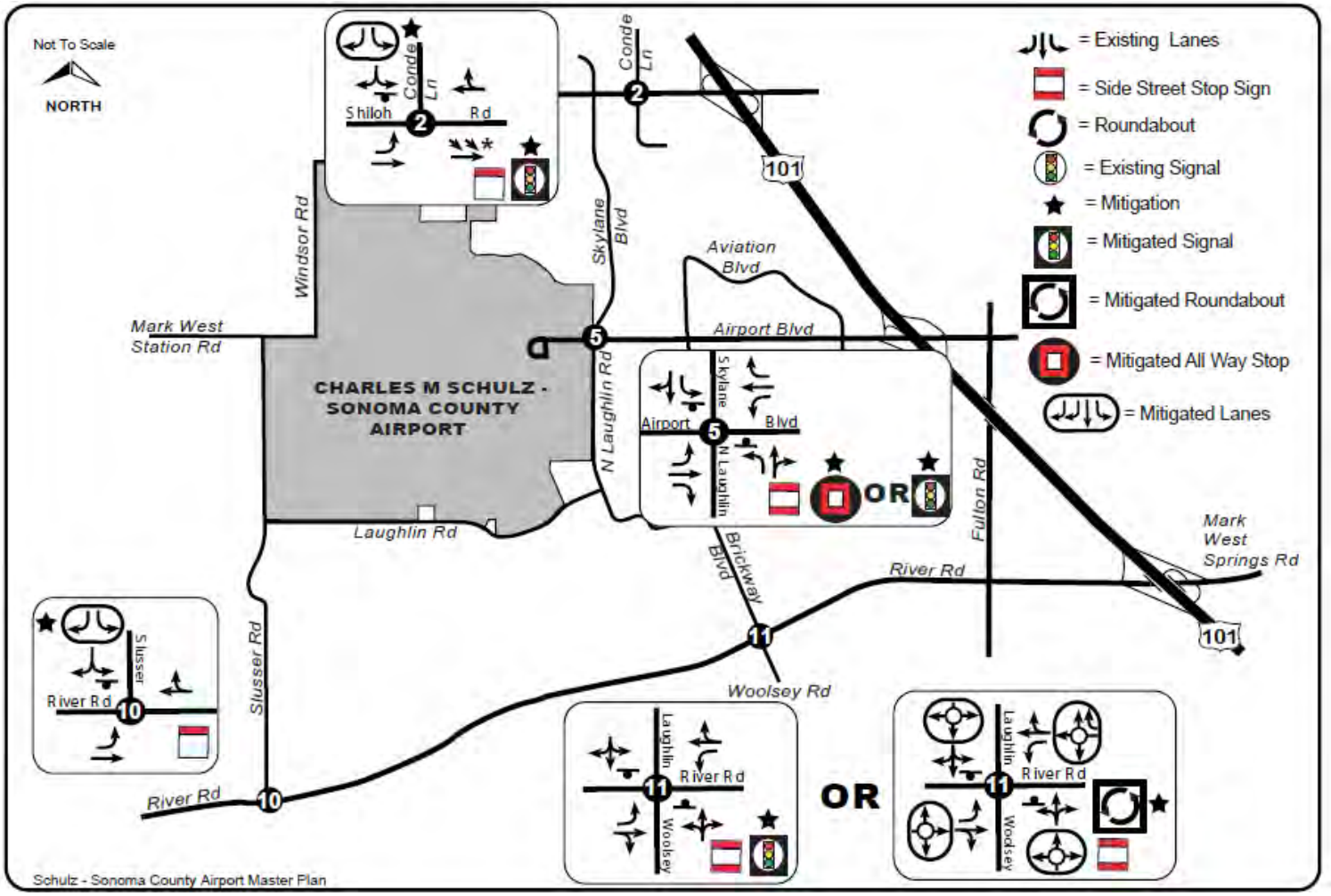
Figure 3.12-15

EXISTING + 2030 PROJECT INCREMENT LANE GEOMETRICS AND INTERSECTION CONTROL MITIGATIONS



SOURCE: Crane Transportation Group, 2011
PREPARED BY: Crane Transportation Group, 2011

River Road/Slusser Road

The County is not planning to signalize this intersection. Therefore, install a dedicated right-turn lane on the Slusser Road intersection approach to River Road in order to mitigate the significant impact of the Proposed Project. The installation of the dedicated right-turn lane would result in LOS C AM peak hour operation and LOS D PM peak hour operation on the stop sign controlled intersection approach. This would reduce this impact to a less-than-significant level.

Shiloh Road/Conde Lane

Provide intersection signalization and widen the southbound Conde Lane approach from 1 lane to 2 lanes. The installation of a signal would result in LOS A AM peak hour operation and LOS A PM peak hour operation.

Airport Boulevard/North Laughlin Road - Skylane Boulevard

Provide all-way stop control or signalize the intersection. The installation of an all-way stop control would result in LOS C AM peak hour operation and LOS C PM peak hour operation. The installation of a signal would result in LOS B AM peak hour operation and LOS B PM peak hour operation.

River Road/Laughlin Road (Brickway Boulevard)-Woolsey Road

Provide a roundabout or signalize the intersection. The installation of a roundabout would result in LOS A AM peak hour operation and LOS A PM peak hour operation. The installation of a signal would result in LOS B AM peak hour operation and LOS C PM peak hour operation.

Installation of roadway improvements RI-1 (signalization of the Shiloh Road/Conde Lane intersection), RI-5 (signalization of the Airport Boulevard/ North Laughlin Road- Skylane Boulevard Intersection), RI-7 (roundabout construction or signalization of the River Road/Laughlin Road (Brickway Boulevard)-Woolsey Road Intersection), and RI-8 (addition of 4th leg to Shiloh Road/Conde Lane intersection) or implementation of the improvements set forth in this mitigation measure would reduce the impacts associated with the Proposed Project to a less-than-significant level.

Impact 3.12.9: U.S. 101 Freeway Operation for Existing + 2030 Project Traffic Increment

Table 3.12-11 shows that all but one direction of mixed flow travel lanes on the U.S.101 freeway north and south of the Airport Boulevard interchange would be operating at acceptable levels of service during the AM and PM peak traffic hours after the addition of traffic associated with the 2030 Project development traffic to existing volumes. The exception is the northbound direction north of the Airport Boulevard interchange during the PM peak hour, where operation would be LOS D. However, the addition of traffic associated with the Proposed Project 2030 development would produce no change in the v/c ratio for this segment of freeway. Therefore, this would not meet Caltrans criteria for a significant impact. This would be a less-than-significant impact.

Mitigation Measure 3.12.9

No mitigation is warranted.

Table 3.12-11
FREEWAY LEVEL OF SERVICE – EXISTING + 2030 PROJECT INCREMENT

	AM PEAK HOUR							
	NORTHBOUND				SOUTHBOUND			
	WITHOUT PROPOSED PROJECT		WITH PROPOSED PROJECT		WITHOUT PROPOSED PROJECT		WITH PROPOSED PROJECT	
	VOLUME	LOS SPEED V/C	VOLUME	LOS SPEED V/C	VOLUME	LOS SPEED V/C	VOLUME	LOS SPEED V/C
North of Airport Boulevard Interchange	2071	B 65.0 0.44	2074	C 65.0 0.44	2576	C 65.0 0.55	2588	C 65.0 0.55
South of Airport Boulevard Interchange	2420	C 65.0 0.51	2551	C 65.0 0.54	2478	C 65.0 0.53	2511	C 65.0 0.53
	PM PEAK HOUR							
	NORTHBOUND				SOUTHBOUND			
	WITHOUT PROPOSED PROJECT		WITH PROPOSED PROJECT		WITHOUT PROPOSED PROJECT		WITH PROPOSED PROJECT	
	VOLUME	LOS SPEED V/C	VOLUME	LOS SPEED V/C	VOLUME	LOS SPEED V/C	VOLUME	LOS SPEED V/C
North of Airport Boulevard Interchange	3129	D 64.6 0.67	3134	D 64.6 0.67	2311	C 65.0 0.49	2327	C 65.0 0.50
South of Airport Boulevard Interchange	2757	C 66.0 0.57	2824	C 65.0 0.60	2663	C 65.0 0.57	2816	C 65.0 0.60
0.57								

SOURCE: Crane Transportation Group, 2011
PREPARED BY: Crane Transportation Group, 2011

Impact 3.12.10: Impacts to Pedestrian Facilities Due to Existing + 2030 Project Traffic Increment

Roadways adjacent to the Airport lack sidewalks in many locations. While there is little observed or expected pedestrian traffic along the Laughlin Road, Slusser Road, Mark West Station Road and Windsor Road frontages, there is the possibility of moderate pedestrian levels along Airport Boulevard with the 2030 development increment. The lack of sidewalks along Airport Boulevard adjacent to the Airport may result in a significant pedestrian safety concern. In addition, the spread out design of the Airport Boulevard/North Laughlin Road-Skylane Boulevard intersection would result in a pedestrian safety concern due to the long crossing distances. If signalized, as recommended in the level of service and signal warrant mitigations, the lack of pedestrian crossing signals may also result in pedestrian safety concerns. This impact is considered significant according to Policy 1.07 of the *2010 Sonoma County Bicycle and Pedestrian Plan* which states that impacts to planned or existing pedestrian facilities must be identified and

mitigated. Based on County of Sonoma Significance Criteria 14, this would be a significant impact. However, not all long-term project elements have the same potential to affect pedestrian safety. Replacement of the existing passenger terminal does carry the potential to generate additional traffic that could affect pedestrians along streets adjacent to the Airport. The two office buildings would also have the potential to add pedestrians as well as add traffic that would affect pedestrians. However, the two office buildings are not part of the Proposed Project, and any impacts associated with the construction of these two buildings would be evaluated during the review process for these projects.

