulevard	--	--	--	91.9	0.886	F
30. Haven Avenue at Inland Empire Boulevard	99.1	0.636	F	184.1	0.927	F

**Italicized text* corresponds to unsignalized intersections.

Review of column (5) of *Table 8-5* indicates that these intersections are forecast to operate at an acceptable level of service with the implementation of the mitigations recommended in this report. The remaining key study intersections are forecast to operate at acceptable levels of service during the AM and PM peak hours. Please note that the trips associated with the Project are less intense than what was adopted within The Ontario Plan. Therefore, in general the plus Project levels of services are lower than the "No Project" condition. Further, the resulting service levels for key intersections No. 17, No. 18, No. 19, No. 26 and No. 27, all of which provide access to the residential neighborhood located west of the project site, west of Vineyard Avenue, are representative of future conditions with the conversion of Plaza Serena to a "right-turn only"

unsignalized intersection with the realignment of Inland Empire Boulevard to the north. ***Appendix I*** contains the Delay/LOS calculation worksheets for the Year 2035 Cumulative Traffic Conditions.

TABLE 8-5
YEAR 2035 GENERAL PLAN BUILDOUT PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4
PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY[70]

Key Intersection	Time Period	Minimum Acceptable LOS	(1) Existing Traffic Conditions			(2) Year 2035 GPB "No Project" (TOP) Traffic Conditions			(3) Year 2035 GPB Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions			(4) Significant Impact	(5) Year 2035 GPB Plus Project PA-1, PA-2, PA-3 and PA-4 Plus Improvements		
			Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Yes/No	Delay (s/v)	V/C	LOS
1. Vineyard Avenue at	AM	D	36.2	0.722	D	53.7	0.973	D	46.3	0.897	D	No	--	--	--
Arrow Route	PM		33.5	0.771	C	53.0	0.971	D	43.4	0.933	D	No	--	--	--
2. Archibald Avenue at	AM	D	35.2	0.804	D	**58.9**	**1.005**	**F**	54.1	0.983	D	No	48.5	0.942	D
Arrow Route	PM		44.6	0.927	D	**103.6**	**1.197**	**F**	**87.5**	**1.133**	**F**	**Yes**	52.5	0.986	D
3. Baker Avenue at	*AM*	*D*	*15.2*	--	*C*	***47.4***	--	***E***	***54.4***	--	***F***	***Yes***	16.8	--	B
8th Street	*PM*		*14.3*	--	*B*	***40.6***	--	***E***	***43.6***	--	***E***	***Yes***	16.1	--	B
4. Vineyard Avenue at	AM	D	19.0	0.511	B	23.1	0.683	C	21.9	0.630	C	No	--	--	--
8th Street	PM		18.7	0.445	B	23.2	0.713	C	21.1	0.630	C	No	--	--	--
5. Archibald Avenue at	AM	D	18.7	0.889	B	25.0	0.902	C	24.9	0.896	C	No	--	--	--
8th Street	PM		18.3	0.836	B	22.7	0.970	C	22.5	0.952	C	No	--	--	--
6. Grove Avenue at	AM	E	30.4	0.627	C	47.0	0.925	D	46.9	0.925	D	No	--	--	--
6th Street	PM		27.7	0.582	C	45.0	0.884	D	45.2	0.885	D	No	--	--	--
7. Baker Avenue at	AM	E	*13.1*	--	*B*	16.8	0.403	B[71]	16.8	0.403	B	No	--	--	--
6th Street	PM		*12.6*	--	*B*	17.4	0.492	B	17.3	0.509	B	No	--	--	--
8. Vineyard Avenue at	AM	E	18.5	0.471	B	23.2	0.717	C	23.1	0.693	C	No	--	--	--
6th Street	PM		18.8	0.436	B	26.1	0.720	C	26.4	0.715	C	No	--	--	--

Notes:

- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions
- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report
- *Italicized text* corresponds to unsignalized intersections

[70] *Appendix I* contains the Delay/LOS calculation worksheets for all study intersections.

[71] As provided by the City of Ontario, analysis is based on the assumption that Baker Avenue at 6th Street becomes a signalized intersection in Year 2020.

TABLE 8-5 (CONTINUED)
YEAR 2035 GENERAL PLAN BUILDOUT PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4
PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY[72]

Key Intersection	Time Period	Minimum Acceptable LOS	(1) Existing Traffic Conditions			(2) Year 2035 GPB "No Project" (TOP) Traffic Conditions			(3) Year 2035 GPB Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions			(4) Significant Impact	(5) Year 2035 GPB Plus Project PA-1, PA-2, PA-3 and PA-4 Plus Improvements		
			Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Yes/No	Delay (s/v)	V/C	LOS
9. Hellman Avenue at	*AM*	*D*	*10.9*	--	*B*	*16.7*	--	*C*	*17.7*	--	*C*	*No*	15.3	--	B
6th Street	*PM*		*13.4*	--	*B*	*32.1*	--	*D*	***35.6***	--	***E***	***Yes***	15.9	--	B
10. Archibald Avenue at	AM	D	19.3	0.437	B	22.7	0.661	C	22.8	0.668	C	No	--	--	--
6th Street	PM		22.2	0.675	C	32.2	0.941	C	31.2	0.925	C	No	--	--	--
11. Hermosa Avenue at	AM	D	14.7	0.273	B	15.3	0.365	B	15.4	0.358	B	No	--	--	--
6th Street	PM		15.3	0.358	B	16.1	0.475	B	15.9	0.439	B	No	--	--	--
12. Haven Avenue at	AM	D	39.0	0.568	D	47.1	0.710	D	45.0	0.691	D	No	46.1	0.704	D
6th Street	PM		40.9	0.681	D	**55.3**	**0.867**	**E**	**55.4**	**0.873**	**E**	**Yes**	50.2	0.820	D
13. Grove Avenue at	AM	E	45.6	0.810	D	46.5	0.880	D	46.1	0.822	D	No	--	--	--
4th Street	PM		51.2	0.827	D	60.8	0.990	E	55.7	0.898	E	No	--	--	--
14. I-10 EB Ramps at	AM	D	19.6	0.652	B	**I-10 / 4th STREET INTERCHANGE TO BE REPLACED WITH PROPOSED I-10/GROVE INTERCHANGE**									
4th Street	PM		**78.1**	**0.808**	**E**										
15. I-10 WB Ramps at	AM	D	22.4	0.709	C	**I-10 / 4th STREET INTERCHANGE TO BE REPLACED WITH PROPOSED I-10/GROVE INTERCHANGE**									
4th Street	PM		25.2	0.748	C										
16. Baker Avenue at	AM	E	28.1	0.472	C	26.9	0.554	C	26.0	0.578	C	No	--	--	--
4th Street	PM		24.0	0.591	C	26.8	0.686	C	24.3	0.603	C	No	--	--	--

Notes:

- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions
- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report
- *Italicized text* corresponds to unsignalized intersections

[72] *Appendix I* contains the Delay/LOS calculation worksheets for all study intersections.

TABLE 8-5 (CONTINUED)
YEAR 2035 GENERAL PLAN BUILDOUT PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4
PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY[73]

Key Intersection	Time Period	Minimum Acceptable LOS	(1) Existing Traffic Conditions			(2) Year 2035 GPB "No Project" (TOP) Traffic Conditions			(3) Year 2035 GPB Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions			(4) Significant Impact	(5) Year 2035 GPB Plus Project PA-1, PA-2, PA-3 and PA-4 Plus Improvements		
			Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Yes/No	Delay (s/v)	V/C	LOS
17. Mariposa Avenue at	*AM*	*E*	*18.2*	--	*C*	*25.7*	--	*D*	*18.1*	--	*C*	*No*	--	--	--
4th Street	*PM*		*21.0*	--	*C*	*40.8*	--	*E*	*25.1*	--	*D*	*No*	--	--	--
18. Corona Avenue at	AM	E	11.2	0.240	B	11.3	0.262	B	13.0	0.207	B	No	--	--	--
4th Street	PM		8.1	0.248	A	8.0	0.335	A	8.2	0.247	A	No	--	--	--
19. Orange Avenue at	*AM*	*E*	*17.6*	--	*C*	*21.4*	--	*C*	*16.2*	--	*C*	*No*	--	--	--
4th Street	*PM*		*18.3*	--	*C*	*32.7*	--	*D*	*21.3*	--	*C*	*No*	--	--	--
20. Vineyard Avenue at	AM	E	32.8	0.705	C	**84.4**	**1.065**	**F**[74]	76.2	0.983	E[74]	No	47.0	0.807	D
4th Street	PM		44.4	0.807	D	**144.9**	**1.239**	**F**	**92.2**	**1.017**	**F**	**Yes**	61.1	0.862	E
21. Del Rio Place at	*AM*	*E*	*20.8*	--	*C*	*17.1*	--	*C*	*18.1*	--	*C*	*No*	--	--	--
4th Street	*PM*		*16.6*	--	*C*	*32.9*	--	*D*	*37.9*	--	*E*	*No*	--	--	--
22. Hellman Avenue at	AM	E	*42.8*	--	*E*	25.4	0.457	C	25.8[75]	0.477	C	No	--	--	--
4th Street	PM		***75.4***	--	***F***	28.5	0.638	C	38.8	0.670	D	No	--	--	--
23. Archibald Avenue at	AM	D	30.9	0.516	C	41.3	0.893	D	43.1	0.707	D	No	37.3	0.795	D
4th Street	PM		37.6	0.670	D	**100.0**	**1.077**	**F**	**98.6**	**1.048**	**F**	**Yes**	53.9	0.924	D
24. Turner Avenue at	AM	D	21.2	0.365	C	22.7	0.537	C	21.7	0.470	C	No	--	--	--
4th Street	PM		20.5	0.446	C	24.5	0.654	C	21.4	0.532	C	No	--	--	--

Notes:

- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions
- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report
- *Italicized text* corresponds to unsignalized intersections

[73] *Appendix I* contains the Delay/LOS calculation worksheets for all study intersections.

[74] Project enhancements consist of an additional NB thru lane, a NB free right-turn lane and a third WB left-turn lane. Figures 11A through H provided a graphical representation of the project enhancements and cumulative improvements.

[75] As part of the Project, Hellman Avenue at 4th Street is anticipated to be converted to a signalized intersection.

TABLE 8-5 (CONTINUED)
YEAR 2035 GENERAL PLAN BUILDOUT PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4
PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY[76]

Key Intersection	Time Period	Minimum Acceptable LOS	(1) Existing Traffic Conditions			(2) Year 2035 GPB "No Project" (TOP) Traffic Conditions			(3) Year 2035 GPB Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions			(4) Significant Impact	(5) Year 2035 GPB Plus Project PA-1, PA-2, PA-3 and PA-4 Plus Improvements		
			Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Yes/No	Delay (s/v)	V/C	LOS
25. Haven Avenue at 4th Street	AM	D	35.9	0.619	D	45.7	0.836	D	43.0	0.824	D	No	38.2	0.664	D
	PM		52.2	0.919	D	**102.5**	**1.122**	**F**	**97.3**	**1.111**	**F**	**Yes**	54.7	0.916	D
26. Vineyard Avenue at Jay Street	AM	E	*28.6*	--	*D*	39.6	0.786	D	31.5[77]	0.600	C	No	--	--	--
	PM		***50.7***	--	***F***	73.9	1.084	E	28.5	0.699	C	No	--	--	--
27. Vineyard Avenue at Inland Empire Boulevard	AM	E	18.8	0.506	B	39.8	0.954	D[78]	24.4	0.576	C[78]	No	--	--	--
	PM		18.4	0.595	B	**110.6**	**1.260**	**F**	37.7	0.935	D	No	--	--	--
28. Archibald Avenue at Inland Empire Boulevard	AM	E	43.7	0.537	D	**125.6**	**0.959**	**F**[79]	60.4	0.716	E[79]	No	49.1	0.570	D
	PM		59.7	0.631	E	**183.4**	**1.579**	**F**	**103.3**	**0.956**	**F**	**Yes**	69.5	0.784	E
29. Turner Avenue at Inland Empire Boulevard	AM	E	22.2	0.237	C	22.4	0.359	C	22.4	0.292	C	No	--	--	--
	PM		22.7	0.345	C	24.5	0.553	C	23.3	0.465	C	No	--	--	--
30. Haven Avenue at Inland Empire Boulevard	AM	E	52.1	0.537	D	**98.3**	**0.642**	**F**	**99.1**	**0.636**	**F**	**Yes**	36.1	0.645	D
	PM		**102.8**	**0.742**	**F**	**181.0**	**0.955**	**F**	**184.1**	**0.927**	**F**	**Yes**	77.7	0.916	E
31. Vineyard Avenue at I-10 WB Ramps	AM	D	15.0	0.561	B	18.5	0.720	B	20.6	0.571	C	No	--	--	--
	PM		18.2	0.650	B	22.8	0.818	C	22.4	0.600	C	No	--	--	--
32. Vineyard Avenue at I-10 EB Ramps	AM	D	22.5	0.674	C	**50.7**	**1.028**	**F**	36.3	0.775	D	No	--	--	--
	PM		21.8	0.665	C	54.4	1.057	D	34.5	0.813	C	No	--	--	--

Notes:

- s/v = seconds per vehicle (delay), LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions
- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report
- *Italicized text* corresponds to unsignalized intersections

[76] *Appendix I* contains the Delay/LOS calculation worksheets for all study intersections.

[77] As part of the Project, Vineyard Avenue at Jay Street is anticipated to be converted to a signalized intersection.

[78] Project enhancements consist of the realignment of Vineyard Avenue with three NBT lanes and an exclusive right-turn lane, three SBT lanes and two exclusive left-turn lanes. The WB approach consists of two left-turn lanes and an exclusive right-turn lane with overlap phasing. Figures 11A through H provided a graphical representation of the project enhancements and cumulative improvements.

[79] Project enhancements consist of a 2nd EB left-turn lane and an exclusive right-turn lane with overlap phasing. While the WB left consists of a 2nd turn lane. Figures 11A through H provided a graphical representation of the project enhancements and cumulative improvements.

TABLE 8-5 (CONTINUED)
YEAR 2035 GENERAL PLAN BUILDOUT PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4
PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY[80]

Key Intersection	Time Period	Minimum Acceptable LOS	(1) Existing Traffic Conditions			(2) Year 2035 GPB "No Project" (TOP) Traffic Conditions			(3) Year 2035 GPB Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions			(4) Significant Impact	(5) Year 2035 GPB Plus Project PA-1, PA-2, PA-3 and PA-4 Plus Improvements		
			Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Yes/No	Delay (s/v)	V/C	LOS
33. Archibald Avenue at I-10 Freeway	AM	D	23.6	0.589	C	44.1	0.979	D	30.8	0.816	C	No	--	--	--
	PM		30.7	0.607	C	**79.0**	**1.129**	**F**	46.4	0.949	D	No	--	--	--
34. Vineyard Avenue at G Street	AM	E	15.2	0.414	B	17.2	0.680	B	17.9	0.619	B	No	--	--	--
	PM		14.1	0.384	B	28.6	0.889	C	15.6	0.580	B	No	--	--	--
35. Vineyard Avenue at D Street	AM	E	22.3	0.340	C	31.8	0.621	C	42.3	0.506	D	No	--	--	--
	PM		22.0	0.387	C	33.2	0.765	C	30.8	0.597	C	No	--	--	--
36. Vineyard Avenue at 7th Street	*AM*	*E*	*16.5*	--	*C*	***51.8***	--	***F***	*32.3*	--	*D*	*No*	--	--	--
	PM		*20.1*	--	*C*	***131.9***	--	***F***	*49.2*	--	*E*	*No*	--	--	--
37. Vineyard Avenue at Plaza Serena	*AM*	*E*	--	--	--	*27.7*	--	*D*	*21.2*	--	*C*	*No*	--	--	--
	PM		--	--	--	***108.1***	--	***F***	*22.4*	--	*C*	*No*	--	--	--
38. Project Driveway A at Inland Empire Boulevard	AM	E	--	--	--	--	--	--	7.7	0.296	A	No	--	--	--
	PM		--	--	--	--	--	--	12.9	0.589	B	No	--	--	--
39. Del Rio Place at Inland Empire Boulevard	AM	E	--	--	--	--	--	--	29.8	0.484	C	No	--	--	--
	PM		--	--	--	--	--	--	39.3	0.629	D	No	--	--	--
40. Project Driveway C at Inland Empire Boulevard	AM	E	--	--	--	--	--	--	24.2	0.354	C	No	--	--	--
	PM		--	--	--	--	--	--	26.5	0.528	C	No	--	--	--

Notes:

- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions
- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report
- *Italicized text* corresponds to unsignalized intersections

[80] *Appendix I* contains the Delay/LOS calculation worksheets for all study intersections.

TABLE 8-5 (CONTINUED)
YEAR 2035 GENERAL PLAN BUILDOUT PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4
PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY[81]

Key Intersection		Time Period	Minimum Acceptable LOS	(1) Existing Traffic Conditions			(2) Year 2035 GPB "No Project" (TOP) Traffic Conditions			(3) Year 2035 GPB Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions			(4) Significant Impact	(5) Year 2035 GPB Plus Project PA-1, PA-2, PA-3 and PA-4 Plus Improvements		
				Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Delay (s/v)	V/C	LOS	Yes/No	Delay (s/v)	V/C	LOS
41.	Project Driveway D at	AM	E	--	--	--	--	--	--	24.5	0.386	C	No	--	--	--
	Inland Empire Boulevard	PM		--	--	--	--	--	--	27.4	0.554	C	No	--	--	--
42.	*Project Driveway E at*	*AM*	*E*	--	--	--	--	--	--	*17.8*	--	*C*	*No*	--	--	--
	4th Street	*PM*		--	--	--	--	--	--	*28.6*	--	*D*	*No*	--	--	--
43.	Grove Avenue at	AM	E	--	--	--	9.4	0.411	A	9.4	0.411	A	No	--	--	--
	I-10 WB Ramps	PM		--	--	--	15.9	0.566	B	15.9	0.566	B	No	--	--	--
44.	Grove Avenue at	AM	E	--	--	--	19.4	0.647	B	19.4	0.647	B	No	--	--	--
	I-10 EB Ramps	PM		--	--	--	23.1	0.645	C	23.1	0.645	C	No	--	--	--

Notes:

- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions
- **Bold Delay/LOS** values indicate adverse service levels based on the LOS standards mentioned in this report
- *Italicized text* corresponds to unsignalized intersections

[81] *Appendix I* contains the Delay/LOS calculation worksheets for all study intersections.

9.0 TRAFFIC SIGNAL WARRANT ANALYSIS

The level of service analysis at the unsignalized intersections are supplemented with an assessment of the need for signalization of the intersection. For this study, the need for signalization is assessed on the basis of the peak-hour traffic signal warrant and as described in the *California Manual on Uniform Traffic Control Devices (MUTCD).*

Warrant #3 has two parts:

(1) *Part A* evaluates peak hour vehicle delay for traffic on the minor street approach with the highest delay, and

(2) *Part B* evaluates peak-hour traffic volumes on the major and minor streets.

This method provides an indication of whether peak-hour traffic conditions or peak-hour traffic volume levels are, or would be, sufficient to justify installation of a traffic signal.

The decision to install a traffic signal should not be based purely on the warrants alone. Instead, the installation of a signal should be considered and further analysis performed when one or more of the warrants is met. Additionally, engineering judgment is exercised on a case-by-case basis to evaluate the effect a traffic signal will have on certain types of accidents and traffic conditions at the subject intersection as well as at adjacent intersections.

9.1 Traffic Signal Warrant Analysis Results and Conclusions

The results of the peak-hour traffic signal warrant analysis (Warrant #3) for Existing Plus Project, Near Term Plus Project and Long Term Plus Project are summarized on ***Tables 9-1, 9-2*** and ***9-3*** respectively. Review of *Tables 9-1, 9-2* and *9-3* indicates that at locations where signalization is recommended due to mitigation and/or project enhancements it also meets warrants at these locations.

Appendix J presents the signal warrant worksheets for the unsignalized study intersections.

TABLE 9-1
EXISTING PLUS PROJECT TRAFFIC SIGNAL WARRANT ANALYSIS SUMMARY[82]

Key Intersection	Time Period	(1) Existing Traffic Conditions		(2) Existing Plus Project PA-1 and PA-2 (Interim) Traffic Conditions		(3) Existing Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions	
		Part A of Warrant 3 Satisfied?	Part B of Warrant 3 Satisfied?	Part A of Warrant 3 Satisfied?	Part B of Warrant 3 Satisfied?	Part A of Warrant 3 Satisfied?	Part B of Warrant 3 Satisfied?
3. Baker Avenue at 8th Street	AM	--	Yes	--	Yes	--	Yes
	PM	--	No	--	No	--	No
7. Baker Avenue at 6th Street	AM	--	Yes	--	Yes	--	Yes
	PM	--	Yes	--	Yes	--	Yes
9. Hellman Avenue at 6th Street	AM	--	No	--	No	--	No
	PM	--	No	--	No	--	Yes
17. Mariposa Avenue at 4th Street	AM	No	No	No	No	No	No
	PM	No	No	No	No	No	No
19. Orange Avenue at 4th Street	AM	No	No	No	No	No	No
	PM	No	No	No	No	No	No
21. Del Rio Place at 4th Street	AM	No	No	No	No	No	No
	PM	No	No	No	No	No	No
22. Hellman Avenue at 4th Street	AM	No	Yes	Yes	Yes	Yes	Yes
	PM	Yes	Yes	Yes	Yes	Yes	Yes
26. Vineyard Avenue at Jay Street	AM	No	No	Yes	Yes	Yes	Yes
	PM	No	No	Yes	Yes	Yes	Yes
36. Vineyard Avenue at 7th Street	AM	No	Yes	No	Yes	No	Yes
	PM	No	No	No	No	No	No
37. Vineyard Avenue at Plaza Serena	AM	--	--	No	Yes	No	Yes
	PM	--	--	No	No	No	No
38. Project Driveway A at Inland Empire Boulevard	AM	--	--	--	--	No	Yes
	PM	--	--	--	--	Yes	Yes
39. Del Rio Place at Inland Empire Boulevard	AM	--	--	No	No	Yes	Yes
	PM	--	--	Yes	Yes	Yes	Yes
40. Project Driveway C at Inland Empire Boulevard	AM	--	--	--	--	Yes	Yes
	PM	--	--	--	--	Yes	Yes
41. Project Driveway D at Inland Empire Boulevard	AM	--	--	--	--	Yes	Yes
	PM	--	--	--	--	Yes	Yes

[82] Signal warrant checks based on Warrant 3, Part A - Peak-Hour Delay Warrant and Part B - Peak-Hour Volume Warrant are contained in the California MUTCD.

TABLE 9-1 (CONTINUED)
EXISTING PLUS PROJECT TRAFFIC SIGNAL WARRANT ANALYSIS SUMMARY[83]

Key Intersection	Time Period	(1) Existing Traffic Conditions		(2) Existing Plus Project PA-1 and PA-2 (Interim) Traffic Conditions		(3) Existing Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions	
		Part A of Warrant 3 Satisfied?	Part B of Warrant 3 Satisfied?	Part A of Warrant 3 Satisfied?	Part B of Warrant 3 Satisfied?	Part A of Warrant 3 Satisfied?	Part B of Warrant 3 Satisfied?
42. Project Driveway E at 4th Street	AM	--	--	No	No	No	No
	PM	--	--	No	No	No	No

[83] Signal warrant checks based on Warrant 3, Part A - Peak-Hour Delay Warrant and Part B - Peak-Hour Volume Warrant are contained in the California MUTCD.

TABLE 9-2
NEAR TERM PLUS PROJECT TRAFFIC SIGNAL WARRANT ANALYSIS SUMMARY[84]

Key Intersection	Time Period	(1) Year 2017 Cumulative Traffic Conditions		(2) Year 2017 Cumulative Plus Project PA-1 and PA-2 (Interim) Traffic Conditions		(3) Year 2020 Cumulative Traffic Conditions		(4) Year 2020 Cumulative Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions	
		Part A of Warrant 3 Satisfied?	Part B of Warrant 3 Satisfied?	Part A of Warrant 3 Satisfied?	Part B of Warrant 3 Satisfied?	Part A of Warrant 3 Satisfied?	Part B of Warrant 3 Satisfied?	Part A of Warrant 3 Satisfied?	Part B of Warrant 3 Satisfied?
3. Baker Avenue at 8th Street	AM	--	Yes	--	Yes	--	Yes	--	Yes
	PM	--	No	--	No	--	No	--	Yes
7. Baker Avenue at 6th Street	AM	--	Yes	--	Yes	--	--	--	--
	PM	--	Yes	--	Yes	--	--	--	--
9. Hellman Avenue at 6th Street	AM	--	No	--	No	--	No	--	No
	PM	--	No	--	No	--	Yes	--	Yes
17. Mariposa Avenue at 4th Street	AM	No	No	No	No	No	No	No	No
	PM	No	No	No	No	No	No	No	No
19. Orange Avenue at 4th Street	AM	No	Yes	No	Yes	No	Yes	No	Yes
	PM	No	No	No	No	No	No	No	No
21. Del Rio Place at 4th Street	AM	No	No	No	No	No	No	No	No
	PM	No	No	No	No	No	No	No	No
22. Hellman Avenue at 4th Street	AM	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	PM	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
26. Vineyard Avenue at Jay Street	AM	No	No	Yes	Yes	No	No	Yes	Yes
	PM	No	No	Yes	Yes	No	No	Yes	Yes
36. Vineyard Avenue at 7th Street	AM	No	Yes	No	Yes	No	Yes	No	Yes
	PM	No	No	No	No	No	No	No	No
37. Vineyard Avenue at Plaza Serena	AM	--	--	No	Yes	--	--	No	Yes
	PM	--	--	No	No	--	--	No	No
38. Project Driveway A at Inland Empire Boulevard	AM	--	--	--	--	--	--	No	Yes
	PM	--	--	--	--	--	--	Yes	Yes
39. Del Rio Place at Inland Empire Boulevard	AM	--	--	No	No	--	--	Yes	Yes
	PM	--	--	Yes	Yes	--	--	Yes	Yes
40. Project Driveway C at Inland Empire Boulevard	AM	--	--	--	--	--	--	Yes	Yes
	PM	--	--	--	--	--	--	Yes	Yes
41. Project Driveway D at Inland Empire Boulevard	AM	--	--	--	--	--	--	Yes	Yes
	PM	--	--	--	--	--	--	Yes	Yes

[84] Signal warrant checks based on Warrant 3, Part A - Peak-Hour Delay Warrant and Part B - Peak-Hour Volume Warrant are contained in the California MUTCD.

TABLE 9-2 (CONTINUED)

NEAR TERM PLUS PROJECT TRAFFIC SIGNAL WARRANT ANALYSIS SUMMARY[85]

Key Intersection	Time Period	(1) Year 2017 Cumulative Traffic Conditions		(2) Year 2017 Cumulative Plus Project PA-1 and PA-2 (Interim) Traffic Conditions		(3) Year 2020 Cumulative Traffic Conditions		(4) Year 2020 Cumulative Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions	
		Part A of Warrant 3 Satisfied?	Part B of Warrant 3 Satisfied?	Part A of Warrant 3 Satisfied?	Part B of Warrant 3 Satisfied?	Part A of Warrant 3 Satisfied?	Part B of Warrant 3 Satisfied?	Part A of Warrant 3 Satisfied?	Part B of Warrant 3 Satisfied?
42. Project Driveway E at 4th Street	AM	--	--	No	No	--	--	No	No
	PM	--	--	No	No	--	--	No	No

[85] Signal warrant checks based on Warrant 3, Part A - Peak-Hour Delay Warrant and Part B - Peak-Hour Volume Warrant are contained in the California MUTCD.

TABLE 9-3

YEAR 2035 GENERAL PLAN BUILDOUT PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4 TRAFFIC SIGNAL WARRANT ANALYSIS SUMMARY[86]

Key Intersection		Time Period	Year 2035 General Plan Buildout Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions	
			Part A of Warrant 3 Satisfied?	Part B of Warrant 3 Satisfied?
3.	Baker Avenue at 8th Street	AM	--	Yes
		PM	--	Yes
9.	Hellman Avenue at 6th Street	AM	--	Yes
		PM	--	Yes
17.	Mariposa Avenue at 4th Street	AM	No	No
		PM	No	No
19.	Orange Avenue at 4th Street	AM	No	No
		PM	No	No
21.	Del Rio Place at 4th Street	AM	No	No
		PM	No	No
22.	Hellman Avenue at 4th Street	AM	Yes	Yes
		PM	Yes	Yes
26.	Vineyard Avenue at Jay Street	AM	Yes	Yes
		PM	Yes	Yes
36.	Vineyard Avenue at 7th Street	AM	No	Yes
		PM	No	Yes

[86] Signal warrant checks based on Warrant 3, Part A - Peak-Hour Delay Warrant and Part B - Peak-Hour Volume Warrant are contained in the California MUTCD.

TABLE 9-3 (CONTINUED)

YEAR 2035 GENERAL PLAN BUILDOUT PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4 TRAFFIC SIGNAL WARRANT ANALYSIS SUMMARY[87]

Key Intersection		Time Period	Year 2035 General Plan Buildout Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions	
			Part A of Warrant 3 Satisfied?	Part B of Warrant 3 Satisfied?
37.	Vineyard Avenue at	AM	No	Yes
	Plaza Serena	PM	No	No
38.	Project Driveway A at	AM	No	Yes
	Inland Empire Boulevard	PM	Yes	Yes
39.	Del Rio Place at	AM	Yes	Yes
	Inland Empire Boulevard	PM	Yes	Yes
40.	Project Driveway C at	AM	Yes	Yes
	Inland Empire Boulevard	PM	Yes	Yes
41.	Project Driveway D at	AM	Yes	Yes
	Inland Empire Boulevard	PM	Yes	Yes
42.	Project Driveway E at	AM	No	No
	4th Street	PM	No	No

[87] Signal warrant checks based on Warrant 3, Part A - Peak-Hour Delay Warrant and Part B - Peak-Hour Volume Warrant are contained in the California MUTCD.

10.0 SITE ACCESS EVALUATION

As part of the Project, Jay Street will extend easterly from Vineyard Avenue and connect with the future alignment of Del Rio Place; Del Rio Place is shown to extend southerly from Jay Street and intersect with Inland Empire Boulevard. Both Jay Street and Del Rio Place are proposed to be constructed by the Project to the City of Ontario "Local Industrial" street standards and will be public streets. Primary access for PA-1 will be taken via Jay Street at Vineyard Avenue and Del Rio Place at Inland Empire Boulevard, with additional minor access along 4th Street at Hellman Avenue and Project Driveway E at 4th Street. Please note that access to PA-1 is also provided via a right-turn in/out driveway along Vineyard Avenue between 4th Street and Jay Street. For the purposes of this study no trips were assigned to this driveway. Detailed access to PA-2, PA-3 & PA-4 has not been determined, though four (4) signalized driveway access points are anticipated. To Provide a conservative assessment and worse-case evaluation of the four proposed driveways that will serve PA-2, PA-3 and PA-4, all trips were assigned to the signalized driveways and the location of any "right-in right-out only" driveways will be determined with further site planning of these planning areas.

Section 8.0 has already included the level of service assessment at the key project access points. A review of the applicable tables indicates that the proposed Project driveways are forecast to operate at LOS D or better. As such, project access will be adequate. Motorists entering and exiting the Project site will be able to do so comfortably, safely, and without undue congestion.

10.1 Queuing Analysis

To validate the adequacy of the proposed stacking/storage lengths, a queuing evaluation was prepared for the proposed turn pockets at the project driveways. The queuing evaluation was conducted based on projected Year 2035 Plus Project peak hour driveway traffic volumes and the Highway Capacity Manual (HCM) methodology.

Table 10-1 identifies the queuing results at the project driveways. Review of *Table 10-1* shows that the proposed/recommended left-turn pockets will provide adequate storage to accommodate the anticipated vehicular queues.

TABLE 10-1
PROJECT DRIVEWAY QUEUING ANALYSIS FOR
YEAR 2035 CUMULATIVE PLUS PROJECT [88]

Key Intersections		Rec. Storage (ft.)	Year 2035 Plus Project (PA-1, PA-2, PA-3 & PA-4) Traffic Conditions			
			AM Peak Hour		PM Peak Hour	
			Max. Queue (ft.)	Adequate Storage Yes / No	Max. Queue (ft.)	Adequate Storage Yes / No
22.	Hellman Avenue at 4th Street					
	Northbound Left-Turn	50’	22’	Yes	22’	Yes
	Southbound Left-Turn	175’	154’	Yes	154’	Yes
	Eastbound Left-Turn	290’	198’	Yes	264’	Yes
	Westbound Left-Turn	50’	22’	Yes	22’	Yes
26.	Vineyard Avenue at Jay Street[89]					
	Northbound Left-Turn	200’	130’	Yes	121’	Yes
	Northbound Right-Turn	200’	132’	Yes	73’	Yes
	Southbound Left-Turn	200’	126’	Yes	48’	Yes
	Eastbound Left/Thru/Right	--	226’	Yes	71’	Yes
	Westbound Left-Turn	250’	75’	Yes	250’	Yes
	Westbound Thru/Right	--	31’	Yes	133’	Yes
38.	Project Driveway A at Inland Empire Boulevard					
	Northbound Left-Turn	375’	110’	Yes	352’	Yes
	Westbound Left-Turn	75’	44’	Yes	66’	Yes
39.	Del Rio Place at Inland Empire Boulevard					
	Northbound Left-Turn	200’	66’	Yes	154’	Yes
	Northbound Thru/Right	--	88’	Yes	264’	Yes
	Southbound Left-Turn	250’	44’	Yes	242’	Yes
	Southbound Thru/Right	--	44’	Yes	264’	Yes
	Eastbound Left-Turn	325’	308’	Yes	88’	Yes
	Westbound Left-Turn	350’	176’	Yes	330’	Yes

[88] Queuing results are based on HCM 2000 95% percentile queue from Traffix.

[89] Queuing results for Vineyard Avenue at Jay Street is based on Simtraffic consistent with the Synchro analysis for the Vineyard corridor between D Street and 4th Street.

TABLE 10-1 (CONTINUED)
PROJECT DRIVEWAY QUEUING ANALYSIS FOR
YEAR 2035 CUMULATIVE PLUS PROJECT (PA-1, PA-2, PA-3 & PA-4)[90]

Key Intersections		Rec. Storage (ft.)	Year 2035 Plus Project (PA-1, PA-2, PA-3 & PA-4) Traffic Conditions			
			AM Peak Hour		PM Peak Hour	
			Max. Queue (ft.)	Adequate Storage Yes / No	Max. Queue (ft.)	Adequate Storage Yes / No
40.	Project Driveway C at Inland Empire Boulevard					
	Northbound Left-Turn	125’	22’	Yes	110’	Yes
	Southbound Left-Turn	125’	110’	Yes	66’	Yes
	Eastbound Left-Turn	50’	22’	Yes	44’	Yes
	Westbound Left-Turn	225’	154’	Yes	220’	Yes
41.	Project Driveway D at Inland Empire Boulevard					
	Northbound Left-Turn	150’	22’	Yes	132’	Yes
	Southbound Left-Turn	150’	132’	Yes	88’	Yes
	Eastbound Left-Turn	125’	22’	Yes	110’	Yes
	Westbound Left-Turn	200’	110’	Yes	198’	Yes
42.	Project Driveway E at 4th Street					
	Northbound Shared Left/Thru/Right-Turn	50’	22’	Yes	22’	Yes
	Westbound Left-Turn	50’	22’	Yes	22’	Yes

[90] Queuing results are based on HCM 2000 95% percentile queue from Traffix.

10.2 Internal Circulation

Preliminary on-site circulation review appears to be adequate for large trucks. Upon site plan refinement final turn radii's will be validated using *Turning Vehicle Templates*, developed by Jack E. Leisch & Associates and *AutoTURN for AutoCAD* computer software that simulates turning maneuvers for various types of vehicles. The final site plans, including parking layouts, internal circulation and driveways, will be designed to accommodate trucks without internal vehicular conflicts, to the satisfaction of the City of Ontario.

10.3 Project-Specific Improvements

Subject to review and approval by the City, the following improvements are proposed in conjunction with development of the proposed Project to ensure adequate access and egress to the site is provided. ***Appendix K*** presents the conceptual improvement plans along the Project frontage on Vineyard Avenue from the I-10 Freeway to 4th Street. To assist in sizing the left-turn storage requirements and determine the appropriate pocket lengths along Vineyard Avenue, a supplemental assessment has been conducted using Synchro 9.0. ***Appendix L*** documents the findings from the Synchro assessment. The proposed Project will be required to construct improvements along their frontage on Vineyard Avenue, Inland Empire Boulevard and 4th Street, to include the following:

- **Vineyard Avenue, adjacent to the Project site to 4th Street:** Construct Vineyard Avenue bordering the Project site in accordance with the conditions of approval identified in the Specific Plan Amendment and Tract Map to be determined by the City, to include three-travel lanes in each direction separated by a landscaped median (125-foot right-of way section, 100-foot paved width, and 12-foot sidewalk/landscape areas on the west side and 13-foot sidewalk/landscape areas on the east side). The implementation of improvements along Vineyard Avenue and 4th Street will require modifications to the existing traffic signal at the intersection of Vineyard Avenue and 4th Street as well as new signals at the realigned Inland Empire Boulevard and Jay Street, which will be interconnected to provide synchronization.

- **Inland Empire Boulevard:** Realign Inland Empire Boulevard to the north as required by the City of Ontario to intersect with Vineyard Avenue. Design and construct Inland Empire Boulevard, between Vineyard Avenue and Archibald Avenue in accordance with the conditions of approval identified in the Specific Plan Amendment and Tract Map to be determined by the City, to include two-travel lanes in each direction separated by a landscaped median with on-street bike lanes (100-foot right-of way section, 76-foot paved width, and 12-foot sidewalk/landscape areas on either side with necessary widening at intersections and driveways based on lane configurations recommended in this report). With the realignment of Inland Empire Boulevard, convert Vineyard Avenue at Plaza Serena from signalized access to an unsignalized right-turn in/out only access and install a new traffic signal at the intersection of Vineyard Avenue and Inland Empire Boulevard. The improvements associated with Inland Empire Boulevard consists of constructing the project frontage improvements at the intersection of Inland Empire Boulevard and Archibald Avenue including a third receiving lane west bound to accommodate the recommended third left-turn lane northbound which is identified as a 2035 improvement. This third lane will terminate at one of the driveways serving PA-3, depending on final site planning for that parcel. It is anticipated that there will be four (4) new traffic signals on Inland Empire Boulevard at Del Rio Place (to be installed with PA-1 and PA-2 interim) and at Driveway A, C and D when further development of PA-2, PA-3 and/or PA-4 warrants them.

- **4th Street, adjacent to the Project site to Vineyard Avenue:** Construct 4th Street bordering the Project site in accordance with the conditions of approval identified in the Specific Plan Amendment and Tract Map to be determined by the City, to include two-travel lanes in each

direction separated by a landscaped median (100-foot right-of way section, 72-foot paved width, and 14-foot sidewalk/landscape areas on either side). The improvements associated with 4th Street also include the installation of a traffic signal at the intersection of 4th Street and Hellman Avenue.