Mitigation Measure 3.12.10

Prior to the issuance of occupancy permits for a new terminal building, the County shall provide a fair share contribution for sidewalks on Airport Boulevard where needed between the Airport terminal and the North Laughlin Road-Skylane Boulevard intersection. Implementation of this mitigation measure will reduce the impact to a less than significant level.

Impact 3.12.11: Impact to Bicycle Facilities Due to Existing + 2030 Project Traffic Increment

Class II bike lanes already exist along Airport Boulevard internal to the Airport (ending just west of the Flightline Drive-Ordinance Road intersection). There are no other bicycle lanes in the immediate project vicinity. Based upon surveys at the Airport terminal, there is minimal bicycle traffic to/from the Airport. Class III bike routes are planned along the Airport's Slusser Road, Mark West Station Road and Windsor Road frontages. However, there would only be minimal traffic along any of these routes that is associated with the Proposed 2030 Project development increment; therefore, any impact along these roads would be less than significant. Class II bike lanes are planned along Skylane Boulevard between Airport Boulevard and Shiloh Road, where there would be a greater increase in project traffic. There are currently no bicycle facilities along Skylane Boulevard. Project traffic increases along Skylane Boulevard would potentially increase safety concerns for bike riders along this route. This impact is considered significant according to Policy 1.07 of the *2010 Sonoma County Bicycle and Pedestrian Plan* which states that impacts to planned or existing bicycle facilities must be identified and mitigated. Based on County of Sonoma Significance Criteria 14, this would be a significant impact.

Mitigation Measure 3.12.11

Prior to the issuance of occupancy permits for the terminal, the County shall provide a fair share contribution toward provision of Class II bicycle lanes along Skylane Boulevard. The funds shall be proportionally split and allocated to both the County of Sonoma Department of Transportation and Public Works and the Town of Windsor, as the proposed facility is located within both jurisdictions. The funds shall be proportionally split and allocated to both the County of Sonoma Department of Transportation and Public Works and the Town of Windsor, as the proposed facility is located within both jurisdictions. This would reduce the impact to a less-than-significant level.

The following section replaces the text on pages 3.12.11 through 3.12.50 of the Draft EIR.

3.12.5.3 Future Year ~~Base Case~~ (without Proposed Project) Circulation System Operation

~~3.12.5.1~~ Year 2015

~~Base Case~~ 2015 Volumes

Year 2015 AM and PM peak hour volumes were developed using the most recent traffic modeling available from the Sonoma County Transportation Authority (SCTA). Year 2035 projections have recently been developed, and after discussion with SCTA staff, it was determined that a straight line growth rate between existing and 2035 conditions would be reasonable to estimate future volumes for the Airport Boulevard, River Road, Shiloh Road and U.S.101 corridors evaluated in this study. In addition, for CEQA evaluation purposes, additional growth was considered likely[9] at the Airport that would not be due to the Proposed Project, but beyond that included in the SCTA traffic model. **Table 3.12-~~5~~12** presents the maximum additional peak hour traffic that would be expected to travel to/from the Airport by 2015 without the improvements identified as part of the Proposed Project. As shown, added traffic would be due to the arrival and departure of one additional 74-seat commercial flight during both the AM and PM peak hours, as well as a result of 15 new general aviation based aircraft. Overall, about 56 new inbound and outbound vehicle trips would be expected during both the AM and PM peak hours due to activities expected at the Airport by 2015 that are not related to the improvements identified in the Airport Master Plan.

Table 3.12-12~~5~~

INCREASE IN CHARLES M. SCHULZ – SONOMA COUNTY AIRPORT TRIP GENERATION BY 2015 WITHOUT PROPOSED PROJECT

		AM PEAK HOUR TRIPS		PM PEAK HOUR TRIPS	
ACTIVITY	**NUMBER**	**INBOUND**	**OUTBOUND**	**INBOUND**	**OUTBOUND**
NEW PLANE ARRIVALS/DEPARTURES					
AM Peak Hour					
74-Seat Plane	1	55	55		
SUBTOTAL		**55**/a/	**55**/a/		
PM Peak Hour					
74-Seat Plane	1			55	55
SUBTOTAL				**55**/a/	**55**/a/
OTHER ACTIVITIES					
NEW BASED AIRCRAFT	15	1/b/	1/b/	1/b/	1/b/
TOTAL		**56**	**56**	**56**	**56**

/a/ Trip projections based upon Crane Transportation Group October 15, 2010 survey at Sonoma County Airport of traffic activity associated with arrival/departure of two 74-seat aircraft during the mid/late afternoon.

/b/ Trip rates from *Trip Generation*, 8th Edition, by the Institute of Transportation Engineers (ITE) 2008.
Ln = Natural Log, X = Based Aircraft, T = Trips
AM Ln(T) = 1.42 Ln(X)-3.33 (50% in/50% out)
PM Ln(T) = 1.21 Ln(X)-1.93 (55% in/45% out)

SOURCE: Crane Transportation Group, 2010
PREPARED BY: Crane Transportation Group, 2010

[9] RS&H/County of Sonoma.

~~Base Case~~ 2015 Intersection Level of Service

Table 3.12-13~~6~~ presents year 2015 ~~Base Case~~ and ~~Base Case~~ year 2015 + Proposed Project AM and PM peak hour levels of service at analysis intersections. ~~Base Case~~ Year 2015 (without the Proposed Project) estimated operating conditions are detailed below.

Table 3.12-13~~6~~
INTERSECTION LEVEL OF SERVICE – YEAR 2015

	AM PEAK HOUR		PM PEAK HOUR	
INTERSECTION	**~~BASE CASE~~ YEAR 2015**	**~~BASE CASE~~ YEAR 2015 + PROPOSED PROJECT**	**~~BASE CASE~~ YEAR 2015**	**~~BASE CASE~~ YEAR 2015 + PROPOSED PROJECT**
Shiloh Road Corridor – Town of Windsor				
Shiloh Road/Skylane Boulevard (Signal) /a/	D - 51.6	D - 52.9	B - 20.0	C - 22.3
Shiloh Road/Conde Lane (Signal) /a/	A - 9.9	A - 10.8	A - 6.8	A - 6.9
Shiloh Road/U.S.101 Southbound Off-Ramp (Signal) /a/	B - 12.5	B - 12.7	B - 11.5	B - 11.6
Shiloh Road/U.S.101 Northbound Off-Ramp (Signal) /a/	B - 15.4	B-16.4	B-13.0	B - 13.0
Airport Boulevard Corridor – County of Sonoma				
Airport Boulevard/North Laughlin Road-Skylane Boulevard (Signal) /a/	C - 22.0	C - 22.7	C - 20.6	C- 21.3
Airport Boulevard /Brickway Boulevard (Signal) /a/	B - 10.8	B - 10.9	B - 13.8	B - 13.8
Airport Boulevard /Aviation Boulevard (Signal) /a/	B - 18.8	B - 18.8	C - 26.8	C - 26.8
Airport Boulevard/U.S. 101 Southbound Off-Ramp (Signal) /a/	A - 6.0	A - 6.0	A - 5.2	A - 5.3
Airport Boulevard/U.S.101 Northbound Off-Ramp (Signal) /a/	B - 18.9	B - 19.3	B - 12.9	B - 13.2
River Road Corridor – County of Sonoma				
River Road/Slusser Road (Slusser Road Stop Sign Control) /b/	C - 23.4	C - 23.5	**E - 36.6**	**E - 37.1**
River Road/Laughlin Road (Roundabout) /c/	A - 4.0	A - 4.0	A - 6.0	A - 6.1

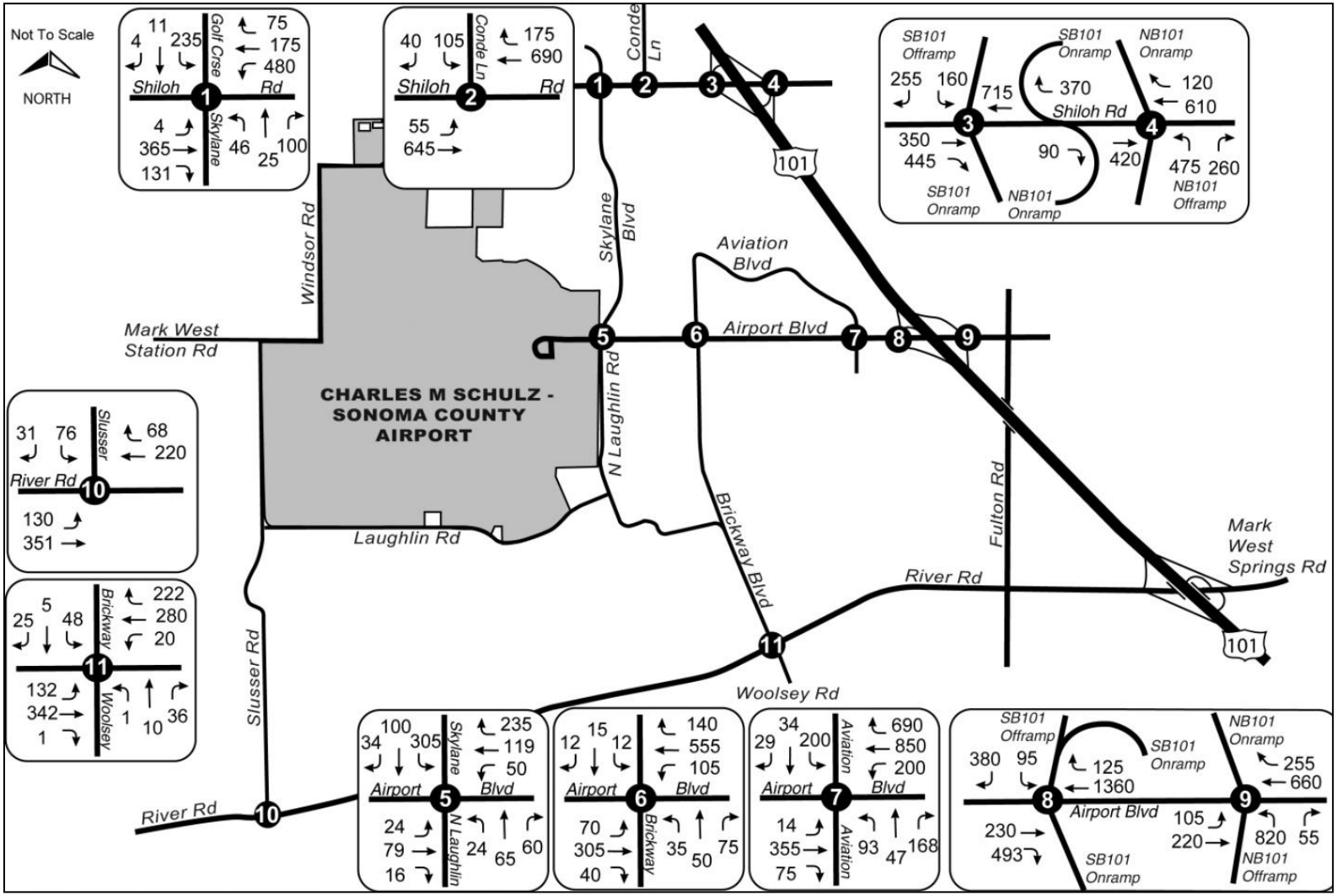
/a/ Signalized level of service – control delay in seconds.
/b/ Unsignalized level of service – control delay in seconds. Slusser Road stop sign controlled approach.
/c/ Roundabout level of service – control delay in seconds.

SOURCE: 2000 Highway Capacity Manual Analysis Methodology, 2000
PREPARED BY: Crane Transportation Group, 2010

AM Peak Hour

During the AM peak hour all intersections within the County of Sonoma and Town of Windsor would be operating at acceptable levels of service with increased volumes and planned improvements. 2015 AM peak hour volumes without the Proposed Project are presented in **Figure 3.12-16**.

Figure 3.12-16
2015 AM PEAK HOUR VOLUMES WITHOUT PROPOSED PROJECT



SOURCE: Crane Transportation Group, 2011
PREPARED BY: Crane Transportation Group, 2011

PM Peak Hour

During the PM peak hour all analysis intersections along Shiloh Road within the Town of Windsor would be operating at acceptable levels of service. During the same time period all intersections within the County of Sonoma would be operating at acceptable levels of service with one exception. At the River Road/Slusser Road intersection, the Slusser Road stop sign controlled approach would be operating at LOS E. 2015 PM peak hour volumes without the Proposed Project are presented in **Figure 3.12-17**.

~~*Base Case*~~ *2015 Signal Warrant Evaluation*

Only one analysis intersection (River Road/Slusser Road in the County of Sonoma) would remain unsignalized by 2015. Estimated 2015 ~~Base Case~~ AM peak hour volumes would be on the borderline of exceeding peak hour signal warrant criteria levels at this location, while PM peak hour volumes would be exceeding peak hour signal warrant criteria levels. Lane geometrics and anticipated intersection controls for year 2015 without the Proposed Project are presented in **Figure 3.12-18**.

~~*Base Case*~~ *2015 Freeway Operation*

Table 3.12-14~~7~~ shows that with 2015 ~~Base Case~~ volumes all mixed flow U.S.101 freeway lanes just north and south of the Airport Boulevard interchange would be operating at acceptable LOS C conditions during the AM peak hour. During the PM peak traffic hour, operation both north and south of the Airport Boulevard interchange would also be an acceptable LOS C with one exception. Northbound mixed flow lanes to the north of the interchange would be operating at LOS D conditions.

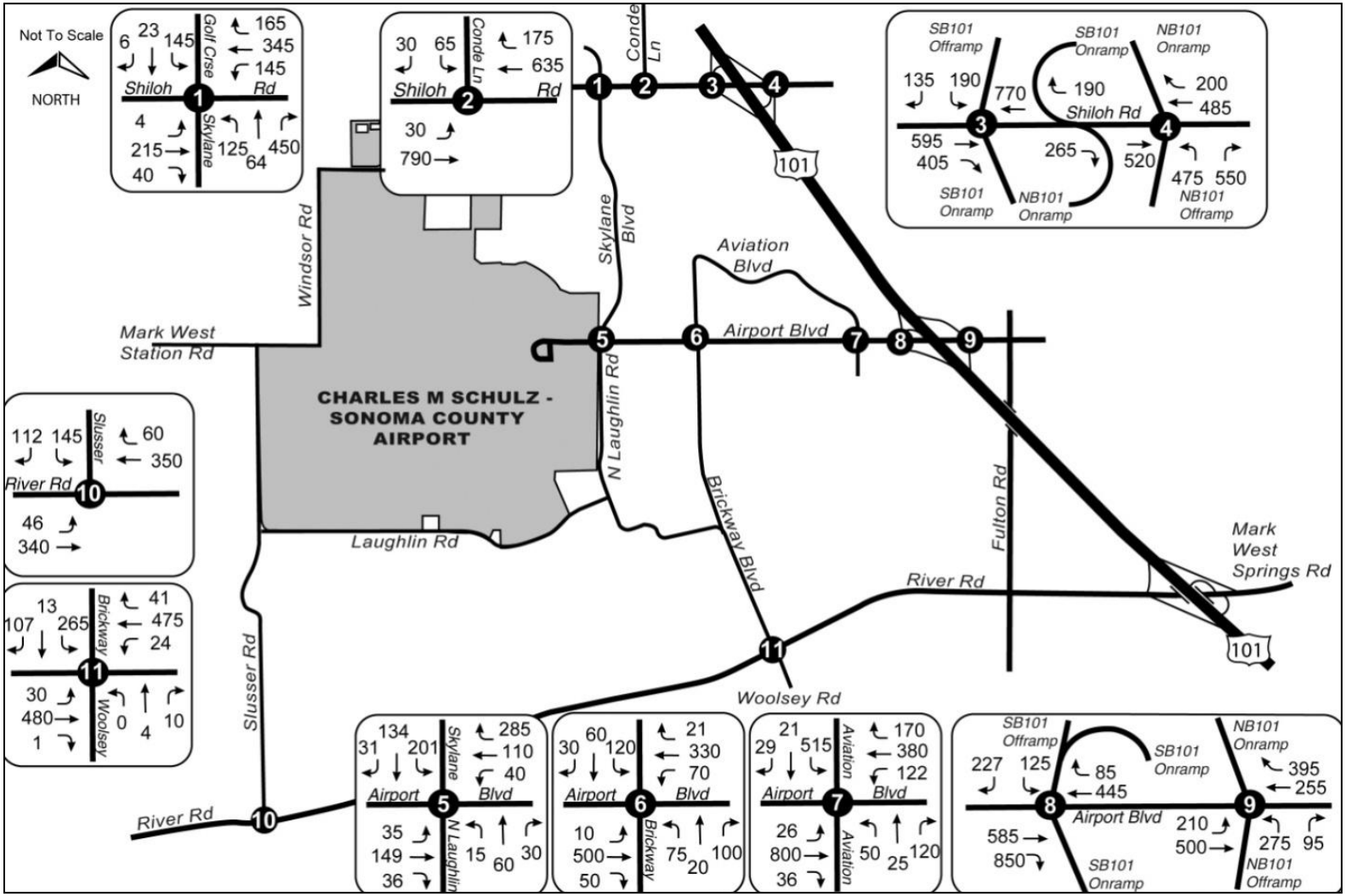
~~3.12.5.2~~ Year 2030

~~*Base Case*~~ *2030 Volumes*

Year 2030 AM and PM peak hour volumes were developed in the same manner as 2015 volumes, using the most recent traffic modeling available from the SCTA and projecting a straight line growth rate between existing and 2030 conditions. In addition, for CEQA evaluation purposes, additional growth was considered likely[10] at the Airport that would not be due to the improvements identified as part of the Proposed Project, but beyond that included in the SCTA traffic model. **Table 3.12-15~~8~~** presents the maximum additional peak hour traffic that would be expected to travel to/from the Airport by 2030 without the improvements identified as part of the Proposed Project. As shown, added traffic would be due to the arrival and departure of three additional commercial flights during the AM peak hour, four additional commercial flights during the PM peak hour as well as 62 new general aviation based aircraft. Overall, about 175 new inbound and outbound vehicle trips would be expected during the AM peak hour, with about 235 new inbound and outbound vehicle trips expected during the PM peak hour due to activities expected at the Airport by 2030 that are not associated with the improvements identified as part of the Proposed Project.