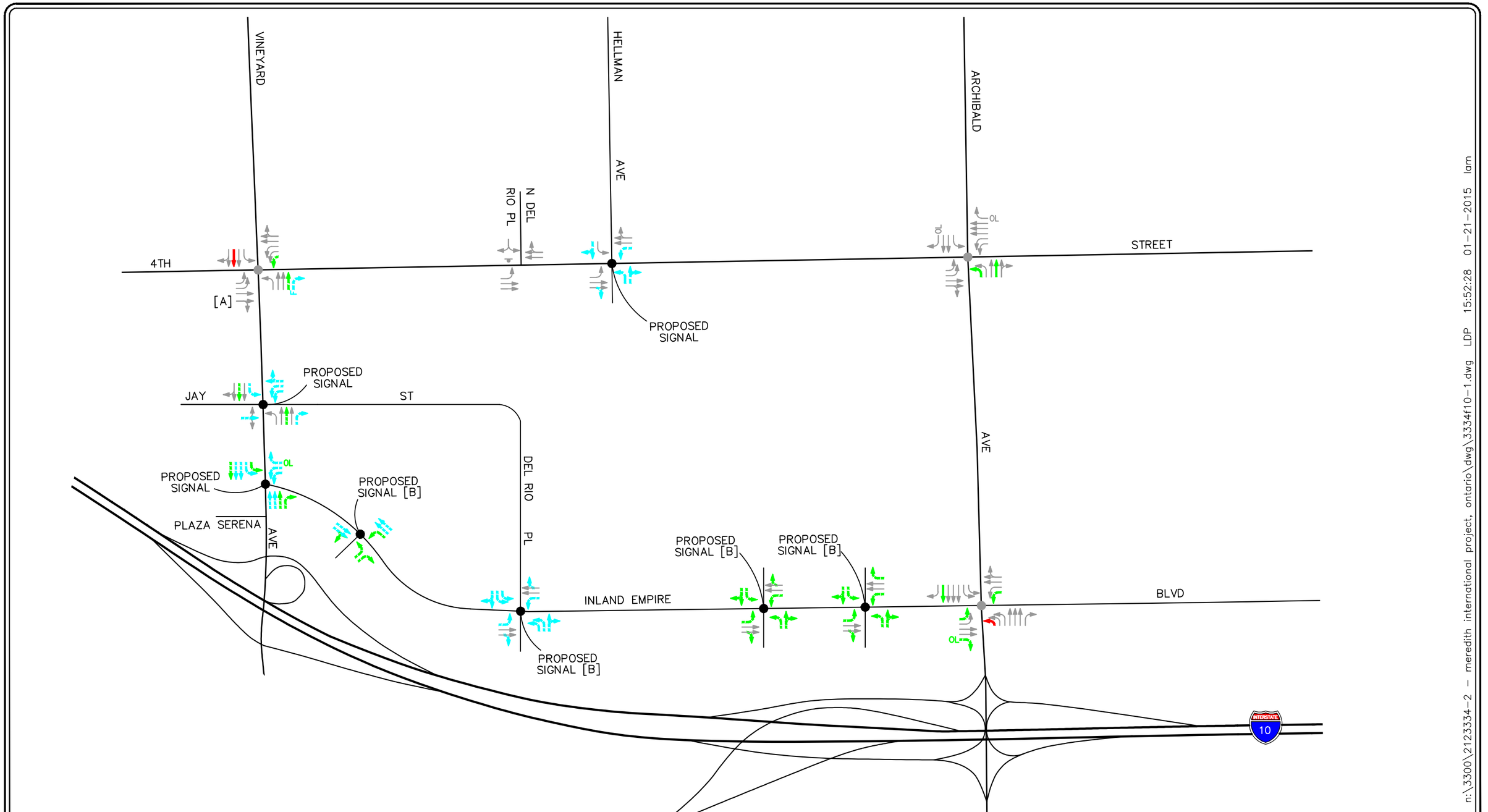
- **Jay Street:** Extend Jay Street easterly from Vineyard Avenue and connect with the future alignment of Del Rio Place. Design and construct Jay Street to the City of Ontario "Local Industrial" street standards (66-foot right-of way section, 40-foot paved width, and 13-foot sidewalk/landscape areas on either side). The improvements associated with Jay Street also include the installation of a traffic signal at the intersection of Vineyard Avenue and Jay Street with necessary widening at the intersection with Vineyard Avenue based on lane configuration recommended in this report.

- **Del Rio Place:** Extend Del Rio Place southerly from future Jay Street and intersect with Inland Empire Boulevard. Design and construct Del Rio Place to the City of Ontario "Local Industrial" street standards. (66-foot right-of way section, 40-foot paved width, and 13-foot sidewalk/landscape areas on either side). The improvements associated with Del Rio Place also include the installation of a traffic signal at the intersection of Inland Empire Boulevard and Del Rio Place with necessary widening at the intersection with Inland Empire Boulevard based on lane configuration recommended in this report.

Please note that recommended intersection lane assignments associated intersections and roadway improvements to be constructed along Vineyard Avenue, Inland Empire Boulevard and 4th Street by the proposed Project, in accordance to conditions of approval identified in the Specific Plan Amendment and Tract Map to be determined by the City, are illustrated in ***Figure 10-1*** and ***Figure 11-1A*** through ***11-1H*** of the following section for the following intersections:

20. Vineyard Avenue at 4th Street
22. Hellman Avenue at 4th Street
26. Vineyard Avenue at Jay Street
27. Vineyard Avenue at Inland Empire Boulevard
28. Archibald Avenue at Inland Empire Boulevard
37. Vineyard Avenue at Plaza Serena
38. Project Driveway A at Inland Empire Boulevard*
39. Del Rio Place (Project Driveway B) at Inland Empire Boulevard*
40. Project Driveway C at Inland Empire Boulevard*
41. Project Driveway D at Inland Empire Boulevard*
42. Project Driveway E at 4th Street

*The final lane configurations for Intersections 38, 39, 40 and 41 will be determined at the time of site plan review for the developments within PA-2, PA-3 and PA-4.



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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

= EXISTING APPROACH LANE ASSIGNMENT
= YEAR 2017 PROJECT SPECIFIC IMPROVEMENTS
= YEAR 2020 PROJECT SPECIFIC IMPROVEMENTS
= YEAR 2035 PROJECT SPECIFIC IMPROVEMENTS
= YEAR 2020 CUMULATIVE IMPROVEMENTS
= YEAR 2035 CUMULATIVE IMPROVEMENTS
= EXISTING TRAFFIC SIGNAL
= PROJECT SPECIFIC PROPOSED TRAFFIC SIGNAL
OL = OVERLAP
F = FREE RIGHT
[A] = EXCLUSIVE RIGHT TURN LANE SHOULD BE REMOVED DURING 2020 IMPROVMENT TO ALLOW FOR PROPER ALIGNMENT OF THE EBT LANES
[B] = FINAL LANE CONFIGURATIONS TO BE DETERMINED WITH FURTHER DEVELOPMENT OF PA-2, PA-3 AND PA-4.

FIGURE 10-1

PROJECT SPECIFIC IMPROVEMENTS

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO

11.0 AREA WIDE INTERSECTION TRAFFIC IMPROVEMENTS

For those intersections and roadway segments where projected traffic volumes are expected to result in significant impacts, this report recommends traffic improvements that change the intersection and/or roadway segments geometry to increase capacity. These capacity improvements involve roadway widening and/or re-striping to reconfigure (add lanes) roadways to specific approaches of a key intersection and/or roadway segments. The identified improvements are expected to:

- Address the impact of existing traffic, Project traffic and future non-project (ambient traffic growth and related projects) traffic, and
- Improve Levels of Service to an acceptable range and/or to pre-project conditions.

Transportation improvements throughout San Bernardino County are funded through a combination of direct Project mitigation, fair share contributions or development impact fee programs. Identification and timing of needed improvements is generally determined through local jurisdictions based upon a variety of factors.

11.1 Recommended Improvements

11.1.1 *Existing Plus Project PA-1 and PA-2 (Interim) Recommended Improvements*

The following improvements listed below have been identified to mitigate the traffic impacts of the Project in the Existing Plus Project PA-1 and PA-2 (Interim) traffic conditions at the two (2) significantly impacted intersections. At the direction of the City, the Project may be expected to construct and/or pay a fair-share of the construction costs to implement these mitigation measures:

- No. 14 – I-10 EB Ramps at 4th Street: Widen and restripe the westbound approach and departure to provide an additional through-lane with a minimum width of 10 feet. Modify the existing traffic signal as necessary and install all necessary striping, pavement markings and signs per Caltrans requirements, the City of Ontario Standard Design Guidelines and/or CA MUTCD. The implementation of this improvement will require coordination and approval by Caltrans, to include a Fact Sheet Exceptions to Mandatory Design Standards. The improvements will require the removal of the existing sidewalks on one or both sides of the 4th Street undercrossing, thus restricting pedestrian access. This improvement will require additional right-of-way. Please note this recommended improvement would be temporary given the existing I-10/4th Street Interchange would be eliminated once the construction of the proposed I-10/Grove Avenue Interchange is completed.
- No. 30 – Haven Avenue at Inland Empire Boulevard: Modify the existing traffic signal to install pedestrian push buttons along with median modifications on all four legs of the intersection to provide for a 6 foot pedestrian refuge area per Caltrans requirements, the City of Ontario Standard Design Guidelines and/or CA MUTCD.

11.1.2 *Existing Plus Project PA-1, PA-2, PA-3 and PA-4 Recommended Improvements*

The following improvements listed below have been identified to mitigate the traffic impacts of the Project in the Existing Plus Project PA-1, PA-2, PA-3 and PA-4 traffic conditions at the two (2) significantly impacted intersections. At the direction of the City, the Project may be expected to construct and/or pay a fair-share of the construction costs to implement these mitigation measures:

- No. 14 – I-10 EB Ramps at 4th Street: Widen and restripe the westbound approach and departure to provide an additional through-lane with a minimum width of 10 feet. Modify the existing traffic signal as necessary and install all necessary striping, pavement markings and signs per Caltrans requirements, the City of Ontario Standard Design Guidelines and/or CA MUTCD. The implementation of this improvement will require coordination and approval by Caltrans, to include a Fact Sheet Exceptions to Mandatory Design Standards. The improvements will require the removal of the existing sidewalks on one or both sides of the 4th Street undercrossing, thus restricting pedestrian access. This improvement will require additional right-of-way. Please note this recommended improvement would be temporary given the existing I-10/4th Street Interchange would be eliminated once the construction of the proposed I-10/Grove Avenue Interchange is completed.
- No. 30 – Haven Avenue at Inland Empire Boulevard: Modify the existing traffic signal to install pedestrian push buttons along with median modifications on all four legs of the intersection to provide for a 6 foot pedestrian refuge area per Caltrans requirements, the City of Ontario Standard Design Guidelines and/or CA MUTCD.

11.1.3 *Year 2017 Recommended Improvements*

The following improvements listed below have been identified to mitigate projected adverse service levels for Year 2017 Cumulative Plus Project PA-1 and PA-2 (Interim) traffic conditions at the seven (7) impacted intersections. Per City requirements and CMP guidelines, the Project can be expected to pay a fair-share of the construction costs to implement these mitigation measures.

- No. 2 – Archibald Avenue at Arrow Route: Widen and restripe the northbound approach to provide an exclusive right-turn lane. Modify the existing traffic signal as necessary and install all necessary striping, pavement markings and signs per Caltrans requirements, the City of Rancho Cucamonga Standard Design Guidelines and/or CA MUTCD. This improvement will require coordination and approval of the City of Rancho Cucamonga. This improvement will require widening along the west curb and modification of the existing sidewalk to accommodate a right-turn lane. This improvement will require additional right-of-way.
- No. 14 – I-10 EB Ramps at 4th Street: Widen and restripe the westbound approach and departure to provide an additional through-lane with a minimum width of 10 feet. Modify the existing traffic signal as necessary and install all necessary striping, pavement markings and signs per Caltrans requirements, the City of Ontario Standard Design Guidelines and/or CA MUTCD. The implementation of this improvement will require coordination and approval by Caltrans, to include a Fact Sheet Exceptions to Mandatory Design Standards. The improvements will require the removal of the existing sidewalks on one or both sides of the 4th Street undercrossing, thus restricting pedestrian access. This improvement will require additional right-of-way. Please note this recommended improvement would be temporary given the existing I-10/4th Street Interchange would be eliminated once the construction of the proposed I-10/Grove Avenue Interchange is completed.

- No. 25 – Haven Avenue at 4th Street: Widen and restripe the northbound approach and departure to provide an additional through-lane. Widen and restripe the eastbound approach to provide an exclusive right-turn lane. Modify the existing traffic signal as necessary and install all necessary striping, pavement markings and signs per Caltrans requirements, the

City of Ontario and Rancho Cucamonga Standard Design Guidelines and/or CA MUTCD. This improvement will require coordination and approval of the City of Rancho Cucamonga given the northeast corner of the intersection is located with their jurisdiction. These improvements will require additional right-of-way. It is noted that the northeast and southeast quadrants of the intersection is currently undeveloped.

- No. 30 – Haven Avenue at Inland Empire Boulevard: Modify the existing traffic signal to install pedestrian push buttons along with median modifications on all four legs of the intersection to provide for a 6 foot pedestrian refuge area per Caltrans requirements, the City of Ontario Standard Design Guidelines and/or CA MUTCD.

11.1.4 *Year 2020 Recommended Improvements*

The following improvements listed below have been identified to mitigate projected adverse service levels for Year 2020 Cumulative Plus Project PA-1, PA-2, PA-3 and PA-4 traffic conditions at the eleven (11) impacted intersections. Per City requirements and CMP guidelines, the Project can be expected to pay a fair-share of the construction costs to implement these mitigation measures.

- No. 2 – Archibald Avenue at Arrow Route: Widen and restripe the northbound approach to provide an exclusive right-turn lane. Modify the existing traffic signal as necessary and install all necessary striping, pavement markings and signs per Caltrans requirements, the City of Rancho Cucamonga Standard Design Guidelines and/or CA MUTCD. This improvement will require coordination and approval of the City of Rancho Cucamonga. This improvement will require widening along the west curb and modification of the existing sidewalk to accommodate a right-turn lane. This improvement will require additional right-of-way.
- No. 14 – I-10 EB Ramps at 4th Street: Widen and restripe the westbound approach and departure to provide an additional through-lane with a minimum width of 10 feet. Modify the existing traffic signal as necessary and install all necessary striping, pavement markings and signs per Caltrans requirements, the City of Ontario Standard Design Guidelines and/or CA MUTCD. The implementation of this improvement will require coordination and approval by Caltrans, to include a Fact Sheet Exceptions to Mandatory Design Standards. The improvements will require the removal of the existing sidewalks on one or both sides of the 4th Street undercrossing, thus restricting pedestrian access. This improvement will require additional right-of-way. Please note this recommended improvement would be temporary given the existing I-10/4th Street Interchange would be eliminated once the construction of the proposed I-10/Grove Avenue Interchange is completed.
- No. 23 – Archibald Avenue at 4th Street: Widen and restripe the northbound approach to provide a 2nd left-turn lane and an additional through-lane for both the approach and departure. These improvements will require additional right-of-way. In addition, restripe the southbound approach to provide proper alignment. This improvement will require coordination and approval of the City of Rancho Cucamonga given the intersection is partially located with their jurisdiction. Modify existing traffic signal as necessary, and install all necessary striping, pavement markings and signs per the City of Ontario/Rancho Cucamonga Standard Design Guidelines and/or CA MUTCD. It is noted that the southeast quadrant of the intersection is currently undeveloped.
- No. 25 – Haven Avenue at 4th Street: Widen and restripe the northbound and southbound approach and departure to provide an additional through-lane. Widen and restripe the

eastbound approach to provide an exclusive right-turn lane. These improvements will require additional right-of-way. This improvement will require coordination and approval of the City of Rancho Cucamonga given the intersection is partially located with their jurisdiction. Modify existing traffic signal as necessary and install all necessary striping, pavement markings and signs per the City of Ontario/Rancho Cucamonga Standard Design Guidelines and/or CA MUTCD. It is noted that the northeast and southeast quadrants of the intersection is currently undeveloped.

- No. 28 – Archibald Avenue at Inland Empire Boulevard: Widen and restripe the southbound approach and departure to provide an additional through-lane. Since the northwest corner of the intersection is currently developed, the implementation of this improvement would require reducing existing landscaping and reconstruction of the sidewalk with widening along the west side. These improvements will require additional right-of-way. Modify existing traffic signal and install all necessary striping, pavement markings and signs per the City of Ontario Standard Design Guidelines and/or CA MUTCD.
- No. 30 – Haven Avenue at Inland Empire Boulevard: Modify the existing traffic signal to install pedestrian push buttons along with median modifications on all four legs of the intersection to provide for a 6 foot pedestrian refuge area per Caltrans requirements, the City of Ontario Standard Design Guidelines and/or CA MUTCD.
- No. 32 – Vineyard Avenue at I-10 EB Ramps: Widen and restripe the northbound approach to provide an exclusive right-turn lane. Modify the existing traffic signal as necessary and install all necessary striping, pavement markings and signs per Caltrans requirements, the City of Ontario Standard Design Guidelines and/or CA MUTCD. The implementation of this improvement will require coordination and approval by Caltrans and will require additional right-of-way. Please note this recommended improvement would be temporary given the proposed I-10/Vineyard Avenue Interchange Improvement project would eliminate these improvements once construction is completed.

11.1.5 *Year 2035 Recommended Improvements*

The following improvements listed below have been identified to mitigate projected adverse service levels for Year 2035 Cumulative Plus Project PA-1, PA-2, PA-3 and PA-4 traffic conditions at the twelve (12) impacted intersections. Per City requirements and CMP guidelines, the Project can be expected to pay a fair-share of the construction costs to implement these mitigation measures.

- No. 2 – Archibald Avenue at Arrow Route: Widen and restripe the northbound, eastbound and westbound approaches to provide exclusive right-turn lanes. Modify the existing traffic signal as necessary and install all necessary striping, pavement markings and signs per Caltrans requirements, the City of Rancho Cucamonga Standard Design Guidelines and/or CA MUTCD. This improvement will require coordination and approval of the City of Rancho Cucamonga. This improvement will require widening along the west curb, south curb and north curb and modification of the existing sidewalks to accommodate the recommended right-turn lanes. This improvement will require additional right-of-way.
- No. 3 – Baker Avenue at 8th Street: Install traffic signal and all necessary pavement markings and signs per the City of Rancho Cucamonga Standard Design Guidelines and/or CA MUTCD. This improvement will require coordination and approval of the City of Rancho Cucamonga.

- No. 9 – Hellman Avenue at 6th Street: Install traffic signal and all necessary pavement markings and signs per the City of Rancho Cucamonga Standard Design Guidelines and/or CA MUTCD. This improvement will require coordination and approval of the City of Rancho Cucamonga.
- No. 12 – Haven Avenue at 6th Street: Widen and restripe the northbound approach to provide an exclusive right-turn lane. This improvement will require additional right-of-way. Modify existing traffic signal accordingly and install all necessary striping, pavement markings and signs per the City of Rancho Cucamonga Standard Design Guidelines and/or CA MUTCD. This improvement will require coordination and approval of the City of Rancho Cucamonga. It is noted that the southeast quadrant of the intersection is currently undeveloped.
- No. 20 – Vineyard Avenue at 4th Street: Widen and restripe the southbound approach and departure to provide an additional through-lane. These improvements will require additional right-of-way along Vineyard Avenue north of 4th Street. Modify existing traffic signal as necessary and install all necessary striping, pavement markings and signs per the City of Ontario Standard Design Guidelines and/or CA MUTCD.
- No. 23 – Archibald Avenue at 4th Street: Widen and restripe the northbound approach to provide a 2nd left-turn lane and an additional through-lane for both the approach and departure. These improvements will require additional right-of-way. In addition, restripe the southbound approach to provide proper alignment. This improvement will require coordination and approval of the City of Rancho Cucamonga given the intersection is partially located with their jurisdiction. Modify existing traffic signal as necessary, and install all necessary striping, pavement markings and signs per the City of Ontario/Rancho Cucamonga Standard Design Guidelines and/or CA MUTCD. It is noted that the southeast quadrant of the intersection is currently undeveloped.
- No. 25 – Haven Avenue at 4th Street: Widen and restripe the northbound and southbound approach and departure to provide an additional through-lane. Widen and restripe the eastbound approach to provide an exclusive right-turn lane. These improvements will require additional right-of-way. This improvement will require coordination and approval of the City of Rancho Cucamonga given the intersection is partially located with their jurisdiction. Modify existing traffic signal as necessary and install all necessary striping, pavement markings and signs per the City of Ontario/Rancho Cucamonga Standard Design Guidelines and/or CA MUTCD. It is noted that the northeast and southeast quadrants of the intersection is currently undeveloped.
- No. 28 – Archibald Avenue at Inland Empire Boulevard: Widen and restripe the northbound approach to include a 3rd left-turn lane. Widen and restripe the southbound approach and departure to provide an additional through-lane. Since the northwest corner of the intersection is currently developed, the implementation of this improvement would require reducing existing landscaping and reconstruction of the sidewalk with widening along the west side. These improvements will require additional right-of-way. Modify existing traffic signal as necessary and install all necessary striping, pavement markings and signs per the City of Ontario Standard Design Guidelines and/or CA MUTCD.
- No. 30 – Haven Avenue at Inland Empire Boulevard: Modify the existing traffic signal to install pedestrian push buttons along with median modifications on all four legs of the intersection to provide for a 6 foot pedestrian refuge area per Caltrans requirements, the City of Ontario Standard Design Guidelines and/or CA MUTCD.

Please note that statement of overriding considerations may be needed for all the improvements that require right-of-way that are not under the Project Applicant's control and may need condemnation by the City of Ontario for implementation. ***Figures 11-1A*** through ***11-1G*** present the planned and recommended improvements along with the project specific and cumulative cost for Existing Plus Project, Year 2017 Plus Project, Year 2020 Plus Project and Year 2035 Plus Project traffic conditions. A review of these figures as well as the results of the intersection level of service calculations summarized in *Tables 8-1, 8-2, 8-3, 8-4, 8-5, 8-6* and *8-7*, indicates that the development of the Project is anticipated to create two (2) significant impact in the Existing Plus Project traffic conditions, five (5) significant impacts in the Year 2017 traffic conditions, seven (7) significant impacts in the Year 2020 traffic conditions, and nine (9) significant impacts in the year 2035 traffic conditions. Of the intersections cumulatively impacted by the Project, four (4) intersections are located within or share a border with the City of Rancho Cucamonga and two (2) locations are under the jurisdiction of Caltrans:

<u>Rancho Cucamonga jurisdiction:</u>

2. Archibald Avenue at Arrow Route (CMP intersection)
9. Hellman Avenue at 6th Street
12. Haven Avenue at 6th Street
23. Archibald Avenue at 4th Street (CMP intersection)

<u>Caltrans jurisdiction:</u>

14. I-10 EB Ramps at 4th Street (CMP intersection)
32. Vineyard Avenue at I-10 EB Ramps (CMP intersection)

Per City requirements and CMP guidelines, the Project may be expected to pay a fair-share/local fee to cover the Project's fair share of the full construction costs needed to implement the recommended mitigation measures summarized in *Figures 11-1A through 11-1G*. The cost of recommended improvements summarized in these figures to meet City of Ontario, City of Rancho Cucamonga and/or Caltrans level of service requirements have been estimated using cost guidelines contained in *Appendix G of the San Bernardino County CMP, 2009 Update.* Unit costs for improvement measures identified in this report are presented in ***Table 11-1***. Please note that all costs summarized in *Table 11-1* represent a rough order of magnitude for construction only and do not include acquisition of right-of way.

TABLE 11-1

ORDER OF MAGNITUDE INTERSECTION IMPROVEMENT UNIT COSTS[91]

Intersection Improvement	Unit Cost
Signalization of Intersection (with roadwork)	$250,000.00
Construct Through-Lane[92]	$130,000.00
Ramp Improvements	$350,000.00
Signal Modification	$75,000.00
Construct Left-Turn Lane	$50,000.00
Construct Right-Turn Lane	$50,000.00
Median Modification and Striping	$30,000.00
Restripe Lanes	$25,000.00

[91] Source: *Appendix G of the San Bernardino County CMP, 2009 Update*. Unit costs represent a rough order of magnitude for construction only and do not include acquisition of right-of way.
[92] The cost associated with the construction of a through lane assumes 600 feet before and after the intersection.

The City of Ontario has established a local Development Impact Fee (DIF) program for the purposes of funding infrastructure improvements, to include roadway and intersection improvements necessary to accommodate City growth as identified in the City's General Plan Circulation Element. These improvements are typically associated with arterial and collector streets but may also be associated with local streets. After City traffic impact fees are collected, they are placed in a separate interest account, per the requirements of the Government Code sections 66000 et seq. The timing to use the transportation funds is determined by the fee program. The timing is established through the 5-year Capital Improvement Program. This program is also overseen by the City's Public Works Department. Periodic traffic counts, review of traffic accidents, and review of traffic trends throughout the City are also performed by City staff. The City uses this data to determine the timing for the improvements listed on the list of facilities. Improvements are identified within each of the 5 years and reviewed periodically to determine if improvements should be shifted into another year based on the traffic counts, accidents, and trends. This ensures that needed improvements are constructed prior to that time at which the LOS is forecast to fall below the performance levels established by the City. In this way, payment of fees at significantly impacted intersections qualifies as mitigation for said improvements if these improvements are constructed before the LOS falls below the City's performance standards. The City's capital improvement program establishes a timeframe to fund the improvement as well as design improvements and for the City to hire a contractor to build the improvements.

The City has an established, proven track record with respect to implementing its transportation fee programs. Under these programs, as a result of its continual monitoring of the local circulation system, the City ensures that requisite facilities are constructed prior to when the LOS would otherwise fall below the City's established performance criteria.

Figures 11-1A through 11-1G identify the incremental intersection and roadway improvements needed by the relevant study years to maintain/achieve, where possible, acceptable service levels based on the LOS standards defined in this report. The Project's proportionate share responsibility for the cost of local mitigation improvements exclusive of right-of-way costs is based on the relation between Project traffic to new traffic in the year the improvement is required. For example, the Project's fair-share percentage in the year 2035 would be calculated according to the following equation.

$$\left[\frac{(\text{Project Traffic})}{(2035 + \text{Project Traffic}) - (2014\,\text{Traffic})} \times 100\right]$$

This equation has been used by the City of Ontario, the County of San Bernardino and is utilized by Caltrans and other agencies throughout the state. It provides for a reasonably conservative estimate of the cost of local mitigation since it takes only future traffic into consideration and does not account for other transportation fees or sources of income.

The improvements listed in *Figures 11-1A through 11-1H* are comprised of lane additions, installation of signals and signal modifications. Lane additions are shown graphically as the number

of lanes required and the direction of travel. Depending upon the width of existing pavement and right-of-way, these improvements may involve only striping modifications or they may involve construction of additional pavement width with commensurate sidewalk, landscaping, utilities and traffic signal modifications. ***Table 11-2*** provides order of magnitude cost estimates, exclusive of right-of-way acquisition, for these improvements.

TABLE 11-2
RECOMMENDED IMPROVEMENTS AND PRELIMINARY COSTS[93]

Key Intersections	Jurisdiction	Improvement Description	Unit Improvement Cost	Improvements by Scenario				
				Existing Plus Project PA-1 and PA-2 (Interim)	Existing Plus Project PA-1, PA-2, PA-3 and PA-4	Year 2017	Year 2020	Year 2035
2. Archibald Avenue at Arrow Route	Rancho Cucamonga	▪ Construct an exclusive NB right-turn lane.	$50,000.00	--	--	X	X	X
		▪ Construct an exclusive EB right-turn lane.	$50,000.00	--	--	--	--	X
		▪ Construct an exclusive WB right-turn lane.	$50,000.00	--	--	--	--	X
		▪ Modify existing traffic signal.	$75,000.00	--	--	X	X	X
			Total:	$0.00	$0.00	$125,000.00	$0.00	$175,000.00
3. Baker Avenue at 8th Street	Rancho Cucamonga/Ontario	▪ Install Traffic Signal	$250,000.00	--	--	--	--	X
			Total:	$0.00	$0.00	$0.00	$0.00	$250,000.00
9. Hellman Avenue at 6th Street	Rancho Cucamonga	▪ Install Traffic Signal	$250,000.00	--	--	--	--	X
			Total:	$0.00	$0.00	$0.00	$0.00	$250,000.00
12. Haven Avenue at 6th Street	Rancho Cucamonga	▪ Construct exclusive NB right-turn lane.	$50,000.00	--	--	--	--	X
		▪ Modify existing traffic signal.	$75,000.00	--	--	--	--	X
			Total:	$0.00	$0.00	$0.00	$0.00	$125,000.00
14. I-10 EB Ramps at 4th Street	Ontario/Caltrans	▪ Construct an additional WB through-lane.	$130,000.00	X	X	X	X	--
		▪ Restripe accordingly	$25,000.00	X	X	X	X	--
		▪ Modify existing traffic signal.	$75,000.00	X	X	X	X	--
			Total:	$230,000.00	$0.00	$0.00	$0.00	$0.00
20. Vineyard Avenue at 4th Street	Ontario	▪ Construct an additional SB through-lane.	$130,000.00	--	--	--	--	X
		▪ Modify existing traffic signal.	$75,000.00	--	--	--	--	X
			Total:	$0.00	$0.00	$0.00	$0.00	$205,000.00
23. Archibald Avenue at 4th Street	Rancho Cucamonga/Ontario	▪ Construct a 2nd exclusive NB left-turn lane.	$50,000.00	--	--	--	X	X
		▪ Construct an additional NB through-lane.	$130,000.00	--	--	--	X	X
		▪ Modify existing traffic signal.	$75,000.00	--	--	--	X	X
			Total:	$0.00	$0.00	$0.00	$255,000.00	$0.00

Note:

- X = Denotes that the improvement carries over from the previous scenario and is assumed to be already implemented, and therefore is not considered in the cost.

[93] The improvement costs have been estimated using cost guidelines contained in *Appendix G of the San Bernardino County CMP, 2003 Update* as well as our general knowledge based on extensive working with contractors and vendor on outside projects. Costs represent a rough order of magnitude for construction only and do not include acquisition of right-of way.

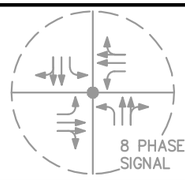
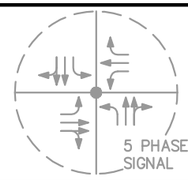
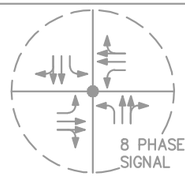
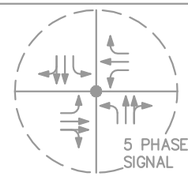
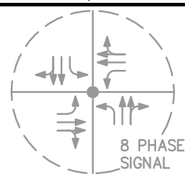
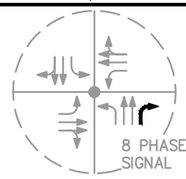
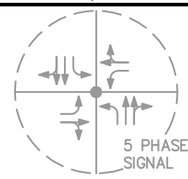
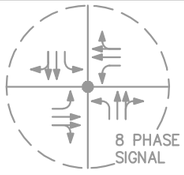
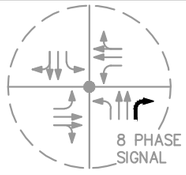
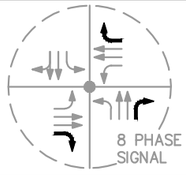
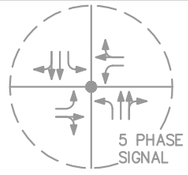
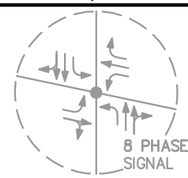
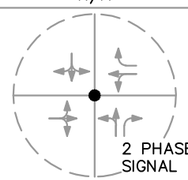
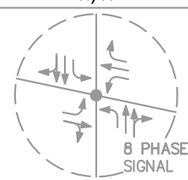
TABLE 11-2 (CONTINUED)
RECOMMENDED IMPROVEMENTS AND PRELIMINARY COSTS[94]

Key Intersections	Jurisdiction	Improvement Description	Unit Improvement Cost	Improvements by Scenario				
				Existing Plus Project PA-1 and PA-2 (Interim)	Existing Plus Project PA-1, PA-2, PA-3 and PA-4	Year 2017	Year 2020	Year 2035
25. Haven Avenue at 4th Street	Rancho Cucamonga/Ontario	▪ Construct an additional NB through-lane.	$130,000.00	--	--	X	X	X
		▪ Construct an additional SB through-lane.	$130,000.00	--	--	--	X	X
		▪ Construct an exclusive EB right-turn lane.	$50,000.00	--	--	X	X	X
		▪ Modify existing traffic signal.	$75,000.00	--	--	X	X	X
			Total:	$0.00	$0.00	$255,000.00	$205,000.00	$0.00
28. Archibald Avenue at Inland Empire Boulevard	Ontario	▪ Construct 3rd NB left-turn lane.	$50,000.00	--	--	--	--	X
		▪ Construct an additional SB through-lane.	$130,000.00	--	--	--	X	X
		▪ Modify existing traffic signal	$75,000.00	--	--	--	X	X
			Total:	$0.00	$0.00	$0.00	$205,000.00	$125,000.00
30. Haven Avenue at Inland Empire Boulevard	Ontario	▪ Modify existing traffic signal to install median pedestrian push buttons.	$75,000.00	X	X	X	X	X
		▪ Modify median to provide 6' refuge and provide minor restriping.	$30,000.00	X	X	X	X	X
			Total:	$105,000.00	$0.00	$0.00	$0.00	$0.00
32. Vineyard Avenue at I-10 EB Ramps	Ontario/Caltrans	▪ Construct an exclusive NB right-turn lane.	$50,000.00	--	--	--	X	--
		▪ Modify existing traffic signal.	$75,000.00	--	--	--	X	--
			Total:	$0.00	$0.00	$0.00	$125,000.00	$0.00
TOTAL COSTS OF IMPROVEMENTS:				**$335,000.00**	**$0.00**	**$380,000.00**	**$790,000.00**	**$1,130,000.00**

Note:

- X = Denotes that the improvement carries over from the previous scenario and is assumed to be already implemented, and therefore is not considered in the cost.

[94] The improvement costs have been estimated using cost guidelines contained in *Appendix G of the San Bernardino County CMP, 2003 Update* as well as our general knowledge based on extensive working with contractors and vendor on outside projects. Costs represent a rough order of magnitude for construction only and do not include acquisition of right-of way.