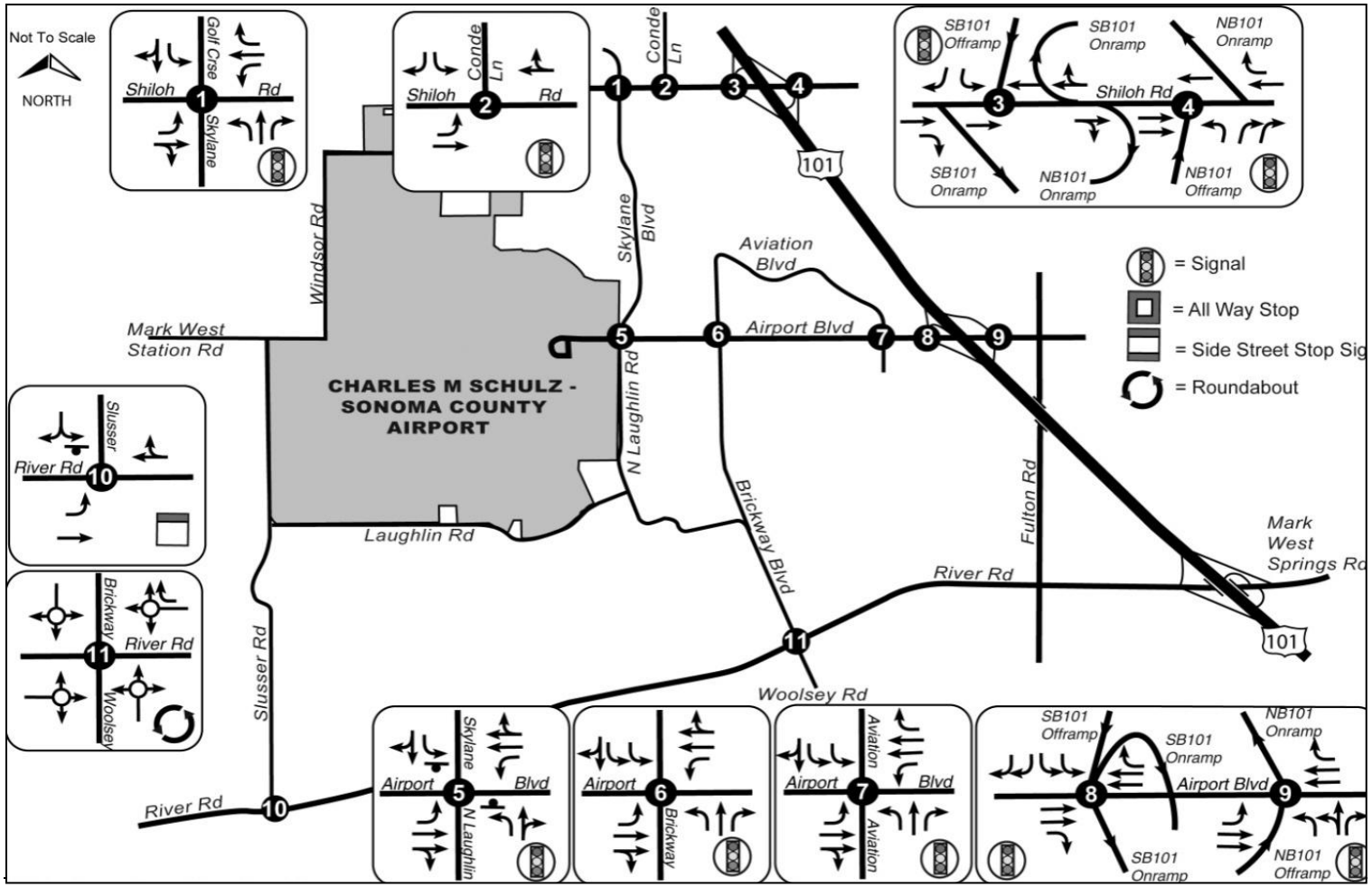
[10] RS&H/County of Sonoma.

Figure 3.12-17
2015 PM PEAK HOUR VOLUMES WITHOUT PROPOSED PROJECT



SOURCE: Crane Transportation Group, 2011
PREPARED BY: Crane Transportation Group, 2011

Figure 3.12-18
2015 LANE GEOMETRICS AND INTERSECTION CONTROL



SOURCE: Crane Transportation Group, 2011
PREPARED BY: Crane Transportation Group, 2011

Table 3.12-14~~7~~
FREEWAY LEVEL OF SERVICE – YEAR 2015

	AM PEAK HOUR							
	NORTHBOUND				SOUTHBOUND			
	WITHOUT PROPOSED PROJECT		WITH PROPOSED PROJECT		WITHOUT PROPOSED PROJECT		WITH PROPOSED PROJECT	
	VOLUME	LOS SPEED V/C	VOLUME	LOS SPEED V/C	VOLUME	LOS SPEED V/C	VOLUME	LOS SPEED V/C
North of Airport Boulevard interchange	2115	C 65.0 0.45	2117	C 65.0 0.45	2740	C 65.0 0.58	2743	C 65.0 0.58
South of Airport Boulevard interchange	2480	C 65.0 0.53	2516	C 65.0 0.54	2678	C 65.0 0.57	2700	C 65.0 0.57
	PM PEAK HOUR							
	NORTHBOUND				SOUTHBOUND			
	WITHOUT PROPOSED PROJECT		WITH PROPOSED PROJECT		WITHOUT PROPOSED PROJECT		WITH PROPOSED PROJECT	
	VOLUME	LOS SPEED V/C	VOLUME	LOS SPEED V/C	VOLUME	LOS SPEED V/C	VOLUME	LOS SPEED V/C
North of Airport Boulevard interchange	3265	D 64.3 0.69	3266	D 64.3 0.69	2455	C 65.0 0.52	2461	C 65.0 0.52
South of Airport Boulevard interchange	2905	C 65.0 0.62	2932	C 64.9 0.62	2843	C 65.0 0.60	2874	C 64.9 0.61

SOURCE: Crane Transportation Group, 2010
PREPARED BY: Crane Transportation Group, 2010

Table 3.12-158

INCREASE IN CHARLES M. SCHULZ-SONOMA COUNTY AIRPORT TRIP GENERATION BY 2030 WITHOUT PROPOSED PROJECT

		AM PEAK HOUR TRIPS		PM PEAK HOUR TRIPS	
ACTIVITY	**NUMBER**	**INBOUND**	**OUTBOUND**	**INBOUND**	**OUTBOUND**
NEW PLANE ARRIVALS/DEPARTURES					
AM Peak Hour					
66-Seat Plane	1	49	49		
74-Seat Plane	1	55	55		
86-Seat Plane	1	64	64		
PM Peak Hour					
66-Seat Plane	1			49	49
74-Seat Plane	2			110	110
86-Seat Plane	1			64	64
COMMERCIAL PLANE SUBTOTAL		**168** /a/	**168** /a/	**223** /a/	**223** /a/
NEW BASED AIRCRAFT					
East Side of Field	32	3 /b/	2 /b/	5 /b/	5 /b/
South Side of Field	24	2 /b/	2 /b/	4 /b/	3 /b/
West Side of Field	6	1 /b/	0 /b/	1 /b/	1 /b/
BASED AIRCRAFT SUBTOTAL	**62**	**6**	**4**	**10**	**9**
GRAND TOTAL		**174**	**172**	**233**	**232**

/a/ Trip projections based upon Crane Transportation Group October 15, 2010 survey at Sonoma County Airport of traffic activity associated with arrival/departure of two 74-seat aircraft during the mid/late afternoon.

/b/ Trip rates from *Trip Generation*, 8th Edition, by the Institute of Transportation Engineers (ITE) 2008.
Ln = Natural Log, X = Based Aircraft, T = Trips
AM Ln(T) = 1.42 Ln(X)-3.33 (50% in/50% out)
PM Ln(T) = 1.21 Ln(X)-1.93 (55% in/45% out)

SOURCE: Crane Transportation Group, 2010
PREPARED BY: Crane Transportation Group, 2010

~~Base Case~~ 2030 Intersection Level of Service

Table 3.12-~~16~~9 presents year 2030 ~~Base Case~~ and ~~Base Case~~ year 2030 + Proposed Project AM and PM peak hour levels of service at analysis intersections. ~~Base Case~~ Year 2030 (without the improvements identified as part of the Proposed Project) projected operating conditions are detailed below.

Table 3.12-~~16~~9
INTERSECTION LEVEL OF SERVICE – YEAR 2030

	AM PEAK HOUR		PM PEAK HOUR	
INTERSECTION	**~~BASE CASE~~ YEAR 2030**	**~~BASE CASE~~ YEAR 2030 + PROPOSED PROJECT**	**~~BASE CASE~~ YEAR 2030**	**~~BASE CASE~~ YEAR 2030 + PROPOSED PROJECT**
Shiloh Road Corridor – Town of Windsor				
Shiloh Road/Skylane Boulevard (Signal) /a/	**E - 62.7**	**E - 68.2**	C - 23.5	C - 23.9
Shiloh Road/Conde Lane (Signal) /a/	D - 44.8	D - 46.9	D - 44.9	D - 49.6
Shiloh Road/U.S.101 Southbound Off-Ramp (Signal) /a/	B - 14.1	B - 14.4	B - 12.7	B - 12.8
Shiloh Road/U.S.101 Northbound Off- Ramp (Signal) /a/	C - 20.6	C - 20.9	B - 15.4	B - 15.4
Airport Boulevard Corridor – County of Sonoma				
Airport Boulevard/North Laughlin Road-Skylane Boulevard (Signal) /a/	C - 24.2	C - 30.6	C - 22.3	C - 27.8
Airport Boulevard /Brickway Boulevard (Signal) /a/	B - 12.8	B - 14.9	B - 14.5	B - 15.3
Airport Boulevard /Aviation Boulevard (Signal) /a/	B - 19.1	B - 19.1	C - 27.7	C - 28.9
Airport Boulevard/U.S. 101 Southbound Off-Ramp (Signal) /a/	B - 10.4	B - 10.4	A - 5.7	A - 5.7
Airport Boulevard/U.S.101 Northbound Off-Ramp (Signal) /a/	C - 23.8	C - 29.1	B - 15.5	B - 16.2
River Road Corridor – County of Sonoma				
River Road/Slusser Road (Slusser Road Stop Sign Control) /b/	D - 27.1	D - 27.9	**E - 48.1**	**F - 50.9**
River Road/Laughlin Road (Roundabout) /c/	A - 4.2	A - 4.3	A - 7.1	A - 7.8

/a/ Signalized level of service – control delay in seconds.
/b/ Unsignalized level of service – control delay in seconds. Slusser Road stop sign controlled approach.
/c/ Roundabout level of service – control delay in seconds.

SOURCE: Year 2000 Highway Capacity Manual Analysis Methodology, 2000
PREPARED BY: Crane Transportation Group, 2010

AM Peak Hour

During the AM peak hour all analysis intersections within the County of Sonoma would be operating at acceptable levels of service. In the Town of Windsor all analysis intersections along Shiloh Road within the Town of Windsor would be operating at acceptable levels of service, with one exception. The Shiloh Road/Skylane Boulevard signalized intersection would be operating at LOS E. 2030 AM peak hour volumes without the Proposed Project are presented in **Figure 3.12-19**.

PM Peak Hour

During the PM peak hour all analysis intersections along Shiloh Road within the Town of Windsor would be operating at acceptable levels of service. During the same time period all intersections within the County of Sonoma would be operating at acceptable levels of service with one exception. At the *River Road/Slusser Road* intersection, the Slusser Road stop sign controlled approach would be operating at LOS E. 2030 PM peak hour volumes without the Proposed Project are presented in **Figure 3.12-210**.

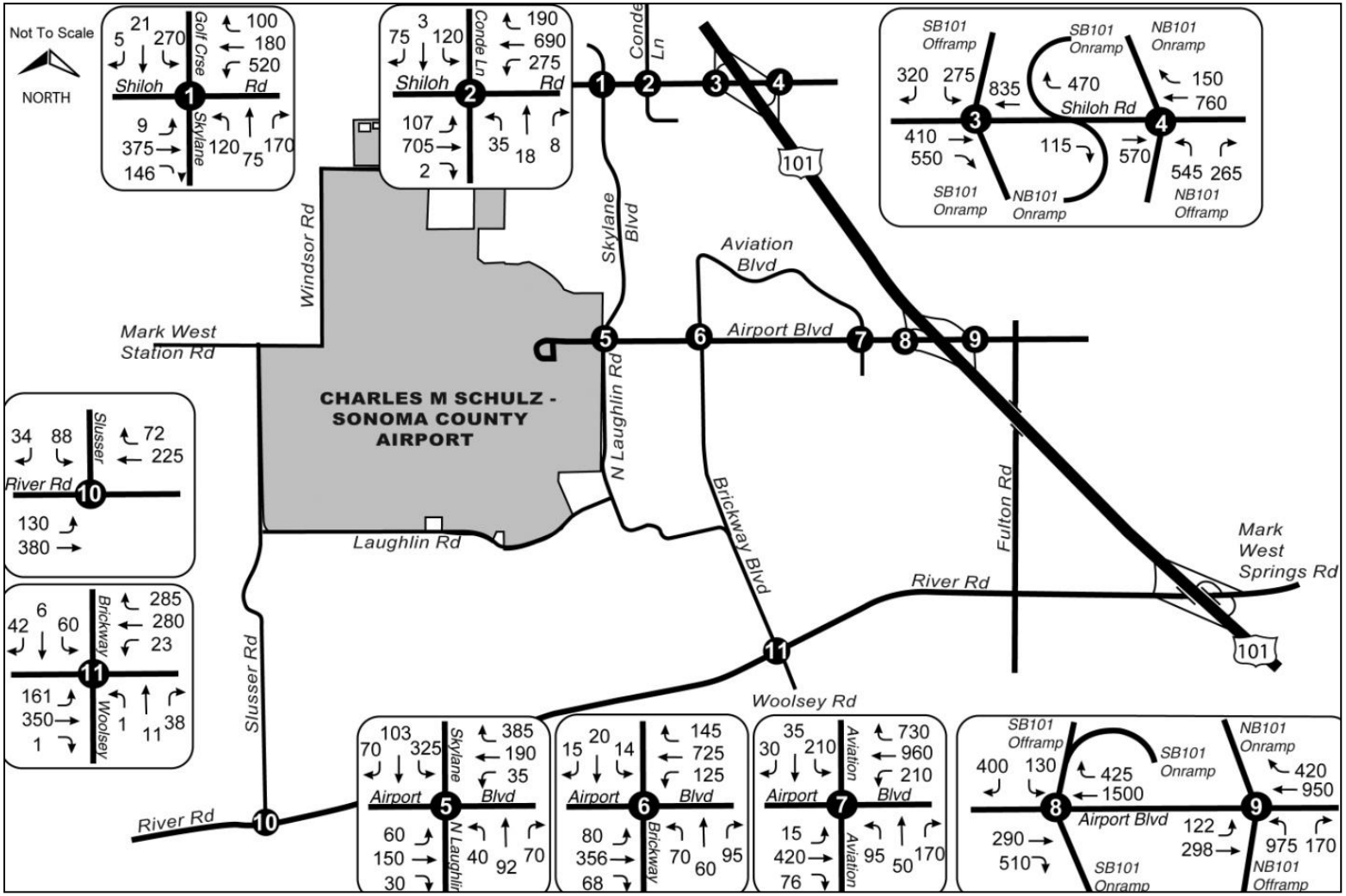
~~*Base Case*~~ *2030 Signal Warrant Evaluation*

Only one analysis intersection would remain unsignalized by 2030 (River Road/Slusser Road in the County of Sonoma). Estimated 2030 ~~Base Case~~ AM and PM peak hour volumes would both exceed peak hour signal warrant criteria levels at the River Road/Slusser Road intersection. Lane geometrics and anticipated intersection controls for year 2030 without the Proposed Project is presented in **Figure 3.12-211**.

~~*Base Case*~~ *2030 Freeway Operation*

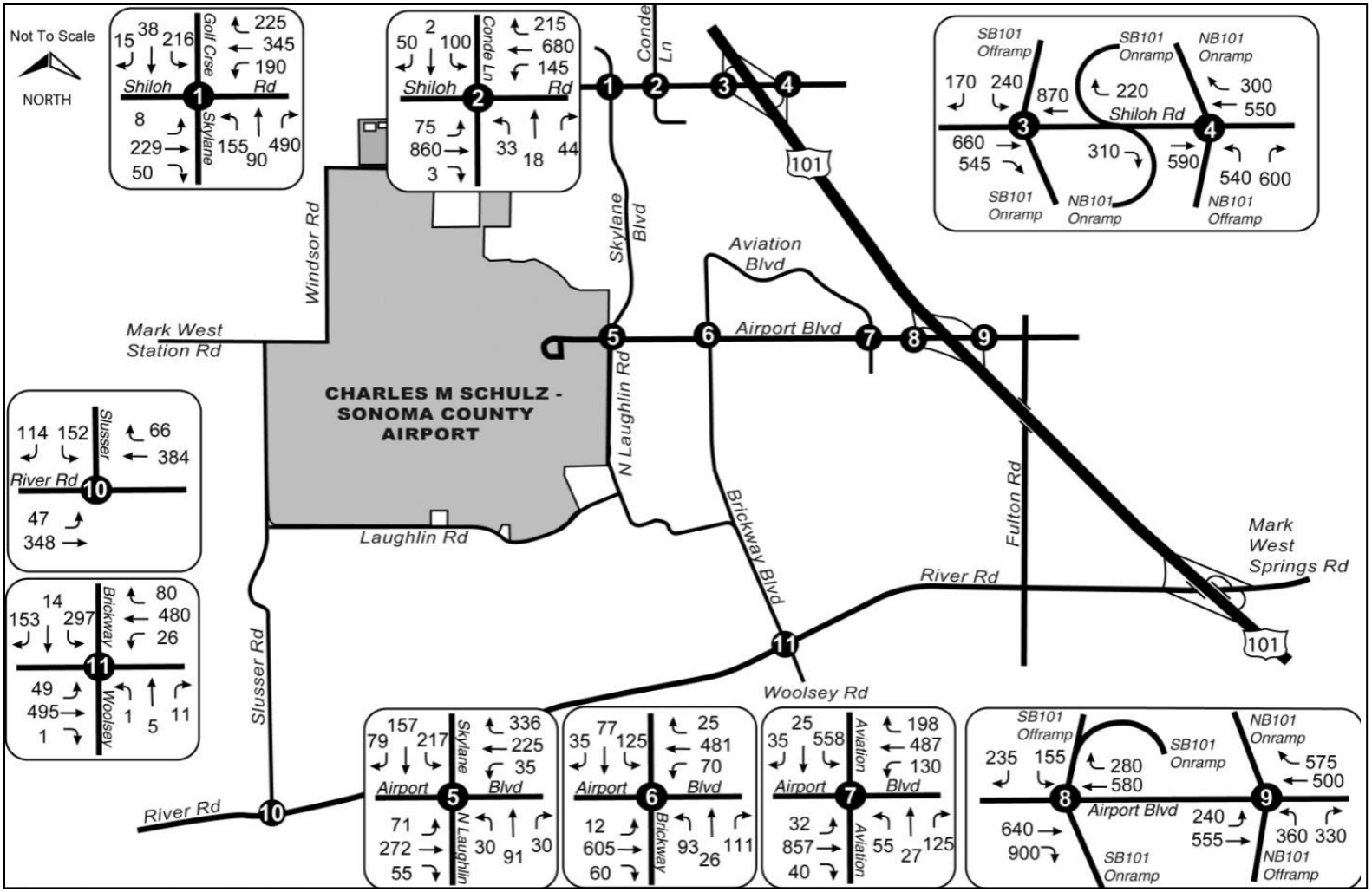
Table 3.12-170 presents 2030 ~~Base Case~~ operation of all mixed flow U.S.101 freeway lanes just north and south of the Airport Boulevard interchange. During the AM peak hour the freeway would be experiencing unacceptable LOS D southbound operation and acceptable LOS C northbound operation both north and south of Airport Boulevard. During the PM peak hour the freeway would be experiencing unacceptable LOS D operation in the northbound direction both north and south of Airport Boulevard and in the southbound direction south of Airport Boulevard. Acceptable LOS C operation would be experienced in the southbound direction to the north of Airport Boulevard.