INTERSECTION	EXISTING	EXISTING PLUS PROJECT	NEAR TERM PLUS PROJECT	LONG TERM PLUS PROJECT	INTERSECTION	EXISTING	EXISTING PLUS PROJECT	NEAR TERM PLUS PROJECT	LONG TERM PLUS PROJECT
① VINEYARD AVE @ ARROW ROUTE (PA-1 & PA-2)		NO CHANGE	NO CHANGE	N/A	④ VINEYARD AVE @ 8TH ST (PA-1 & PA-2)		NO CHANGE	NO CHANGE	N/A
COST	N/A	N/A	N/A	N/A	COST	N/A	N/A	N/A	N/A
① VINEYARD AVE @ ARROW ROUTE (PA-1, PA-2, PA-3 & PA-4)		NO CHANGE	NO CHANGE	NO CHANGE	④ VINEYARD AVE @ 8TH ST (PA-1, PA-2, PA-3 & PA-4)		NO CHANGE	NO CHANGE	NO CHANGE
COST	N/A	N/A	N/A	N/A	COST	N/A	N/A	N/A	N/A
② ARCHIBLAD AVE @ ARROW ROUTE (PA-1 & PA-2)		NO CHANGE		N/A	⑤ ARCHIBLAD AVE @ 8TH ST (PA-1 & PA-2)		NO CHANGE	NO CHANGE	N/A
COST	N/A	N/A	$0/$125,000	N/A	COST	N/A	N/A	N/A	N/A
② ARCHIBLAD AVE @ ARROW ROUTE (PA-1, PA-2, PA-3 & PA-4)		NO CHANGE			⑤ ARCHIBLAD AVE @ 8TH ST (PA-1, PA-2, PA-3 & PA-4)		NO CHANGE	NO CHANGE	NO CHANGE
COST	N/A	N/A	$0/$0	$0/$175,000	COST	N/A	N/A	N/A	N/A
③ BAKER AVE @ 8TH ST (PA-1 & PA-2)		NO CHANGE	NO CHANGE	N/A	⑥ GROVE AVE @ 6TH ST (PA-1 & PA-2)		NO CHANGE	NO CHANGE	N/A
COST	N/A	N/A	N/A	N/A	COST	N/A	N/A	N/A	N/A
③ BAKER AVE @ 8TH ST (PA-1, PA-2, PA-3 & PA-4)		NO CHANGE	NO CHANGE		⑥ GROVE AVE @ 6TH ST (PA-1, PA-2, PA-3 & PA-4)		NO CHANGE	NO CHANGE	NO CHANGE
COST	N/A	N/A	N/A	$0/$250,000	COST	N/A	N/A	N/A	N/A

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N NO SCALE

KEY

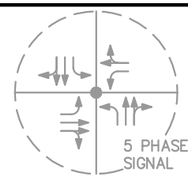
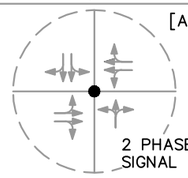
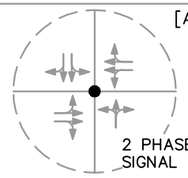
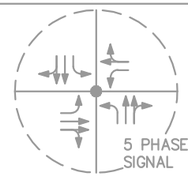
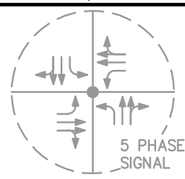
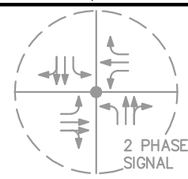
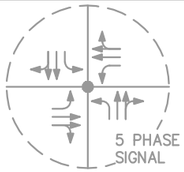
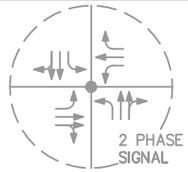
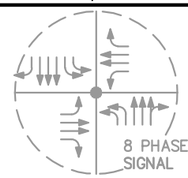
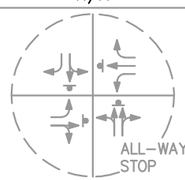
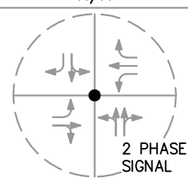
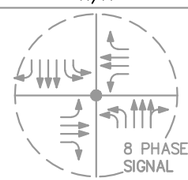
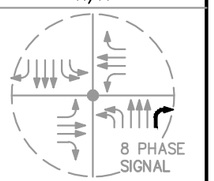
= EXISTING APPROACH LANE ASSIGNMENT
= PROJECT SPECIFIC IMPROVEMENTS
= CUMULATIVE IMPROVEMENTS
= EXISTING TRAFFIC SIGNAL
= PROJECT SPECIFIC TRAFFIC SIGNAL
= CUMULATIVE RECOMMENDED TRAFFIC SIGNAL

OL = OVERLAP
F = FREE RIGHT
COST = PROJECT SPECIFIC/CUMULATIVE
(NOTE: COST DOES NOT INCLUDE ACQUISITION OF RIGHT-OF-WAY)

FIGURE 11-1A

PLANNED AND RECOMMENDED IMPROVEMENTS (INTERSECTIONS 1-6)

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO

INTERSECTION	EXISTING	EXISTING PLUS PROJECT	NEAR TERM PLUS PROJECT	LONG TERM PLUS PROJECT	INTERSECTION	EXISTING	EXISTING PLUS PROJECT	NEAR TERM PLUS PROJECT	LONG TERM PLUS PROJECT
⑦ BAKER AVE @ 6TH ST (PA-1 & PA-2)		NO CHANGE	NO CHANGE	N/A	⑩ ARCHIBALD AVE @ 6TH ST (PA-1 & PA-2)		NO CHANGE	NO CHANGE	N/A
COST	N/A	N/A	N/A	N/A	COST	N/A	N/A	N/A	N/A
⑦ BAKER AVE @ 6TH ST (PA-1, PA-2, PA-3 & PA-4)		NO CHANGE			⑩ ARCHIBALD AVE @ 6TH ST (PA-1, PA-2, PA-3 & PA-4)		NO CHANGE	NO CHANGE	NO CHANGE
COST	N/A	N/A	N/A	N/A	COST	N/A	N/A	N/A	N/A
⑧ VINEYARD AVE @ 6TH ST (PA-1 & PA-2)		NO CHANGE	NO CHANGE	N/A	⑪ HERMOSA AVE @ 6TH ST (PA-1 & PA-2)		NO CHANGE	NO CHANGE	N/A
COST	N/A	N/A	N/A	N/A	COST	N/A	N/A	N/A	N/A
⑧ VINEYARD AVE @ 6TH ST (PA-1, PA-2, PA-3 & PA-4)		NO CHANGE	NO CHANGE	NO CHANGE	⑪ HERMOSA AVE @ 6TH ST (PA-1, PA-2, PA-3 & PA-4)		NO CHANGE	NO CHANGE	NO CHANGE
COST	N/A	N/A	N/A	N/A	COST	N/A	N/A	N/A	N/A
⑨ HELLMAN AVE @ 6TH ST (PA-1 & PA-2)		NO CHANGE	NO CHANGE	N/A	⑫ HAVEN AVE @ 6TH ST (PA-1 & PA-2)		NO CHANGE	NO CHANGE	N/A
COST	N/A	N/A	N/A	N/A	COST	N/A	N/A	N/A	N/A
⑨ HELLMAN AVE @ 6TH ST (PA-1, PA-2, PA-3 & PA-4)		NO CHANGE	NO CHANGE		⑫ HAVEN AVE @ 6TH ST (PA-1, PA-2, PA-3 & PA-4)		NO CHANGE	NO CHANGE	
COST	N/A	N/A	N/A	$0/$250,000	COST	N/A	N/A	N/A	$0/$125,000

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N NO SCALE

KEY

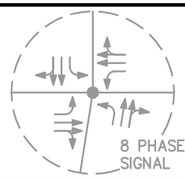
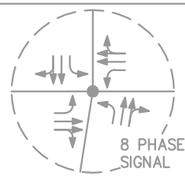
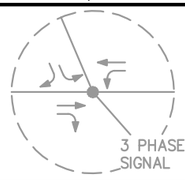
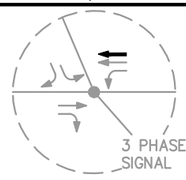
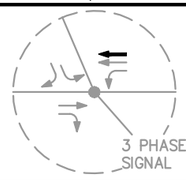
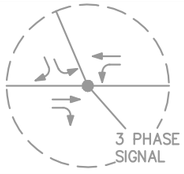
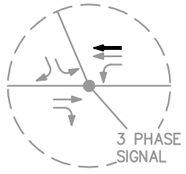
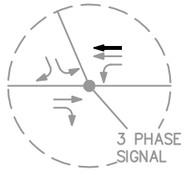
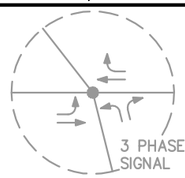
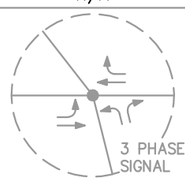
= EXISTING APPROACH LANE ASSIGNMENT
= PROJECT SPECIFIC IMPROVEMENTS
= CUMULATIVE IMPROVEMENTS
= EXISTING TRAFFIC SIGNAL
= PROJECT SPECIFIC TRAFFIC SIGNAL
= CUMULATIVE RECOMMENDED TRAFFIC SIGNAL
OL = OVERLAP

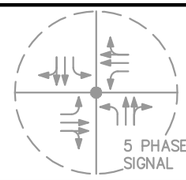
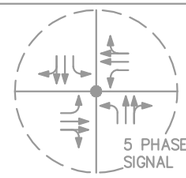
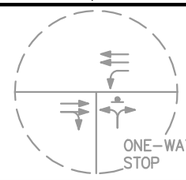
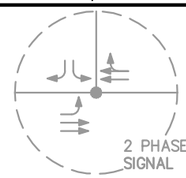
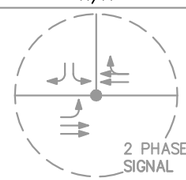
F = FREE RIGHT
COST = PROJECT SPECIFIC/CUMULATIVE (NOTE: COST DOES NOT INCLUDE ACQUISITION OF RIGHT-OF-WAY)
[A] = CITY OF ONTARIO WILL BE SIGNALIZING BAKER AVENUE AT 6TH STREET BY YEAR 2020

FIGURE 11-1B

PLANNED AND RECOMMENDED IMPROVEMENTS (INTERSECTIONS 7-12)

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO

INTERSECTION	EXISTING	EXISTING PLUS PROJECT	NEAR TERM PLUS PROJECT	LONG TERM PLUS PROJECT
⑬ GROVE AVE @ 4TH ST (PA-1 & PA-2)		NO CHANGE	NO CHANGE	N/A
COST	N/A	N/A	N/A	N/A
⑬ GROVE AVE @ 4TH ST (PA-1, PA-2, PA-3 & PA-4)		NO CHANGE	NO CHANGE	NO CHANGE
COST	N/A	N/A	N/A	N/A
⑭ I-10 EB RAMPS @ 4TH ST (PA-1 & PA-2)				N/A
COST	N/A	$0/$230,000	$0/$0	N/A
⑭ I-10 EB RAMPS @ 4TH ST (PA-1, PA-2, PA-3 & PA-4)				TO BE REPLACED BY I-10/GROVE AVENUE INTERCHANGE FOR YEAR 2035
COST	N/A	$0/$0	$0/$0	N/A
⑮ I-10 WB RAMPS @ 4TH ST (PA-1 & PA-2)		NO CHANGE	NO CHANGE	N/A
COST	N/A	N/A	N/A	N/A
⑮ I-10 WB RAMPS @ 4TH ST (PA-1, PA-2, PA-3 & PA-4)		NO CHANGE	NO CHANGE	TO BE REPLACED BY I-10/GROVE AVENUE INTERCHANGE FOR YEAR 2035
COST	N/A	N/A	N/A	N/A

INTERSECTION	EXISTING	EXISTING PLUS PROJECT	NEAR TERM PLUS PROJECT	LONG TERM PLUS PROJECT
⑯ BAKER AVE @ 4TH ST (PA-1 & PA-2)		NO CHANGE	NO CHANGE	N/A
COST	N/A	N/A	N/A	N/A
⑯ BAKER AVE @ 4TH ST (PA-1, PA-2, PA-3 & PA-4)		NO CHANGE	NO CHANGE	NO CHANGE
COST	N/A	N/A	N/A	N/A
⑰ MARIPOSA AVE @ 4TH ST (PA-1 & PA-2)		NO CHANGE	NO CHANGE	N/A
COST	N/A	N/A	N/A	N/A
⑰ MARIPOSA AVE @ 4TH ST (PA-1, PA-2, PA-3 & PA-4)		NO CHANGE	NO CHANGE	NO CHANGE
COST	N/A	N/A	N/A	N/A
⑱ CORONA AVE @ 4TH ST (PA-1 & PA-2)		NO CHANGE	NO CHANGE	N/A
COST	N/A	N/A	N/A	N/A
⑱ CORONA AVE @ 4TH ST (PA-1, PA-2, PA-3 & PA-4)		NO CHANGE	NO CHANGE	NO CHANGE
COST	N/A	N/A	N/A	N/A

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

= EXISTING APPROACH LANE ASSIGNMENT
= PROJECT SPECIFIC IMPROVEMENTS
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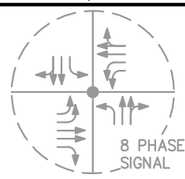
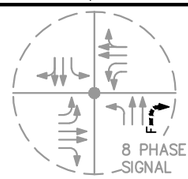
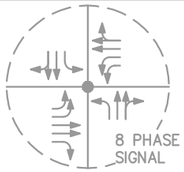
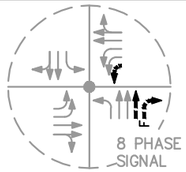
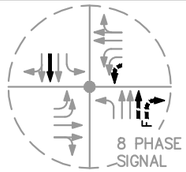
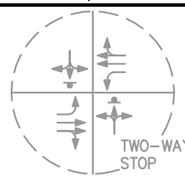
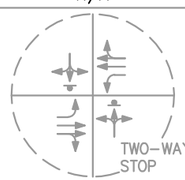
= PROJECT SPECIFIC TRAFFIC SIGNAL
= CUMULATIVE RECOMMENDED TRAFFIC SIGNAL

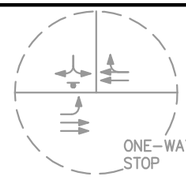
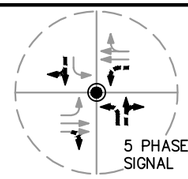
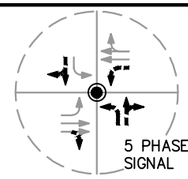
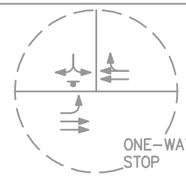
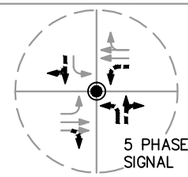
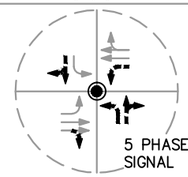
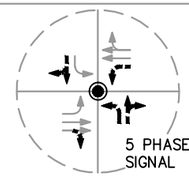
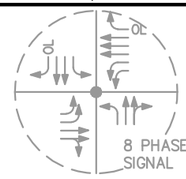
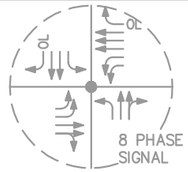
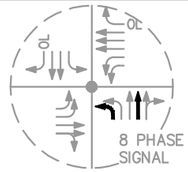
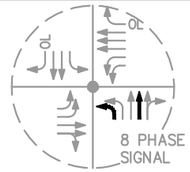
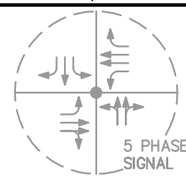
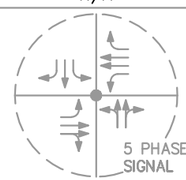
OL = OVERLAP
F = FREE RIGHT
COST = PROJECT SPECIFIC/CUMULATIVE
(NOTE: COST DOES NOT INCLUDE ACQUISITION OF RIGHT-OF-WAY)

FIGURE 11-1C

PLANNED AND RECOMMENDED IMPROVEMENTS (INTERSECTIONS 13-18)

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO

INTERSECTION	EXISTING	EXISTING PLUS PROJECT	NEAR TERM PLUS PROJECT	LONG TERM PLUS PROJECT
⑲ ORANGE AVE @ 4TH ST (PA-1 & PA-2)		NO CHANGE	NO CHANGE	N/A
COST	N/A	N/A	N/A	N/A
⑲ ORANGE AVE @ 4TH ST (PA-1, PA-2, PA-3 & PA-4)		NO CHANGE	NO CHANGE	NO CHANGE
COST	N/A	N/A	N/A	N/A
⑳ VINEYARD AVE @ 4TH ST (PA-1 & PA-2)		NO CHANGE		N/A
COST	N/A	N/A	$125,000/$0	N/A
⑳ VINEYARD AVE @ 4TH ST (PA-1, PA-2, PA-3 & PA-4)		NO CHANGE		
COST	N/A	N/A	$255,000/$0	$0/$205,000
㉑ N. DEL RIO PL @ 4TH ST (PA-1 & PA-2)		NO CHANGE	NO CHANGE	N/A
COST	N/A	N/A	N/A	N/A
㉑ N. DEL RIO PL @ 4TH ST (PA-1, PA-2, PA-3 & PA-4)		NO CHANGE	NO CHANGE	NO CHANGE
COST	N/A	N/A	N/A	N/A

INTERSECTION	EXISTING	EXISTING PLUS PROJECT	NEAR TERM PLUS PROJECT	LONG TERM PLUS PROJECT
㉒ HELLMAN AVE @ 4TH ST (PA-1 & PA-2)				N/A
COST	N/A	$250,000/$0	$0/$0	N/A
㉒ HELLMAN AVE @ 4TH ST (PA-1, PA-2, PA-3 & PA-4)				
COST	N/A	$0/$0	$0/$0	$0/$0
㉓ ARCHIBALD AVE @ 4TH ST (PA-1 & PA-2)		NO CHANGE	NO CHANGE	N/A
COST	N/A	N/A	N/A	N/A
㉓ ARCHIBALD AVE @ 4TH ST (PA-1, PA-2, PA-3 & PA-4)		NO CHANGE		
COST	N/A	N/A	$0/$255,000	$0/$0
㉔ TURNER AVE @ 4TH ST (PA-1 & PA-2)		NO CHANGE	NO CHANGE	N/A
COST	N/A	N/A	N/A	N/A
㉔ TURNER AVE @ 4TH ST (PA-1, PA-2, PA-3 & PA-4)		NO CHANGE	NO CHANGE	NO CHANGE
COST	N/A	N/A	N/A	N/A

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

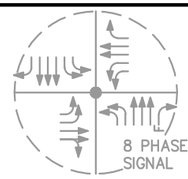
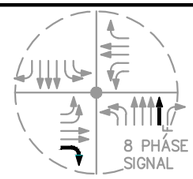
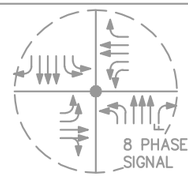
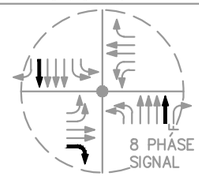
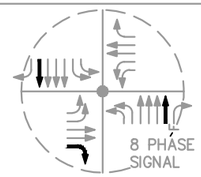
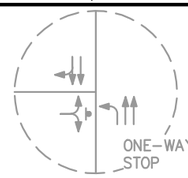
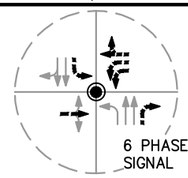
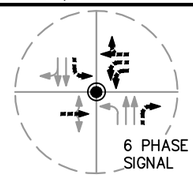
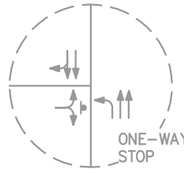
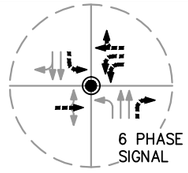
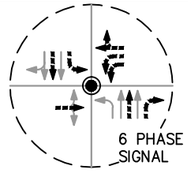
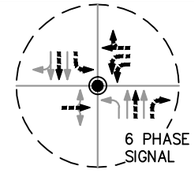
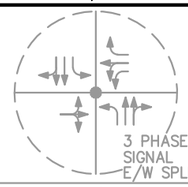
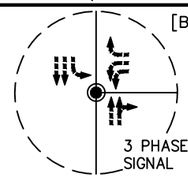
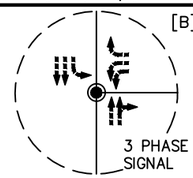
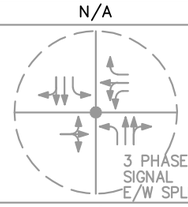
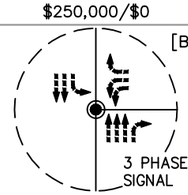
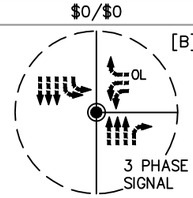
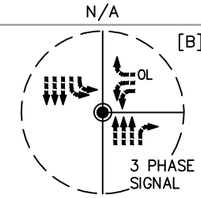
= EXISTING APPROACH LANE ASSIGNMENT
= PROJECT SPECIFIC IMPROVEMENTS
= CUMULATIVE IMPROVEMENTS
= EXISTING TRAFFIC SIGNAL
= PROJECT SPECIFIC TRAFFIC SIGNAL
= CUMULATIVE RECOMMENDED TRAFFIC SIGNAL

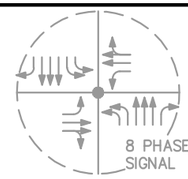
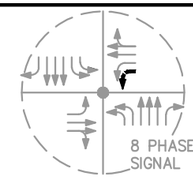
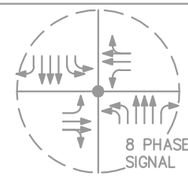
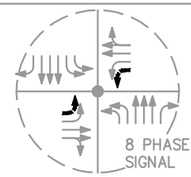
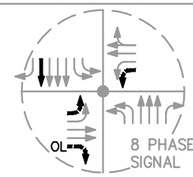
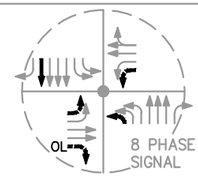
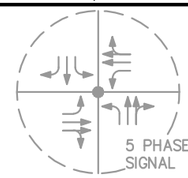
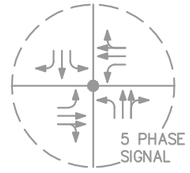
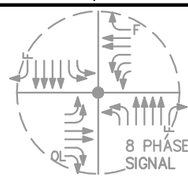
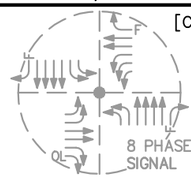
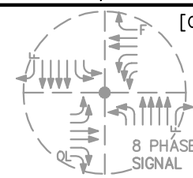
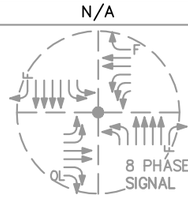
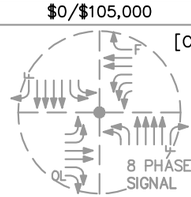
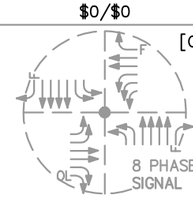
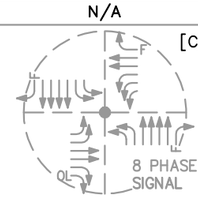
OL = OVERLAP
F = FREE RIGHT
COST = PROJECT SPECIFIC/CUMULATIVE
(NOTE: COST DOES NOT INCLUDE ACQUISITION OF RIGHT-OF-WAY)

FIGURE 11-1D

PLANNED AND RECOMMENDED IMPROVEMENTS (INTERSECTIONS 19-24)

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO

INTERSECTION	EXISTING	EXISTING PLUS PROJECT	NEAR TERM PLUS PROJECT	LONG TERM PLUS PROJECT
(25) HAVEN AVE @ 4TH ST (PA-1 & PA-2)		NO CHANGE		N/A
COST	N/A	N/A	$0/$255,000	N/A
(25) HAVEN AVE @ 4TH ST (PA-1, PA-2, PA-3 & PA-4)		NO CHANGE		
COST	N/A	N/A	$0/$205,000	$0/$0
(26) VINEYARD AVE @ JAY ST (PA-1 & PA-2)				N/A
COST	N/A	$250,000/$0	$0/$0	N/A
(26) VINEYARD AVE @ JAY ST (PA-1, PA-2, PA-3 & PA-4)				
COST	N/A	$0/$0	$335,000/$0	$0/$0
(27) VINEYARD AVE @ INLAND EMPIRE BLVD (PA-1 & PA-2)		[B] 	[B] 	N/A
COST	N/A	$250,000/$0	$0/$0	N/A
(27) VINEYARD AVE @ INLAND EMPIRE BLVD (PA-1, PA-2, PA-3 & PA-4)		[B] 	[B] 	[B] 
COST	N/A	$255,000/$0	$255,000/$0	$0/$0

INTERSECTION	EXISTING	EXISTING PLUS PROJECT	NEAR TERM PLUS PROJECT	LONG TERM PLUS PROJECT
(28) ARCHIBALD AVE @ INLAND EMPIRE BLVD (PA-1 & PA-2)		NO CHANGE		N/A
COST	N/A	N/A	$125,000/$0	N/A
(28) ARCHIBALD AVE @ INLAND EMPIRE BLVD (PA-1, PA-2, PA-3 & PA-4)				
COST	N/A	$125,000/$0	$125,000/$205,000	$0/$125,000
(29) TURNER AVE @ INLAND EMPIRE BLVD (PA-1 & PA-2)		NO CHANGE	NO CHANGE	N/A
COST	N/A	N/A	N/A	N/A
(29) TURNER AVE @ INLAND EMPIRE BLVD (PA-1, PA-2, PA-3 & PA-4)		NO CHANGE	NO CHANGE	NO CHANGE
COST	N/A	N/A	N/A	N/A
(30) HAVEN AVE @ INLAND EMPIRE BLVD (PA-1 & PA-2)		[C] 	[C] 	N/A
COST	N/A	$0/$105,000	$0/$0	N/A
(30) HAVEN AVE @ INLAND EMPIRE BLVD (PA-1, PA-2, PA-3 & PA-4)		[C] 	[C] 	[C] 
COST	N/A	$0/$0	$0/$0	$0/$0

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N NO SCALE

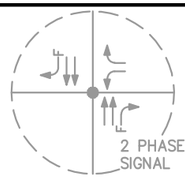
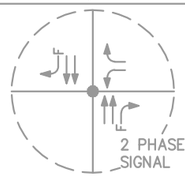
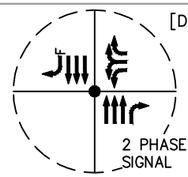
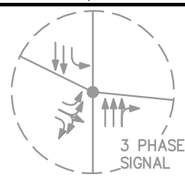
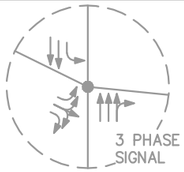
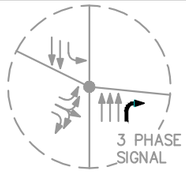
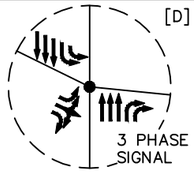
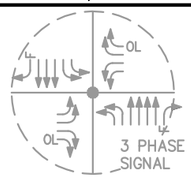
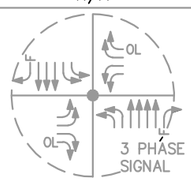
KEY

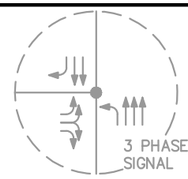
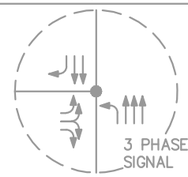
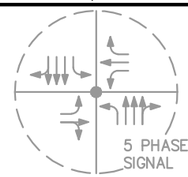
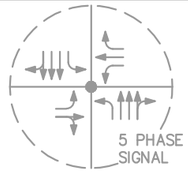
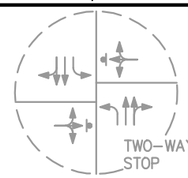
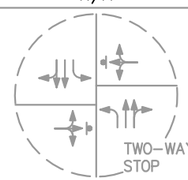
- = EXISTING APPROACH LANE ASSIGNMENT
- = PROJECT SPECIFIC IMPROVEMENTS
- = CUMULATIVE IMPROVEMENTS
- = EXISTING TRAFFIC SIGNAL
- = PROJECT SPECIFIC TRAFFIC SIGNAL
- = CUMULATIVE RECOMMENDED TRAFFIC SIGNAL
- OL = OVERLAP
- F = FREE RIGHT
- COST = PROJECT SPECIFIC/CUMULATIVE (NOTE: COST DOES NOT INCLUDE ACQUISITION OF RIGHT-OF-WAY)
- [B] = PROJECT SPECIFIC IMPROVEMENT RELATED TO IEB REALIGNMENT
- [C] = CUMULATIVE IMPROVEMENT REQUIRES THE INSTALLATION OF MEDIAN PED PUSH BUTTON

FIGURE 11-1E

PLANNED AND RECOMMENDED IMPROVEMENTS (INTERSECTIONS 25-30)

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO

INTERSECTION	EXISTING	EXISTING PLUS PROJECT	NEAR TERM PLUS PROJECT	LONG TERM PLUS PROJECT
(31) VINEYARD AVE @ I-10 WB RAMPS (PA-1 & PA-2)		NO CHANGE	NO CHANGE	N/A
COST	N/A	N/A	N/A	N/A
(31) VINEYARD AVE @ I-10 WB RAMPS (PA-1, PA-2, PA-3 & PA-4)		NO CHANGE	NO CHANGE	[D] 
COST	N/A	N/A	N/A	N/A
(32) VINEYARD AVE @ I-10 EB RAMPS (PA-1 & PA-2)		NO CHANGE	NO CHANGE	N/A
COST	N/A	N/A	N/A	N/A
(32) VINEYARD AVE @ I-10 EB RAMPS (PA-1, PA-2, PA-3 & PA-4)		NO CHANGE		[D] 
COST	N/A	N/A	$0/$125,000	N/A
(33) ARCHIBALD AVE @ I-10 FWY SINGLE POINT INTERCHANGE (PA-1 & PA-2)		NO CHANGE	NO CHANGE	N/A
COST	N/A	N/A	N/A	N/A
(33) ARCHIBALD AVE @ I-10 FWY SINGLE POINT INTERCHANGE (PA-1, PA-2, PA-3 & PA-4)		NO CHANGE	NO CHANGE	NO CHANGE
COST	N/A	N/A	N/A	N/A

INTERSECTION	EXISTING	EXISTING PLUS PROJECT	NEAR TERM PLUS PROJECT	LONG TERM PLUS PROJECT
(34) VINEYARD AVE @ G ST (PA-1 & PA-2)		NO CHANGE	NO CHANGE	N/A
COST	N/A	N/A	N/A	N/A
(34) VINYARD AVE @ G ST (PA-1, PA-2, PA-3 & PA-4)		NO CHANGE	NO CHANGE	NO CHANGE
COST	N/A	N/A	N/A	N/A
(35) VINEYARD AVE @ D ST (PA-1 & PA-2)		NO CHANGE	NO CHANGE	N/A
COST	N/A	N/A	N/A	N/A
(35) VINEYARD AVE @ D ST (PA-1, PA-2, PA-3 & PA-4)		NO CHANGE	NO CHANGE	NO CHANGE
COST	N/A	N/A	N/A	N/A
(36) VINEYARD AVE @ 7TH ST (PA-1 & PA-2)		NO CHANGE	NO CHANGE	N/A
COST	N/A	N/A	N/A	N/A
(36) VINEYARD AVE @ 7TH ST (PA-1, PA-2, PA-3 & PA-4)		NO CHANGE	NO CHANGE	NO CHANGE
COST	N/A	N/A	N/A	N/A

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N NO SCALE

KEY

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= PROJECT SPECIFIC TRAFFIC SIGNAL
= CUMULATIVE RECOMMENDED TRAFFIC SIGNAL
OL = OVERLAP

F = FREE RIGHT
COST = PROJECT SPECIFIC/CUMULATIVE (NOTE: COST DOES NOT INCLUDE ACQUISITION OF RIGHT-OF-WAY)
[D] = YEAR 2035 IMPROVEMENTS WILL BE IMPLEMENTED BY CALTRANS AS PART OF THE I-10/VINEYARD INTERCHANGE PROJECT

FIGURE 11-1F

PLANNED AND RECOMMENDED IMPROVEMENTS (INTERSECTIONS 31-36)

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO

INTERSECTION	EXISTING	EXISTING PLUS PROJECT	NEAR TERM PLUS PROJECT	LONG TERM PLUS PROJECT	INTERSECTION	EXISTING	EXISTING PLUS PROJECT	NEAR TERM PLUS PROJECT	LONG TERM PLUS PROJECT
(37) VINEYARD AVE @ PLAZA SERENA (PA-1 & PA-2)	N/A	[E] ONE-WAY STOP	NO CHANGE	N/A	[F] (40) PROJECT DWY "C" @ INLAND EMPIRE BLVD (PA-1 & PA-2)	DOES NOT EXIST	DOES NOT EXIST	DOES NOT EXIST	N/A
COST	N/A	N/A	N/A	N/A	COST	N/A	N/A	N/A	N/A
(37) VINEYARD AVE @ PLAZA SERENA (PA-1, PA-2, PA-3 & PA-4)	N/A	[E] ONE-WAY STOP	[E] ONE-WAY STOP	[E] ONE-WAY STOP	[F] (40) PROJECT DWY "C" @ INLAND EMPIRE BLVD (PA-1, PA-2, PA-3 & PA-4)	DOES NOT EXIST	5 PHASE SIGNAL	5 PHASE SIGNAL	5 PHASE SIGNAL
COST	N/A	N/A	$130,000/$0	$130,000/$0	COST	N/A	$250,000/$0	$0/$0	$0/$0
[F] (38) PROJECT DWY "A" @ INLAND EMPIRE BLVD (PA-1 & PA-2)	DOES NOT EXIST	DOES NOT EXIST	DOES NOT EXIST	N/A	[F] (41) PROJECT DWY "D" @ INLAND EMPIRE BLVD (PA-1 & PA-2)	DOES NOT EXIST	DOES NOT EXIST	DOES NOT EXIST	N/A
COST	N/A	N/A	N/A	N/A	COST	N/A	N/A	N/A	N/A
[F] (38) PROJECT DWY "A" @ INLAND EMPIRE BLVD (PA-1, PA-2, PA-3 & PA-4)	DOES NOT EXIST	2 PHASE SIGNAL	2 PHASE SIGNAL	2 PHASE SIGNAL	[F] (41) PROJECT DWY "D" @ INLAND EMPIRE BLVD (PA-1, PA-2, PA-3 & PA-4)	DOES NOT EXIST	5 PHASE SIGNAL	5 PHASE SIGNAL	5 PHASE SIGNAL
COST	N/A	$250,000/$0	$0/$0	$0/$0	COST	N/A	$250,000/$0	$0/$0	$0/$0
(39) DEL RIO PLACE @ INLAND EMPIRE BLVD (PA-1 & PA-2)	DOES NOT EXIST	8 PHASE SIGNAL	8 PHASE SIGNAL	N/A	[F] (42) PROJECT DWY "E" @ 4TH ST (PA-1 & PA-2)	DOES NOT EXIST	ONE-WAY STOP	ONE-WAY STOP	N/A
COST	N/A	$250,000/$0	$0/$0	N/A	COST	N/A	N/A	N/A	N/A
(39) DEL RIO PLACE @ INLAND EMPIRE BLVD (PA-1, PA-2, PA-3 & PA-4)	DOES NOT EXIST	8 PHASE SIGNAL	8 PHASE SIGNAL	8 PHASE SIGNAL	[F] (42) PROJECT DWY "E" @ 4TH ST (PA-1, PA-2, PA-3 & PA-4)	DOES NOT EXIST	ONE-WAY STOP	ONE-WAY STOP	ONE-WAY STOP
COST	N/A	$0/$0	$0/$0	$0/$0	COST	N/A	N/A	N/A	N/A

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N NO SCALE

KEY

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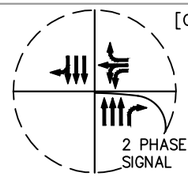
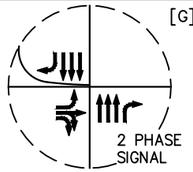
= PROJECT SPECIFIC IMPROVEMENTS
= CUMULATIVE IMPROVEMENTS
= EXISTING TRAFFIC SIGNAL
= PROJECT SPECIFIC TRAFFIC SIGNAL
= CUMULATIVE RECOMMENDED TRAFFIC SIGNAL
OL = OVERLAP

F = FREE RIGHT
COST = PROJECT SPECIFIC/CUMULATIVE (NOTE: COST DOES NOT INCLUDE ACQUISITION OF RIGHT-OF-WAY)
[E] = PROJECT SPECIFIC IMPROVEMENTS RELATED TO IEB REALIGNMENT
[F] = FINAL LANE CONFIGURATIONS WILL BE DETERMINED AT TIME OF SITE PLAN REVIEW FOR DEVELOPMENTS OF PA-2, PA-3 AND PA-4

FIGURE 11-1G

PLANNED AND RECOMMENDED IMPROVEMENTS (INTERSECTIONS 37-42)

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO

INTERSECTION	EXISTING	EXISTING PLUS PROJECT	NEAR TERM PLUS PROJECT	LONG TERM PLUS PROJECT	INTERSECTION	EXISTING	EXISTING PLUS PROJECT	NEAR TERM PLUS PROJECT	LONG TERM PLUS PROJECT
(43) GROVE AVE @ I-10 WB RAMPS (PA-1 & PA-2)	N/A	N/A	N/A	N/A	--	--	--	--	--
COST	N/A	N/A	N/A	N/A		--	--	--	--
(43) GROVE AVE @ I-10 WB RAMPS (PA-1, PA-2, PA-3 & PA-4)	N/A	N/A	N/A	[G] 	--	--	--	--	--
COST	N/A	N/A	N/A	N/A	--	--	--	--	--
(44) GROVE AVE @ I-10 EB RAMPS (PA-1 & PA-2)	N/A	N/A	N/A	N/A	--	--	--	--	--
COST	N/A	N/A	N/A	N/A	--	--	--	--	--
(44) GROVE AVE @ I-10 EB RAMPS (PA-1, PA-2, PA-3 & PA-4)	N/A	N/A	N/A	[G] 	--	--	--	--	--
COST	N/A	N/A	N/A	N/A	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
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--	--	--	--	--	--	--	--	--	--

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

= EXISTING APPROACH LANE ASSIGNMENT
= PROJECT SPECIFIC IMPROVEMENTS
= CUMULATIVE IMPROVEMENTS
= EXISTING TRAFFIC SIGNAL
= PROJECT SPECIFIC TRAFFIC SIGNAL
= CUMULATIVE RECOMMENDED TRAFFIC SIGNAL
OL = OVERLAP

F = FREE RIGHT
COST = PROJECT SPECIFIC/CUMULATIVE (NOTE: COST DOES NOT INCLUDE ACQUISITION OF RIGHT-OF-WAY)
[G] = THE PARTIAL CLOVER LEAF OPTION FOR THE GROVE INTERCHANGE WAS ALSO ANALYZED

FIGURE 11-1H

PLANNED AND RECOMMENDED IMPROVEMENTS (INTERSECTIONS 43-44)

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO

11.2 City of Ontario Development Impact Fee (DIF) Program

Pursuant to the requirements of the City of Ontario, Development Impact Fees will be required of the Project. The DIF is applied to pay a portion of the costs identified for public facilities, including transportation-related improvements. The current fee schedule as of March 2013 is summarized in ***Table 11-3.*** The Development Impact Fee is based on the size of all new developments, with the cost per unit or cost per square-foot of development determined based on the type of development (i.e. single family, commercial, industrial, etc.).

Review of *Table 11-3* indicates that the City's current DIF rate for residential development ranges from a low of $3,929 per unit for Commercial Lodging Units to a high of $22,945 per unit for Detached Dwellings. For retail/commercial/industrial development, the City's DIF rate ranges from a low of $3.188 per SF for Industrial Uses to a high of $7.185 per SF for Retail/Services Uses.

Hence, as shown in ***Table 11-3A,*** application to the appropriate DIF rates summarized in *Table 11-3* to the proposed Project results in a preliminary estimate of **$26,729,741.00**, of which PA-1 can be expected to pay **$9,586,316.00** (3,007,000 SF x 3.188 per SF) in Development Impact Fees with the remaining **$17,143,425.00** in Development Impact Fees attributable to PA-2, PA-3 and PA-4.

Further review of *Table 11-3A* indicates that a portion of these fees will be allocated to the construction costs associated with roadway and intersection improvements, bridges, interchange improvements, inclusive of the I-10/Vineyard Avenue Interchange Reconstruction/Expansion Project and I-10 at Grove/Fourth Street Interchange Project, and other select off-site facilities within the Project vicinity that have local and regional significance. As shown in the last column of *Table 11-3A*, approximately **$9,296,598.00** of the total potential DIF of **$26,729,741.00** would be allocated to DIF eligible improvements, of which **$4,492,458.00** would be the responsibility of PA-1 (3,007,000 SF x 1.494 SF per SF). The Project's payment of the required DIF fees will mitigate its impacts to those facilities included in the City's DIF program, including those identified in the following section. The precise fee will be collected prior to the issuance of building permits by the City of Ontario.

TABLE 11-3
CITY OF ONTARIO DEVELOPMENT IMPACT FEE RATES

Type of Development	City Fee / Rate ($ per unit or SF) [96]	Circulation (Streets, Signal and Bridges) System Rate ($ per unit or SF) [97]
Residential		
▪ Detached Dwellings	$22,945 per unit	$2,413 per unit
▪ Attached Dwellings	$16,353 per unit	$1,611 per unit
▪ High Density Dwellings	$11,952 per unit	$997 per unit
▪ Mobile Home Dwellings	$15,875 per unit	$1,256 per unit
▪ Commercial Lodging Units	$3,929 per unit	$1,273 per unit
Retail/Commercial/Industrial		
▪ Retail/Services Uses	$7.185 per SF	$4.876 per SF
▪ Office Uses	$5.700 per SF	$2.787 per SF
▪ Business Park Uses	$5.960 per SF	$2.899 per SF
▪ Industrial Uses	$3.188 per SF	$1.494 per SF
▪ Institutional Uses	$5.905 per SF	$3.184 per SF

[96] Source: City of Ontario, *Table A – Old Model Colony Development Impact Fees, as of March 1, 2013* http://www.ci.ontario.ca.us/index.aspx?page=1338.