Figure 3.12-19
2030 AM PEAK HOUR VOLUMES WITHOUT PROPOSED PROJECT



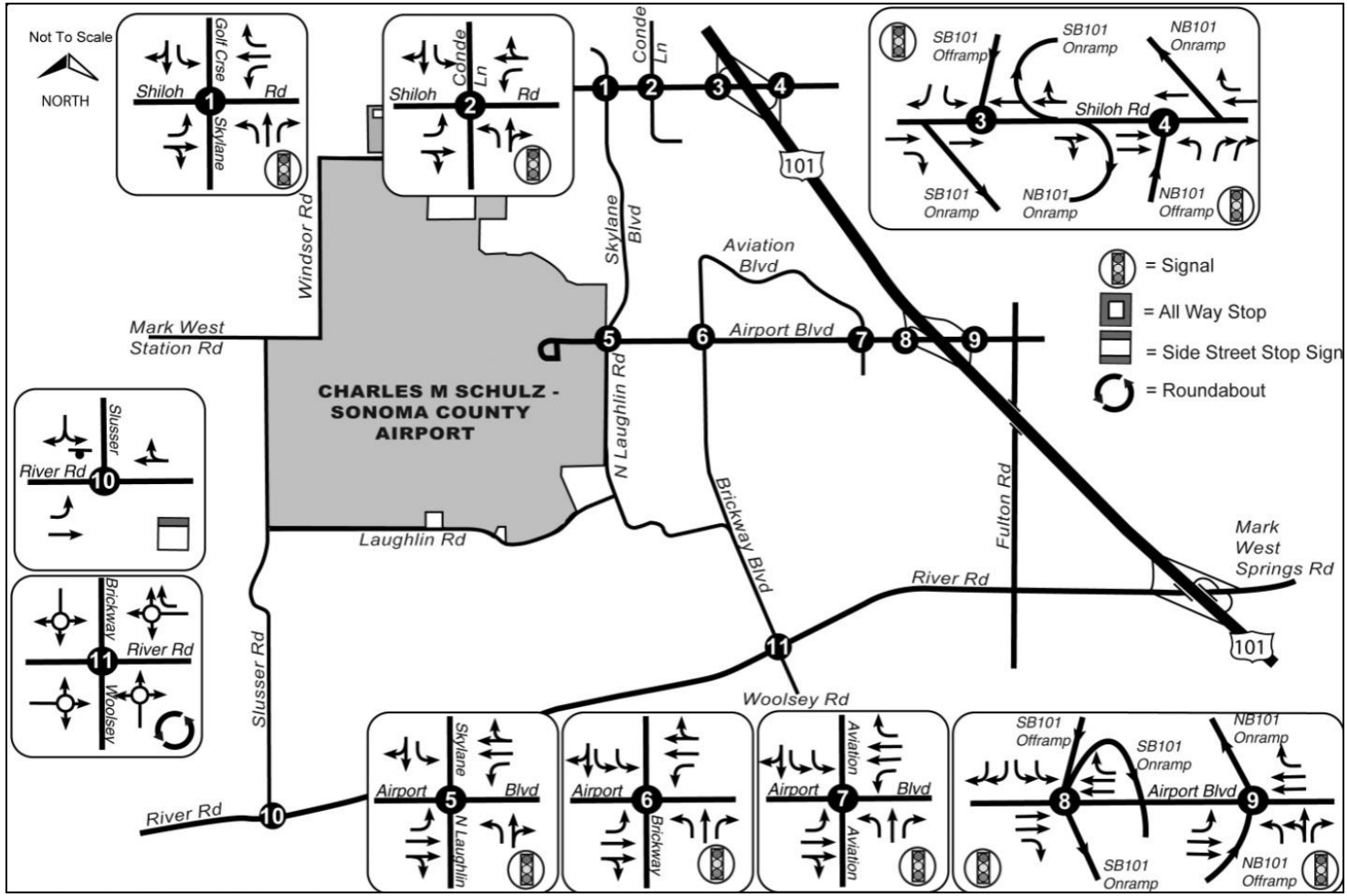
SOURCE: Crane Transportation Group, 2011
PREPARED BY: Crane Transportation Group, 2011

Figure 3.12-20
2030 PM PEAK HOUR VOLUMES WITHOUT PROPOSED PROJECT



SOURCE: Crane Transportation Group, 2011
PREPARED BY: Crane Transportation Group, 2011

Figure 3.12-21
2030 LANE GEOMETRICS AND INTERSECTION CONTROL WITHOUT PROPOSED PROJECT



SOURCE: Crane Transportation Group, 2011
PREPARED BY: Crane Transportation Group, 2011

Table 3.12-1~~7~~8
FREEWAY LEVEL OF SERVICE – YEAR 2030

	AM PEAK HOUR							
	NORTHBOUND				SOUTHBOUND			
	WITHOUT PROPOSED PROJECT		WITH PROPOSED PROJECT		WITHOUT PROPOSED PROJECT		WITH PROPOSED PROJECT	
	VOLUME	LOS SPEED V/C	VOLUME	LOS SPEED V/C	VOLUME	LOS SPEED V/C	VOLUME	LOS SPEED V/C
North of Airport Boulevard interchange	2270	C 65.0 0.48	2273	C 65.0 0.48	3345	**D** **64.2** **0.71**	3357	**D** **64.1** **0.71**
South of Airport Boulevard interchange	2703	C 65.0 0.58	2834	C 65.0 0.60	3425	**D** **63.8** **0.73**	3458	**D** **63.7** **0.74**
	PM PEAK HOUR							
	NORTHBOUND				**SOUTHBOUND**			
	WITHOUT PROPOSED PROJECT		**WITH PROPOSED PROJECT**		**WITHOUT PROPOSED PROJECT**		**WITH PROPOSED PROJECT**	
	VOLUME	**LOS SPEED V/C**	**VOLUME**	**LOS SPEED V/C**	**VOLUME**	**LOS SPEED V/C**	**VOLUME**	**LOS SPEED V/C**
North of Airport Boulevard interchange	3765	**D** **61.6** **0.80**	3770	**D** **61.6** **0.80**	2985	C 64.9 0.64	3001	C 64.8 0.64
South of Airport Boulevard interchange	3455	**D** **63.7** **0.74**	3522	**D** **63.3** **0.75**	3520	**D** **62.9** **0.75**	3673	**D** **61.8** **0.78**

SOURCE: Crane Transportation Group, 2010
PREPARED BY: Crane Transportation Group, 2010

3.12.5.46 Environmental Impacts and Mitigation Measures

~~3.12.6.1~~ Project Trip Generation and Distribution

Project trip generation projections were developed with the assistance of the County of Sonoma Permit and Resource Management Department (PRMD) and County of Sonoma Department of Transportation, Airport Division staff in consultation with Reynolds, Smith & Hills (RS&H). Proposed Project components resulting in additional traffic are as follows;

Year 2015

- One new 74-seat commercial plane arrival/departure during both the AM and PM peak hours

Year 2030

- One new 74-seat commercial plane arrival/departure during the AM peak hour
- One new 66-seat commercial plane and one new 86-seat commercial plane arrival/departure during the PM peak hour
- 49 new based general aviation aircraft
- Two new office buildings: (1) a 98,000-square-foot office building north of Airport Boulevard adjacent to the west side of Ordinance Road and (2) a 51,000-square-foot office building south of Airport Boulevard along the west side of North Laughlin Road[11]
- A new air cargo facility (with ± 50 new inbound and 50 new outbound trips per day)

Tables 3.12-181 and **3.12-192** present the increase in new Airport AM and PM peak hour trip generation from existing conditions to years 2015 and 2030, respectively, with the implementation of the Proposed Project. **Table 3.12-2013** presents a summary of the trip generation associated with the Proposed Project. **Figures 3.12-122** and **3.12-123** respectively present the 2015 AM and PM peak hour volumes associated with the Proposed Project. **Figures 3.12-124** and **3.12-125** respectively present the 2030 AM and PM peak hour volumes associated with the Proposed Project. Specific development plans for the long-term project elements have not been prepared at this time. For the purposes of developing the project trip generation projections for 2030, it is assumed that all long-term project elements identified in the Master Plan will be fully implemented. For 2015 conditions, the Proposed Project would result in approximately 55 more inbound and outbound vehicles during both the AM (see **Figure 3.12-126**) and PM (see **Figure 3.12-127)** peak traffic hours. For 2030 conditions, the Proposed Project would result in approximately 260 more inbound and 100 more outbound trips during the AM (see **Figure 3.12-128**) peak hour and about 165 more inbound and 300 more outbound vehicles during the PM peak hour (see **Figure 3.12-129).**

[11] The two office buildings are not part of the proposed project and may be fully built under existing zoning. However, they would be located on property owned by the Airport, and were included for purposes of fully studying potential future traffic impacts associated with any Airport activities.