[97] Source: *City of Ontario Development Impact Fee Calculation and Nexus* Report *dated September 24, 2012.*

TABLE 11-3A

CITY OF ONTARIO PROJECT DEVELOPMENT IMPACT FEE CALCULATION

Planning Area / Type of Development	Building Square-Footage (SF) / Rooms / Dwelling Units (DU)	City Fee/ Rate ($ /unit or SF)	Overall Total DIF Calculation	Circulation (Streets, Signal and Bridges) System Rate ($ / unit or SF)	Circulation (Streets, Signal and Bridges) System DIF Calculation
Planning Area 1					
▪ Industrial	3,007,000 SF	$3.188 / SF	$9,586,316.00	$1.494 per SF	$4,492,458.00
Planning Area 2					
▪ Commercial Lodging/Units	200 rooms	$3,929 /unit	$785,800.00	$1,273 per unit	$254,600.00
▪ Office Uses	180,000 SF	$5.700 / SF	$1,026,000.00	$2.787 per SF	$501,660.00
▪ Retail/Services Uses	355,000 SF	$7.185 / SF	$2,550,675.00	$4.876 per SF	$1,730,980.00
Total			$4,362,475.00		$2,487,240.00
Planning Area 3					
▪ Commercial Lodging/Units	400 rooms	$3,929 / unit	$1,571,600.00	$1,273 per unit	$509,200.00
▪ Office Uses	100,000 SF	$5.700 / SF	$570,000.00	$2.787 per SF	$278,700.00
▪ Retail/Services Uses	150,000 SF	$7.185 / SF	$1,077,750.00	$4.876 per SF	$731,400.00
Total			$3,219,350.00		$1,519,300.00
Planning Area 4					
▪ High Density Dwellings	800 DU	$11,952 / unit	$9,561,600.00	$997 per unit	$797,600.00
			$26,729,741.00		**$9,296,598.00**

11.3 Measure "I" Funds

In 2004, the voters of San Bernardino County approved the 30-year extension of Measure "I", a one-half of one percent sales tax on retail transactions, through the year 2040, for transportation projects including, but not limited to, infrastructure improvements, commuter rail, public transit, and other identified improvements. The Measure "I" extension requires that a regional traffic impact fee be created to ensure development is paying its fair share. A regional Nexus study was prepared by SANBAG and concluded that each jurisdiction should include a regional fee component in their local programs in order to meet the Measure "I" requirement. The regional component assigns specific facilities and cost sharing formulas to each jurisdiction and was most recently updated in November 2011. Revenues collected through these programs are used in tandem with Measure "I" funds to deliver projects identified in the Nexus Study.

While Measure "I" is a self-executing sales tax administered by SANBAG, it bears discussion here because the funds raised through Measure "I" have funded in the past and will continue to fund new transportation facilities in San Bernardino County.

11.4 Project-Related Fair-Share Contribution and Development Impact Fees (DIF)

11.4.1 *Project-Related Fair-Share/Development Impact Fee Contribution*

The transportation impacts associated with the development of the Project were determined based on the Existing Plus Project, Year 2017, Year 2020 and Year 2035 analyses. As summarized in *Tables 8-1, 8-2, 8-3, 8-4, 8-5, 8-6* and *8-7*, the development of the Project is anticipated to create four (4) significant impact in the Existing Plus Project traffic conditions, five (5) significant impacts in the Year 2017 traffic conditions, seven (7) significant impacts in the Year 2020 traffic conditions, and ten (10) significant impacts in the year 2035 traffic conditions. As such, the Project is required to pay its fair share/DIF amount of the improvement costs of the impacted intersections to mitigate the Project's traffic impacts.

Tables 11-4, 11-5 and ***11-6*** presents the AM and PM peak hour percentages of traffic impact at the study intersections impacted by the PA-1, PA-2, PA-3 & PA-4 components of the proposed Project for Year 2017, Year 2020 and Year 2035, respectively. As presented in these tables, the first column (1) presents a total of all intersection peak hour movements for existing traffic conditions. The second column (2) presents ambient growth/cumulative traffic volumes. The third column (3) presents PA-1 only traffic volumes, and the fourth column (4) presents PA-2, PA-3 & PA-4 only traffic volumes. The fifth column (5) presents Year 2035 Plus Project PA-1, PA-2, PA-3 & PA-4 traffic volumes. The sixth column (6) represents the percentage increase attributed to the ambient growth/cumulative traffic. The seventh column (7) represents the percentage increase related to PA-1, and the eighth column (8) represents the percentage increase related to PA-2, PA-3 & PA-4. The ninth column (9) shows the estimated improvement costs. The tenth column (10) presents the ambient growth Fair-Share Contribution. The eleventh column presents PA-1 Fair-Share Contribution, and the twelfth column (12) presents PA-2 and or PA-2, PA-3 & PA-4 Fair-Share Contribution. ***Table 11-7*** summarizes the combined totals presented in *Tables 11-4* through *11-6*.

Review of *Tables 11-4, 11-5, 11-6* and *11-7* shows that the Project's total fair-share contribution consist of an Ontario DIF fair-share component, an Ontario Non-DIF fair-share component and a Rancho Cucamonga fair-share component. The total of all three tables results in total fair-share contribution of **$1,026,215.00** to mitigate project impacts.

Please note that of above-referenced total, **$268,044.50** is associated with DIF-related improvements, inclusive of **$73,612.50** that is associated with the improvements at the Vineyard Avenue/I-10 Interchange, which is under Caltrans jurisdiction, while **$623,505.50** represents the Project's fair-share contribution for Non-DIF related recommended improvements within the City of Ontario, inclusive of **$230,000.00** that is associated with the intersection of I-10 EB Ramps at 4th Street, which is also Caltrans jurisdiction. Given $268,044.50 of the Project's fair-share contribution is associated with DIF-related improvements, this amount could be credited against the fees allocated to the construction costs associated with roadway and intersection improvements, bridges, interchange improvements as identified in *Table 11-3A.*

The Project's fair-share contribution of the recommended improvements at the intersections located within or share a border with the City of Rancho Cucamonga totals **$134,665.00**.

TABLE 11-4
YEAR 2017 PLUS PROJECT PA-1 AND PA-2 (INTERIM) PROJECT FAIR SHARE CONTRIBUTION

Key	Intersection	Jurisdiction	Ontario DIF	Time Period	(1) Existing Traffic	(2) Ambient Growth and Related Traffic Growth	(3) PA-1 Traffic	(4) PA-2 Traffic	(5) 2017 Plus PA-1 and PA-2 Traffic	(6) Ambient Growth Percent Increase	(7) PA-1 Percent Increase	(8) PA-2 Percent Increase	(9) Estimated Improvement Cost	(10) Ambient Growth Fair Share Contribution	(11) PA-1 Fair Share Contribution	(12) PA-2 Fair-Share Contribution
2.	Archibald Avenue at Arrow Route	Rancho Cucamonga	--	AM	--	--	--	--	--	77.96%	19.04%	3.00%	$125,000.00	$97,450.00	$23,800.00	$3,750.00
				PM	**4,013**	**389**	**95**	**15**	**4,512**							
14	I-10 EB ramps at 4th Street	Ontario/Caltrans	--	AM	--	--	--	--	--	0.00%	100.00%	0.00%	$230,000.00	$0.00	$230,000.00	$0.00
				PM	**2,453**	**312**	**35**	**8**	**2,808**							
25.	Haven Avenue at 4th Street	Ontario	--	AM	--	--	--	--	--	95.98%	3.33%	0.69%	$255,000.00	$244,749.00	$8,491.50	$1,759.50
				PM	**6,646**	**835**	**29**	**6**	**7,516**							
30.	Haven Avenue at Inland Empire Boulevard	Ontario	--	AM	--	--	--	--	--	0.00%	100.00%	0.00%	$105,000.00	$0.00	$105,000.00	$0.00
				PM	**7,067**	**664**	**26**	**8**	**7,765**							
2017 PROJECT FAIR-SHARE CONTRIBUTION													**$715,000.00**	**$342,199.00**	**$367,291.50**	**$5,509.50**
2017 PROJECT FAIR-SHARE CONTRIBUTION (ONTARIO DIF)													**$0.00**	**$0.00**	**$0.00**	**$0.00**
2017 PROJECT FAIR-SHARE CONTRIBUTION (ONTARIO NON-DIF/OTHER)													**$590,000.00**	**$244,749.00**	**$343,491.50**	**$1,759.50**
2017 PROJECT FAIR-SHARE CONTRIBUTION (RANCHO CUCAMONGA)													**$125,000.00**	**$97,450.00**	**$23,800.00**	**$3,750.00**

Notes:

- Net Ambient Growth Percent Increase (6) = [Column (2)] / [Column (5) – Column (1)]
- Net PA-1 Percent Increase (7) = [Column (3)] / [Column (5) – Column (1)]
- Net PA-2, PA-3, PA-4 Percent Increase (8) = [Column (4)] / [Column (5) – Column (1)]
- Dashes represent peak hours that were not impacted. Therefore, no calculations were done for these time periods.
- **Bold** values distinguish the higher fair share percentage between two peak hours.

TABLE 11-5

YEAR 2020 PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4 PROJECT FAIR SHARE CONTRIBUTION

Key Intersection		Jurisdiction	Ontario DIF	Time Period	(1) Existing Traffic	(2) Ambient Growth and Related Traffic Growth	(3) PA-1 Traffic	(4) PA-2, PA-3 & PA-4 Traffic	(5) 2020 Plus PA-1, PA-2, PA-3 & PA-4 Traffic	(6) Ambient Growth Percent Increase	(7) PA-1 Percent Increase	(8) PA-2, PA-3 & PA-4 Percent Increase	(9) Estimated Improvement Cost	(10) Ambient Growth Fair Share Contribution	(11) PA-1 Fair Share Contribution	(12) PA-2, PA-3 & PA-4 Fair-Share Contribution
23.	Archibald Avenue at 4th Street	Rancho Cucamonga/ Ontario	ST052 & ST044	AM	--	--	--	--	--	54.88%	10.34%	34.78%	$255,000.00	$139,944.00	$26,367.00	$88,689.00
				PM	**3,903**	**961**	**181**	**609**	**5,654**							
25.	Haven Avenue at 4th Street	Ontario	--	AM	--	--	--	--	--	92.77%	2.19%	5.04%	$205,000.00	$190,178.50	$4,489.50	$10,332.00
				PM	**6,646**	**1,231**	**29**	**67**	**7,973**							
28.	Archibald Avenue at Inland Empire Boulevard	Ontario	--	AM	3,469	804	392	815	5,480	36.24%	13.86%	49.90%	$205,000.00	$74,292.00	$28,413.00	$102,295.00
				PM	**4,006**	**1,017**	**389**	**1,400**	**6,812**							
32.	Vineyard Avenue at I-10 Freeway Interchange	Ontario/Caltrans	ST116	AM	2,755	505	435	250	3,945	41.11%	26.25%	32.64%	$125,000.00	$51,387.50	$32,812.50	$40,800.00
				PM	**3,068**	**476**	**304**	**378**	**4,226**							
2020 PROJECT FAIR-SHARE CONTRIBUTION													**$790,000.00**	**$455,802.00**	**$92,082.00**	**$242,116.00**
2020 PROJECT FAIR-SHARE CONTRIBUTION (ONTARIO DIF)													**$380,000.00**	**$191,331.50**	**$59,179.50**	**$129,489.00**
2020 PROJECT FAIR-SHARE CONTRIBUTION (ONTARIO NON-DIF/OTHER)													**$410,000.00**	**$264,470.50**	**$32,902.50**	**$112,627.00**
2020 PROJECT FAIR-SHARE CONTRIBUTION (RANCHO CUCAMONGA)													**$0.00**	**$0.00**	**$0.00**	**$0.00**

Notes:

- Net Ambient Growth Percent Increase (6) = [Column (2)] / [Column (5) – Column (1)]
- Net PA-1 Percent Increase (7) = [Column (3)] / [Column (5) – Column (1)]
- Net PA-2, PA-3, PA-4 Percent Increase (8) = [Column (4)] / [Column (5) – Column (1)]
- Dashes represent peak hours that were not impacted. Therefore, no calculations were done for these time periods.
- **Bold** values distinguish the higher fair share percentage between two peak hours.

TABLE 11-6
YEAR 2035 PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4 PROJECT FAIR SHARE CONTRIBUTION

Key Intersection		Jurisdiction	Ontario DIF	Time Period	(1) Existing Traffic	(2) Ambient Growth	(3) PA-1 Traffic	(4) PA-2, PA-3 & PA-4 Traffic	(5) 2035 Plus PA-1, PA-2, PA-3 & PA-4 Traffic	(6) Ambient Growth Percent Increase	(7) PA-1 Percent Increase	(8) PA-2, PA-3 & PA-4 Percent Increase	(9) Estimated Improvement Cost	(10) Ambient Growth Fair Share Contribution	(11) PA-1 Fair Share Contribution	(12) PA-2, PA-3 & PA-4 Fair-Share Contribution
2.	Archibald Avenue at Arrow Route	Rancho Cucamonga	--	AM	--	--	--	--	--	81.07%	7.05%	11.88%	$175,000.00	$141,872.50	$12,337.50	$20,790.00
				PM	**4,013**	**1,092**	**95**	**160**	**5,360**							
3.	Baker Avenue at 8th Street	Ontario	--	AM	1,012	323	40	56	1,431	72.28%	8.65%	19.07%	$250,000.00	$180,700.00	$21,625.00	$47,675.00
				PM	**967**	**326**	**39**	**86**	**1,418**							
9.	Hellman Avenue at 6th Street	Rancho Cucamonga	--	AM	--	--	--	--	--	73.75%	5.94%	20.31%	$250,000.00	$184,375.00	$14,850.00	$50,775.00
				PM	**1,051**	**385**	**31**	**106**	**1,573**							
12.	Haven Avenue at 6th Street	Rancho Cucamonga	--	AM	--	--	--	--	--	93.31%	1.87%	4.82%	$125,000.00	$116,637.50	$2,337.50	$6,025.00
				PM	**5,065**	**1,297**	**26**	**67**	**6,455**							
20.	Vineyard Avenue at 4th Street	Ontario	ST052	AM	3,443	1,576	194	437	5,650	61.28%	8.62%	30.10%	$205,000.00	$125,624.00	$17,671.00	$61,705.00
				PM	**4,144**	**1,450**	**204**	**712**	**6,510**							
28.	Archibald Avenue at Inland Empire Boulevard	Ontario	--	AM	--	--	--	--	--	49.26%	11.03%	39.71%	$125,000.00	$61,575.00	$13,787.50	$49,637.50
				PM	**4,006**	**1,737**	**389**	**1,400**	**7,532**							
2035 PROJECT FAIR-SHARE CONTRIBUTION													**$1,130,000.00**	**$810,784.00**	**$82,608.50**	**$236,607.50**
2035 PROJECT FAIR-SHARE CONTRIBUTION (ONTARIO DIF)													**$205,000.00**	**$125,624.00**	**$17,671.00**	**$61,705.00**
2035 PROJECT FAIR-SHARE CONTRIBUTION (ONTARIO NON-DIF/OTHER)													**$375,000.00**	**$242,275.00**	**$35,412.50**	**$97,312.50**
2035 PROJECT FAIR-SHARE CONTRIBUTION (RANCHO CUCAMONGA)													**$550,000.00**	**$442,885.00**	**$29,525.00**	**$77,590.00**

Notes:

- Net Ambient Growth Percent Increase (6) = [Column (2)] / [Column (5) – Column (1)]
- Net PA-1 Percent Increase (7) = [Column (3)] / [Column (5) – Column (1)]
- Net PA-2, PA-3, PA-4 Percent Increase (8) = [Column (4)] / [Column (5) – Column (1)]
- Dashes represent peak hours that were not impacted. Therefore, no calculations were done for these time periods.
- **Bold** values distinguish the higher fair share percentage between two peak hours.

TABLE 11-7
SUMMARY OF PROJECT FAIR SHARE CONTRIBUTIONS

	(1) Year 2017 Plus Project PA-1 and PA-2 (Interim)		(2) Year 2020 Plus Project PA-1, PA-2, PA-3 and PA-4		(3) Year 2035 General Plan Buildout Plus Project PA-1, PA-2, PA-3 and PA-4		(4) Total		
	PA-1 Contribution	PA-2 Contribution	PA-1 Contribution	PA-2, PA-3 and PA-4 Contribution	PA-1 Contribution	PA-2, PA-3 and PA-4 Contribution	PA-1	PA-2, PA-3 and PA-4	PA-1, PA-2, PA-3 and PA-4
A. TOTAL PROJECT FAIR-SHARE CONTRIBUTION	$367,291.50	$5,509.50	$92,082.00	$242,116.00	$82,608.50	$236,607.50	$541,982.00	$484,233.00[98]	**$1,026,215.00**
B. ONTARIO DIF PROJECT FAIR-SHARE CONTRIBUTION	$0.00	$0.00	$59,179.50	$129,489.00	$17,671.00	$61,705.00	$76,850.50	$191,194.00[99]	**$268,044.50**
C. ONTARIO NON-DIF/OTHER PROJECT FAIR-SHARE CONTRIBUTION	$343,491.50	$1,759.50	$32,902.50	$112,627.00	$35,412.50	$97,312.50	$411,806.50	$211,699.00[100]	**$623,505.50**
D. RANCHO CUCAMONGA PROJECT FAIR-SHARE CONTRIBUTION	$23,800.00	$3,750.00	$0.00	$0.00	$29,525.00	$77,590.00	$53,325.00	$81,340.00[101]	**$134,665.00**

98 The fair-share total of $484,233.00 consists of $239,552.00 allocated to PA-2, $167,546.00 allocated to PA-3, and $77,135.00 allocated to PA-4.
99 The fair-share total of $191,194.00 consists of $99,761.50 allocated to PA-2, $61,057.00 allocated to PA-3, and $30,375.50 allocated to PA-4.
100 The fair-share total of $211,699.00 consists of $93,158.00 allocated to PA-2, $80,719.00 allocated to PA-3, and $37,822.00 allocated to PA-4.
101 The fair-share total of $81,340.00 consists of $46,632.50 allocated to PA-2, $25,770.00 allocated to PA-3, and $8,937.50 allocated to PA-4.

11.5 Recommended Project Mitigation Measures

Based on the foregoing, the following mitigation measures are recommended:

TT-1 The Project applicant shall participate in the City's development impact fee program by paying **$268,044.50** and in addition pay the Project's fair share amount **$623,505.50** for the improvements within the City of Ontario identified in *Figures 11-1A through 11-1G* and *Table 11-2* or as agreed to by the City and the applicant. These fair-share estimates are a rough order of magnitude only and are subject to change based on future detailed engineering estimates. City shall ensure that the improvements specified in these figures will be constructed pursuant to the fee program at that point in time necessary to avoid identified significant impacts.

Figures 11-1A through 11-1H combined with *Table 11-2* and *Table 11-6* shows the project fair share contribution for all of the affected intersections, including three (3) intersections that are within or share a mutual border with the City of Rancho Cucamonga (see intersections 2, 9, and 12) and two locations (2) that are under the jurisdiction of Caltrans (see intersections 14 and 32). Please note that although intersection 23 is a shared intersection the improvements identified would not result in any widening within Rancho Cucamonga. Therefore, the cost associated with this intersection are included as part of the Ontario fair-share estimate. Please note that statement of overriding considerations may be needed for all the improvements that require right-of-way that is not under the Project Applicant's control and may need condemnation by the City of Ontario for implementation.

Because the City cannot guarantee that the improvements located in the City of Rancho Cucamonga will be implemented, a statement of overriding considerations will be required at the following three (3) intersections.

Rancho Cucumonga jurisdiction:

2. Archibald Avenue at Arrow Route (CMP intersection)
9. Hellman Avenue at 6th Street
12. Haven Avenue at 6th Street

Further yet, since the City cannot guarantee that the improvements located under the jurisdiction of Caltrans will be completed, a statement of overriding considerations will be required for the following two (2) intersections:

Caltrans jurisdiction:

14. I-10 EB Ramps at 4th Street (CMP intersection)
32. Vineyard Avenue at I-10 EB Ramps (CMP intersection)

12.0 FREEWAY PEAK-HOUR VOLUME FORECAST METHODOLOGY

The freeway peak-hour traffic volume forecast were developed through the utilization of the Caltrans traffic counts, and is consistent with the Caltrans Methodology. Using the available base year (Year 2012) segment volumes published on the Caltrans website, directional peak-hour segment volumes were calculated and using K- and D-factors. A K-factor is the percentage of AADT in both directions during the peak hour. A D-factor is the percentage of traffic in the peak direction during the peak hour. These volumes were used to forecast Existing (Year 2014), near-term (Year 2017 and Year 2020) and long-term (Year 2035) traffic volumes. Caltrans volumes exclude HOV lanes, therefore the number of travels lanes utilized only include general purpose lanes.

The freeway segment volumes along the project frontage, between Haven Avenue and Grove Avenue, were balanced when considered with the on- and off-ramp volumes. However, segment volumes farther from the project site were taken directly from the forecasted volumes. Freeway ramp volumes were obtained directly from the corresponding key study intersections analyzed within the project vicinity, with the exception of Holt Avenue, in which the volumes were determined by balancing the volumes along the project frontage.

12.1.1 *Volume Development*

The steps mentioned below detail the methodology utilized to forecast the freeway segment volumes:

Near Term Volume Development

- Obtain base year (Year 2012) freeway traffic volumes provided on Caltrans website. (Volumes that are denoted as "west of" or "north of" a segment used the "Back AADT" Caltrans volumes. Volumes that are denoted as "south of" or "east of" a segment used the "Ahead AADT" Caltrans volumes.)
- Obtain base year (Year 2012) peak-hour direction, K-factors, and D-factors provided on Caltrans website.
- Calculate the directional volumes for base year (Year 2012) using the K- and D-factors.
- Increase Year 2012 volumes to Year 2014 by applying an ambient growth rate of one percent (1%) per year. Please note that 10 years of Caltrans freeway volumes have been reviewed of which only 2003 to 2004 had a growth rate of up to 1%. However, to be conservative a 1% growth rate was utilized.
- Forecast Existing Plus Project volumes by assigning the project traffic volumes to the Existing (Year 2014) volumes.
- Forecast near term (Year 2017 and Year 2020) volumes by applying an ambient growth rate of one percent (1%) per year and manually assigning related Projects traffic volumes.
- Forecast Near-Term Plus Project volumes by assigning project traffic volumes to Near-Term Plus Ambient Growth Plus Related Projects.

Year 2035 Volume Development:

- The post-process methodology presented in Section 6.4 was utilized in developing the freeway growth between Year 2014 and Year 2035 which was based on SBTAM.
- Forecast long term (Year 2035) volumes by applying the modeled growth from Year 2014 to Year 2035 to existing freeway volumes and manually assigning Projects traffic volumes.

Appendix M contains information on Caltrans Methodology, the Caltrans freeway volumes with the K- and D- factors, volume development spreadsheet, and the freeway volumes for Project Only, Existing Plus Project, Near Term Plus Project, and Long Term Plus Project.

12.2 Freeway Mainline Segment Analysis

Consistent with the Caltrans *Guide for the Preparation of Traffic Impact Studies dated December 2002,* an analysis of the freeway mainline segments located on either side of the I-10 Freeway/ Vineyard Avenue Interchange and I-10 Freeway/Archibald Avenue Interchange has been prepared. The freeway segments evaluated include mainline segments where the proposed Project is anticipated to contribute 100 two-way peak hour trips to existing and/or future conditions.

Table 12-1 presents a summary of the Project traffic volumes on key freeway segments on the San Bernardino (I-10) Freeway (Segments 1 through 25), the Orange Freeway (SR-57) Freeway (Segments 26 through 27) and Interstate 15 (I-15) Freeway (Segments 28 through 35). A review of *Table 12-1* indicates that the proposed Project is forecast to contribute 100 two-way peak hour trips on all key freeway mainline study segments, except four locations, Segments 1, 25, 28 and 35. Project added freeway volumes on these four segments total at 50 trips or less. Nevertheless, a freeway mainline segment analysis has also been conducted at these four freeway mainline segments on the I-10 Freeway, I-15 Freeway and/or SR-57 Freeway to provide a conservative assessment of the proposed Projects' potential traffic impacts. ***Figure 12-1*** presents the scope of the freeway analysis. The expansive scope of this freeway analysis is very conservative and goes beyond the analysis that exists or is included in most traffic impact analyses and likely overstates the potential traffic impacts from the proposed Project.

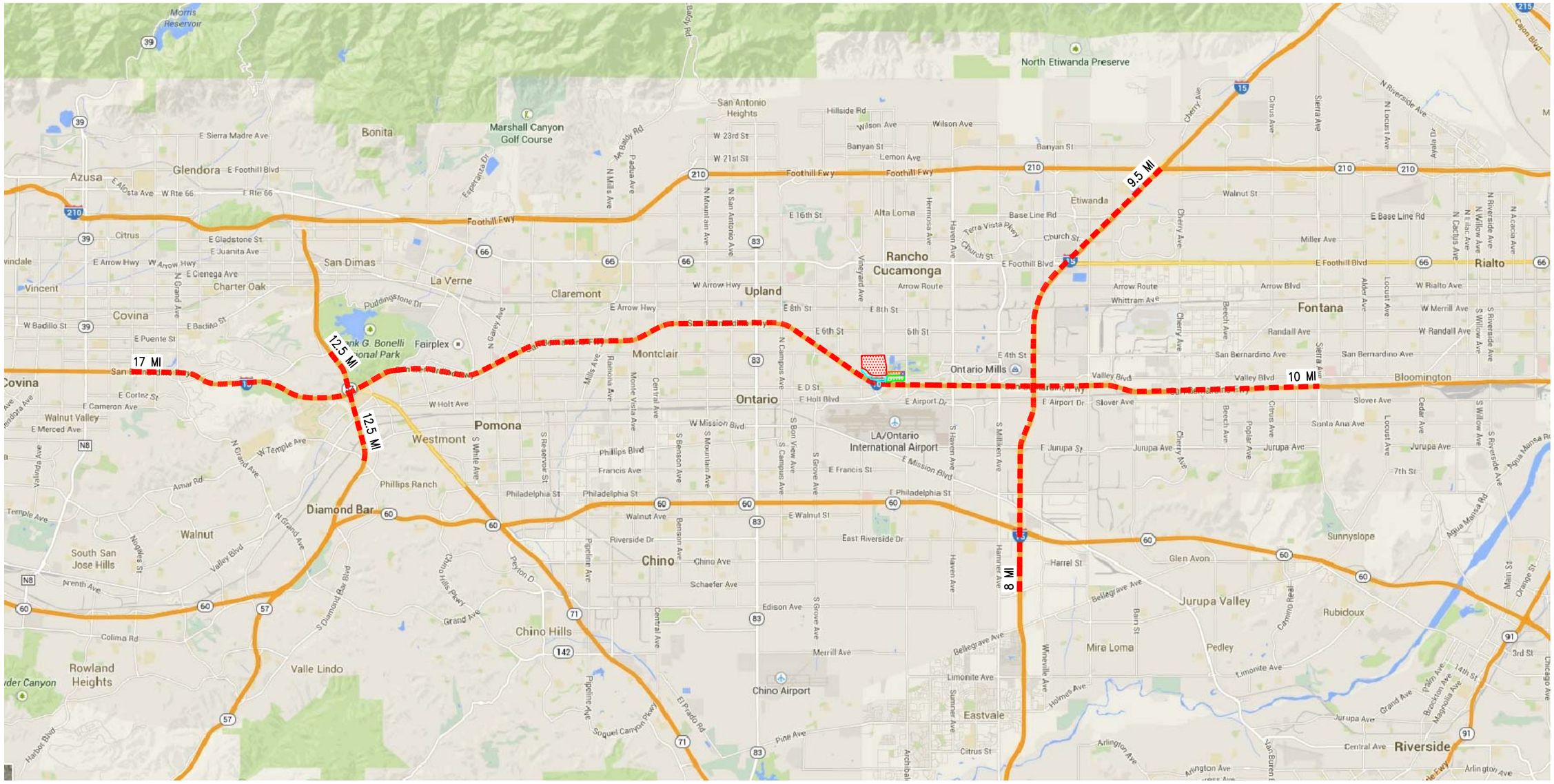
The freeway peak hour traffic forecasts were developed based on the peak period model data for autos and trucks. This incremental growth was added to existing freeway volumes obtained from Caltrans to develop Year 2035 Cumulative traffic volumes. The Project traffic volumes, as assigned, were added to Year 2035 Cumulative traffic volumes to develop Year 2035 Cumulative Plus Project PA-1, PA-2, PA-3 and PA-4 traffic conditions.

The CMP definition of deficiency is based on maintaining a level of service standard of LOS "E" or better, except where an existing LOS "F" condition is identified in the CMP document.

Caltrans District 8 has established that LOS D is the operating standard for all Caltrans facilities. Caltrans has determined that all state owned facilities that operate below LOS D should be identified and improved (to the extent feasible) to an acceptable LOS. However, the *Caltrans Traffic Impact*

Study Guidelines dated December 2002 does state that if an existing state owned facility operates at less than LOS D, the existing service level should be maintained.

The most current San Bernardino County CMP states "*Only project opening day and future scenarios with project require that traffic operational problems be mitigated to provide LOS E or better operation. If the lead agency or an affected adjacent jurisdiction requires mitigation to a higher LOS, this takes precedence over the CMP requirements*." Based on this, LOS D is the minimum required LOS to be maintained on the freeway segments since the I-10, SR-57 and I-15 are under Caltrans' jurisdiction.



KEY

- = FREEWAY SEGMENT
- XX MI = DISTANCE FROM PROJECT SITE
- = PA–1
- = PA–2
- = PA–3
- = PA–4
- = PA–5

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

FIGURE 12–1

LOCATION OF FREEWAY SEGMENTS

MEREDITH INTERNATIONAL CENTRE SPECIFIC PLAN AMENDMENT, ONTARIO

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TABLE 12-1

CMP FREEWAY PROJECT CONTRIBUTION SUMMARY (YEAR 2035 TRAFFIC CONDITIONS)

CMP Freeway Segment		Trip Threshold	AM Peak Hour Project Freeway Volume (two-way)	Threshold Exceeded (Yes/No)	PM Peak Hour Project Freeway Volume (two-way)	Threshold Exceeded (Yes/No)
1.	I-10 Freeway, btwn Azusa Avenue & Citrus Street	100 trips (two-way)	43	No	61	No
2.	I-10 Freeway, btwn Citrus Street & Grand Avenue Interchanges	100 trips (two-way)	70	No	103	Yes
3.	I-10 Freeway, btwn Grand Avenue & Holt Avenue Interchanges	100 trips (two-way)	100	Yes	145	Yes
4.	I-10 Freeway, btwn Holt Avenue & Via Verde Street Interchanges	100 trips (two-way)	100	Yes	145	Yes
5.	I-10 Freeway, btwn Via Verde St & SR-57 Interchanges	100 trips (two-way)	130	Yes	188	Yes
6.	I-10 Freeway, btwn SR-57 & Fairplex Drive Interchanges	100 trips (two-way)	271	Yes	393	Yes
7.	I-10 Freeway, btwn Fairplex & Dudley Street Interchanges	100 trips (two-way)	317	Yes	445	Yes
8.	I-10 Freeway, btwn Dudley Street & White Avenue Interchanges	100 trips (two-way)	317	Yes	445	Yes
9.	I-10 Freeway, White Avenue & Garey Avenue Interchanges	100 trips (two-way)	317	Yes	445	Yes
10.	I-10 Freeway, btwn Garey Avenue & Town Avenue Interchanges	100 trips (two-way)	317	Yes	445	Yes
11.	I-10 Freeway, btwn Towne Avenue & Indian Hill Boulevard Interchanges	100 trips (two-way)	367	Yes	502	Yes
12.	I-10 Freeway, btwn Indian Hill Boulevard & Monte Vista Avenue Interchanges	100 trips (two-way)	419	Yes	557	Yes
13.	I-10 Freeway, btwn Monte Vista Avenue & Central Avenue Interchanges	100 trips (two-way)	467	Yes	612	Yes
14.	I-10 Freeway, btwn Central Avenue & Mountain Avenue Interchanges	100 trips (two-way)	518	Yes	666	Yes
15.	I-10 Freeway, btwn Mountain Avenue & Euclid Avenue Interchanges	100 trips (two-way)	569	Yes	723	Yes
16.	I-10 Freeway, btwn Euclid Avenue & 4th Street Interchanges	100 trips (two-way)	620	Yes	780	Yes

TABLE 12-1 (CONTINUED)

CMP FREEWAY PROJECT CONTRIBUTION SUMMARY (YEAR 2035 TRAFFIC CONDITIONS)

CMP Freeway Segment		Trip Threshold	AM Peak Hour Project Freeway Volume (two-way)	Threshold Exceeded (Yes/No)	PM Peak Hour Project Freeway Volume (two-way)	Threshold Exceeded (Yes/No)
17.	I-10 Freeway, btwn 4th Street & Vineyard Avenue Interchanges	100 trips (two-way)	620	Yes	780	Yes
18.	I-10 Freeway, btwn Vineyard Avenue & Holt Boulevard Interchanges	100 trips (two-way)	381	Yes	493	Yes
19.	I-10 Freeway, btwn Holt Boulevard & Archibald Avenue Interchanges	100 trips (two-way)	381	Yes	493	Yes
20.	I-10 Freeway, btwn Archibald Avenue & Haven Avenue Interchanges	100 trips (two-way)	567	Yes	706	Yes
21.	I-10 Freeway, btwn Haven Avenue & Miliken Avenue Interchanges	100 trips (two-way)	567	Yes	706	Yes
22.	I-10 Freeway, btwn Miliken Avenue & I-15 Interchanges	100 trips (two-way)	517	Yes	649	Yes
23.	I-10 Freeway, btwn I-15 & Etiwanda Avenue Interchanges	100 trips (two-way)	189	Yes	239	Yes
24.	I-10 Freeway, btwn Etiwanda Avenue & Cherry Avenue Interchanges	100 trips (two-way)	135	Yes	183	Yes
25.	I-10 Freeway, btwn Cherry Avenue & Citrus Avenue Interchanges	100 trips (two-way)	94	No	122	Yes
26.	I-10 Freeway, btwn Citrus Avenue & Sierra Avenue Interchanges	100 trips (two-way)	76	No	92	No
27.	SR-57 Freeway, btwn Temple Avenue & I-10 Interchanges	100 trips (two-way)	70	No	103	Yes
28.	SR-57 Freeway, btwn I-10 & Via Verde Interchanges	100 trips (two-way)	70	No	103	Yes
29.	I-15 Freeway, btwn Cantu-Galleano Ranch Road & SR-60 Interchanges	100 trips (two-way)	57	No	74	No
30.	I-15 Freeway, btwn SR-60 & Jurupa Street Interchanges	100 trips (two-way)	127	Yes	159	Yes
31.	I-15 Freeway, btwn Jurupa Street & I-10 Interchanges	100 trips (two-way)	167	Yes	207	Yes
32.	I-15 Freeway, btwn I-10 & 4th Street Interchanges	100 trips (two-way)	161	Yes	204	Yes

TABLE 12-1 (CONTINUED)

CMP FREEWAY PROJECT CONTRIBUTION SUMMARY (YEAR 2035 TRAFFIC CONDITIONS)

CMP Freeway Segment		Trip Threshold	AM Peak Hour Project Freeway Volume (two-way)	Threshold Exceeded (Yes/No)	PM Peak Hour Project Freeway Volume (two-way)	Threshold Exceeded (Yes/No)
33.	I-15 Freeway, btwn 4th Street & Foothill Boulevard Interchanges	100 trips (two-way)	161	Yes	204	Yes
34.	I-15 Freeway, btwn Foothill Boulevard & Baseline Road Interchanges	100 trips (two-way)	115	Yes	152	Yes
35.	I-15 Freeway, btwn Baseline Road & SR-210 Interchanges	100 trips (two-way)	84	No	116	Yes
36.	I-15 Freeway, btwn SR-210 & Wilson Avenue Interchanges	100 trips (two-way)	29	No	42	No

12.3 Basic Freeway Segment Analysis

The traffic volume forecasting methodology for the freeway segments are consistent with Section 6 of this traffic impact analysis. Near term development utilizes the buildup methodology, while long term uses the post processing method. ***Appendix M*** presents Caltrans volumes along with K and D factors utilized throughout this section. As a supplement to the volumes presented in the freeway tables figures are presenting the volumes are also included within *Appendix M*.

12.3.1 *Existing Plus Project PA-1 and PA-2 (Interim) Freeway Segment Analysis*

Table 12-2 summarizes the peak hour Level of Service results at the sixty-eight (68) freeway segments for "Existing Plus Project PA-1 and PA-2 (Interim)" traffic conditions. The first column (1) presents a summary of existing AM and PM peak hour traffic conditions. The second column (2) lists forecast Existing Plus PA-1 and PA-2 (Interim) traffic conditions. The third column (3) indicates whether the traffic associated with the PA-1 and PA-2 (Interim) component of the Project will have an impact based on the LOS standards defined in this report. ***Table 12-3*** summarizes the peak hour Level of Service results at the sixty-eight (68) freeway segments for "Existing Plus Project PA-1, PA-2, PA-3 and PA-4" traffic conditions. The first column (1) presents a summary of existing AM and PM peak hour traffic conditions. The second column (2) lists forecast Existing Plus Project PA-1, PA-2, PA-3 and PA-4 traffic conditions. The third column (3) indicates whether the traffic associated with the PA-1, PA-2, PA-3 and PA-4 component of the Project will have an impact based on the LOS standards defined in this report.

12.3.1.1 *Existing Traffic Conditions*

Review of column (1) of *Table 12-2* and *12-3* indicates that fifty-one (51) of the sixty-eight (68) freeway segments currently operate at an unacceptable level of service during the AM and/or PM peak hours when compared to the LOS standards defined in this report. The remaining seventeen (17) freeway segments operate at acceptable levels of service during the AM and PM peak hours.

12.3.1.2 *Existing Plus Project PA-1and PA-2 (Interim) Traffic Conditions*

Review of column (2) of *Table 12-2* indicates that with the addition of Project traffic, fifty-one (51) of the sixty-eight (68) freeway segments are forecast to operate at an unacceptable levels of service during the AM and/or PM peak hours when compared to the LOS standards defined in this report. Although the addition of Project trips is not anticipated to result in any new deficient service levels, the Project's contribution to the freeway system could be considered cumulatively significant under this traffic impact analysis scenario. The remaining seventeen (17) freeway segments are forecast to operate at acceptable levels of service during the AM and PM peak hours.

12.3.1.3 *Existing Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions*

Review of column (2) of *Table 12-3* indicates that the fifty-two (52) of the sixty-eight (68) freeway segments are forecast to operate at an unacceptable levels of service during the AM and/or PM peak hours when compared to the LOS standards defined in this report.

It should be noted that when compared to existing traffic conditions, the proposed Project will significantly impact one freeway segment, the I-10 Eastbound Freeway segment, between Milliken Avenue and the I-15 Freeway (segment no. 21). This freeway segment is forecast to operate at LOS E under Existing Plus Project traffic conditions, whereas the Project's contribution to the other fifty-one (51) freeway segments can be considered cumulatively significant under this traffic impact analysis scenario.

The remaining sixteen (16) freeway segments are forecast to operate at acceptable levels of service during the AM and PM peak hours.

Appendix M contains the Basic Freeway Segment Analysis Calculation worksheets for all freeway segments for the Existing Plus Project traffic conditions.

TABLE 12-2
YEAR 2014 EXISTING PLUS PROJECT PA-1 AND PA-2 (INTERIM)
PEAK HOUR BASIC FREEWAY SEGMENTS CAPACITY ANALYSIS SUMMARY[102] (CALTRANS FACILITIES ANALYSIS)

Key Basic Freeway Segment		Time Period	Lanes	(1) Existing Traffic Conditions			(2) Existing Plus Project PA-1 and PA-2 (Interim) Traffic Conditions			(3) Impact
				Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Yes/No
1.	I-10 Eastbound *from*	AM	4	1,838	27.3	D	1,844	27.4	D	No
	Citrus Street *to* Grand Avenue	PM		**2,220**	**37.3**	**E**	**2,222**	**37.4**	**E**	**Yes**
2.	I-10 Eastbound *from*	AM	4	1,708	24.8	C	1,716	25.0	C	No
	Grand Avenue *to* Holt Avenue	PM		2,062	32.4	D	2,065	32.5	D	No
3.	I-10 Eastbound *from*	AM	4	1,716	25.0	C	1,725	25.1	C	No
	Holt Avenue *to* Via Verde	PM		2,072	32.7	D	2,076	32.8	D	No
4.	I-10 Eastbound *from*	AM	4	1,699	24.7	C	1,710	24.9	C	No
	Via Verde *to* SR-57	PM		2,051	32.1	D	2,056	32.3	D	No
5.	I-10 Eastbound *from*	AM	4	2,065	32.5	D	2,087	33.1	D	No
	SR-57 *to* Fairplex Drive	PM		**2,493**	--	**F**	**2,503**	--	**F**	**Yes**
6.	I-10 Eastbound *from*	AM	4	2,065	32.5	D	2,094	33.3	D	No
	Fairplex Drive *to* Dudley Street	PM		**2,493**	--	**F**	**2,504**	--	**F**	**Yes**
7.	I-10 Eastbound *from*	AM	4	2,056	32.3	D	2,085	33.1	D	No
	Dudley Street *to* White Avenue	PM		**2,482**	--	**F**	**2,494**	--	**F**	**Yes**
8.	I-10 Eastbound *from*	AM	4	1,969	30.1	D	1,998	30.8	D	No
	White Avenue *to* Garey Avenue	PM		**2,377**	**43.8**	**E**	**2,388**	**44.4**	**E**	**Yes**
9.	I-10 Eastbound *from*	AM	4	2,047	32.0	D	2,076	32.8	D	No
	Garey Avenue *to* Town Avenue	PM		**2,472**	--	**F**	**2,483**	--	**F**	**Yes**
10.	I-10 Eastbound *from*	AM	4	2,030	31.6	D	2,067	32.6	D	No
	Towne Avenue *to* Indian Hill Boulevard	PM		**2,451**	--	**F**	**2,464**	--	**F**	**Yes**
11.	I-10 Eastbound *from*	AM	4	1,509	21.6	C	1,553	22.3	C	No
	Indian Hill Boulevard *to* Monte Vista Avenue	PM		**3,161**	--	**F**	**3,176**	--	**F**	**Yes**
12.	I-10 Eastbound *from*	AM	4	1,496	21.4	C	1,548	22.2	C	No
	Monte Vista Avenue *to* Central Avenue	PM		**3,136**	--	**F**	**3,152**	--	**F**	**Yes**
13.	I-10 Eastbound *from*	AM	4	1,503	21.5	C	1,563	22.5	C	No
	Central Avenue *to* Mountain Avenue	PM		**3,148**	--	**F**	**3,166**	--	**F**	**Yes**
14.	I-10 Eastbound *from*	AM	4	1,509	21.6	C	1,576	22.7	C	No
	Mountain Avenue *to* Euclid Avenue	PM		**3,161**	--	**F**	**3,180**	--	**F**	**Yes**

Notes:

- pc/mi/ln = Passenger cars per mile per lane (density)
- **Bold Volume/Density/LOS values** indicate adverse service levels based on the Caltrans LOS Criteria

[102] *Appendix M* contains the Density/LOS calculation worksheets for all study basic freeway segments.

TABLE 12-2 (CONTINUED)
YEAR 2014 EXISTING PLUS PROJECT PA-1 AND PA-2 (INTERIM)
PEAK HOUR BASIC FREEWAY SEGMENTS CAPACITY ANALYSIS SUMMARY[103] (CALTRANS FACILITIES ANALYSIS)

Key Basic Freeway Segment		Time Period	Lanes	(1) Existing Traffic Conditions			(2) Existing Plus Project PA-1 and PA-2 (Interim) Traffic Conditions			(3) Impact
				Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Yes/No
15.	I-10 Eastbound *from*	AM	4	1,485	21.3	C	1,560	22.4	C	No
	Euclid Avenue *to* 4th Street	PM		**3,133**	--	**F**	**3,154**	--	**F**	**Yes**
16.	I-10 Eastbound *from*	AM	4	1,442	20.6	C	1,517	21.7	C	No
	4th Street *to* Vineyard Avenue	PM		**3,021**	--	**F**	**3,042**	--	**F**	**Yes**
17.	I-10 Eastbound *from*	AM	4	1,503	21.5	C	1,512	21.7	C	No
	Vineyard Avenue *to* Holt Boulevard	PM		**2,999**	--	**F**	**3,037**	--	**F**	**Yes**
18.	I-10 Eastbound *from*	AM	4	1,370	19.6	C	1,378	19.7	C	No
	Holt Boulevard *to* Archibald Avenue	PM		**2,976**	--	**F**	**3,012**	--	**F**	**Yes**
19.	I-10 Eastbound *from*	AM	4	1,515	21.7	C	1,531	22.0	C	No
	Archibald Avenue *to* Haven Avenue	PM		**3,174**	--	**F**	**3,244**	--	**F**	**Yes**
20.	I-10 Eastbound *from*	AM	4	1,509	21.6	C	1,525	21.9	C	No
	Haven Avenue *to* Miliken Avenue	PM		**3,161**	--	**F**	**3,231**	--	**F**	**Yes**
21.	I-10 Eastbound *from*	AM	6	995	14.2	B	1,004	14.3	B	No
	Miliken Avenue *to* I-15	PM		2,085	33.1	D	2,127	34.3	D	No
22.	I-10 Eastbound *from*	AM	4	1,492	21.4	C	1,497	21.4	C	No
	I-15 *to* Etiwanda Avenue	PM		**3,127**	--	**F**	**3,150**	--	**F**	**Yes**
23.	I-10 Eastbound *from*	AM	4	1,277	18.2	C	1,281	18.3	C	No
	Etiwanda Avenue *to* Cherry Avenue	PM		**2,677**	--	**F**	**2,692**	--	**F**	**Yes**
24.	I-10 Eastbound *from*	AM	4	1,247	17.8	B	1,250	17.9	B	No
	Cherry Avenue *to* Citrus Avenue	PM		**2,613**	--	**F**	**2,625**	--	**F**	**Yes**
25.	I-10 Eastbound *from*	AM	4	1,241	17.7	B	1,244	17.8	B	No
	Citrus Avenue *to* Sierra Avenue	PM		**2,600**	--	**F**	**2,611**	--	**F**	**Yes**
26.	SR-57 Northbound *from*	AM	3	1,949	31.3	D	1,956	31.5	D	No
	Temple Avenue *to* I-10	PM		2,032	33.4	D	2,036	33.5	D	No
27.	SR-57 Northbound *from*	AM	5	1,268	19.5	C	1,269	19.5	C	No
	I-10 *to* Via Verde	PM		1,322	20.3	C	1,328	20.4	C	No
28.	I-15 Northbound *from*	AM	4	1,210	17.3	B	1,215	17.4	B	No
	Cantu-Galleano Ranch Road *to* SR-60	PM		1,623	23.4	C	1,624	23.4	C	No

Notes:

- pc/mi/ln = Passenger cars per mile per lane (density)
- **Bold Volume/Density/LOS values** indicate adverse service levels based on the Caltrans LOS Criteria

[103] *Appendix M* contains the Density/LOS calculation worksheets for all study basic freeway segments.

TABLE 12-2 (CONTINUED)
YEAR 2014 EXISTING PLUS PROJECT PA-1 AND PA-2 (INTERIM)
PEAK HOUR BASIC FREEWAY SEGMENTS CAPACITY ANALYSIS SUMMARY[104] (CALTRANS FACILITIES ANALYSIS)

Key Basic Freeway Segment		Time Period	Lanes	(1) Existing Traffic Conditions			(2) Existing Plus Project PA-1 and PA-2 (Interim) Traffic Conditions			(3) Impact
				Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Yes/No
29.	I-15 Northbound *from*	AM	5	1,416	20.2	C	1,428	20.4	C	No
	SR-60 *to* Jurupa Street	PM		1,898	28.5	D	1,901	28.6	D	No
30.	I-15 Northbound *from*	AM	4	**2,958**	--	**F**	**2,978**	--	**F**	**Yes**
	Jurupa Street *to* I-10	PM		1,714	25.0	C	1,719	25.0	C	No
31.	I-15 Northbound *from*	AM	4	**2,725**	--	**F**	**2,729**	--	**F**	**Yes**
	I-10 *to* 4th Street	PM		1,579	22.7	C	1,598	23.0	C	No
32.	I-15 Northbound *from*	AM	4	**2,573**	--	**F**	**2,578**	--	**F**	**Yes**
	4th Street *to* Foothill Boulevard	PM		1,491	21.4	C	1,511	21.7	C	No
33.	I-15 Northbound *from*	AM	4	**2,257**	**38.6**	**E**	**2,259**	**38.7**	**E**	**Yes**
	Foothill Boulevard *to* Baseline Road	PM		1,307	18.7	C	1,321	18.9	C	No
34.	I-15 Northbound *from*	AM	4	1,995	30.7	D	1,998	30.8	D	No
	Baseline Road *to* SR-210	PM		1,156	16.5	B	1,166	16.7	B	No
35.	I-15 Southbound *from*	AM	4	1,413	20.2	C	1,421	20.3	C	No
	SR-210 *to* Baseline Road	PM		2,111	33.8	D	2,114	33.9	D	No
36.	I-15 Southbound *from*	AM	4	1,598	23.0	C	1,610	23.2	C	No
	Baseline Road *to* Foothill Boulevard	PM		**2,387**	**44.3**	**E**	**2,391**	**44.5**	**E**	**Yes**
37.	I-15 Southbound *from*	AM	4	1,822	27.0	D	1,841	27.3	D	No
	Foothill Boulevard *to* 4th Street	PM		**2,722**	--	**F**	**2,727**	--	**F**	**Yes**
38.	I-15 Southbound *from*	AM	4	1,929	29.2	D	1,948	29.6	D	No
	4th Street *to* I-10	PM		**2,882**	--	**F**	**2,887**	--	**F**	**Yes**
39.	I-15 Southbound *from*	AM	4	2,095	33.3	D	2,100	33.5	D	No
	I-10 *to* Jurupa Street	PM		**3,130**	--	**F**	**3,150**	--	**F**	**Yes**
40.	I-15 Southbound *from*	AM	5	1,942	29.5	D	1,944	29.5	D	No
	Jurupa Street *to* SR-60	PM		1,427	20.4	C	1,439	20.6	C	No
41.	I-15 Southbound *from*	AM	4	1,659	24.0	C	1,661	24.0	C	No
	SR-60 *to* Cantu-Galleano Ranch Road	PM		1,219	17.4	B	1,225	17.5	B	No
42.	SR-57 Southbound *from*	AM	5	1,351	20.8	C	1,355	20.8	C	No
	Via Verde *to* I-10	PM		1,460	22.5	C	1,461	22.5	C	No

Notes:
- pc/mi/ln = Passenger cars per mile per lane (density)
- **Bold Volume/Density/LOS values** indicate adverse service levels based on the Caltrans LOS Criteria

[104] *Appendix M* contains the Density/LOS calculation worksheets for all study basic freeway segments.

TABLE 12-2 (CONTINUED)
YEAR 2014 EXISTING PLUS PROJECT PA-1 AND PA-2 (INTERIM)
PEAK HOUR BASIC FREEWAY SEGMENTS CAPACITY ANALYSIS SUMMARY[105] (CALTRANS FACILITIES ANALYSIS)

Key Basic Freeway Segment	Time Period	Lanes	(1) Existing Traffic Conditions			(2) Existing Plus Project PA-1 and PA-2 (Interim) Traffic Conditions			(3) Impact
			Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Yes/No
43. SR-57 Southbound *from* I-10 *to* Temple Avenue	AM	3	2,076	34.6	D	2,078	34.6	D	No
	PM		**2,243**	**40.2**	**E**	**2,252**	**40.6**	**E**	**Yes**
44. I-10 Westbound *from* Sierra Avenue *to* Citrus Avenue	AM	4	**2,791**	--	**F**	**2,800**	--	**F**	**Yes**
	PM		1,642	23.7	C	1,644	23.8	C	No
45. I-10 Westbound *from* Citrus Avenue *to* Cherry Avenue	AM	4	**2,805**	--	**F**	**2,816**	--	**F**	**Yes**
	PM		1,650	23.9	C	1,653	23.9	C	No
46. I-10 Westbound *from* Cherry Avenue *to* Etiwanda Avenue	AM	4	**2,873**	--	**F**	**2,886**	--	**F**	**Yes**
	PM		1,690	24.5	C	1,694	24.6	C	No
47. I-10 Westbound *from* Etiwanda Avenue *to* I-15	AM	4	**3,356**	--	**F**	**3,377**	--	**F**	**Yes**
	PM		1,974	30.2	D	1,980	30.4	D	No
48. I-10 Westbound *from* I-15 *to* Miliken Avenue	AM	6	**2,237**	**37.9**	**E**	**2,278**	**39.5**	**E**	**Yes**
	PM		1,316	18.8	C	1,327	19.0	C	No
49. I-10 Westbound *from* Miliken Avenue *to* Haven Avenue	AM	4	**3,393**	--	**F**	**3,461**	--	**F**	**Yes**
	PM		1,996	30.7	D	2,014	31.2	D	No
50. I-10 Westbound *from* Haven Avenue *to* Archibald Avenue	AM	4	**3,406**	--	**F**	**3,475**	--	**F**	**Yes**
	PM		2,004	30.9	D	2,022	31.4	D	No
51. I-10 Westbound *from* Archibald Avenue *to* Holt Boulevard	AM	4	**3,239**	--	**F**	**3,276**	--	**F**	**Yes**
	PM		1,866	27.8	D	1,876	28.0	D	No
52. I-10 Westbound *from* Holt Boulevard *to* Vineyard Avenue	AM	4	**3,232**	--	**F**	**3,270**	--	**F**	**Yes**
	PM		1,933	29.3	D	1,943	29.5	D	No
53. I-10 Westbound *from* Vineyard Avenue *to* 4th Street	AM	4	**3,242**	--	**F**	**3,261**	--	**F**	**Yes**
	PM		1,907	28.7	D	1,988	30.5	D	No
54. I-10 Westbound *from* 4th Street *to* Euclid Avenue	AM	4	**3,379**	--	**F**	**3,398**	--	**F**	**Yes**
	PM		1,953	29.7	D	2,034	31.7	D	No
55. I-10 Westbound *from* Euclid Avenue *to* Mountain Avenue	AM	4	**3,393**	--	**F**	**3,410**	--	**F**	**Yes**
	PM		1,996	30.7	D	2,069	32.6	D	No
56. I-10 Westbound *from* Mountain Avenue *to* Central Avenue	AM	4	**3,379**	--	**F**	**3,394**	--	**F**	**Yes**
	PM		1,988	30.5	D	2,054	32.2	D	No

Notes:

- pc/mi/ln = Passenger cars per mile per lane (density)
- **Bold Volume/Density/LOS values** indicate adverse service levels based on the Caltrans LOS Criteria

[105] *Appendix M* contains the Density/LOS calculation worksheets for all study basic freeway segments.

TABLE 12-2 (CONTINUED)
YEAR 2014 EXISTING PLUS PROJECT PA-1 AND PA-2 (INTERIM)
PEAK HOUR BASIC FREEWAY SEGMENTS CAPACITY ANALYSIS SUMMARY[106] (CALTRANS FACILITIES ANALYSIS)

Key Basic Freeway Segment		Time Period	Lanes	(1) Existing Traffic Conditions			(2) Existing Plus Project PA-1 and PA-2 (Interim) Traffic Conditions			(3) Impact
				Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Yes/No
57.	I-10 Westbound *from*	AM	4	**3,365**	**--**	**F**	**3,379**	**--**	**F**	**Yes**
	Central Avenue *to* Monte Vista Avenue	PM		1,980	30.4	D	2,039	31.8	D	No
58.	I-10 Westbound *from*	AM	4	**3,393**	**--**	**F**	**3,405**	**--**	**F**	**Yes**
	Monte Vista Avenue *to* Indian Hill Boulevard	PM		1,996	30.7	D	2,047	32.0	D	No
59.	I-10 Westbound *from*	AM	4	**2,246**	**38.2**	**E**	**2,257**	**38.6**	**E**	**Yes**
	Indian Hill Boulevard *to* Towne Avenue	PM		2,141	34.7	D	**2,186**	**36.1**	**E**	**Yes**
60.	I-10 Westbound *from*	AM	4	**2,266**	**39.0**	**E**	**2,275**	**39.3**	**E**	**Yes**
	Towne Avenue *to* Garey Avenue	PM		**2,160**	**35.3**	**E**	**2,197**	**36.5**	**E**	**Yes**
61.	I-10 Westbound *from*	AM	4	**2,179**	**35.9**	**E**	**2,188**	**36.2**	**E**	**Yes**
	Garey Avenue *to* White Avenue	PM		2,077	32.8	D	2,114	33.9	D	No
62.	I-10 Westbound *from*	AM	4	**2,275**	**39.3**	**E**	**2,284**	**39.7**	**E**	**Yes**
	White Avenue *to* Dudley Street	PM		**2,169**	**35.6**	**E**	**2,206**	**36.8**	**E**	**Yes**
63.	I-10 Westbound *from*	AM	4	**2,285**	**39.7**	**E**	**2,294**	**40.1**	**E**	**Yes**
	Dudley Street *to* Fairplex Drive	PM		**2,178**	**35.9**	**E**	**2,215**	**37.1**	**E**	**Yes**
64.	I-10 Westbound *from*	AM	4	**2,285**	**39.7**	**E**	**2,292**	**40.0**	**E**	**Yes**
	Fairplex Drive *to* SR-57	PM		**2,178**	**35.9**	**E**	**2,209**	**36.9**	**E**	**Yes**
65.	I-10 Westbound *from*	AM	4	1,880	28.1	D	1,884	28.2	D	No
	SR-57 *to* Via Verde	PM		1,792	26.4	D	1,808	26.7	D	No
66.	I-10 Westbound *from*	AM	4	1,899	28.5	D	1,902	28.6	D	No
	Via Verde *to* Holt Avenue	PM		1,811	26.7	D	1,822	27.0	D	No
67.	I-10 Westbound *from*	AM	4	1,889	28.3	D	1,892	28.4	D	No
	Holt Avenue *to* Grand Avenue	PM		1,801	26.5	D	1,813	26.8	D	No
68.	I-10 Westbound *from*	AM	4	2,034	31.7	D	2,036	31.7	D	No
	Grand Avenue *to* Citrus Street	PM		1,939	29.4	D	1,947	29.6	D	No

Notes:

- pc/mi/ln = Passenger cars per mile per lane (density)
- **Bold Volume/Density/LOS values** indicate adverse service levels based on the Caltrans LOS Criteria

[106] *Appendix M* contains the Density/LOS calculation worksheets for all study basic freeway segments.

TABLE 12-3
YEAR 2014 EXISTING PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4
PEAK HOUR BASIC FREEWAY SEGMENTS CAPACITY ANALYSIS SUMMARY[107] (CALTRANS FACILITIES ANALYSIS)

Key Basic Freeway Segment	Time Period	Lanes	(1) Existing Traffic Conditions			(2) Existing Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions			(3) Impact
			Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Yes/No
1. I-10 Eastbound *from* Citrus Street *to* Grand Avenue	AM	4	1,838	27.3	D	1,850	27.5	D	No
	PM		**2,220**	**37.3**	**E**	**2,230**	**37.7**	**E**	**Yes**
2. I-10 Eastbound *from* Grand Avenue *to* Holt Avenue	AM	4	1,708	24.8	C	1,725	25.1	C	No
	PM		2,062	32.4	D	2,076	32.8	D	No
3. I-10 Eastbound *from* Holt Avenue *to* Via Verde	AM	4	1,716	25.0	C	1,733	25.3	C	No
	PM		2,072	32.7	D	2,087	33.1	D	No
4. I-10 Eastbound *from* Via Verde *to* SR-57	AM	4	1,699	24.7	C	1,721	25.1	C	No
	PM		2,051	32.1	D	2,070	32.6	D	No
5. I-10 Eastbound *from* SR-57 *to* Fairplex Drive	AM	4	2,065	32.5	D	2,111	33.8	D	No
	PM		**2,493**	--	**F**	**2,533**	--	**F**	**Yes**
6. I-10 Eastbound *from* Fairplex Drive *to* Dudley Street	AM	4	2,065	32.5	D	2,120	34.1	D	No
	PM		**2,493**	--	**F**	**2,537**	--	**F**	**Yes**
7. I-10 Eastbound *from* Dudley Street *to* White Avenue	AM	4	2,056	32.3	D	2,111	33.8	D	No
	PM		**2,482**	--	**F**	**2,526**	--	**F**	**Yes**
8. I-10 Eastbound *from* White Avenue *to* Garey Avenue	AM	4	1,969	30.1	D	2,024	31.4	D	No
	PM		**2,377**	**43.8**	**E**	**2,421**	--	**F**	**Yes**
9. I-10 Eastbound *from* Garey Avenue *to* Town Avenue	AM	4	2,047	32.0	D	2,103	33.6	D	No
	PM		**2,472**	--	**F**	**2,516**	--	**F**	**Yes**
10. I-10 Eastbound *from* Towne Avenue *to* Indian Hill Boulevard	AM	4	2,030	31.6	D	2,095	33.3	D	No
	PM		**2,451**	--	**F**	**2,499**	--	**F**	**Yes**
11. I-10 Eastbound *from* Indian Hill Boulevard *to* Monte Vista Avenue	AM	4	1,509	21.6	C	1,584	22.8	C	No
	PM		**3,161**	--	**F**	**3,214**	--	**F**	**Yes**
12. I-10 Eastbound *from* Monte Vista Avenue *to* Central Avenue	AM	4	1,496	21.4	C	1,581	22.7	C	No
	PM		**3,136**	--	**F**	**3,193**	--	**F**	**Yes**
13. I-10 Eastbound *from* Central Avenue *to* Mountain Avenue	AM	4	1,503	21.5	C	1,598	23.0	C	No
	PM		**3,148**	--	**F**	**3,210**	--	**F**	**Yes**
14. I-10 Eastbound *from* Mountain Avenue *to* Euclid Avenue	AM	4	1,509	21.6	C	1,614	23.3	C	No
	PM		**3,161**	--	**F**	**3,227**	--	**F**	**Yes**

Notes:

- pc/mi/ln = Passenger cars per mile per lane (density)
- **Bold Volume/Density/LOS values** indicate adverse service levels based on the Caltrans LOS Criteria

[107] *Appendix M* contains the Density/LOS calculation worksheets for all study basic freeway segments.

TABLE 12-3 (CONTINUED)
YEAR 2014 EXISTING PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4
PEAK HOUR BASIC FREEWAY SEGMENTS CAPACITY ANALYSIS SUMMARY[108] (CALTRANS FACILITIES ANALYSIS)

Key Basic Freeway Segment		Time Period	Lanes	(1) Existing Traffic Conditions			(2) Existing Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions			(3) Impact
				Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Yes/No
15.	I-10 Eastbound *from*	AM	4	1,485	21.3	C	1,601	23.1	C	No
	Euclid Avenue *to* 4th Street	PM		**3,133**	--	**F**	**3,204**	--	**F**	**Yes**
16.	I-10 Eastbound *from*	AM	4	1,442	20.6	C	1,557	22.4	C	No
	4th Street *to* Vineyard Avenue	PM		**3,021**	--	**F**	**3,092**	--	**F**	**Yes**
17.	I-10 Eastbound *from*	AM	4	1,503	21.5	C	1,536	22.0	C	No
	Vineyard Avenue *to* Holt Boulevard	PM		**2,999**	--	**F**	**3,081**	--	**F**	**Yes**
18.	I-10 Eastbound *from*	AM	4	1,370	19.6	C	1,382	19.7	C	No
	Holt Boulevard *to* Archibald Avenue	PM		**2,976**	--	**F**	**3,027**	--	**F**	**Yes**
19.	I-10 Eastbound *from*	AM	4	1,515	21.7	C	1,559	22.4	C	No
	Archibald Avenue *to* Haven Avenue	PM		**3,174**	--	**F**	**3,297**	--	**F**	**Yes**
20.	I-10 Eastbound *from*	AM	4	1,509	21.6	C	1,553	22.3	C	No
	Haven Avenue *to* Miliken Avenue	PM		**3,161**	--	**F**	**3,284**	--	**F**	**Yes**
21.	I-10 Eastbound *from*	AM	6	995	14.2	B	1,022	14.6	B	No
	Miliken Avenue *to* I-15	PM		2,085	33.1	D	**2,160**	**35.3**	**E**	**Yes**[109]
22.	I-10 Eastbound *from*	AM	4	1,492	21.4	C	1,507	21.6	C	No
	I-15 *to* Etiwanda Avenue	PM		**3,127**	--	**F**	**3,168**	--	**F**	**Yes**
23.	I-10 Eastbound *from*	AM	4	1,277	18.2	C	1,289	18.4	C	No
	Etiwanda Avenue *to* Cherry Avenue	PM		**2,677**	--	**F**	**2,708**	--	**F**	**Yes**
24.	I-10 Eastbound *from*	AM	4	1,247	17.8	B	1,255	17.9	B	No
	Cherry Avenue *to* Citrus Avenue	PM		**2,613**	--	**F**	**2,635**	--	**F**	**Yes**
25.	I-10 Eastbound *from*	AM	4	1,241	17.7	B	1,247	17.8	B	No
	Citrus Avenue *to* Sierra Avenue	PM		**2,600**	--	**F**	**2,617**	--	**F**	**Yes**
26.	SR-57 Northbound *from*	AM	3	1,949	31.3	D	1,965	31.7	D	No
	Temple Avenue *to* I-10	PM		2,032	33.4	D	2,047	33.8	D	No
27.	SR-57 Northbound *from*	AM	5	1,268	19.5	C	1,273	19.6	C	No
	I-10 *to* Via Verde	PM		1,322	20.3	C	1,336	20.6	C	No
28.	I-15 Northbound *from*	AM	4	1,210	17.3	B	1,220	17.4	B	No
	Cantu-Galleano Ranch Road *to* SR-60	PM		1,623	23.4	C	1,630	23.5	C	No

Notes:

- pc/mi/ln = Passenger cars per mile per lane (density)
- **Bold Volume/Density/LOS values** indicate adverse service levels based on the Caltrans LOS Criteria

[108] *Appendix M* contains the Density/LOS calculation worksheets for all study basic freeway segments.

[109] The I-10 Eastbound from Miliken Avenue to I-15 is directly impacted by the Project. All other segments identified as significantly impacted are deficient under Existing Conditions.

TABLE 12-3 (CONTINUED)
YEAR 2014 EXISTING PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4
PEAK HOUR BASIC FREEWAY SEGMENTS CAPACITY ANALYSIS SUMMARY[110] (CALTRANS FACILITIES ANALYSIS)

Key Basic Freeway Segment		Time Period	Lanes	(1) Existing Traffic Conditions			(2) Existing Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions			(3) Impact
				Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Yes/No
29.	I-15 Northbound *from*	AM	5	1,416	20.2	C	1,435	20.5	C	No
	SR-60 *to* Jurupa Street	PM		1,898	28.5	D	1,910	28.8	D	No
30.	I-15 Northbound *from*	AM	4	**2,958**	--	**F**	**2,990**	--	**F**	**Yes**
	Jurupa Street *to* I-10	PM		1,714	25.0	C	1,733	25.3	C	No
31.	I-15 Northbound *from*	AM	4	**2,725**	--	**F**	**2,737**	--	**F**	**Yes**
	I-10 *to* 4th Street	PM		1,579	22.7	C	1,614	23.3	C	No
32.	I-15 Northbound *from*	AM	4	**2,573**	--	**F**	**2,586**	--	**F**	**Yes**
	4th Street *to* Foothill Boulevard	PM		1,491	21.4	C	1,527	21.9	C	No
33.	I-15 Northbound *from*	AM	4	**2,257**	**38.6**	**E**	**2,266**	**39.0**	**E**	**Yes**
	Foothill Boulevard *to* Baseline Road	PM		1,307	18.7	C	1,333	19.0	C	No
34.	I-15 Northbound *from*	AM	4	1,995	30.7	D	2,002	30.9	D	No
	Baseline Road *to* SR-210	PM		1,156	16.5	B	1,176	16.8	B	No
35.	I-15 Southbound *from*	AM	4	1,413	20.2	C	1,428	20.4	C	No
	SR-210 *to* Baseline Road	PM		2,111	33.8	D	2,122	34.1	D	No
36.	I-15 Southbound *from*	AM	4	1,598	23.0	C	1,619	23.4	C	No
	Baseline Road *to* Foothill Boulevard	PM		**2,387**	**44.3**	**E**	**2,401**	--	**F**	**Yes**
37.	I-15 Southbound *from*	AM	4	1,822	27.0	D	1,852	27.5	D	No
	Foothill Boulevard *to* 4th Street	PM		**2,722**	--	**F**	**2,741**	--	**F**	**Yes**
38.	I-15 Southbound *from*	AM	4	1,929	29.2	D	1,959	29.9	D	No
	4th Street *to* I-10	PM		**2,882**	--	**F**	**2,901**	--	**F**	**Yes**
39.	I-15 Southbound *from*	AM	4	2,095	33.3	D	2,109	33.7	D	No
	I-10 *to* Jurupa Street	PM		**3,130**	--	**F**	**3,166**	--	**F**	**Yes**
40.	I-15 Southbound *from*	AM	5	1,942	29.5	D	1,950	29.7	D	No
	Jurupa Street *to* SR-60	PM		1,427	20.4	C	1,449	20.7	C	No
41.	I-15 Southbound *from*	AM	4	1,659	24.0	C	1,664	24.1	C	No
	SR-60 *to* Cantu-Galleano Ranch Road	PM		1,219	17.4	B	1,232	17.6	B	No
42.	SR-57 Southbound *from*	AM	5	1,351	20.8	C	1,360	20.9	C	No
	Via Verde *to* I-10	PM		1,460	22.5	C	1,468	22.6	C	No

Notes:
- pc/mi/ln = Passenger cars per mile per lane (density)
- **Bold Volume/Density/LOS values** indicate adverse service levels based on the Caltrans LOS Criteria

[110] *Appendix M* contains the Density/LOS calculation worksheets for all study basic freeway segments.

TABLE 12-3 (CONTINUED)
YEAR 2014 EXISTING PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4
PEAK HOUR BASIC FREEWAY SEGMENTS CAPACITY ANALYSIS SUMMARY[111] (CALTRANS FACILITIES ANALYSIS)

Key Basic Freeway Segment		Time Period	Lanes	(1) Existing Traffic Conditions			(2) Existing Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions			(3) Impact
				Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Yes/No
43.	SR-57 Southbound *from*	AM	3	2,076	34.6	D	**2,085**	**34.8**	**E**	**Yes**
	I-10 *to* Temple Avenue	PM		**2,243**	**40.2**	**E**	**2,265**	**41.1**	**E**	**Yes**
44.	I-10 Westbound *from*	AM	4	**2,791**	--	**F**	**2,805**	--	**F**	**Yes**
	Sierra Avenue *to* Citrus Avenue	PM		1,642	23.7	C	1,649	23.8	C	No
45.	I-10 Westbound *from*	AM	4	**2,805**	--	**F**	**2,822**	--	**F**	**Yes**
	Citrus Avenue *to* Cherry Avenue	PM		1,650	23.9	C	1,661	24.0	C	No
46.	I-10 Westbound *from*	AM	4	**2,873**	--	**F**	**2,897**	--	**F**	**Yes**
	Cherry Avenue *to* Etiwanda Avenue	PM		1,690	24.5	C	1,707	24.8	C	No
47.	I-10 Westbound *from*	AM	4	**3,356**	--	**F**	**3,391**	--	**F**	**Yes**
	Etiwanda Avenue *to* I-15	PM		1,974	30.2	D	1,996	30.7	D	No
48.	I-10 Westbound *from*	AM	6	**2,237**	**37.9**	**E**	**2,301**	**40.4**	**E**	**Yes**
	I-15 *to* Miliken Avenue	PM		1,316	18.8	C	1,356	19.4	C	No
49.	I-10 Westbound *from*	AM	4	**3,393**	--	**F**	**3,499**	--	**F**	**Yes**
	Miliken Avenue *to* Haven Avenue	PM		1,996	30.7	D	2,060	32.4	D	No
50.	I-10 Westbound *from*	AM	4	**3,406**	--	**F**	**3,513**	--	**F**	**Yes**
	Haven Avenue *to* Archibald Avenue	PM		2,004	30.9	D	2,068	32.6	D	No
51.	I-10 Westbound *from*	AM	4	**3,239**	--	**F**	**3,288**	--	**F**	**Yes**
	Archibald Avenue *to* Holt Boulevard	PM		1,866	27.8	D	1,866	28.3	D	No
52.	I-10 Westbound *from*	AM	4	**3,232**	--	**F**	3,301	--	F	Yes
	Holt Boulevard *to* Vineyard Avenue	PM		1,933	29.3	D	1,982	30.4	D	Yes
53.	I-10 Westbound *from*	AM	4	**3,242**	--	**F**	**3,291**	--	**F**	**Yes**
	Vineyard Avenue *to* 4th Street	PM		1,907	28.7	D	2,044	32.0	D	No
54.	I-10 Westbound *from*	AM	4	**3,379**	--	**F**	**3,428**	--	**F**	**Yes**
	4th Street *to* Euclid Avenue	PM		1,953	29.7	D	2,090	33.2	D	No
55.	I-10 Westbound *from*	AM	4	**3,393**	--	**F**	**3,438**	--	**F**	**Yes**
	Euclid Avenue *to* Mountain Avenue	PM		1,996	30.7	D	2,122	34.1	D	No
56.	I-10 Westbound *from*	AM	4	**3,379**	--	**F**	**3,421**	--	**F**	**Yes**
	Mountain Avenue *to* Central Avenue	PM		1,988	30.5	D	2,103	33.6	D	No

Notes:

- pc/mi/ln = Passenger cars per mile per lane (density)
- **Bold Volume/Density/LOS values** indicate adverse service levels based on the Caltrans LOS Criteria

[111] *Appendix M* contains the Density/LOS calculation worksheets for all study basic freeway segments.

TABLE 12-3 (CONTINUED)
YEAR 2014 EXISTING PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4
PEAK HOUR BASIC FREEWAY SEGMENTS CAPACITY ANALYSIS SUMMARY[112] (CALTRANS FACILITIES ANALYSIS)

Key Basic Freeway Segment		Time Period	Lanes	(1) Existing Traffic Conditions			(2) Existing Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions			(3) Impact
				Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Yes/No
57.	I-10 Westbound *from*	AM	4	**3,365**	**--**	**F**	**3,404**	**--**	**F**	**Yes**
	Central Avenue *to* Monte Vista Avenue	PM		1,980	30.4	D	2,085	33.1	D	No
58.	I-10 Westbound *from*	AM	4	**3,393**	**--**	**F**	**3,428**	**--**	**F**	**Yes**
	Monte Vista Avenue *to* Indian Hill Boulevard	PM		1,996	30.7	D	2,091	33.2	D	No
59.	I-10 Westbound *from*	AM	4	**2,246**	**38.2**	**E**	**2,279**	**39.5**	**E**	**Yes**
	Indian Hill Boulevard *to* Towne Avenue	PM		2,141	34.7	D	**2,226**	**37.5**	**E**	**Yes**
60.	I-10 Westbound *from*	AM	4	**2,266**	**39.0**	**E**	**2,295**	**40.2**	**E**	**Yes**
	Towne Avenue *to* Garey Avenue	PM		**2,160**	**35.3**	**E**	**2,234**	**37.8**	**E**	**Yes**
61.	I-10 Westbound *from*	AM	4	**2,179**	**35.9**	**E**	**2,208**	**36.9**	**E**	**Yes**
	Garey Avenue *to* White Avenue	PM		2,077	32.8	D	**2,151**	**35.0**	**E**	**Yes**
62.	I-10 Westbound *from*	AM	4	**2,275**	**39.3**	**E**	**2,304**	**40.5**	**E**	**Yes**
	White Avenue *to* Dudley Street	PM		**2,169**	**35.6**	**E**	**2,243**	**38.1**	**E**	**Yes**
63.	I-10 Westbound *from*	AM	4	**2,285**	**39.7**	**E**	**2,314**	**40.9**	**E**	**Yes**
	Dudley Street *to* Fairplex Drive	PM		**2,178**	**35.9**	**E**	**2,253**	**38.5**	**E**	**Yes**
64.	I-10 Westbound *from*	AM	4	**2,285**	**39.7**	**E**	**2,311**	**40.8**	**E**	**Yes**
	Fairplex Drive *to* SR-57	PM		**2,178**	**35.9**	**E**	**2,243**	**38.1**	**E**	**Yes**
65.	I-10 Westbound *from*	AM	4	1,880	28.1	D	1,892	28.4	D	No
	SR-57 *to* Via Verde	PM		1,792	26.4	D	1,824	27.0	D	No
66.	I-10 Westbound *from*	AM	4	1,899	28.5	D	1,909	28.7	D	No
	Via Verde *to* Holt Avenue	PM		1,811	26.7	D	1,834	27.2	D	No
67.	I-10 Westbound *from*	AM	4	1,889	28.3	D	1,899	28.5	D	No
	Holt Avenue *to* Grand Avenue	PM		1,801	26.5	D	1,825	27.0	D	No
68.	I-10 Westbound *from*	AM	4	2,034	31.7	D	2,041	31.9	D	No
	Grand Avenue *to* Citrus Street	PM		1,939	29.4	D	1,956	29.8	D	No

Notes:

- pc/mi/ln = Passenger cars per mile per lane (density)
- **Bold Volume/Density/LOS values** indicate adverse service levels based on the Caltrans LOS Criteria

[112] *Appendix M* contains the Density/LOS calculation worksheets for all study basic freeway segments.

12.3.2 *Year 2017 Cumulative Traffic Conditions*

Table 12-4 summarizes the peak hour Level of Service results at the sixty-eight (68) freeway segments for "Year 2017 Cumulative Plus Project" traffic conditions. The first column (1) presents a summary of existing AM and PM peak hour traffic conditions (which were also presented in *Table 12-2 and 12-3*). The second column (2) lists forecast Year 2017 Cumulative traffic conditions and the third column (3) lists forecast Cumulative Plus Project PA-1 and PA-2 (Interim) traffic conditions. The fourth column (4) presents the level of service with the implementation of an additional general purpose lane, if necessary.

12.3.2.1 *Year 2017 Cumulative Traffic Conditions*

Review of column (2) of *Table 12-4* indicates that fifty-five (55) of the sixty-eight (68) freeway segments are forecast to operate at an unacceptable level of service during the AM and/or PM peak hours when compared to the LOS standards defined in this report. The remaining thirteen (13) freeway segments are forecast to operate at acceptable levels of service during the AM and PM peak hours.