Table 3.12-181

INCREASE IN CHARLES M. SCHULZ – SONOMA COUNTY AIRPORT TRIP GENERATION BY 2015 WITH PROPOSED PROJECT

		AM PEAK HOUR TRIPS		PM PEAK HOUR TRIPS	
ACTIVITY	**NUMBER**	**INBOUND**	**OUTBOUND**	**INBOUND**	**OUTBOUND**
NEW PLANE ARRIVALS/DEPARTURES					
AM Peak Hour					
74-Seat Plane	2	110 /a/	110 /a/		
SUBTOTAL		**110**	**110**		
PM Peak Hour					
74-Seat Plane	2			110 /a/	110 /a/
SUBTOTAL				**110**	**110**
OTHER ACTIVITIES					
NEW BASED AIRCRAFT	15	1 /b/	1 /b/	1 /b/	1 /b/
East Side of Field					
TOTAL		**111**	**111**	**111**	**111**

/a/ Trip projections based upon Crane Transportation Group October 15, 2010 survey at Sonoma County Airport of traffic activity associated with arrival/departure of two 74-seat aircraft during the mid/late afternoon.

/b/ Trip rates from *Trip Generation*, 8th Edition, by the Institute of Transportation Engineers (ITE) 2008.
Ln = Natural Log, X = Based Aircraft, T = Trips
AM Ln(T) = 1.42 Ln(X)-3.33 (50% in/50% out)
PM Ln(T) = 1.21 Ln(X)-1.93 (55% in/45% out)

SOURCE: Crane Transportation Group, 2010
PREPARED BY: Crane Transportation Group, 2010

Table 3.12-1~~9~~2

INCREASE IN CHARLES M. SCHULZ – SONOMA COUNTY AIRPORT TRIP GENERATION BY 2030 WITH PROPOSED PROJECT[12]

		AM PEAK HOUR TRIPS		PM PEAK HOUR TRIPS	
ACTIVITY	**NUMBER**	**INBOUND**	**OUTBOUND**	**INBOUND**	**OUTBOUND**
NEW PLANE ARRIVALS/DEPARTURES					
AM Peak Hour					
66-Seat Plane	1	49 /a/	49 /a/		
74-Seat Plane	2	110 /a/	110 /a/		
86-Seat Plane	1	64 /a/	64 /a/		
PM Peak Hour					
66-Seat Plane	2			98 /a/	98 /a/
74-Seat Plane	2			110 /a/	110 /a/
86-Seat Plane	2			128 /a/	128 /a/
COMMERCIAL PLANE SUBTOTAL		**223**	**223**	**336**	**336**
NEW BASED AIRCRAFT					
East Side of Field	34	3 /b/	3 /b/	6 /b/	5 /b/
South Side of Field	24	2 /b/	2 /b/	4 /b/	3 /b/
West Side of Field	6	1 /b/	0 /b/	1 /b/	1 /b/
BASED AIRCRAFT SUBTOTAL	**64**	**6**	**5**	**11**	**9**
OTHER ACTIVITIES					
Office North of Airport Boulevard South of Airport Boulevard	 98,000 sq ft 51,000 sq ft	 133 /c/ 69 /c/	 19 /c/ 10 /c/	 24 /c/ 13 /c/	 122 /c/ 63 /c/
Cargo Facility (Laughlin Road Access)		2 /d/	15 /d/	15 /d/	2 /d/
OTHER ACTIVITY SUBTOTAL		**204**	**44**	**52**	**187**
GRAND TOTAL		**433**	**272**	**399**	**532**

/a/ Trip projections based upon Crane Transportation Group October 15, 2010 survey at Sonoma County Airport of traffic activity associated with arrival/departure of two 74-seat aircraft during the mid/late afternoon.

/b/ Trip rates from *Trip Generation*, 8th Edition, by the Institute of Transportation Engineers (ITE) 2008.
Ln = Natural Log, X = Based Aircraft, T = Trips
AM Ln(T) = 1.42 Ln(X)-3.33 (50% in/50% out)
PM Ln(T) = 1.21 Ln(X)-1.93 (55% in/45% out)

/c/ Trip rates from *Trip Generation*, 8th Edition, by the Institute of Transportation Engineers (ITE) 2008.
AM 1.36 in/.19 out
PM .25 in/1.24 out

/d/ RS&H/Crane Transportation Group

SOURCE: Crane Transportation Group, 2010
PREPARED BY: Crane Transportation Group, 2010

[12] The two office buildings are not part of the proposed project and may be fully built under existing zoning. However, they would be located on property owned by the Airport, and were included for purposes of fully studying potential future traffic impacts associated with any Airport activities.

Table 3.12-2013
CHARLES M. SCHULZ-SONOMA COUNTY AIRPORT
TRIP GENERATION SUMMARY FOR PROPOSED PROJECT

	YEAR 2015			
	AM PEAK HOUR TRIPS		PM PEAK HOUR TRIPS	
	IN	OUT	IN	OUT
Existing	175	85	130	225
Existing to 2015 without Proposed Project	56	56	56	56
2015 Total without Proposed Project	231	141	186	281
Existing to 2015 with Proposed Project	55	55	55	55
2015 Total with Proposed Project	286	196	241	336
	YEAR 2030			
	AM PEAK HOUR TRIPS		PM PEAK HOUR TRIPS	
	IN	OUT	IN	OUT
Existing	175	85	130	225
Existing to 2030 without Proposed Project	174	172	233	232
2030 Total without Proposed Project	349	257	363	457
Existing to 2030 with Proposed Project	259	100	166	300
2030 Total with Proposed Project	608	357	529	757

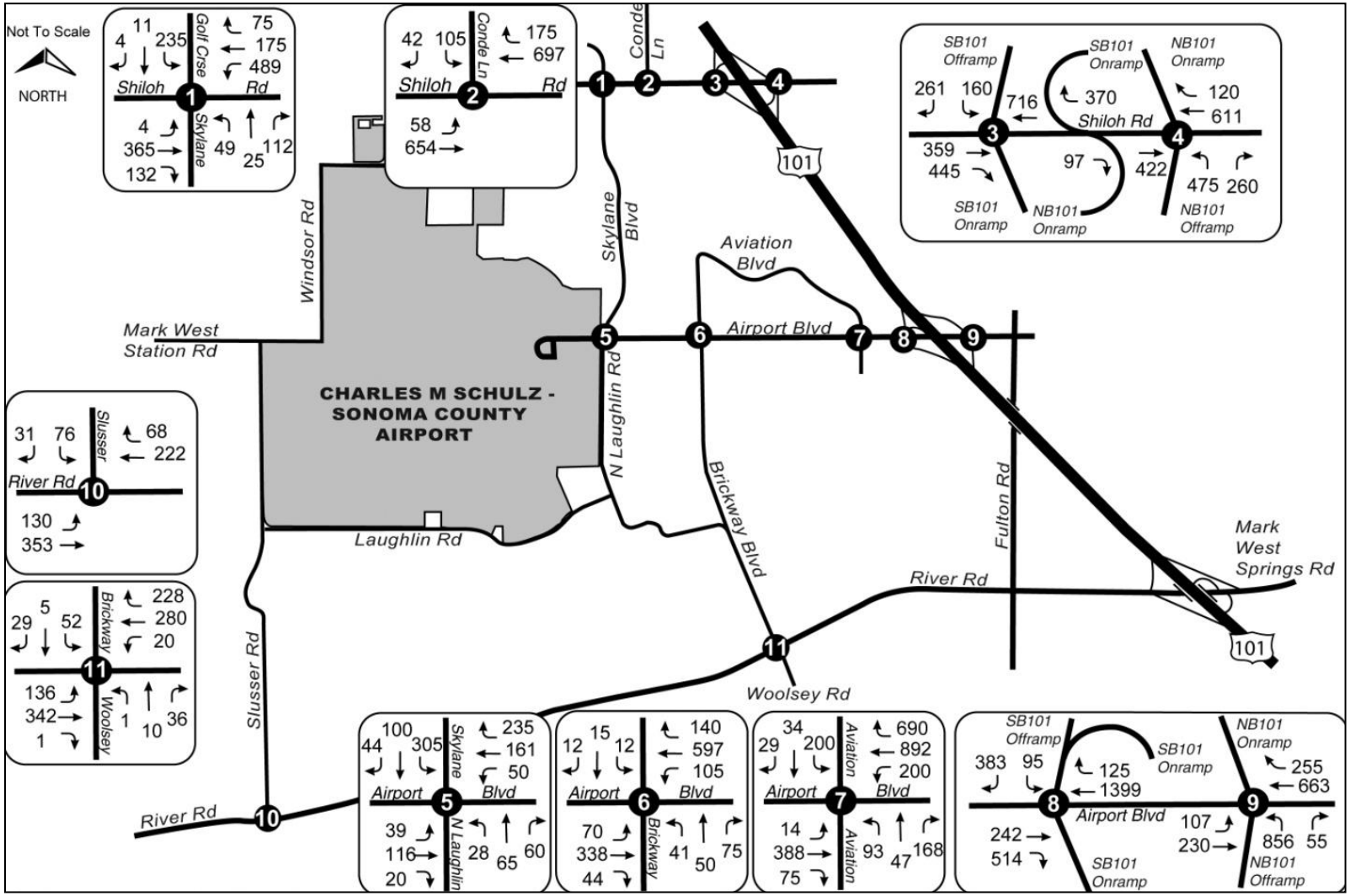
SOURCE: Crane Transportation Group
PREPARED BY: Crane Transportation Group

Trip generation projections for new based aircraft and offices were based upon trip rates from the traffic engineering profession's standard source of trip rate data, *Trip Generation*, 8th Edition, by the Institute of Transportation Engineers (ITE) 2008. Cargo facility trip generation was based upon projections from RS&H. Trip generation projections for new commercial airline flights were based upon detailed surveys conducted at the Airport in October 2010 during an afternoon with two 74-seat aircraft arrivals and departures. Traffic counts were conducted of drop offs and pickups at the terminal building; in and outbound flow to short and long term parking; taxi, rent-a-car, hotel van, Sonoma Airporter and public bus arrivals and departures as well as bicycle arrivals and departures. Survey findings indicated that with a 95 percent load factor and 100 percent of passengers either deplaning or enplaning at the Airport, each 74-seat aircraft resulted in about 55 inbound and 55 outbound trips. Surface street trip generation to be associated with proposed 66- and 86-seat planes using the Airport in the future was estimated to be in proportion to the number of seats on the plane.