12.3.2.2 *Year 2017 Cumulative Plus Project PA-1 and PA-2 (Interim) Traffic Conditions*

Review of columns (3) and (4) of *Table 12-4* indicates that the same fifty-five (55) freeway segments forecast to operate at an unacceptable LOS without the Project are forecast to operate at an unacceptable level of service during the AM and/or PM peak hours with Project traffic. Although the addition of Project trips is not anticipated to result in any new deficient service levels, the Project's contribution to the freeway system can be considered cumulatively significant under this traffic impact analysis scenario. The remaining thirteen (13) freeway segments are forecast to operate at acceptable levels of service during the AM and PM peak hours.

Appendix M contains the Basic Freeway Segment Analysis Calculation worksheets for all freeway segments for the Existing traffic conditions.

TABLE 12-4
YEAR 2017 PLUS PROJECT PA-1 AND PA-2 (INTERIM)
PEAK HOUR BASIC FREEWAY SEGMENTS CAPACITY ANALYSIS SUMMARY[113] (CALTRANS FACILITIES ANALYSIS)

Key Basic Freeway Segment		Time Period	Lanes	(1) Existing Traffic Conditions			(2) Year 2017 Cumulative Traffic Conditions			(3) Year 2017 Plus Project PA-1 and PA-2 (Interim) Traffic Conditions			(4) Impact
				Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Yes/No
1.	I-10 Eastbound *from*	AM	4	1,838	27.3	D	1,912	28.8	D	1,917	28.9	D	No
	Citrus Street *to* Grand Avenue	PM		**2,220**	**37.3**	**E**	**2,305**	**40.6**	**E**	**2,307**	**40.6**	**E**	**Yes**
2.	I-10 Eastbound *from*	AM	4	1,708	24.8	C	1,778	26.1	D	1,786	26.3	D	No
	Grand Avenue *to* Holt Avenue	PM		2,062	32.4	D	2,143	34.8	D	2,146	34.8	D	No
3.	I-10 Eastbound *from*	AM	4	1,716	25.0	C	1,787	26.3	D	1,795	26.4	D	No
	Holt Avenue *to* Via Verde	PM		2,072	32.7	D	**2,153**	**35.1**	**E**	**2,157**	**35.2**	**E**	**Yes**
4.	I-10 Eastbound *from*	AM	4	1,699	24.7	C	1,770	26.0	C	1,781	26.2	D	No
	Via Verde *to* SR-57	PM		2,051	32.1	D	2,132	34.4	D	2,137	34.6	D	No
5.	I-10 Eastbound *from*	AM	4	2,065	32.5	D	**2,181**	**36.0**	**E**	**2,203**	**36.7**	**E**	**Yes**
	SR-57 *to* Fairplex Drive	PM		**2,493**	--	**F**	**2,608**	--	**F**	**2,618**	--	**F**	**Yes**
6.	I-10 Eastbound *from*	AM	4	2,065	32.5	D	**2,184**	**36.1**	**E**	**2,212**	**37.0**	**E**	**Yes**
	Fairplex Drive *to* Dudley Street	PM		**2,493**	--	**F**	**2,611**	--	**F**	**2,622**	--	**F**	**Yes**
7.	I-10 Eastbound *from*	AM	4	2,056	32.3	D	**2,175**	**35.8**	**E**	**2,203**	**36.7**	**E**	**Yes**
	Dudley Street *to* White Avenue	PM		**2,482**	--	**F**	**2,600**	--	**F**	**2,611**	--	**F**	**Yes**
8.	I-10 Eastbound *from*	AM	4	1,969	30.1	D	2,085	33.1	D	2,114	33.9	D	No
	White Avenue *to* Garey Avenue	PM		**2,377**	**43.8**	**E**	**2,492**	--	**F**	**2,503**	--	**F**	**Yes**
9.	I-10 Eastbound *from*	AM	4	2,047	32.0	D	**2,166**	**35.5**	**E**	**2,194**	**36.4**	**E**	**Yes**
	Garey Avenue *to* Town Avenue	PM		**2,472**	--	**F**	**2,589**	--	**F**	**2,600**	--	**F**	**Yes**
10.	I-10 Eastbound *from*	AM	4	2,030	31.6	D	**2,151**	**35.0**	**E**	**2,187**	**36.2**	**E**	**Yes**
	Towne Avenue *to* Indian Hill Boulevard	PM		**2,451**	--	**F**	**2,569**	--	**F**	**2,582**	--	**F**	**Yes**
11.	I-10 Eastbound *from*	AM	4	1,509	21.6	C	1,617	23.3	C	1,661	24.0	C	No
	Indian Hill Boulevard *to* Monte Vista Avenue	PM		**3,161**	--	**F**	**3,303**	--	**F**	**3,318**	--	**F**	**Yes**
12.	I-10 Eastbound *from*	AM	4	1,496	21.4	C	1,607	23.2	C	1,659	24.0	C	No
	Monte Vista Avenue *to* Central Avenue	PM		**3,136**	--	**F**	**3,279**	--	**F**	**3,295**	--	**F**	**Yes**
13.	I-10 Eastbound *from*	AM	4	1,503	21.5	C	1,616	23.3	C	1,676	24.3	C	No
	Central Avenue *to* Mountain Avenue	PM		**3,148**	--	**F**	**3,296**	--	**F**	**3,314**	--	**F**	**Yes**
14.	I-10 Eastbound *from*	AM	4	1,509	21.6	C	1,626	23.5	C	1,694	24.6	C	No
	Mountain Avenue *to* Euclid Avenue	PM		**3,161**	--	**F**	**3,311**	--	**F**	**3,330**	--	**F**	**Yes**

Notes:

- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report

[113] *Appendix M* contains the Density/LOS calculation worksheets for all study basic freeway segments.

TABLE 12-4 (CONTINUED)
YEAR 2017 PLUS PROJECT PA-1 AND PA-2 (INTERIM)
PEAK HOUR BASIC FREEWAY SEGMENTS CAPACITY ANALYSIS SUMMARY[114] (CALTRANS FACILITIES ANALYSIS)

	Key Basic Freeway Segment	Time Period	Lanes	(1) Existing Traffic Conditions			(2) Year 2017 Cumulative Traffic Conditions			(3) Year 2017 Plus Project PA-1 and PA-2 (Interim) Traffic Conditions			(4) Impact
				Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Yes/No
15.	I-10 Eastbound *from*	AM	4	1,485	21.3	C	1,608	23.2	C	1,682	24.4	C	No
	Euclid Avenue *to* 4th Street	PM		**3,133**	--	**F**	**3,289**	--	**F**	**3,311**	--	**F**	**Yes**
16.	I-10 Eastbound *from*	AM	4	1,442	20.6	C	1,560	22.4	C	1,636	23.6	C	No
	4th Street *to* Vineyard Avenue	PM		**3,021**	--	**F**	**3,171**	--	**F**	**3,192**	--	**F**	**Yes**
17.	I-10 Eastbound *from*	AM	4	1,503	21.5	C	1,593	22.9	C	1,602	23.1	C	No
	Vineyard Avenue *to* Holt Boulevard	PM		**2,999**	--	**F**	**3,145**	--	**F**	**3,183**	--	**F**	**Yes**
18.	I-10 Eastbound *from*	AM	4	1,370	19.6	C	1,424	20.4	C	1,432	20.5	C	No
	Holt Boulevard *to* Archibald Avenue	PM		**2,976**	--	**F**	**3,081**	--	**F**	**3,117**	--	**F**	**Yes**
19.	I-10 Eastbound *from*	AM	4	1,515	21.7	C	1,599	23.0	C	1,615	23.3	C	No
	Archibald Avenue *to* Haven Avenue	PM		**3,174**	--	**F**	**3,351**	--	**F**	**3,421**	--	**F**	**Yes**
20.	I-10 Eastbound *from*	AM	4	1,509	21.6	C	1,602	23.1	C	1,618	23.3	C	No
	Haven Avenue *to* Miliken Avenue	PM		**3,161**	--	**F**	**3,352**	--	**F**	**3,422**	--	**F**	**Yes**
21.	I-10 Eastbound *from*	AM	6	995	14.2	B	1,050	15.0	B	1,060	15.1	B	No
	Miliken Avenue *to* I-15	PM		2,085	33.1	D	**2,202**	**36.7**	**E**	**2,244**	**38.2**	**E**	**Yes**
22.	I-10 Eastbound *from*	AM	4	1,492	21.4	C	1,551	22.3	C	1,556	22.3	C	No
	I-15 *to* Etiwanda Avenue	PM		**3,127**	--	**F**	**3,255**	--	**F**	**3,278**	--	**F**	**Yes**
23.	I-10 Eastbound *from*	AM	4	1,277	18.2	C	1,330	19.0	C	1,333	19.0	C	No
	Etiwanda Avenue *to* Cherry Avenue	PM		**2,677**	--	**F**	**2,789**	--	**F**	**2,805**	--	**F**	**Yes**
24.	I-10 Eastbound *from*	AM	4	1,247	17.8	B	1,298	18.5	C	1,301	18.6	C	No
	Cherry Avenue *to* Citrus Avenue	PM		**2,613**	--	**F**	**2,722**	--	**F**	**2,734**	--	**F**	**Yes**
25.	I-10 Eastbound *from*	AM	4	1,241	17.7	B	1,291	18.4	C	1,294	18.5	C	No
	Citrus Avenue *to* Sierra Avenue	PM		**2,600**	--	**F**	**2,707**	--	**F**	**2,717**	--	**F**	**Yes**
26.	SR-57 Northbound *from*	AM	3	1,949	31.3	D	2,031	33.3	D	2,038	33.5	D	No
	Temple Avenue *to* I-10	PM		2,032	33.4	D	**2,108**	**35.5**	**E**	**2,111**	**35.6**	**E**	**Yes**
27.	SR-57 Northbound *from*	AM	5	1,268	19.5	C	1,312	20.2	C	1,314	20.2	C	No
	I-10 *to* Via Verde	PM		1,322	20.3	C	1,377	21.2	C	1,383	21.3	C	No
28.	I-15 Northbound *from*	AM	4	1,210	17.3	B	1,267	18.1	C	1,273	18.2	C	No
	Cantu-Galleano Ranch Road *to* SR-60	PM		1,623	23.4	C	1,695	24.6	C	1,697	24.7	C	No

Notes:

- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report

[114] *Appendix M* contains the Density/LOS calculation worksheets for all study basic freeway segments.

TABLE 12-4 (CONTINUED)
YEAR 2017 PLUS PROJECT PA-1 AND PA-2 (INTERIM)
PEAK HOUR BASIC FREEWAY SEGMENTS CAPACITY ANALYSIS SUMMARY[115] (CALTRANS FACILITIES ANALYSIS)

Key Basic Freeway Segment		Time Period	Lanes	(1) Existing Traffic Conditions			(2) Year 2017 Cumulative Traffic Conditions			(3) Year 2017 Plus Project PA-1 and PA-2 (Interim) Traffic Conditions			(4) Impact
				Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Yes/No
29.	I-15 Northbound *from*	AM	5	1,416	20.2	C	1,477	21.1	C	1,488	21.3	C	No
	SR-60 *to* Jurupa Street	PM		1,898	28.5	D	1,975	30.2	D	1,978	30.3	D	No
30.	I-15 Northbound *from*	AM	4	**2,958**	--	**F**	**3,072**	--	**F**	**3,092**	--	**F**	**Yes**
	Jurupa Street *to* I-10	PM		1,714	25.0	C	1,790	26.3	D	1,795	26.4	D	No
31.	I-15 Northbound *from*	AM	4	**2,725**	--	**F**	**2,813**	--	**F**	**2,818**	--	**F**	**Yes**
	I-10 *to* 4th Street	PM		1,579	22.7	C	1,641	23.7	C	1,661	24.0	C	No
32.	I-15 Northbound *from*	AM	4	**2,573**	--	**F**	**2,657**	--	**F**	**2,661**	--	**F**	**Yes**
	4th Street *to* Foothill Boulevard	PM		1,491	21.4	C	1,551	22.3	C	1,571	22.6	C	No
33.	I-15 Northbound *from*	AM	4	**2,257**	**38.6**	**E**	**2,331**	**41.7**	**E**	**2,334**	**41.8**	**E**	**Yes**
	Foothill Boulevard *to* Baseline Road	PM		1,307	18.7	C	1,360	19.4	C	1,374	19.6	C	No
34.	I-15 Northbound *from*	AM	4	1,995	30.7	D	2,061	32.4	D	2,063	32.5	D	No
	Baseline Road *to* SR-210	PM		1,156	16.5	B	1,202	17.2	B	1,212	17.3	B	No
35.	I-15 Southbound *from*	AM	4	1,413	20.2	C	1,466	21.0	C	1,474	21.1	C	No
	SR-210 *to* Baseline Road	PM		2,111	33.8	D	**2,182**	**36.0**	**E**	**2,185**	**36.1**	**E**	**Yes**
36.	I-15 Southbound *from*	AM	4	1,598	23.0	C	1,658	24.0	C	1,670	24.2	C	No
	Baseline Road *to* Foothill Boulevard	PM		**2,387**	**44.3**	**E**	**2,467**	--	**F**	**2,470**	--	**F**	**Yes**
37.	I-15 Southbound *from*	AM	4	1,822	27.0	D	1,892	28.4	D	1,911	28.8	D	No
	Foothill Boulevard *to* 4th Street	PM		**2,722**	--	**F**	**2,812**	--	**F**	**2,817**	--	**F**	**Yes**
38.	I-15 Southbound *from*	AM	4	1,929	29.2	D	2,002	30.9	D	2,021	31.4	D	No
	4th Street *to* I-10	PM		**2,882**	--	**F**	**2,977**	--	**F**	**2,982**	--	**F**	**Yes**
39.	I-15 Southbound *from*	AM	4	2,095	33.3	D	**2,176**	**35.8**	**E**	**2,181**	**36.0**	**E**	**Yes**
	I-10 *to* Jurupa Street	PM		**3,130**	--	**F**	**3,255**	--	**F**	**3,276**	--	**F**	**Yes**
40.	I-15 Southbound *from*	AM	5	1,942	29.5	D	2,013	31.2	D	2,016	31.2	D	No
	Jurupa Street *to* SR-60	PM		1,427	20.4	C	1,494	21.4	C	1,506	21.6	C	No
41.	I-15 Southbound *from*	AM	4	1,659	24.0	C	1,726	25.2	C	1,727	25.2	C	No
	SR-60 *to* Cantu-Galleano Ranch Road	PM		1,219	17.4	B	1,283	18.3	C	1,290	18.4	C	No
42.	SR-57 Southbound *from*	AM	5	1,351	20.8	C	1,405	21.6	C	1,410	21.7	C	No
	Via Verde *to* I-10	PM		1,460	22.5	C	1,512	23.3	C	1,514	23.3	C	No

Notes:

- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report

[115] *Appendix M* contains the Density/LOS calculation worksheets for all study basic freeway segments.

TABLE 12-4 (CONTINUED)
YEAR 2017 PLUS PROJECT PA-1 AND PA-2 (INTERIM)
PEAK HOUR BASIC FREEWAY SEGMENTS CAPACITY ANALYSIS SUMMARY[116] (CALTRANS FACILITIES ANALYSIS)

Key Basic Freeway Segment		Time Period	Lanes	(1) Existing Traffic Conditions			(2) Year 2017 Cumulative Traffic Conditions			(3) Year 2017 Plus Project PA-1 and PA-2 (Interim) Traffic Conditions			(4) Impact
				Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Yes/No
43.	SR-57 Southbound *from*	AM	3	2,076	34.6	D	**2,149**	**36.8**	**E**	**2,151**	**36.9**	**E**	**Yes**
	I-10 *to* Temple Avenue	PM		**2,243**	**40.2**	**E**	**2,335**	**44.2**	**E**	**2,345**	**44.7**	**E**	**Yes**
44.	I-10 Westbound *from*	AM	4	**2,791**	--	**F**	**2,896**	--	**F**	**2,905**	--	**F**	**Yes**
	Sierra Avenue *to* Citrus Avenue	PM		1,642	23.7	C	1,712	24.9	C	1,715	25.0	C	No
45.	I-10 Westbound *from*	AM	4	**2,805**	--	**F**	**2,912**	--	**F**	**2,923**	--	**F**	**Yes**
	Citrus Avenue *to* Cherry Avenue	PM		1,650	23.9	C	1,721	25.1	C	1,724	25.1	C	No
46.	I-10 Westbound *from*	AM	4	**2,873**	--	**F**	**2,984**	--	**F**	**2,998**	--	**F**	**Yes**
	Cherry Avenue *to* Etiwanda Avenue	PM		1,690	24.5	C	1,763	25.8	C	1,767	25.9	C	No
47.	I-10 Westbound *from*	AM	4	**3,356**	--	**F**	**3,484**	--	**F**	**3,506**	--	**F**	**Yes**
	Etiwanda Avenue *to* I-15	PM		1,974	30.2	D	2,056	32.3	D	2,062	32.4	D	No
48.	I-10 Westbound *from*	AM	6	**2,237**	**37.9**	**E**	**2,349**	**42.5**	**E**	**2,389**	**44.4**	**E**	**Yes**
	I-15 *to* Miliken Avenue	PM		1,316	18.8	C	1,393	19.9	C	1,404	20.1	C	No
49.	I-10 Westbound *from*	AM	4	**3,393**	--	**F**	**3,574**	--	**F**	**3,643**	--	**F**	**Yes**
	Miliken Avenue *to* Haven Avenue	PM		1,996	30.7	D	2,125	34.2	D	2,143	34.8	D	No
50.	I-10 Westbound *from*	AM	4	**3,406**	--	**F**	**3,575**	--	**F**	**3,643**	--	**F**	**Yes**
	Haven Avenue *to* Archibald Avenue	PM		2,004	30.9	D	2,120	34.1	D	2,138	34.6	D	No
51.	I-10 Westbound *from*	AM	4	**3,239**	--	**F**	**3,350**	--	**F**	**3,387**	--	**F**	**Yes**
	Archibald Avenue *to* Holt Boulevard	PM		1,866	27.8	D	1,937	29.4	D	1,946	29.6	D	No
52.	I-10 Westbound *from*	AM	4	**3,232**	--	**F**	**3,369**	--	**F**	**3,406**	--	**F**	**Yes**
	Holt Boulevard *to* Vineyard Avenue	PM		1,933	29.3	D	2,051	32.1	D	2,062	32.4	D	No
53.	I-10 Westbound *from*	AM	4	**3,242**	--	**F**	**3,380**	--	**F**	**3,399**	--	**F**	**Yes**
	Vineyard Avenue *to* 4th Street	PM		1,907	28.7	D	2,054	32.2	D	2,135	34.5	D	No
54.	I-10 Westbound *from*	AM	4	**3,379**	--	**F**	**3,525**	--	**F**	**3,544**	--	**F**	**Yes**
	4th Street *to* Euclid Avenue	PM		1,953	29.7	D	2,103	33.6	D	2,183	36.0	E	Yes
55.	I-10 Westbound *from*	AM	4	**3,393**	--	**F**	**3,532**	--	**F**	**3,549**	--	**F**	**Yes**
	Euclid Avenue *to* Mountain Avenue	PM		1,996	30.7	D	2,141	34.7	D	**2,214**	**37.1**	**E**	**Yes**
56.	I-10 Westbound *from*	AM	4	**3,379**	--	**F**	**3,517**	--	**F**	**3,532**	--	**F**	**Yes**
	Mountain Avenue *to* Central Avenue	PM		1,988	30.5	D	2,128	34.3	D	**2,194**	**36.4**	**E**	**Yes**

Notes:

- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report

[116] *Appendix M* contains the Density/LOS calculation worksheets for all study basic freeway segments.

TABLE 12-4 (CONTINUED)
YEAR 2017 PLUS PROJECT PA-1 AND PA-2 (INTERIM)
PEAK HOUR BASIC FREEWAY SEGMENTS CAPACITY ANALYSIS SUMMARY[117] (CALTRANS FACILITIES ANALYSIS)

Key Basic Freeway Segment		Time Period	Lanes	(1) Existing Traffic Conditions			(2) Year 2017 Cumulative Traffic Conditions			(3) Year 2017 Plus Project PA-1 and PA-2 (Interim) Traffic Conditions			(4) Impact
				Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Yes/No
57.	I-10 Westbound *from*	AM	4	**3,365**	--	**F**	**3,500**	--	**F**	**3,515**	--	**F**	**Yes**
	Central Avenue *to* Monte Vista Avenue	PM		1,980	30.4	D	2,115	33.9	D	**2,174**	**35.7**	**E**	**Yes**
58.	I-10 Westbound *from*	AM	4	**3,393**	--	**F**	**3,528**	--	**F**	**3,540**	--	**F**	**Yes**
	Monte Vista Avenue *to* Indian Hill Boulevard	PM		1,996	30.7	D	2,129	34.3	D	**2,180**	**35.9**	**E**	**Yes**
59.	I-10 Westbound *from*	AM	4	**2,246**	**38.2**	**E**	**2,347**	**42.4**	**E**	**2,358**	**42.9**	**E**	**Yes**
	Indian Hill Boulevard *to* Towne Avenue	PM		2,141	34.7	D	**2,275**	**39.3**	**E**	**2,319**	**41.2**	**E**	**Yes**
60.	I-10 Westbound *from*	AM	4	**2,266**	**39.0**	**E**	**2,366**	**43.3**	**E**	**2,375**	**43.7**	**E**	**Yes**
	Towne Avenue *to* Garey Avenue	PM		**2,160**	**35.3**	**E**	**2,290**	**39.9**	**E**	**2,327**	**41.5**	**E**	**Yes**
61.	I-10 Westbound *from*	AM	4	**2,179**	**35.9**	**E**	**2,276**	**39.4**	**E**	**2,285**	**39.7**	**E**	**Yes**
	Garey Avenue *to* White Avenue	PM		2,077	32.8	D	**2,205**	**36.8**	**E**	**2,242**	**38.1**	**E**	**Yes**
62.	I-10 Westbound *from*	AM	4	**2,275**	**39.3**	**E**	**2,376**	**43.8**	**E**	**2,385**	**44.2**	**E**	**Yes**
	White Avenue *to* Dudley Street	PM		**2,169**	**35.6**	**E**	**2,300**	**40.4**	**E**	**2,337**	**42.0**	**E**	**Yes**
63.	I-10 Westbound *from*	AM	4	**2,285**	**39.7**	**E**	**2,386**	**44.3**	**E**	**2,394**	**44.7**	**E**	**Yes**
	Dudley Street *to* Fairplex Drive	PM		**2,178**	**35.9**	**E**	**2,309**	**40.7**	**E**	**2,346**	**42.4**	**E**	**Yes**
64.	I-10 Westbound *from*	AM	4	**2,285**	**39.7**	**E**	**2,385**	**44.2**	**E**	**2,392**	**44.6**	**E**	**Yes**
	Fairplex Drive *to* SR-57	PM		**2,178**	**35.9**	**E**	**2,306**	**40.6**	**E**	**2,336**	**41.9**	**E**	**Yes**
65.	I-10 Westbound *from*	AM	4	1,880	28.1	D	1,952	29.7	D	1,956	29.8	D	No
	SR-57 *to* Via Verde	PM		1,792	26.4	D	1,870	27.9	D	1,885	28.2	D	No
66.	I-10 Westbound *from*	AM	4	1,899	28.5	D	1,972	30.2	D	1,975	30.2	D	No
	Via Verde *to* Holt Avenue	PM		1,811	26.7	D	1,888	28.3	D	1,899	28.5	D	No
67.	I-10 Westbound *from*	AM	4	1,889	28.3	D	1,962	29.9	D	1,965	30.0	D	No
	Holt Avenue *to* Grand Avenue	PM		1,801	26.5	D	1,878	28.1	D	1,889	28.3	D	No
68.	I-10 Westbound *from*	AM	4	2,034	31.7	D	2,111	33.8	D	2,113	33.9	D	No
	Grand Avenue *to* Citrus Street	PM		1,939	29.4	D	2,019	31.3	D	2,026	31.5	D	No

Notes:

- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report

[117] *Appendix M* contains the Density/LOS calculation worksheets for all study basic freeway segments.

12.3.3 *Year 2020 Cumulative Traffic Conditions*

Table 12-5 summarizes the peak hour Level of Service results at the sixty-eight (68) freeway segments for "Year 2020 Plus Project PA-1, PA-2, PA-3 and PA-4" traffic conditions. The first column (1) presents a summary of existing AM and PM peak hour traffic conditions (which were also presented in *Table 12-2 and 12-3*). The second column (2) lists forecast Year 2020 Cumulative traffic conditions and the third column (3) lists forecast Cumulative Plus Project PA-1, PA-2, PA-3 and PA-4 traffic conditions. The fourth column (4) indicates whether the traffic associated with the entire Meredith International Project (PA-1, PA-2, PA-3 and PA-4) will have an impact based on the LOS standards in this report.

12.3.3.1 *Year 2020 Cumulative Traffic Conditions*

Review of column (2) of *Table 12-5* indicates that fifty-eight (58) of the sixty-eight (68) freeway segments are forecast to operate at an unacceptable level of service during the AM and PM peak hours when compared to the LOS standards defined in this report. The remaining ten (10) freeway segments are forecast to operate at acceptable levels of service during the AM and PM peak hours.

12.3.3.2 *Year 2020 Cumulative Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions*

Review of columns (3) and (4) of *Table 12-5* indicates that the addition of Project traffic contributes incrementally to the fifty-eight (58) freeway segments forecast to operate at an unacceptable level of service during the AM and PM peak hours in the Year 2020 Cumulative Traffic Conditions. Although the addition of Project trips is not anticipated to result in any new deficient service levels on the fifty-eight (58) freeway segments forecast to operate at an unsatisfactory service level on either AM peak hour or PM peak hour under the "without Project" traffic conditions, the Project's contribution to the freeway system can be considered cumulatively significant under this traffic impact analysis scenario.

The remaining ten (10) freeway segments are forecast to operate at acceptable levels of service during the AM and PM peak hours.

Appendix M contains the Basic Freeway Segment Analysis Calculation worksheets for all freeway segments for the Existing traffic conditions.

TABLE 12-5
YEAR 2020 PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4
PEAK HOUR BASIC FREEWAY SEGMENTS CAPACITY ANALYSIS SUMMARY[118] (CALTRANS FACILITIES ANALYSIS)

Key Basic Freeway Segment		Time Period	Lanes	(1) Existing Traffic Conditions			(2) Year 2020 Cumulative Traffic Conditions			(3) Year 2020 Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions			(4) Impact
				Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Yes/No
1.	I-10 Eastbound *from*	AM	4	1,838	27.3	D	1,967	30.0	D	1,979	30.3	D	No
	Citrus Street *to* Grand Avenue	PM		**2,220**	**37.3**	**E**	**2,371**	**43.5**	**E**	**2,382**	**44.1**	**E**	**Yes**
2.	I-10 Eastbound *from*	AM	4	1,708	24.8	C	1,829	27.1	D	1,846	27.4	D	No
	Grand Avenue *to* Holt Avenue	PM		2,062	32.4	D	**2,204**	**36.7**	**E**	**2,219**	**37.3**	**E**	**Yes**
3.	I-10 Eastbound *from*	AM	4	1,716	25.0	C	1,838	27.3	D	1,855	27.6	D	No
	Holt Avenue *to* Via Verde	PM		2,072	32.7	D	**2,216**	**37.2**	**E**	**2,230**	**37.7**	**E**	**Yes**
4.	I-10 Eastbound *from*	AM	4	1,699	24.7	C	1,821	26.9	D	1,844	27.4	D	No
	Via Verde *to* SR-57	PM		2,051	32.1	D	**2,193**	**36.4**	**E**	**2,212**	**37.0**	**E**	**Yes**
5.	I-10 Eastbound *from*	AM	4	2,065	32.5	D	**2,243**	**38.1**	**E**	**2,290**	**39.9**	**E**	**Yes**
	SR-57 *to* Fairplex Drive	PM		**2,493**	--	**F**	**2,683**	--	**F**	**2,723**	--	**F**	**Yes**
6.	I-10 Eastbound *from*	AM	4	2,065	32.5	D	**2,246**	**38.2**	**E**	**2,301**	**40.4**	**E**	**Yes**
	Fairplex Drive *to* Dudley Street	PM		**2,493**	--	**F**	**2,686**	--	**F**	**2,730**	--	**F**	**Yes**
7.	I-10 Eastbound *from*	AM	4	2,056	32.3	D	**2,236**	**37.9**	**E**	**2,292**	**40.0**	**E**	**Yes**
	Dudley Street *to* White Avenue	PM		**2,482**	--	**F**	**2,674**	--	**F**	**2,718**	--	**F**	**Yes**
8.	I-10 Eastbound *from*	AM	4	1,969	30.1	D	2,144	34.8	D	**2,199**	**36.6**	**E**	**Yes**
	White Avenue *to* Garey Avenue	PM		**2,377**	**43.8**	**E**	**2,563**	--	**F**	**2,607**	--	**F**	**Yes**
9.	I-10 Eastbound *from*	AM	4	2,047	32.0	D	**2,227**	**37.5**	**E**	**2,282**	**39.6**	**E**	**Yes**
	Garey Avenue *to* Town Avenue	PM		**2,472**	--	**F**	**2,663**	--	**F**	**2,707**	--	**F**	**Yes**
10.	I-10 Eastbound *from*	AM	4	2,030	31.6	D	**2,212**	**37.0**	**E**	**2,277**	**39.4**	**E**	**Yes**
	Towne Avenue *to* Indian Hill Boulevard	PM		**2,451**	--	**F**	**2,643**	--	**F**	**2,691**	--	**F**	**Yes**
11.	I-10 Eastbound *from*	AM	4	1,509	21.6	C	1,662	24.1	C	1,737	25.4	C	No
	Indian Hill Boulevard *to* Monte Vista Avenue	PM		**3,161**	--	**F**	**3,398**	--	**F**	**3,451**	--	**F**	**Yes**
12.	I-10 Eastbound *from*	AM	4	1,496	21.4	C	1,652	23.9	C	1,737	25.4	C	No
	Monte Vista Avenue *to* Central Avenue	PM		**3,136**	--	**F**	**3,373**	--	**F**	**3,430**	--	**F**	**Yes**
13.	I-10 Eastbound *from*	AM	4	1,503	21.5	C	1,661	24.0	C	1,757	25.7	C	No
	Central Avenue *to* Mountain Avenue	PM		**3,148**	--	**F**	**3,390**	--	**F**	**3,452**	--	**F**	**Yes**
14.	I-10 Eastbound *from*	AM	4	1,509	21.6	C	1,671	24.2	C	1,777	26.1	C	No
	Mountain Avenue *to* Euclid Avenue	PM		**3,161**	--	**F**	**3,406**	--	**F**	**3,472**	--	**F**	**Yes**

Notes:

- pc/mi/ln = Passenger cars per mile per lane (density)
- **Bold Volume/Density/LOS values** indicate adverse service levels based on the Caltrans LOS Criteria

[118] *Appendix M* contains the Density/LOS calculation worksheets for all study basic freeway segments.

TABLE 12-5 (CONTINUED)
YEAR 2020 PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4
PEAK HOUR BASIC FREEWAY SEGMENTS CAPACITY ANALYSIS SUMMARY[119] (CALTRANS FACILITIES ANALYSIS)

	Key Basic Freeway Segment	Time Period	Lanes	(1) Existing Traffic Conditions			(2) Year 2020 Cumulative Traffic Conditions			(3) Year 2020 Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions			(4) Impact
				Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Yes/No
15.	I-10 Eastbound *from*	AM	4	1,485	21.3	C	1,652	23.9	C	1,768	25.9	C	No
	Euclid Avenue *to* 4th Street	PM		**3,133**	--	**F**	**3,387**	--	**F**	**3,457**	--	**F**	**Yes**
16.	I-10 Eastbound *from*	AM	4	1,442	20.6	C	1,604	23.1	C	1,719	25.0	C	No
	4th Street *to* Vineyard Avenue	PM		**3,021**	--	**F**	**3,262**	--	**F**	**3,332**	--	**F**	**Yes**
17.	I-10 Eastbound *from*	AM	4	1,503	21.5	C	1,640	23.7	C	1,673	24.2	C	No
	Vineyard Avenue *to* Holt Boulevard	PM		**2,999**	--	**F**	**3,234**	--	**F**	**3,316**	--	**F**	**Yes**
18.	I-10 Eastbound *from*	AM	4	1,370	19.6	C	1,460	20.9	C	1,472	21.1	C	No
	Holt Boulevard *to* Archibald Avenue	PM		**2,976**	--	**F**	**3,164**	--	**F**	**3,215**	--	**F**	**Yes**
19.	I-10 Eastbound *from*	AM	4	1,515	21.7	C	1,644	23.8	C	1,689	24.5	C	No
	Archibald Avenue *to* Haven Avenue	PM		**3,174**	--	**F**	**3,446**	--	**F**	**3,569**	--	**F**	**Yes**
20.	I-10 Eastbound *from*	AM	4	1,509	21.6	C	1,648	23.8	C	1,692	24.6	C	No
	Haven Avenue *to* Miliken Avenue	PM		**3,161**	--	**F**	**3,447**	--	**F**	**3,570**	--	**F**	**Yes**
21.	I-10 Eastbound *from*	AM	6	995	14.2	B	1,080	15.4	B	1,108	15.8	B	No
	Miliken Avenue *to* I-15	PM		2,085	33.1	D	**2,264**	**38.9**	**E**	**2,339**	**42.0**	**E**	**Yes**
22.	I-10 Eastbound *from*	AM	4	1,492	21.4	C	1,596	23.0	C	1,611	23.2	C	No
	I-15 *to* Etiwanda Avenue	PM		**3,127**	--	**F**	**3,349**	--	**F**	**3,390**	--	**F**	**Yes**
23.	I-10 Eastbound *from*	AM	4	1,277	18.2	C	1,368	19.5	C	1,379	19.7	C	No
	Etiwanda Avenue *to* Cherry Avenue	PM		**2,677**	--	**F**	**2,869**	--	**F**	**2,901**	--	**F**	**Yes**
24.	I-10 Eastbound *from*	AM	4	1,247	17.8	B	1,336	19.1	C	1,343	19.2	C	No
	Cherry Avenue *to* Citrus Avenue	PM		**2,613**	--	**F**	**2,800**	--	**F**	**2,821**	--	**F**	**Yes**
25.	I-10 Eastbound *from*	AM	4	1,241	17.7	B	1,329	19.0	C	1,335	19.1	C	No
	Citrus Avenue *to* Sierra Avenue	PM		**2,600**	--	**F**	**2,784**	--	**F**	**2,801**	--	**F**	**Yes**
26.	SR-57 Northbound *from*	AM	3	1,949	31.3	D	2,089	35.0	D	**2,105**	**35.4**	**E**	**Yes**
	Temple Avenue *to* I-10	PM		2,032	33.4	D	**2,169**	**37.5**	**E**	**2,183**	**38.0**	**E**	**Yes**
27.	SR-57 Northbound *from*	AM	5	1,268	19.5	C	1,350	20.8	C	1,356	20.9	C	No
	I-10 *to* Via Verde	PM		1,322	20.3	C	1,417	21.8	C	1,430	22.0	C	No
28.	I-15 Northbound *from*	AM	4	1,210	17.3	B	1,303	18.6	C	1,314	18.8	C	No
	Cantu-Galleano Ranch Road *to* SR-60	PM		1,623	23.4	C	1,744	25.5	C	1,750	25.6	C	No

Notes:

- pc/mi/ln = Passenger cars per mile per lane (density)
- **Bold Volume/Density/LOS values** indicate adverse service levels based on the Caltrans LOS Criteria

[119] *Appendix M* contains the Density/LOS calculation worksheets for all study basic freeway segments.

TABLE 12-5 (CONTINUED)
YEAR 2020 PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4
PEAK HOUR BASIC FREEWAY SEGMENTS CAPACITY ANALYSIS SUMMARY[120] (CALTRANS FACILITIES ANALYSIS)

	Key Basic Freeway Segment	Time Period	Lanes	(1) Existing Traffic Conditions			(2) Year 2020 Cumulative Traffic Conditions			(3) Year 2020 Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions			(4) Impact
				Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Yes/No
29.	I-15 Northbound *from*	AM	5	1,416	20.2	C	1,519	21.8	C	1,538	22.1	C	No
	SR-60 *to* Jurupa Street	PM		1,898	28.5	D	2,032	31.6	D	2,043	31.9	D	No
30.	I-15 Northbound *from*	AM	4	**2,958**	--	**F**	**3,161**	--	**F**	**3,192**	--	**F**	**Yes**
	Jurupa Street *to* I-10	PM		1,714	25.0	C	1,841	27.3	D	1,860	27.7	D	No
31.	I-15 Northbound *from*	AM	4	**2,725**	--	**F**	**2,895**	--	**F**	**2,907**	--	**F**	**Yes**
	I-10 *to* 4th Street	PM		1,579	22.7	C	1,688	24.5	C	1,724	25.1	C	No
32.	I-15 Northbound *from*	AM	4	**2,573**	--	**F**	**2,734**	--	**F**	**2,747**	--	**F**	**Yes**
	4th Street *to* Foothill Boulevard	PM		1,491	21.4	C	1,596	23.0	C	1,631	23.5	C	No
33.	I-15 Northbound *from*	AM	4	**2,257**	**38.6**	**E**	**2,398**	**44.9**	**E**	**2,408**	--	**F**	**Yes**
	Foothill Boulevard *to* Baseline Road	PM		1,307	18.7	C	1,399	20.0	C	1,425	20.4	C	No
34.	I-15 Northbound *from*	AM	4	1,995	30.7	D	2,121	34.1	D	2,128	34.3	D	No
	Baseline Road *to* SR-210	PM		1,156	16.5	B	1,236	17.7	B	1,256	17.9	B	No
35.	I-15 Southbound *from*	AM	4	1,413	20.2	C	1,508	21.6	C	1,523	21.8	C	No
	SR-210 *to* Baseline Road	PM		2,111	33.8	D	**2,245**	**38.2**	**E**	**2,257**	**38.6**	**E**	**Yes**
36.	I-15 Southbound *from*	AM	4	1,598	23.0	C	1,706	24.8	C	1,727	25.2	C	No
	Baseline Road *to* Foothill Boulevard	PM		**2,387**	**44.3**	**E**	**2,539**	--	**F**	**2,553**	--	**F**	**Yes**
37.	I-15 Southbound *from*	AM	4	1,822	27.0	D	1,946	29.6	D	1,976	30.3	D	No
	Foothill Boulevard *to* 4th Street	PM		**2,722**	--	**F**	**2,894**	--	**F**	**2,912**	--	**F**	**Yes**
38.	I-15 Southbound *from*	AM	4	1,929	29.2	D	2,060	32.4	D	2,090	33.2	D	No
	4th Street *to* I-10	PM		**2,882**	--	**F**	**3,064**	--	**F**	**3,082**	--	**F**	**Yes**
39.	I-15 Southbound *from*	AM	4	2,095	33.3	D	**2,238**	**37.9**	**E**	**2,252**	**38.5**	**E**	**Yes**
	I-10 *to* Jurupa Street	PM		**3,130**	--	**F**	**3,349**	--	**F**	**3,386**	--	**F**	**Yes**
40.	I-15 Southbound *from*	AM	5	1,942	29.5	D	2,072	32.7	D	2,080	32.9	D	No
	Jurupa Street *to* SR-60	PM		1,427	20.4	C	1,536	22.0	C	1,559	22.4	C	No
41.	I-15 Southbound *from*	AM	4	1,659	24.0	C	1,775	26.1	D	1,780	26.1	D	No
	SR-60 *to* Cantu-Galleano Ranch Road	PM		1,219	17.4	B	1,320	18.9	C	1,333	19.0	C	No
42.	SR-57 Southbound *from*	AM	5	1,351	20.8	C	1,446	22.2	C	1,455	22.4	C	No
	Via Verde *to* I-10	PM		1,460	22.5	C	1,556	24.0	C	1,565	24.1	C	No

Notes:
- pc/mi/ln = Passenger cars per mile per lane (density)
- **Bold Volume/Density/LOS values** indicate adverse service levels based on the Caltrans LOS Criteria

[120] *Appendix M* contains the Density/LOS calculation worksheets for all study basic freeway segments.

TABLE 12-5 (CONTINUED)
YEAR 2020 PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4
PEAK HOUR BASIC FREEWAY SEGMENTS CAPACITY ANALYSIS SUMMARY[121] (CALTRANS FACILITIES ANALYSIS)

Key Basic Freeway Segment		Time Period	Lanes	(1) Existing Traffic Conditions			(2) Year 2020 Cumulative Traffic Conditions			(3) Year 2020 Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions			(4) Impact
				Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Yes/No
43.	SR-57 Southbound *from*	AM	3	2,076	34.6	D	**2,211**	**39.0**	**E**	**2,220**	**39.3**	**E**	**Yes**
	I-10 *to* Temple Avenue	PM		**2,243**	**40.2**	**E**	**2,402**	--	**F**	**2,424**	--	**F**	**Yes**
44.	I-10 Westbound *from*	AM	4	**2,791**	--	**F**	**2,979**	--	**F**	**2,994**	--	**F**	**Yes**
	Sierra Avenue *to* Citrus Avenue	PM		1,642	23.7	C	1,762	25.8	C	1,769	25.9	C	No
45.	I-10 Westbound *from*	AM	4	**2,805**	--	**F**	**2,996**	--	**F**	**3,013**	--	**F**	**Yes**
	Citrus Avenue *to* Cherry Avenue	PM		1,650	23.9	C	1,770	26.0	C	1,782	26.2	D	No
46.	I-10 Westbound *from*	AM	4	**2,873**	--	**F**	**3,071**	--	**F**	**3,095**	--	**F**	**Yes**
	Cherry Avenue *to* Etiwanda Avenue	PM		1,690	24.5	C	1,813	26.8	D	1,831	27.1	D	No
47.	I-10 Westbound *from*	AM	4	**3,356**	--	**F**	**3,585**	--	**F**	**3,620**	--	**F**	**Yes**
	Etiwanda Avenue *to* I-15	PM		1,974	30.2	D	2,116	33.9	D	2,138	34.6	D	No
48.	I-10 Westbound *from*	AM	6	**2,237**	**37.9**	**E**	**2,416**	--	**F**	**2,480**	--	**F**	**Yes**
	I-15 *to* Miliken Avenue	PM		1,316	18.8	C	1,433	20.5	C	1,473	21.1	C	No
49.	I-10 Westbound *from*	AM	4	**3,393**	--	**F**	**3,676**	--	**F**	**3,782**	--	**F**	**Yes**
	Miliken Avenue *to* Haven Avenue	PM		1,996	30.7	D	**2,185**	**36.1**	**E**	**2,249**	**38.3**	**E**	**Yes**
50.	I-10 Westbound *from*	AM	4	**3,406**	--	**F**	**3,677**	--	**F**	**3,784**	--	**F**	**Yes**
	Haven Avenue *to* Archibald Avenue	PM		2,004	30.9	D	**2,181**	**36.0**	**E**	**2,245**	**38.2**	**E**	**Yes**
51.	I-10 Westbound *from*	AM	4	**3,239**	--	**F**	**3,443**	--	**F**	**3,491**	--	**F**	**Yes**
	Archibald Avenue *to* Holt Boulevard	PM		1,866	27.8	D	1,989	30.6	D	2,009	31.1	D	No
52.	I-10 Westbound *from*	AM	4	**3,232**	--	**F**	**3,466**	--	**F**	**3,534**	--	**F**	**Yes**
	Holt Boulevard *to* Vineyard Avenue	PM		1,933	29.3	D	2,110	33.8	D	**2,160**	**35.3**	**E**	**Yes**
53.	I-10 Westbound *from*	AM	4	**3,242**	--	**F**	**3,478**	--	**F**	**3,527**	--	**F**	**Yes**
	Vineyard Avenue *to* 4th Street	PM		1,907	28.7	D	2,112	33.8	D	**2,248**	**38.3**	**E**	**Yes**
54.	I-10 Westbound *from*	AM	4	**3,379**	--	**F**	**3,630**	--	**F**	**3,680**	--	**F**	**Yes**
	4th Street *to* Euclid Avenue	PM		1,953	29.7	D	**2,163**	**35.4**	**E**	**2,300**	**40.4**	**E**	**Yes**
55.	I-10 Westbound *from*	AM	4	**3,393**	--	**F**	**3,634**	--	**F**	**3,680**	--	**F**	**Yes**
	Euclid Avenue *to* Mountain Avenue	PM		1,996	30.7	D	**2,201**	**36.6**	**E**	**2,327**	**41.5**	**E**	**Yes**
56.	I-10 Westbound *from*	AM	4	**3,379**	--	**F**	**3,618**	--	**F**	**3,661**	--	**F**	**Yes**
	Mountain Avenue *to* Central Avenue	PM		1,988	30.5	D	**2,188**	**36.2**	**E**	**2,304**	**40.5**	**E**	**Yes**

Notes:

- pc/mi/ln = Passenger cars per mile per lane (density)
- **Bold Volume/Density/LOS values** indicate adverse service levels based on the Caltrans LOS Criteria

[121] *Appendix M* contains the Density/LOS calculation worksheets for all study basic freeway segments.

TABLE 12-5 (CONTINUED)
YEAR 2020 PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4
PEAK HOUR BASIC FREEWAY SEGMENTS CAPACITY ANALYSIS SUMMARY[122] (CALTRANS FACILITIES ANALYSIS)

Key Basic Freeway Segment		Time Period	Lanes	(1) Existing Traffic Conditions			(2) Year 2020 Cumulative Traffic Conditions			(3) Year 2020 Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions			(4) Impact
				Peak Hour Volume (pc/h/ln)	Peak Hour Volume	Density (pc/mi/ln)	Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Yes/No
57.	I-10 Westbound *from*	AM	4	**3,365**	--	**F**	**3,601**	--	**F**	**3,641**	--	**F**	**Yes**
	Central Avenue *to* Monte Vista Avenue	PM		1,980	30.4	D	**2,175**	**35.8**	**E**	**2,280**	**39.5**	**E**	**Yes**
58.	I-10 Westbound *from*	AM	4	**3,393**	--	**F**	**3,630**	--	**F**	**3,666**	--	**F**	**Yes**
	Monte Vista Avenue *to* Indian Hill Boulevard	PM		1,996	30.7	D	**2,189**	**36.2**	**E**	**2,284**	**39.7**	**E**	**Yes**
59.	I-10 Westbound *from*	AM	4	**2,246**	**38.2**	**E**	**2,414**	--	**F**	**2,447**	--	**F**	**Yes**
	Indian Hill Boulevard *to* Towne Avenue	PM		2,141	34.7	D	**2,339**	**42.0**	**E**	**2,424**	--	**F**	**Yes**
60.	I-10 Westbound *from*	AM	4	**2,266**	**39.0**	**E**	**2,434**	--	**F**	**2,463**	--	**F**	**Yes**
	Towne Avenue *to* Garey Avenue	PM		**2,160**	**35.3**	**E**	**2,355**	**42.8**	**E**	**2,430**	--	**F**	**Yes**
61.	I-10 Westbound *from*	AM	4	**2,179**	**35.9**	**E**	**2,342**	**42.2**	**E**	**2,371**	**43.5**	**E**	**Yes**
	Garey Avenue *to* White Avenue	PM		2,077	32.8	D	**2,267**	**39.0**	**E**	**2,342**	**42.2**	**E**	**Yes**
62.	I-10 Westbound *from*	AM	4	**2,275**	**39.3**	**E**	**2,444**	--	**F**	**2,473**	--	**F**	**Yes**
	White Avenue *to* Dudley Street	PM		**2,169**	**35.6**	**E**	**2,365**	**43.3**	**E**	**2,439**	--	**F**	**Yes**
63.	I-10 Westbound *from*	AM	4	**2,285**	**39.7**	**E**	**2,454**	--	**F**	**2,483**	--	**F**	**Yes**
	Dudley Street *to* Fairplex Drive	PM		**2,178**	**35.9**	**E**	**2,375**	**43.7**	**E**	**2,449**	--	**F**	**Yes**
64.	I-10 Westbound *from*	AM	4	**2,285**	**39.7**	**E**	**2,454**	--	**F**	**2,479**	--	**F**	**Yes**
	Fairplex Drive *to* SR-57	PM		**2,178**	**35.9**	**E**	**2,371**	**43.5**	**E**	**2,436**	--	**F**	**Yes**
65.	I-10 Westbound *from*	AM	4	1,880	28.1	D	2,009	31.1	D	2,021	31.4	D	No
	SR-57 *to* Via Verde	PM		1,792	26.4	D	1,924	29.1	D	1,955	29.8	D	No
66.	I-10 Westbound *from*	AM	4	1,899	28.5	D	2,029	31.6	D	2,039	31.8	D	No
	Via Verde *to* Holt Avenue	PM		1,811	26.7	D	1,942	29.5	D	1,966	30.0	D	No
67.	I-10 Westbound *from*	AM	4	1,889	28.3	D	2,019	31.3	D	2,029	31.6	D	No
	Holt Avenue *to* Grand Avenue	PM		1,801	26.5	D	1,932	29.2	D	1,956	29.8	D	No
68.	I-10 Westbound *from*	AM	4	2,034	31.7	D	**2,172**	**35.7**	**E**	**2,178**	**35.9**	**E**	**Yes**
	Grand Avenue *to* Citrus Street	PM		1,939	29.4	D	2,077	32.8	D	2,094	33.3	D	No

Notes:

- pc/mi/ln = Passenger cars per mile per lane (density)
- **Bold Volume/Density/LOS values** indicate adverse service levels based on the Caltrans LOS Criteria

[122] *Appendix M* contains the Density/LOS calculation worksheets for all study basic freeway segments.

12.3.4 *Year 2035 Plus Project Traffic Conditions*

Table 12-6 summarizes the peak hour Level of Service results at the sixty-six (66) freeway segments for "Year 2035 Plus Project PA-1, PA-2, PA-3 and PA-4" traffic conditions. The first column (1) presents a summary of existing AM and PM peak hour traffic conditions (which were also presented in *Table 12-2 and 12-3*). The second column (2) lists forecast Year 2035 Plus Project PA-1, PA-2, PA-3 and PA-4 traffic conditions. The third column (3) indicates whether the traffic associated with the entire Meredith International Project (PA-1, PA-2, PA-3 and PA-4) will have an impact based on the LOS standards.

12.3.4.1 *Year 2035 Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions*

Review of columns (2) and (3) of *Table 12-6* indicates that sixty-six (66) of the sixty-eight (68) freeway segments are forecast to operate at an unacceptable level of service during the AM and PM peak hours when compared to the LOS standards defined in this report, the Project's contribution to the freeway system can be considered cumulatively significant under this traffic impact analysis scenario. The remaining two (2) freeway segments are forecast to operate at acceptable levels of service during the AM and PM peak hours.

Appendix M contains the Basic Freeway Segment Analysis Calculation worksheets for all freeway segments for the Existing traffic conditions.

TABLE 12-6
YEAR 2035 PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4
PEAK HOUR BASIC FREEWAY SEGMENTS CAPACITY ANALYSIS SUMMARY[123] (CALTRANS FACILITIES ANALYSIS)

Key Basic Freeway Segment		Time Period	Lanes	(1) Existing Traffic Conditions			(2) Year 2035 Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions			(3) Impact
				Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Peak Hour Volume	Density (pc/mi/ln)	LOS	Peak Hour Volume
1.	I-10 Eastbound *from*	AM	4	1,838	27.3	D	**2,750**	--	**F**	**Yes**
	Citrus Street *to* Grand Avenue	PM		**2,220**	**37.3**	**E**	**3,846**	--	**F**	**Yes**
2.	I-10 Eastbound *from*	AM	4	1,708	24.8	C	**2,690**	--	**F**	**Yes**
	Grand Avenue *to* Holt Avenue	PM		2,062	32.4	D	**3,796**	--	**F**	**Yes**
3.	I-10 Eastbound *from*	AM	4	1,716	25.0	C	**2,701**	--	**F**	**Yes**
	Holt Avenue *to* Via Verde	PM		2,072	32.7	D	**3,917**	--	**F**	**Yes**
4.	I-10 Eastbound *from*	AM	4	1,699	24.7	C	**2,694**	--	**F**	**Yes**
	Via Verde *to* SR-57	PM		2,051	32.1	D	**3,864**	--	**F**	**Yes**
5.	I-10 Eastbound *from*	AM	4	2,065	32.5	D	**2,518**	--	**F**	**Yes**
	SR-57 *to* Fairplex Drive	PM		**2,493**	--	**F**	**4,223**	--	**F**	**Yes**
6.	I-10 Eastbound *from*	AM	4	2,065	32.5	D	**2,976**	--	**F**	**Yes**
	Fairplex Drive *to* Dudley Street	PM		**2,493**	--	**F**	**3,980**	--	**F**	**Yes**
7.	I-10 Eastbound *from*	AM	4	2,056	32.3	D	**2,883**	--	**F**	**Yes**
	Dudley Street *to* White Avenue	PM		**2,482**	--	**F**	**3,802**	--	**F**	**Yes**
8.	I-10 Eastbound *from*	AM	4	1,969	30.1	D	**2,650**	--	**F**	**Yes**
	White Avenue *to* Garey Avenue	PM		**2,377**	**43.8**	**E**	**3,553**	--	**F**	**Yes**
9.	I-10 Eastbound *from*	AM	4	2,047	32.0	D	**2,767**	--	**F**	**Yes**
	Garey Avenue *to* Town Avenue	PM		**2,472**	--	**F**	**3,668**	--	**F**	**Yes**
10.	I-10 Eastbound *from*	AM	4	2,030	31.6	D	**2,881**	--	**F**	**Yes**
	Towne Avenue *to* Indian Hill Boulevard	PM		**2,451**	--	**F**	**3,652**	--	**F**	**Yes**
11.	I-10 Eastbound *from*	AM	4	1,509	21.6	C	**2,269**	**39.1**	**E**	**Yes**
	Indian Hill Boulevard *to* Monte Vista Avenue	PM		**3,161**	--	**F**	**4,300**	--	**F**	**Yes**
12.	I-10 Eastbound *from*	AM	4	1,496	21.4	C	**2,270**	**39.2**	**E**	**Yes**
	Monte Vista Avenue *to* Central Avenue	PM		**3,136**	--	**F**	**4,285**	--	**F**	**Yes**
13.	I-10 Eastbound *from*	AM	4	1,503	21.5	C	**2,450**	--	**F**	**Yes**
	Central Avenue *to* Mountain Avenue	PM		**3,148**	--	**F**	**4,518**	--	**F**	**Yes**
14.	I-10 Eastbound *from*	AM	4	1,509	21.6	C	**2,480**	--	**F**	**Yes**
	Mountain Avenue *to* Euclid Avenue	PM		**3,161**	--	**F**	**4,465**	--	**F**	**Yes**

Notes:

- pc/mi/ln = Passenger cars per mile per lane (density)
- **Bold Volume/Density/LOS values** indicate adverse service levels based on the Caltrans LOS Criteria

[123] *Appendix M* contains the Density/LOS calculation worksheets for all study basic freeway segments.

TABLE 12-6 (CONTINUED)
YEAR 2035 PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4
PEAK HOUR BASIC FREEWAY SEGMENTS CAPACITY ANALYSIS SUMMARY[124] (CALTRANS FACILITIES ANALYSIS)

Key Basic Freeway Segment		Time Period	Lanes	(1) Existing Traffic Conditions			(2) Year 2035 Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions			(3) Impact
				Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Yes/No
15.	I-10 Eastbound *from*	AM	4	1,485	21.3	C	**2,467**	--	**F**	**Yes**
	Euclid Avenue *to* Grove Avenue	PM		**3,133**	--	**F**	**4,451**	--	**F**	**Yes**
16.	I-10 Eastbound *from*	AM	4	1,442	20.6	C	**2,448**	--	**F**	**Yes**
	Grove Avenue *to* Vineyard Avenue	PM		**3,021**	--	**F**	**4,308**	--	**F**	**Yes**
17.	I-10 Eastbound *from*	AM	4	1,503	21.5	C	**2,444**	--	**F**	**Yes**
	Vineyard Avenue *to* Holt Boulevard	PM		**2,999**	--	**F**	**4,347**	--	**F**	**Yes**
18.	I-10 Eastbound *from*	AM	4	1,370	19.6	C	2,031	31.6	D	No
	Holt Boulevard *to* Archibald Avenue	PM		**2,976**	--	**F**	**4,078**	--	**F**	**Yes**
19.	I-10 Eastbound *from*	AM	4	1,515	21.7	C	**2,278**	**39.5**	**E**	**Yes**
	Archibald Avenue *to* Haven Avenue	PM		**3,174**	--	**F**	**4,460**	--	**F**	**Yes**
20.	I-10 Eastbound *from*	AM	4	1,509	21.6	C	**2,269**	**39.1**	**E**	**Yes**
	Haven Avenue *to* Miliken Avenue	PM		**3,161**	--	**F**	**4,454**	--	**F**	**Yes**
21.	I-10 Eastbound *from*	AM	6	995	14.2	B	1,590	22.9	C	No
	Miliken Avenue *to* I-15	PM		2,085	33.1	D	**2,921**	--	**F**	**Yes**
22.	I-10 Eastbound *from*	AM	4	1,492	21.4	C	**2,156**	**35.2**	**E**	**Yes**
	I-15 *to* Etiwanda Avenue	PM		**3,127**	--	**F**	**4,609**	--	**F**	**Yes**
23.	I-10 Eastbound *from*	AM	4	1,277	18.2	C	1,909	28.7	D	No
	Etiwanda Avenue *to* Cherry Avenue	PM		**2,677**	--	**F**	**4,257**	--	**F**	**Yes**
24.	I-10 Eastbound *from*	AM	4	1,247	17.8	B	1,930	29.2	D	No
	Cherry Avenue *to* Citrus Avenue	PM		**2,613**	--	**F**	**4,267**	--	**F**	**Yes**
25.	I-10 Eastbound *from*	AM	4	1,241	17.7	B	1,954	29.7	D	No
	Citrus Avenue *to* Sierra Avenue	PM		**2,600**	--	**F**	**4,129**	--	**F**	**Yes**
26.	SR-57 Northbound *from*	AM	3	1,949	31.3	D	**2,316**	**43.3**	**E**	**Yes**
	Temple Avenue *to* I-10	PM		2,032	33.4	D	**3,110**	--	**F**	**Yes**
27.	SR-57 Northbound *from*	AM	5	1,268	19.5	C	1,506	23.2	C	No
	I-10 *to* Via Verde	PM		1,322	20.3	C	1,785	27.9	D	No
28.	I-15 Northbound *from*	AM	4	1,210	17.3	B	1,724	25.1	C	No
	Cantu-Galleano Ranch Road *to* SR-60	PM		1,623	23.4	C	**3,140**	--	**F**	**Yes**

Notes:

- pc/mi/ln = Passenger cars per mile per lane (density)
- **Bold Volume/Density/LOS values** indicate adverse service levels based on the Caltrans LOS Criteria

[124] *Appendix M* contains the Density/LOS calculation worksheets for all study basic freeway segments.

TABLE 12-6 (CONTINUED)
YEAR 2035 PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4
PEAK HOUR BASIC FREEWAY SEGMENTS CAPACITY ANALYSIS SUMMARY[125] (CALTRANS FACILITIES ANALYSIS)

Key Basic Freeway Segment		Time Period	Lanes	(1) Existing Traffic Conditions			(2) Year 2035 Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions			(3) Impact
				Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Yes/No
29.	I-15 Northbound *from*	AM	5	1,416	20.2	C	1,995	30.7	D	No
	SR-60 *to* Jurupa Street	PM		1,898	28.5	D	**3,329**	--	**F**	**Yes**
30.	I-15 Northbound *from*	AM	4	**2,958**	--	**F**	**3,634**	--	**F**	**Yes**
	Jurupa Street *to* I-10	PM		1,714	25.0	C	**3,189**	--	**F**	**Yes**
31.	I-15 Northbound *from*	AM	4	**2,725**	--	**F**	**3,689**	--	**F**	**Yes**
	I-10 *to* 4th Street	PM		1,579	22.7	C	**3,328**	--	**F**	**Yes**
32.	I-15 Northbound *from*	AM	4	**2,573**	--	**F**	**3,396**	--	**F**	**Yes**
	4th Street *to* Foothill Boulevard	PM		1,491	21.4	C	**3,234**	--	**F**	**Yes**
33.	I-15 Northbound *from*	AM	4	**2,257**	**38.6**	**E**	**3,038**	--	**F**	**Yes**
	Foothill Boulevard *to* Baseline Road	PM		1,307	18.7	C	**3,253**	--	**F**	**Yes**
34.	I-15 Northbound *from*	AM	4	1,995	30.7	D	**2,727**	--	**F**	**Yes**
	Baseline Road *to* SR-210	PM		1,156	16.5	B	**3,071**	--	**F**	**Yes**
35.	I-15 Southbound *from*	AM	4	1,413	20.2	C	**2,339**	**42.0**	**E**	**Yes**
	SR-210 *to* Baseline Road	PM		2,111	33.8	D	**2,981**	--	**F**	**Yes**
36.	I-15 Southbound *from*	AM	4	1,598	23.0	C	**2,596**	--	**F**	**Yes**
	Baseline Road *to* Foothill Boulevard	PM		**2,387**	**44.3**	**E**	**3,296**	--	**F**	**Yes**
37.	I-15 Southbound *from*	AM	4	1,822	27.0	D	**2,655**	--	**F**	**Yes**
	Foothill Boulevard *to* 4th Street	PM		**2,722**	--	**F**	**3,822**	--	**F**	**Yes**
38.	I-15 Southbound *from*	AM	4	1,929	29.2	D	**2,956**	--	**F**	**Yes**
	4th Street *to* I-10	PM		**2,882**	--	**F**	**4,052**	--	**F**	**Yes**
39.	I-15 Southbound *from*	AM	4	2,095	33.3	D	**3,256**	--	**F**	**Yes**
	I-10 *to* Jurupa Street	PM		**3,130**	--	**F**	**4,547**	--	**F**	**Yes**
40.	I-15 Southbound *from*	AM	5	1,942	29.5	D	**2,401**	--	**F**	**Yes**
	Jurupa Street *to* SR-60	PM		1,427	20.4	C	2,138	34.6	D	No
41.	I-15 Southbound *from*	AM	4	1,659	24.0	C	**2,614**	--	**F**	**Yes**
	SR-60 *to* Cantu-Galleano Ranch Road	PM		1,219	17.4	B	**2,648**	--	**F**	**Yes**
42.	SR-57 Southbound *from*	AM	5	1,351	20.8	C	1,601	24.7	C	No
	Via Verde *to* I-10	PM		1,460	22.5	C	1,721	26.7	D	No

Notes:
- pc/mi/ln = Passenger cars per mile per lane (density)
- **Bold Volume/Density/LOS values** indicate adverse service levels based on the Caltrans LOS Criteria

[125] *Appendix M* contains the Density/LOS calculation worksheets for all study basic freeway segments.

TABLE 12-6 (CONTINUED)
YEAR 2035 PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4
PEAK HOUR BASIC FREEWAY SEGMENTS CAPACITY ANALYSIS SUMMARY[126] (CALTRANS FACILITIES ANALYSIS)

Key Basic Freeway Segment		Time Period	Lanes	(1) Existing Traffic Conditions			(2) Year 2035 Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions			(3) Impact
				Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Yes/No
43.	SR-57 Southbound *from*	AM	3	2,076	34.6	D	**2,441**	--	**F**	**Yes**
	I-10 *to* Temple Avenue	PM		**2,243**	**40.2**	**E**	**2,501**	--	**F**	**Yes**
44.	I-10 Westbound *from*	AM	4	**2,791**	--	**F**	**3,440**	--	**F**	**Yes**
	Sierra Avenue *to* Citrus Avenue	PM		1,642	23.7	C	**2,560**	--	**F**	**Yes**
45.	I-10 Westbound *from*	AM	4	**2,805**	--	**F**	**3,705**	--	**F**	**Yes**
	Citrus Avenue *to* Cherry Avenue	PM		1,650	23.9	C	**2,686**	--	**F**	**Yes**
46.	I-10 Westbound *from*	AM	4	**2,873**	--	**F**	**3,661**	--	**F**	**Yes**
	Cherry Avenue *to* Etiwanda Avenue	PM		1,690	24.5	C	**2,703**	--	**F**	**Yes**
47.	I-10 Westbound *from*	AM	4	**3,356**	--	**F**	**4,087**	--	**F**	**Yes**
	Etiwanda Avenue *to* I-15	PM		1,974	30.2	D	**2,968**	--	**F**	**Yes**
48.	I-10 Westbound *from*	AM	6	**2,237**	**37.9**	**E**	**2,728**	--	**F**	**Yes**
	I-15 *to* Miliken Avenue	PM		1,316	18.8	C	1,647	23.8	C	No
49.	I-10 Westbound *from*	AM	4	**3,393**	--	**F**	**4,085**	--	**F**	**Yes**
	Miliken Avenue *to* Haven Avenue	PM		1,996	30.7	D	**3,133**	--	**F**	**Yes**
50.	I-10 Westbound *from*	AM	4	**3,406**	--	**F**	**4,085**	--	**F**	**Yes**
	Haven Avenue *to* Archibald Avenue	PM		2,004	30.9	D	**2,541**	--	**F**	**Yes**
51.	I-10 Westbound *from*	AM	4	**3,239**	--	**F**	**3,772**	--	**F**	**Yes**
	Archibald Avenue *to* Holt Boulevard	PM		1,866	27.8	D	**3,034**	--	**F**	**Yes**
52.	I-10 Westbound *from*	AM	4	**3,232**	--	**F**	**3,760**	--	**F**	**Yes**
	Holt Boulevard *to* Vineyard Avenue	PM		1,933	29.3	D	**3,063**	--	**F**	**Yes**
53.	I-10 Westbound *from*	AM	4	**3,242**	--	**F**	**3,734**	--	**F**	**Yes**
	Vineyard Avenue *to* Grove Avenue	PM		1,907	28.7	D	**3,094**	--	**F**	**Yes**
54.	I-10 Westbound *from*	AM	4	**3,379**	--	**F**	**3,860**	--	**F**	**Yes**
	Grove Avenue *to* Euclid Avenue	PM		1,953	29.7	D	**3,111**	--	**F**	**Yes**
55.	I-10 Westbound *from*	AM	4	**3,393**	--	**F**	**3,715**	--	**F**	**Yes**
	Euclid Avenue *to* Mountain Avenue	PM		1,996	30.7	D	**3,035**	--	**F**	**Yes**
56.	I-10 Westbound *from*	AM	4	**3,379**	--	**F**	**3,851**	--	**F**	**Yes**
	Mountain Avenue *to* Central Avenue	PM		1,988	30.5	D	**3,024**	--	**F**	**Yes**

Notes:

- pc/mi/ln = Passenger cars per mile per lane (density)
- **Bold Volume/Density/LOS values** indicate adverse service levels based on the Caltrans LOS Criteria

[126] *Appendix M* contains the Density/LOS calculation worksheets for all study basic freeway segments.

TABLE 12-6 (CONTINUED)
YEAR 2035 PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4
PEAK HOUR BASIC FREEWAY SEGMENTS CAPACITY ANALYSIS SUMMARY[127] (CALTRANS FACILITIES ANALYSIS)

Key Basic Freeway Segment		Time Period	Lanes	(1) Existing Traffic Conditions			(2) Year 2035 Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions			(3) Impact
				Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Peak Hour Volume (pc/h/ln)	Density (pc/mi/ln)	LOS	Yes/No
57.	I-10 Westbound *from*	AM	4	**3,365**	--	**F**	**3,868**	--	**F**	**Yes**
	Central Avenue *to* Monte Vista Avenue	PM		1,980	30.4	D	**3,015**	--	**F**	**Yes**
58.	I-10 Westbound *from*	AM	4	**3,393**	--	**F**	**3,868**	--	**F**	**Yes**
	Monte Vista Avenue *to* Indian Hill Boulevard	PM		1,996	30.7	D	**2,961**	--	**F**	**Yes**
59.	I-10 Westbound *from*	AM	4	**2,246**	**38.2**	**E**	**2,743**	--	**F**	**Yes**
	Indian Hill Boulevard *to* Towne Avenue	PM		2,141	34.7	D	**3,212**	--	**F**	**Yes**
60.	I-10 Westbound *from*	AM	4	**2,266**	**39.0**	**E**	**2,691**	--	**F**	**Yes**
	Towne Avenue *to* Garey Avenue	PM		**2,160**	**35.3**	**E**	**3,010**	--	**F**	**Yes**
61.	I-10 Westbound *from*	AM	4	**2,179**	**35.9**	**E**	**2,427**	--	**F**	**Yes**
	Garey Avenue *to* White Avenue	PM		2,077	32.8	D	**2,847**	--	**F**	**Yes**
62.	I-10 Westbound *from*	AM	4	**2,275**	**39.3**	**E**	**2,636**	--	**F**	**Yes**
	White Avenue *to* Dudley Street	PM		**2,169**	**35.6**	**E**	**3,026**	--	**F**	**Yes**
63.	I-10 Westbound *from*	AM	4	**2,285**	**39.7**	**E**	**2,640**	--	**F**	**Yes**
	Dudley Street *to* Fairplex Drive	PM		**2,178**	**35.9**	**E**	**3,114**	--	**F**	**Yes**
64.	I-10 Westbound *from*	AM	4	**2,285**	**39.7**	**E**	**2,555**	--	**F**	**Yes**
	Fairplex Drive *to* SR-57	PM		**2,178**	**35.9**	**E**	**3,048**	--	**F**	**Yes**
65.	I-10 Westbound *from*	AM	4	1,880	28.1	D	**2,223**	**37.4**	**E**	**Yes**
	SR-57 *to* Via Verde	PM		1,792	26.4	D	**2,467**	--	**F**	**Yes**
66.	I-10 Westbound *from*	AM	4	1,899	28.5	D	**2,182**	**36.0**	**E**	**Yes**
	Via Verde *to* Holt Avenue	PM		1,811	26.7	D	**2,653**	--	**F**	**Yes**
67.	I-10 Westbound *from*	AM	4	1,889	28.3	D	**2,209**	**36.9**	**E**	**Yes**
	Holt Avenue *to* Grand Avenue	PM		1,801	26.5	D	**2,242**	**38.1**	**E**	**Yes**
68.	I-10 Westbound *from*	AM	4	2,034	31.7	D	**2,362**	**43.1**	**E**	**Yes**
	Grand Avenue *to* Citrus Street	PM		1,939	29.4	D	**2,848**	--	**F**	**Yes**

Notes:

- pc/mi/ln = Passenger cars per mile per lane (density)
- **Bold Volume/Density/LOS values** indicate adverse service levels based on the Caltrans LOS Criteria

[127] *Appendix M* contains the Density/LOS calculation worksheets for all study basic freeway segments.

12.4 Freeway Merge/Diverge Ramp Junction Analysis

In response to Caltrans requirements, a Freeway Ramp (Merge/Diverge) Analysis for the I-10 Interchanges at 4th Street, Archibald Avenue, and Vineyard Avenue have been prepared using the methods provided in the *Highway Capacity Manual 2000 (HCM 2000).*

12.4.1 *Existing Plus Project Ramp Junction Analysis*

Table 12-7 summarizes the peak hour Level of Service results at the ten (10) freeway ramp junctions for "Existing Plus Project PA-1 and PA-2 (Interim)" traffic conditions. The first column (1) presents a summary of existing AM and PM peak hour traffic conditions. The second column (2) presents Existing Plus PA-1 and PA-2 (Interim) traffic conditions and the third column (3) indicates whether the traffic associated with the PA-1 and PA-2 (Interim) component of the Project will have an impact based on the LOS standards defined in this report. The format of ***Table 12-8*** is similar to *Table 12-7* with the exception that the Project component consists of PA-1, PA-2, PA-3 and PA-4 traffic conditions.

12.4.1.1 *Existing Traffic Conditions*

Review of column (1) of *Table 12-7* and *Table 12-8* indicates that all ten (10) of the freeway ramps currently to operate at an unacceptable level of service during the AM or PM peak hours when compared to the LOS standards defined in this report.

12.4.1.2 *Existing Plus Project PA-1 and PA-2 (Interim) Traffic Conditions*

Review of columns (2) of *Table 12-6* indicates that all ten (10) of the freeway ramps are forecast to continue to operate at an unacceptable level of service with the addition of Project traffic during the AM or PM peak hours when compared to the LOS standards defined in this report. Although the addition of Project trips is not anticipated to result in any new deficient service levels, the Project's contribution to the on and off-ramps on the I-10 Freeway at 4th Street, Vineyard Avenue and Archibald Avenue can be considered cumulatively significant under this traffic impact analysis scenario.

12.4.1.3 *Existing Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions*

Review of columns (2) of *Table 12-8* indicates that that all ten (10) of the freeway ramps are forecast to operate at an unacceptable level of service with the addition of Project traffic during the AM or PM peak hours when compared to the LOS standards defined in this report. Although the addition of Project trips is not anticipated to result in any new deficient service levels, the Project's contribution to the on and off-ramps on the I-10 Freeway at 4th Street, Vineyard Avenue and Archibald Avenue can be considered cumulatively significant under this traffic impact analysis scenario.

Appendix N contains the Merge/Diverge Analysis Calculation worksheets.

TABLE 12-7
YEAR 2014 EXISTING PLUS PROJECT PA-1 AND PA-2 (INTERIM)
PEAK HOUR MERGE AND DIVERGE ANALYSIS SUMMARY[128] (CALTRANS FACILITIES ANALYSIS)

	Key Freeway Merge or Diverge Segment	Analysis Type	Time Period	(1) Existing Traffic Conditions				(2) Existing Plus Project PA-1 and PA-2 (Interim) Traffic Conditions				(3) Impact
				Freeway Pk Hr Volume	Ramp Pk Hr Volume	Density (pc/mi/ln)	LOS	Freeway Pk Hr Volume	Ramp Pk Hr Volume	Density (pc/mi/ln)	LOS	Yes/No
1.	I-10 Eastbound Off-Ramp *to* 4th Street	Diverge Analysis	AM	5,024	563	25.0	C	5,308	563	26.2	C	No
			PM	**11,044**	**743**	**56.6**	**F**	**11,124**	**743**	**57.4**	**F**	**Yes**
2.	I-10 Eastbound On-Ramp *from* 4th Street	Merge Analysis	AM	5,024	400	23.4	C	5,308	400	24.3	C	No
			PM	**11,044**	**322**	**42.7**	**F**	**11,124**	**322**	**43.0**	**F**	**Yes**
3.	I-10 Eastbound On-Ramp *from* Holt Boulevard	Merge Analysis	AM	4,562	592	20.7	C	4,593	592	20.8	C	No
			PM	**10,189**	**1,006**	**38.2**	**E**	**10,326**	**1,005**	**38.6**	**F**	**Yes**
4.	I-10 Eastbound On-Ramp *from* Archibald Avenue	Merge Analysis	AM	5,154	545	21.2	C	5,185	574	21.2	C	No
			PM	**11,195**	**746**	**38.8**	**F**	**11,331**	**875**	**40.3**	**F**	**Yes**
5.	I-10 Eastbound Off-Ramp *to* Vineyard Avenue	Diverge Analysis	AM	4,930	494	24.7	C	4,932	776	26.2	C	No
			PM	**10,753**	**613**	**54.4**	**F**	**10,758**	**688**	**54.5**	**F**	**Yes**
6.	I-10 Westbound Off-Ramp *to* 4th Street	Diverge Analysis	AM	**11,916**	**282**	**41.6**	**F**	**11,987**	**282**	**42.1**	**F**	**Yes**
			PM	6,726	450	24.6	C	7,029	450	25.6	C	No
7.	I-10 Westbound On-Ramp *to* 4th Street	Merge Analysis	AM	**11,916**	**796**	**49.2**	**F**	**11,987**	**796**	**49.4**	**F**	**Yes**
			PM	6,726	623	30.6	D	7,029	623	31.6	D	No
8.	I-10 Westbound On-Ramp *from* Northbound on Vineyard Avenue	Merge Analysis	AM	**11,620**	**195**	**36.7**	**F**	**11,621**	**195**	**36.7**	**F**	**Yes**
			PM	6,606	210	22.1	C	6,612	210	22.1	C	No
9.	I-10 Westbound On-Ramp *from* Southbound on Vineyard Avenue	Merge Analysis	AM	**11,815**	**383**	**36.3**	**F**	**11,816**	**453**	**36.8**	**F**	**Yes**
			PM	6,816	360	21.2	C	6,822	657	23.5	C	No
10.	I-10 Westbound Off-Ramp *to* Holt Boulevard	Diverge Analysis	AM	**11,589**	**598**	**42.2**	**F**	**11,730**	**597**	**42.7**	**F**	**Yes**
			PM	6,296	726	27.3	C	6,330	727	27.4	C	No

Note:

- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report

[128] *Appendix N* contains the Density/LOS calculation worksheets for all study basic freeway segments.

TABLE 12-8

YEAR 2014 EXISTING PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4

PEAK HOUR MERGE AND DIVERGE CAPACITY ANALYSIS SUMMARY[129] (CALTRANS FACILITIES ANALYSIS)

Key Freeway Merge or Diverge Segment	Analysis Type	Time Period	(1) Existing Traffic Conditions				(2) Existing Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions				(3) Impact
			Freeway Pk Hr Volume	Ramp Pk Hr Volume	Density (pc/mi/ln)	LOS	Freeway Pk Hr Volume	Ramp Pk Hr Volume	Density (pc/mi/ln)	LOS	Yes/No
1. I-10 Eastbound Off-Ramp *to* 4th Street	Diverge Analysis	AM	5,024	563	25.0	C	5,459	563	26.8	C	No
		PM	**11,044**	**743**	**56.6**	**F**	**11,310**	**743**	**59.1**	**F**	**Yes**
2. I-10 Eastbound On-Ramp *from* 4th Street	Merge Analysis	AM	5,024	400	23.4	C	5,459	400	24.8	C	No
		PM	**11,044**	**322**	**42.7**	**F**	**11,310**	**322**	**57.8**	**F**	**Yes**
3. I-10 Eastbound On-Ramp *from* Holt Boulevard	Merge Analysis	AM	4,562	592	20.7	C	4,609	591	20.9	C	No
		PM	**10,189**	**1,006**	**38.2**	**E**	**10,386**	**1,003**	**38.8**	**F**	**Yes**
4. I-10 Eastbound On-Ramp *from* Archibald Avenue	Merge Analysis	AM	5,154	545	21.2	C	5,200	666	22.0	C	No
		PM	**11,195**	**746**	**38.8**	**F**	**11,389**	**1,016**	**41.6**	**F**	**Yes**
5. I-10 Eastbound Off-Ramp *to* Vineyard Avenue	Diverge Analysis	AM	4,930	494	24.7	C	5,008	851	26.9	C	No
		PM	**10,753**	**613**	**54.4**	**F**	**10,864**	**768**	**55.4**	**F**	**Yes**
6. I-10 Westbound Off-Ramp *to* 4th Street	Diverge Analysis	AM	**11,916**	**282**	**41.6**	**F**	**12,101**	**282**	**42.9**	**F**	**Yes**
		PM	6,726	450	24.6	C	7240	450	26.2	C	No
7. I-10 Westbound On-Ramp *to* 4th Street	Merge Analysis	AM	**11,916**	**796**	**49.2**	**F**	**12,101**	**796**	**49.8**	**F**	**Yes**
		PM	6,726	623	30.6	D	7,240	623	32.3	D	No
8. I-10 Westbound On-Ramp *from* Northbound on Vineyard Avenue	Merge Analysis	AM	**11,620**	**195**	**36.7**	**F**	**11,695**	**195**	**37.0**	**F**	**Yes**
		PM	6,606	210	22.1	C	6,719	210	22.4	C	No
9. I-10 Westbound On-Ramp *from* Southbound on Vineyard Avenue	Merge Analysis	AM	**11,815**	**383**	**36.3**	**F**	**11,890**	**493**	**37.4**	**F**	**Yes**
		PM	6,816	360	21.2	C	6,929	761	24.6	C	No
10. I-10 Westbound Off-Ramp *to* Holt Boulevard	Diverge Analysis	AM	**11,589**	**598**	**42.2**	**F**	**11,774**	**596**	**42.8**	**F**	**Yes**
		PM	6,296	726	27.3	C	6,370	727	27.5	C	No

Note:

- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report

[129] *Appendix N* contains the Density/LOS calculation worksheets for all study basic freeway segments.

12.4.2 *Year 2017 Cumulative Traffic Conditions*

Table 12-9 summarizes the peak hour Level of Service results at the ten (10) freeway ramps for "Year 2017 Cumulative Plus Project" traffic conditions. The first column (1) lists forecast Year 2017 Cumulative traffic conditions and the two column (2) lists forecast Cumulative Plus PA-1 and PA-2 (Interim) traffic conditions. The third column (3) indicates whether the traffic associated with PA-1 and PA-2 (Interim) will have an impact based on the LOS standards defined in this report.

12.4.2.1 *Year 2017 Cumulative Traffic Conditions*

Review of column (1) of *Table 12-9* indicates that all ten (10) of the freeway ramps are forecast to operate at an unacceptable level of service during the AM and PM peak hours when compared to the LOS standards defined in this report.

12.4.2.2 *Year 2017 Plus Project PA-1 and PA-2 (Interim) Traffic Conditions*

Review of columns (2) of *Table 12-9* indicates that all ten (10) of the freeway ramps are forecast to continue to operate at an unacceptable level of service during the AM and PM peak hours when compared to the LOS standards defined in this report with the addition of Project traffic. Although the addition of Project trips is not anticipated to result in any new deficient service levels, the Project's contribution to the on and off-ramps on the I-10 Freeway at 4th Street, Vineyard Avenue and Archibald Avenue can be considered cumulatively significant under this traffic impact analysis scenario.

Appendix N contains the Merge/Diverge Analysis Calculation worksheets.

TABLE 12-9
YEAR 2017 PLUS PROJECT PA-1 AND PA-2 (INTERIM)
PEAK HOUR MERGE AND DIVERGE CAPACITY ANALYSIS SUMMARY[130] (CALTRANS FACILITIES ANALYSIS)

	Key Freeway Merge or Diverge Segment	Analysis Type	Time Period	(1) Year 2017 Traffic Conditions				(2) Year 2017 Plus Project PA-1 and PA-2 (Interim) Traffic Conditions				(3) Impact
				Freeway Pk Hr Volume	Ramp Pk Hr Volume	Density (pc/mi/ln)	LOS	Freeway Pk Hr Volume	Ramp Pk Hr Volume	Density (pc/mi/ln)	LOS	Yes/No
1.	I-10 Eastbound Off-Ramp *to* 4th Street	Diverge Analysis	AM	5,452	597	26.9	C	5,731	597	28.0	D	No
			PM	**11,589**	**787**	**61.6**	**F**	**11,669**	**787**	**62.3**	**F**	**Yes**
2.	I-10 Eastbound On-Ramp *from* 4th Street	Merge Analysis	AM	5,452	424	25.0	C	5,731	424	25.9	C	No
			PM	**11,589**	**341**	**60.2**	**F**	**11,669**	**341**	**60.9**	**F**	**Yes**
3.	I-10 Eastbound On-Ramp *from* Holt Boulevard	Merge Analysis	AM	4,725	632	21.5	C	4,756	632	21.5	C	No
			PM	**10,543**	**1,048**	**39.7**	**F**	**10,685**	**1,042**	**40.1**	**F**	**Yes**
4.	I-10 Eastbound On-Ramp *from* Archibald Avenue	Merge Analysis	AM	5,357	659	23.6	C	5,388	688	22.6	C	No
			PM	**11,591**	**1,015**	**42.2**	**F**	**11,727**	**1,144**	**43.7**	**F**	**Yes**
5.	I-10 Eastbound Off-Ramp *to* Vineyard Avenue	Diverge Analysis	AM	5,212	659	26.7	C	5,214	941	28.2	D	No
			PM	**11,235**	**695**	**58.8**	**F**	**11,240**	**770**	**58.9**	**F**	**Yes**
6.	I-10 Westbound Off-Ramp *to* 4th Street	Diverge Analysis	AM	**12,419**	**299**	**45.2**	**F**	**12,490**	**299**	**45.8**	**F**	**Yes**
			PM	7,252	477	26.4	C	7,555	477	27.4	C	No
7.	I-10 Westbound On-Ramp *to* 4th Street	Merge Analysis	AM	**12,419**	**844**	**51.2**	**F**	**12,490**	**844**	**51.4**	**F**	**Yes**
			PM	7,252	660	32.6	D	7,555	660	33.6	D	No
8.	I-10 Westbound On-Ramp *from* Northbound on Vineyard Avenue	Merge Analysis	AM	**12,067**	**207**	**38.3**	**F**	**12,068**	**207**	**38.3**	**F**	**Yes**
			PM	6,997	223	23.2	C	7,003	223	23.2	C	No
9.	I-10 Westbound On-Ramp *from* Southbound on Vineyard Avenue	Merge Analysis	AM	**12,274**	**444**	**38.7**	**F**	**12,275**	**514**	**38.8**	**F**	**Yes**
			PM	7,220	509	23.0	C	7,226	806	25.3	C	No
10.	I-10 Westbound Off-Ramp *to* Holt Boulevard	Diverge Analysis	AM	**12,004**	**601**	**43.6**	**F**	**12,145**	**600**	**44.6**	**F**	**Yes**
			PM	6,526	761	28.2	D	6,554	768	28.4	D	No

Note:

- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report

[130] *Appendix N* contains the Density/LOS calculation worksheets for all study basic freeway segments.

12.4.3 *Year 2020 Cumulative Traffic Conditions*

Table 12-10 summarizes the peak hour Level of Service results at the ten (10) freeway ramps for "Year 2020 Plus Project PA-1, PA-2, PA-3 and PA-4" traffic conditions. The first column (1) lists forecast Year 2020 Cumulative traffic conditions and the two column (2) lists forecast Cumulative Plus PA-1, PA-2, PA-3 and PA-4 traffic conditions. The third column (3) indicates whether the traffic associated with PA-1, PA-2, PA-3 and PA-4 will have an impact based on the LOS standards defined in this report.

12.4.3.1 *Year 2020 Cumulative Traffic Conditions*

Review of column (1) of *Table 12-10* indicates that all ten (10) of the freeway ramps are forecast to operate at an unacceptable level of service during the AM and PM peak hours when compared to the LOS standards defined in this report.

12.4.3.2 *Year 2020 Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions*

Review of columns (2) of *Table 12-10* indicates that that all ten (10) of the freeway ramps are forecast to continue to operate at an unacceptable level of service during the AM and PM peak hours when compared to the LOS standards defined in this report. Although the addition of Project trips is not anticipated to result in any new deficient service levels, the Project's contribution to the on and off-ramps on the I-10 Freeway at 4th Street, Vineyard Avenue and Archibald Avenue can be considered cumulatively significant under this traffic impact analysis scenario.

Appendix N contains the Merge/Diverge Analysis Calculation worksheets.

TABLE 12-10
YEAR 2020 CUMULATIVE PLUS PA-1, PA-2, PA-3 AND PA-4
PEAK HOUR MERGE AND DIVERGE CAPACITY ANALYSIS SUMMARY[131] (CALTRANS FACILITIES ANALYSIS)

Key Freeway Merge or Diverge Segment	Analysis Type	Time Period	(1) Year 2020 Traffic Conditions				(2) Year 2020 Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions				(3) Impact
			Freeway Pk Hr Volume	Ramp Pk Hr Volume	Density (pc/mi/ln)	LOS	Freeway Pk Hr Volume	Ramp Pk Hr Volume	Density (pc/mi/ln)	LOS	Yes/No
1. I-10 Eastbound Off-Ramp *to* 4th Street	Diverge Analysis	AM	5,585	630	27.6	C	6,020	630	29.3	D	No
		PM	**11,910**	**832**	**64.5**	**F**	**12,176**	**832**	**67.0**	**F**	**Yes**
2. I-10 Eastbound On-Ramp *from* 4th Street	Merge Analysis	AM	5,585	448	25.6	C	6,020	448	27.1	C	No
		PM	**11,910**	**361**	**63.1**	**F**	**12,176**	**361**	**65.3**	**F**	**Yes**
3. I-10 Eastbound On-Ramp *from* Holt Boulevard	Merge Analysis	AM	4,833	661	22.0	C	4,880	660	22.1	C	No
		PM	**10,819**	**1,084**	**40.9**	**F**	**11,016**	**1,099**	**41.6**	**F**	**Yes**
4. I-10 Eastbound On-Ramp *from* Archibald Avenue	Merge Analysis	AM	5,494	693	22.9	C	5,540	814	24.0	C	No
		PM	**11,903**	**1,061**	**43.6**	**F**	**12,097**	**1,331**	**46.4**	**F**	**Yes**
5. I-10 Eastbound Off-Ramp *to* Vineyard Avenue	Diverge Analysis	AM	5,343	690	27.4	C	5,421	1,047	29.5	D	No
		PM	**11,540**	**731**	**61.6**	**F**	**11,651**	**886**	**62.6**	**F**	**Yes**
6. I-10 Westbound Off-Ramp *to* 4th Street	Diverge Analysis	AM	**12,768**	**316**	**47.8**	**F**	**12,953**	**316**	**49.1**	**F**	**Yes**
		PM	7,441	504	27.2	C	7,955	504	28.8	D	No
7. I-10 Westbound On-Ramp *to* 4th Street	Merge Analysis	AM	**12,768**	**891**	**74.1**	**F**	**12,953**	**891**	**75.7**	**F**	**Yes**
		PM	7,441	698	33.6	D	**7,955**	**698**	**35.3**	**F**	**Yes**
8. I-10 Westbound On-Ramp *from* Northbound on Vineyard Avenue	Merge Analysis	AM	**12,399**	**218**	**39.5**	**F**	**12,474**	**218**	**39.7**	**F**	**Yes**
		PM	7,180	235	23.3	C	7,293	235	23.6	C	No
9. I-10 Westbound On-Ramp *from* Southbound on Vineyard Avenue	Merge Analysis	AM	**12,617**	**467**	**39.6**	**F**	**12,692**	**577**	**40.7**	**F**	**Yes**
		PM	7,415	530	23.6	C	7,528	931	27.0	C	No
10. I-10 Westbound Off-Ramp *to* Holt Boulevard	Diverge Analysis	AM	**12,335**	**617**	**46.0**	**F**	**12,520**	**615**	**47.3**	**F**	**Yes**
		PM	6,685	797	27.6	C	6,759	798	27.9	C	No

Notes:

- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report

[131] *Appendix N* contains the Density/LOS calculation worksheets for all study basic freeway segments.

12.4.4 *Year 2035 Plus Project Traffic Conditions*

Table 12-11 summarizes the peak hour Level of Service results for I-10 Interchanges with Archibald Avenue, Vineyard Avenue and Grove Avenue freeway ramps for "Year 2035 General Plan Buildout Plus Project PA-1, PA-2, PA-3 and PA-4" traffic conditions. The first column (1) lists forecast Year 2035 plus Project PA-1, PA-2, PA-3 and PA-4 traffic conditions. The third column (2) indicates whether the traffic associated with the entire Meredith International Project PA-1, PA-2, PA-3 and PA-4 will have an impact based on the LOS standards defined in this report.

12.4.4.1 *Year 2035 Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions*

Review of columns (1) of *Table 12-11* indicates that the freeway ramps at I-10 Interchange with Archibald Avenue, Vineyard Avenue and Grove Avenue are forecast to operate at an unacceptable level of service during the AM and PM peak hours when compared to the LOS standards defined in this report. Hence, the Project's contribution to the on and off-ramps on the I-10 Freeway at 4th Street, Vineyard Avenue and Archibald Avenue can be considered cumulatively significant under this traffic impact analysis scenario.

Appendix N contains the Merge/Diverge Analysis Calculation worksheets.

TABLE 12-11
YEAR 2035 PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4
PEAK HOUR MERGE AND DIVERGE CAPACITY ANALYSIS SUMMARY[132] (CALTRANS FACILITIES ANALYSIS)

Key Freeway Merge or Diverge Segment	Analysis Type	Time Period	(1) Year 2035 Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions				(2) Impact
			Freeway Pk Hr Volume	Ramp Pk Hr Volume	Density (pc/mi/ln)	LOS	Yes/No
1. I-10 Eastbound Off-Ramp *to* 4th Street	Diverge Analysis	AM	**I-10/4th STREET INTERCHANGE IS REPLACED WITH I-10/GROVE STREET INTERCHANGE IN YEAR 2035**				
		PM					
2. I-10 Eastbound On-Ramp *from* 4th Street	Merge Analysis	AM	**I-10/4th STREET INTERCHANGE IS REPLACED WITH I-10/GROVE STREET INTERCHANGE IN YEAR 2035**				
		PM					
3. I-10 Eastbound On-Ramp *from* Archibald Avenue	Merge Analysis	AM	7,640	931	29.0	D	No
		PM	**15,343**	**1,437**	**58.0**	**F**	**Yes**
4. I-10 Eastbound Off-Ramp *to* Vineyard Avenue	Diverge Analysis	AM	**8,056**	**1,146**	**40.6**	**E**	**Yes**
		PM	**15,186**	**1,022**	**94.9**	**F**	**Yes**
5. I-10 Eastbound On-Ramp *from* Northbound on Grove Avenue	Merge Analysis	AM	8,779	432	30.2	D	No
		PM	**15,938**	**270**	**78.1**	**F**	**Yes**
6. I-10 Eastbound Off-Ramp *to* Grove Avenue	Diverge Analysis	AM	**8,424**	**890**	**42.4**	**E**	**Yes**
		PM	**15,646**	**1,101**	**100.9**	**F**	**Yes**
7. I-10 Eastbound On-Ramp *from* Southbound on Grove Avenue	Merge Analysis	AM	8,424	355	28.4	D	No
		PM	**15,646**	**292**	**75.9**	**F**	**Yes**
8. I-10 Eastbound On-Ramp *from* Holt Boulevard	Merge Analysis	AM	7,399	241	23.7	C	No
		PM	**14,714**	**629**	**69.6**	**F**	**Yes**
9. I-10 Westbound Off-Ramp *to* 4th Street	Diverge Analysis	AM	**I-10/4th STREET INTERCHANGE IS REPLACED WITH I-10/GROVE STREET INTERCHANGE IN YEAR 2035**				
		PM					
10. I-10 Westbound On-Ramp *to* 4th Street	Merge Analysis	AM	**I-10/4th STREET INTERCHANGE IS REPLACED WITH I-10/GROVE STREET INTERCHANGE IN YEAR 2035**				
		PM					
11. I-10 Westbound On-Ramp *from* Northbound on Vineyard Avenue	Merge Analysis	AM	**13,205**	**220**	**42.2**	**F**	**Yes**
		PM	10,436	259	33.3	D	No
12. I-10 Westbound On-Ramp *from* Southbound on Vineyard Avenue	Merge Analysis	AM	**13,425**	**624**	**43.5**	**F**	**Yes**
		PM	**10,695**	**946**	**37.0**	**F**	**Yes**
13. I-10 Westbound On-Ramp *from* Northbound on Grove Avenue	Merge Analysis	AM	**13,622**	**393**	**45.9**	**F**	**Yes**
		PM	**10,784**	**505**	**37.4**	**E**	**Yes**
14. I-10 Westbound Off-Ramp *to* Grove Avenue	Diverge Analysis	AM	**13,622**	**427**	**82.4**	**F**	**Yes**
		PM	**10,784**	**857**	**56.4**	**F**	**Yes**
15. I-10 Westbound On-Ramp *from* Southbound on Grove Avenue	Merge Analysis	AM	**14,015**	**509**	**48.1**	**F**	**Yes**
		PM	**11,289**	**417**	**38.4**	**F**	**Yes**
16. I-10 Westbound Off-Ramp *to* Holt Boulevard	Diverge Analysis	AM	**13,244**	**949**	**52.6**	**F**	**Yes**
		PM	**9,760**	**1,544**	**41.3**	**E**	**Yes**

Notes:

- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report

[132] *Appendix N* contains the Density/LOS calculation worksheets for all study basic freeway segments.

12.5 Freeway Weaving Analysis

In response to Caltrans requirements, a Freeway Weaving Analysis for the I-10 Freeway segments between Vineyard Avenue and 4th Street as well as Archibald Avenue and Haven Avenue have been prepared using the methods provided in the *Highway Capacity Manual 2000 (HCM 2000).*

12.5.1 *Existing Plus Project Freeway Weaving Analysis*

Table 12-12 summarizes the peak hour Level of Service results at the three (3) freeway weaving segments for "Existing Plus Project PA-1 and PA-2" traffic conditions. The first column (1) presents a summary of existing AM and PM peak hour traffic conditions. The second column (2) presents Existing Plus PA-1 and PA-2 (Interim) traffic conditions and the third column (3) indicates whether the traffic associated with the PA-1 and PA-2 (Interim) component of the Project will have an impact based on the LOS standards defined in this report. The format of ***Table 12-13*** is similar to *Table 12-12* with the exception that the Project component consists of PA-1, PA-2, PA-3 and PA-4 traffic conditions.

12.5.1.1 *Existing Traffic Conditions*

Review of column (1) of *Table 12-12* and *Table 12-13* indicates that all three (3) of the freeway weaving segments currently operate at an unacceptable level of service during the AM and PM peak hours when compared to the LOS standards defined in this report.

12.5.1.2 *Existing Plus Project PA-1 and PA-2 (Interim) Traffic Conditions*

Review of columns (2) of *Table 12-12* indicates that all three (3) of the freeway ramps are forecast to continue to operate at an unacceptable level of service during the AM and PM peak hours when compared to the LOS standards defined in this report. Although the addition of Project trips is not anticipated to result in any new deficient service levels, the Project's contribution to the freeway system can be considered cumulatively significant under this traffic impact analysis scenario.

12.5.1.3 *Existing Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions*

Review of columns (2) of *Table 12-13* indicates that that all three (3) of the freeway weaving segments are forecast to continue operate at an unacceptable level of service during the AM and PM peak hours when compared to the LOS standards defined in this report. Although the addition of Project trips is not anticipated to result in any new deficient service levels, the Project's contribution to the freeway system can be considered cumulatively significant under this traffic impact analysis scenario.

Appendix O contains the Weaving Analysis Calculation worksheets.

TABLE 12-12
YEAR 2014 EXISTING PLUS PROJECT PA-1 AND PA-2 (INTERIM)
PEAK HOUR WEAVING CAPACITY ANALYSIS SUMMARY[133] (CALTRANS FACILITIES ANALYSIS)

Key Freeway Weaving Segment		Time Period	(1) Existing Traffic Conditions						(2) Existing Plus Project PA-1 and PA-2 (Interim) Traffic Conditions						(3) Impact
			A-C	B-D	A-D	B-C	Density (pc/mi/ln)	LOS	A-C	B-D	A-D	B-C	Density (pc/mi/ln)	LOS	Yes/No
1.	I-10 Eastbound *between*	AM	**5,656**	**0**	**726**	**1,094**	**47.00**	**F**	**5,689**	**0**	**757**	**1,096**	**47.61**	**F**	**Yes**
	Vineyard Ave On –Ramp and Archibald Ave Off-Ramp	PM	**11,284**	**0**	**531**	**1,095**	**79.84**	**F**	**11,426**	**0**	**668**	**1,100**	**82.76**	**F**	**Yes**
2.	I-10 Westbound *between*	AM	**12,816**	**0**	**1,037**	**629**	**149.38**	**F**	**13,074**	**0**	**1,037**	**747**	**155.51**	**F**	**Yes**
	Haven Ave On-Ramp and Archibald Ave Off-Ramp	PM	**7,539**	**0**	**1,091**	**517**	**91.48**	**F**	**7,606**	**0**	**1,091**	**549**	**92.89**	**F**	**Yes**
3.	I-10 Westbound *between*	AM	**12,160**	**0**	**571**	**540**	**176.92**	**F**	**12,302**	**0**	**572**	**681**	**184.72**	**F**	**Yes**
	Archibald Ave On-Ramp and Vineyard Ave Off-Ramp	PM	**7,271**	**0**	**975**	**665**	**113.05**	**F**	**7,311**	**0**	**981**	**699**	**114.87**	**F**	**Yes**

Note:

- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report

[133] *Appendix O* contains the Density/LOS calculation worksheets for all study basic freeway segments.

TABLE 12-13
YEAR 2014 EXISTING PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4
PEAK HOUR WEAVING CAPACITY ANALYSIS SUMMARY[134] (CALTRANS FACILITIES ANALYSIS)

Key Freeway Weaving Segment		Time Period	(1) Existing Traffic Conditions						(2) Existing Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions						(3) Impact
			A-C	B-D	A-D	B-C	Density (pc/mi/ln)	LOS	A-C	B-D	A-D	B-C	Density (pc/mi/ln)	LOS	Yes/No
1.	I-10 Eastbound *between*	AM	**5,656**	**0**	**726**	**1,094**	**47.00**	**F**	**5,780**	**0**	**772**	**1,171**	**49.28**	**F**	**Yes**
	Vineyard Ave On –Ramp and Archibald Ave Off-Ramp	PM	**11,284**	**0**	**531**	**1,095**	**79.84**	**F**	**11,591**	**0**	**727**	**1,205**	**86.21**	**F**	**Yes**
2.	I-10 Westbound *between*	AM	**12,816**	**0**	**1,037**	**629**	**149.38**	**F**	**13,216**	**0**	**1,037**	**846**	**159.86**	**F**	**Yes**
	Haven Ave On-Ramp and Archibald Ave Off-Ramp	PM	**7,539**	**0**	**1,091**	**517**	**91.48**	**F**	**7,781**	**0**	**1,091**	**684**	**97.87**	**F**	**Yes**
3.	I-10 Westbound *between*	AM	**12,160**	**0**	**571**	**540**	**176.92**	**F**	**12,419**	**0**	**645**	**724**	**191.18**	**F**	**Yes**
	Archibald Ave On-Ramp and Vineyard Ave Off-Ramp	PM	**7,271**	**0**	**975**	**665**	**113.05**	**F**	**7,458**	**0**	**1,088**	**739**	**121.73**	**F**	**Yes**

Note:

- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report

[134] *Appendix O* contains the Density/LOS calculation worksheets for all study basic freeway segments.

12.5.2 *Year 2017 Cumulative Traffic Conditions*

Table 12-14 summarizes the peak hour Level of Service results at the three (3) freeway weaving segments for "Year 2017 Cumulative Plus Project" traffic conditions. The first column (1) lists forecast Year 2017 Cumulative traffic conditions. The second column (2) lists forecast Year 2017 Cumulative Plus PA-1 and PA-2 (Interim) traffic condition and the third column (3) indicates whether the traffic associated with PA-1 and PA-2 (Interim) will have an impact based on the LOS standards defined in this report.

12.5.2.1 *Year 2017 Cumulative Traffic Conditions*

Review of column (1) of *Table 12-13* indicates that all three (3) of the freeway weaving segments are forecast to operate at an unacceptable level of service during the AM and PM peak hours when compared to the LOS standards defined in this report.

12.5.2.2 *Year 2017 Cumulative Plus Project PA-1 & PA-2 (Interim) Traffic Conditions*

Review of column (2) of *Table 12-14* indicates that that all three (3) of the freeway weaving segments are forecast to operate at an unacceptable level of service during the AM and PM peak hours when compared to the LOS standards defined in this report. Although the addition of Project trips is not anticipated to result in any new deficient service levels, the Project's contribution to the freeway system can be considered cumulatively significant under this traffic impact analysis scenario.

Appendix O contains the Weaving Analysis Calculation worksheets.

TABLE 12-14
YEAR 2017 PLUS PROJECT PA-1 AND PA-2 (INTERIM)
PEAK HOUR WEAVING CAPACITY ANALYSIS SUMMARY[135] (CALTRANS FACILITIES ANALYSIS)

Key Freeway Weaving Segment		Time Period	(1) Year 2017 Traffic Conditions						(2) Year 2017 Plus Project PA-1 and PA-2 (Interim) Traffic Conditions						(3) Impact
			A-C	B-D	A-D	B-C	Density (pc/mi/ln)	LOS	A-C	B-D	A-D	B-C	Density (pc/mi/ln)	LOS	Yes/No
1.	I-10 Eastbound *between*	AM	**5,995**	**0**	**783**	**1,270**	**52.01**	**F**	**6,028**	**0**	**814**	**1,272**	**52.64**	**F**	**Yes**
	Vineyard Ave On –Ramp and Archibald Ave Off-Ramp	PM	**11,832**	**0**	**597**	**1,289**	**87.14**	**F**	**11,974**	**0**	**734**	**1,289**	**90.11**	**F**	**Yes**
2.	I-10 Westbound *between*	AM	**13,450**	**0**	**1,105**	**845**	**164.42**	**F**	**13,708**	**0**	**1,105**	**963**	**170.76**	**F**	**Yes**
	Haven Ave On-Ramp and Archibald Ave Off-Ramp	PM	**7,978**	**0**	**1,179**	**691**	**102.19**	**F**	**8,045**	**0**	**1,179**	**723**	**103.68**	**F**	**Yes**
3.	I-10 Westbound *between*	AM	**12,674**	**0**	**670**	**607**	**192.45**	**F**	**12,816**	**0**	**671**	**748**	**200.50**	**F**	**Yes**
	Archibald Ave On-Ramp and Vineyard Ave Off-Ramp	PM	**7,717**	**0**	**1,197**	**720**	**128.75**	**F**	**7,757**	**0**	**1,203**	**754**	**130.66**	**F**	**Yes**

Note:

- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report

[135] *Appendix O* contains the Density/LOS calculation worksheets for all study basic freeway segments.

12.5.3 *Year 2020 Cumulative Traffic Conditions*

Table 12-15 summarizes the peak hour Level of Service results at the three (3) freeway weaving segments for "Year 2020 Cumulative Plus Project" traffic conditions. The first column (1) lists forecast Year 2020 Cumulative traffic conditions. The second column (2) lists forecast Year 2020 Cumulative plus PA-1, PA-2, PA-3 & PA-4 traffic conditions and the third column (3) indicates whether the traffic associated with the entire Meredith International Project (PA-1, PA-2, PA-3, PA-4) will have an impact based on the LOS standards defined in this report. The fourth column (4) presents the level of service with the implementation of an additional general purpose lane, if necessary. The fifth column (5) presents the level of service with the implementation of an additional HOV/HOT lane, if necessary. Caltrans typically assumes that an addition HOV/HOT lane will reduce the freeway mainline volumes by approximately 14%.

12.5.3.1 *Year 2020 Cumulative Traffic Conditions*

Review of column (1) of *Table 12-14* indicates that all three (3) of the freeway weaving segments are forecast to operate at an unacceptable level of service during the AM and PM peak hours when compared to the LOS standards defined in this report.

12.5.3.2 *Year 2020 Cumulative Plus Project PA-1, PA-2, PA-3 & PA-4 Traffic Conditions*

Review of column (2) of *Table 12-15* indicates that that all three (3) of the freeway weaving segments are forecast to continue to operate at an unacceptable level of service during the AM and PM peak hours when compared to the LOS standards defined in this report. Although the addition of Project trips is not anticipated to result in any new deficient service levels, the Project's contribution to the freeway system can be considered cumulatively significant under this traffic impact analysis scenario.

Appendix O contains the Weaving Analysis Calculation worksheets.

TABLE 12-15
YEAR 2020 PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4
PEAK HOUR WEAVING SEGMENTS CAPACITY ANALYSIS SUMMARY[136] (CALTRANS FACILITIES ANALYSIS)

Key Freeway Weaving Segment	Time Period	(1) Year 2020 Traffic Conditions						(2) Year 2020 Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions						(3) Impact
		A-C	B-D	A-D	B-C	Density (pc/mi/ln)	LOS	A-C	B-D	A-D	B-C	Density (pc/mi/ln)	LOS	Yes/No
1. I-10 Eastbound *between* Vineyard Ave On –Ramp and Archibald Ave Off-Ramp	AM	**6,169**	**0**	**826**	**1,336**	**54.51**	**F**	**6,293**	**0**	**872**	**1,413**	**56.92**	**F**	**Yes**
	PM	**12,168**	**0**	**628**	**1,349**	**90.73**	**F**	**12,475**	**0**	**824**	**1,459**	**97.46**	**F**	**Yes**
2. I-10 Westbound *between* Haven Ave On-Ramp and Archibald Ave Off-Ramp	AM	**13,835**	**0**	**1,136**	**883**	**170.83**	**F**	**14,235**	**0**	**1,136**	**1,100**	**181.86**	**F**	**Yes**
	PM	**8,204**	**0**	**1,211**	**722**	**106.11**	**F**	**8,446**	**0**	**1,211**	**889**	**112.85**	**F**	**Yes**
3. I-10 Westbound *between* Archibald Ave On-Ramp and Vineyard Ave Off-Ramp	AM	**13,039**	**0**	**704**	**640**	**201.81**	**F**	**13,298**	**0**	**778**	**824**	**216.81**	**F**	**Yes**
	PM	**7,940**	**0**	**1,255**	**760**	**135.59**	**F**	**8,127**	**0**	**1,368**	**834**	**144.87**	**F**	**Yes**

Note:

- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report

[136] *Appendix O* contains the Density/LOS calculation worksheets for all study basic freeway segments.

12.5.4 *Year 2035 Plus Project Traffic Conditions*

Table 12-16 summarizes the peak hour Level of Service results at the three (3) freeway weaving segments for "Year 2035 Plus Project PA-1, PA-2, PA-3 & PA-4" traffic conditions. The first column (1) presents a summary of existing AM and PM peak hour traffic conditions. The second column (2) lists forecast Year 2035 Plus Project PA-1, PA-2, PA-3 & PA-4 traffic conditions. The third column (3) indicates whether the traffic associated with the entire Meredith International Project (PA-1, PA-2, PA-3 & PA-4) will have an impact based on the LOS standards defined in this report.

12.5.4.1 *Year 2035 Plus Project PA-1, PA-2, PA-3 & PA-4 Traffic Conditions*

Review of column (2) of *Table 12-16* indicates that that all the three (3) freeway weaving segments are forecast to operate at an unacceptable level of service during the AM and PM peak hours when compared to the LOS standards defined in this report. Hence, the Project's contribution to the freeway system can be considered cumulatively significant under this traffic impact analysis scenario.

Appendix O contains the Weaving Analysis Calculation worksheets.

TABLE 12-16
YEAR 2035 PLUS PROJECT PA-1, PA-2, PA-3 AND PA-4
PEAK HOUR WEAVING CAPACITY ANALYSIS SUMMARY[137] (CALTRANS FACILITIES ANALYSIS)

Key Freeway Weaving Segment		Time Period	(1) Existing Traffic Conditions						(2) Year 2035 Plus Project PA-1, PA-2, PA-3 and PA-4 Traffic Conditions						(3) Impact
			A-C	B-D	A-D	B-C	Density (pc/mi/ln)	LOS	A-C	B-D	A-D	B-C	Density (pc/mi/ln)	LOS	Yes/No
1.	I-10 Eastbound *between*	AM	**5,656**	**0**	**726**	**1,094**	**47.00**	**F**	**9,197**	**0**	**1,132**	**1,798**	**85.17**	**F**	**Yes**
	Vineyard Ave On –Ramp and Archibald Ave Off-Ramp	PM	**11,284**	**0**	**531**	**1,095**	**79.84**	**F**	**16,457**	**0**	**1,271**	**1,743**	**138.03**	**F**	**Yes**
2.	I-10 Westbound *between*	AM	**12,816**	**0**	**1,037**	**629**	**149.38**	**F**	**15,369**	**0**	**1,250**	**1,176**	**201.20**	**F**	**Yes**
	Haven Ave On-Ramp and Archibald Ave Off-Ramp	PM	**7,539**	**0**	**1,091**	**517**	**91.48**	**F**	**9,561**	**0**	**1,332**	**962**	**130.01**	**F**	**Yes**
3.	I-10 Westbound *between*	AM	**12,160**	**0**	**571**	**540**	**176.92**	**F**	**14,146**	**0**	**902**	**941**	**243.17**	**F**	**Yes**
	Archibald Ave On-Ramp and Vineyard Ave Off-Ramp	PM	**7,271**	**0**	**975**	**665**	**113.05**	**F**	**11,523**	**0**	**1,763**	**1,087**	**231.03**	**F**	**Yes**

Note:

- **Bold Delay/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report

[137] *Appendix O* contains the Density/LOS calculation worksheets for all study basic freeway segments.

13.0 FREEWAY SEGMENT TRAFFIC IMPROVEMENTS

13.1 Potential Future Improvements

13.1.1 *I-10 Corridor Project*

The provided link, http://www.i10corridorproject.org/, has information on the project overview, alternatives and cost/funding for the I-10 Corridor Project. On December 4, 2013, the SANBAG Board voted to complete the Project Approval/Environmental Document (PA/ED) stage for the I-10 HOV and Express Lanes alternatives, and to initiate the Request for Proposal (RFP) process to initiate PA/ED for the I-15 Corridor Project.

The proposed I-10 Corridor Project consists of adding lane(s) and providing improvements along all or a portion of the existing 35-mile stretch of I-10 from approximately 2 miles west of the Los Angeles/San Bernardino county line in the City of Pomona to Ford Street in the City of Redlands. This project is a major element of the San Bernardino Associated Governments' (SANBAG) 10-year delivery plan, with an estimated construction cost of $500 million to more than $1 billion, depending on the alternative chosen. As a major regional east-west freeway corridor, I-10 is heavily used by travelers between Los Angeles and San Bernardino counties, and it is also a major truck route between southern California and the rest of the nation. Currently, I-10 is at capacity for many hours of the day, and that condition is expected to worsen significantly during the coming years if more capacity is not added.

The project study segments from Grand Avenue to Citrus Avenue along the I-10 freeway is one of the most congested in San Bernardino County, which is heavily used for commuting, freight movement and vacationing travelers. Heavy congestion is experienced by motorists during the peak hours on both directions along the I-10 (greater delays on Fridays and holiday weekends) on a regular basis. Up to approximately 263,000 vehicles, including 27,000 trucks, travel daily on this stretch of freeway and traffic congestion is anticipated to worsen with the projected daily traffic increase of up to 340,000 vehicles by 2040. With the increase in future traffic, travel times will subsequently increase, hindering freight movement and commuter traffic through the corridor if no improvements are made to the corridor.

13.1.2 *I-15 Corridor Project and Comprehensive Corridor Study*

The provided link http://www.sanbag.ca.gov/planning2/I-15_study/I-15_03-06-.pdf includes detailed information on the proposed corridor project as assessed on the I-15 Comprehensive Corridor Study – Final Report. In April 2004, SCAG adopted Destination 2030, the 2004 RTP for the Southern California region. Destination 2030 delineates significant transportation infrastructure investments planned to occur within the Southern California region through the year 2030.

In addition, the provided link, http://www.i10corridorproject.org/i-15-corridor-project, has preliminary information on the project overview and alternatives, and fact sheet for the I-15 Corridor Project, which is separate from the I-10 Corridor Project. As a major regional north-south freeway corridor, I-15 is heavily used, similar to the I-10, by commuters and recreational travelers, and is also a truck route between southern California and the rest of the nation. Like the I-10, the I-15 is at

capacity for many hours of the day, and is expected to worsen significantly in the future without additional capacity.

The I-15 Corridor Project will consider one alternative to the No Build option. Under the Build Alternative, Express Lanes would be added on the 35-mile stretch of I-15 from Cantu Galleano Ranch Road to US 395. The Strategic Plan and 10-Year Delivery Plan financial analysis concluded that traditional funds will not be available to construct additional lanes on the I-15 without an additional source of funding such as toll revenue. As such, High Occupancy Vehicle (HOV) lanes are not being considered as an alternative for the I-15 corridor.

13.2 Freeway Segment Results

A review of the level of service calculations summarized in *Tables 12-1* through *12-16* indicates that the development of the Project in combination with cumulative development and ambient growth is anticipated to impact 66 of 68 mainline freeway segments assessed in the report and has direct impact on only one segment. However, the I-10, I-15 and SR-57 Freeways are controlled exclusively by the State, there is no mechanism by which the lead agency (City of Ontario) can construct or guarantee the construction of any improvements to these freeways segments.

Therefore, the proposed Project's incremental impacts on key freeway study segments assessed in the report are considered unmitigatable as there are no feasible mitigation measures that will reduce cumulative mainline impacts to below significance thresholds or achieve acceptable service level goals. Traditional funding mechanisms used to improve the freeway mainline include San Bernardino County's Measure "I" retail sales tax revenue for transportation, state and federal gas tax, and formula distributions from vehicle registration fees. Future employees/patrons of the project contribute indirectly to freeway improvements through these sources.

13.3 Freeway Ramp Intersection Queuing Results

As requested by Caltrans, a synchro assessment has been completed which highlights the queuing results for 4th Street/I-10 Ramps, Vineyard Avenue/I-10 Ramps and Archibald Avenue/I-10 ramps. These results are included as a separate memorandum which has been attached as part of ***Appendix L.***