Project Trip Distribution

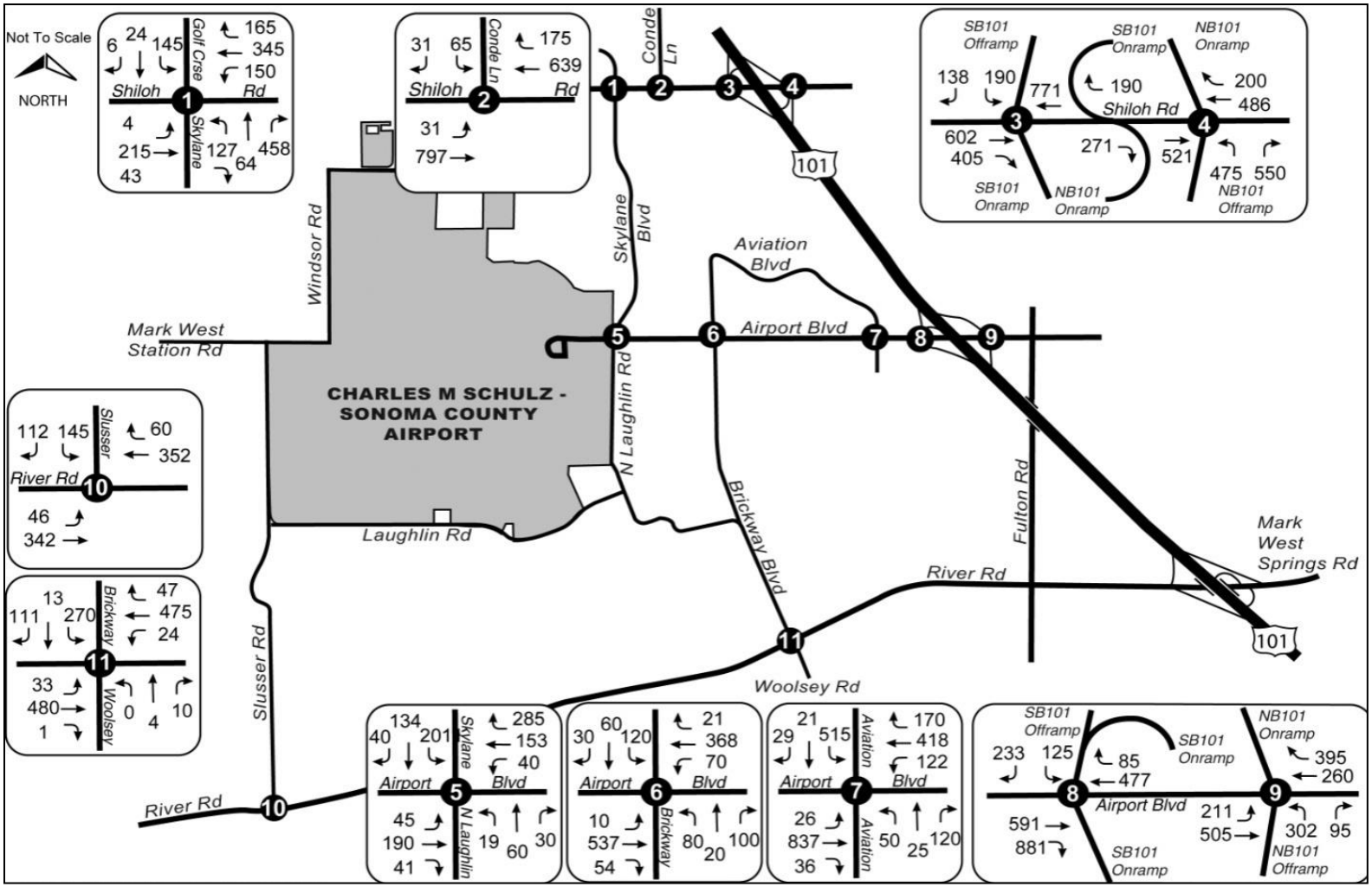
The increase in traffic as a result of the Proposed Project was distributed to the local roadway network based upon results from SCTA modeling conducted both with and without the Proposed Project. Estimated project traffic distribution is presented in **Table 3.12-2114**. Overall, about two thirds of all traffic associated with the Proposed Project is estimated to access the U.S.101 freeway via Airport Boulevard, with a somewhat even split of the remaining traffic to the Shiloh Road and River Road corridors.

Figure 3.12-22
2015 AM PEAK HOUR VOLUMES WITH PROPOSED PROJECT



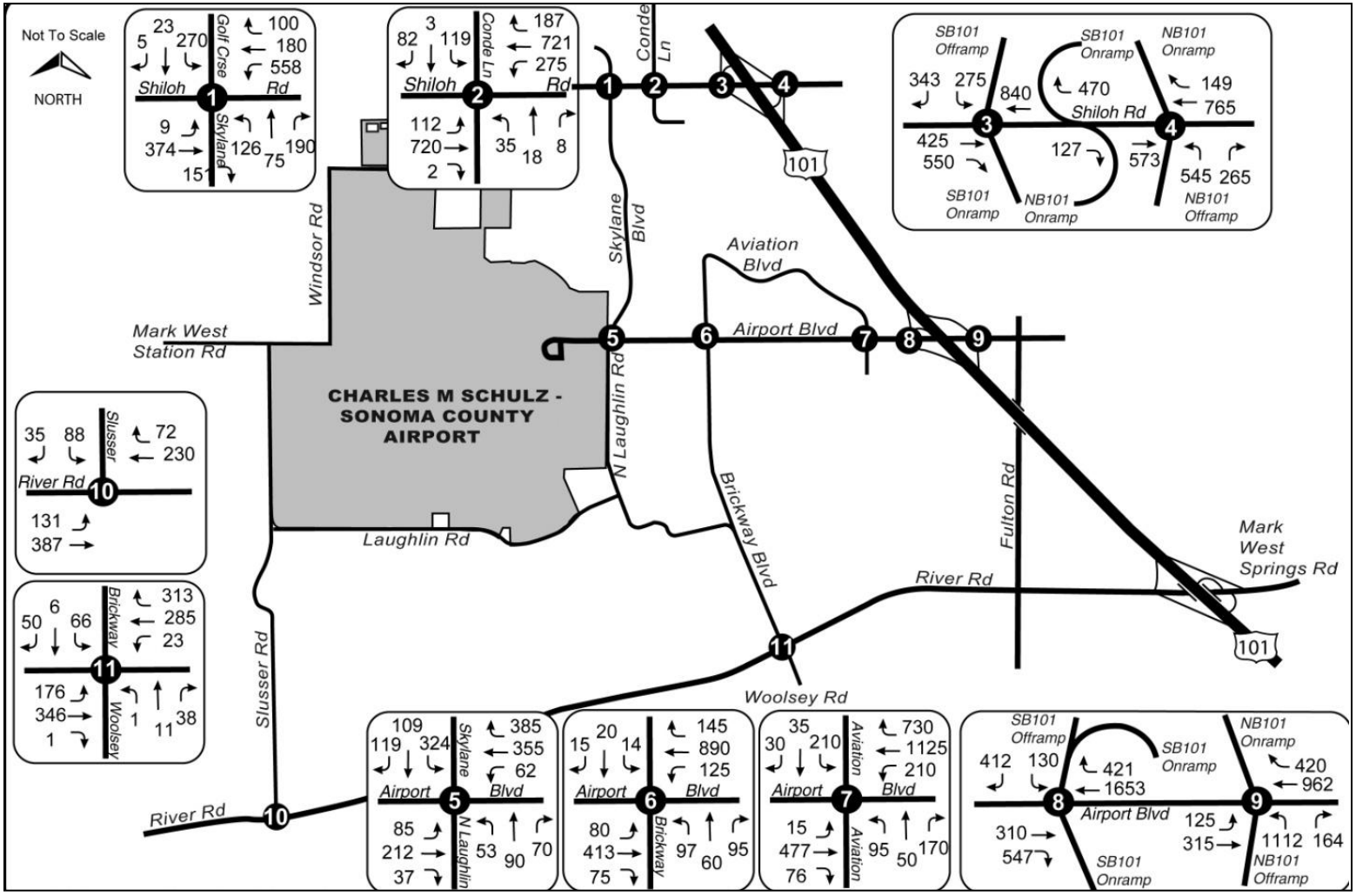
SOURCE: Crane Transportation Group, 2011
PREPARED BY: Crane Transportation Group, 2011

Figure 3.12-23
2015 PM PEAK HOUR VOLUMES WITH PROPOSED PROJECT



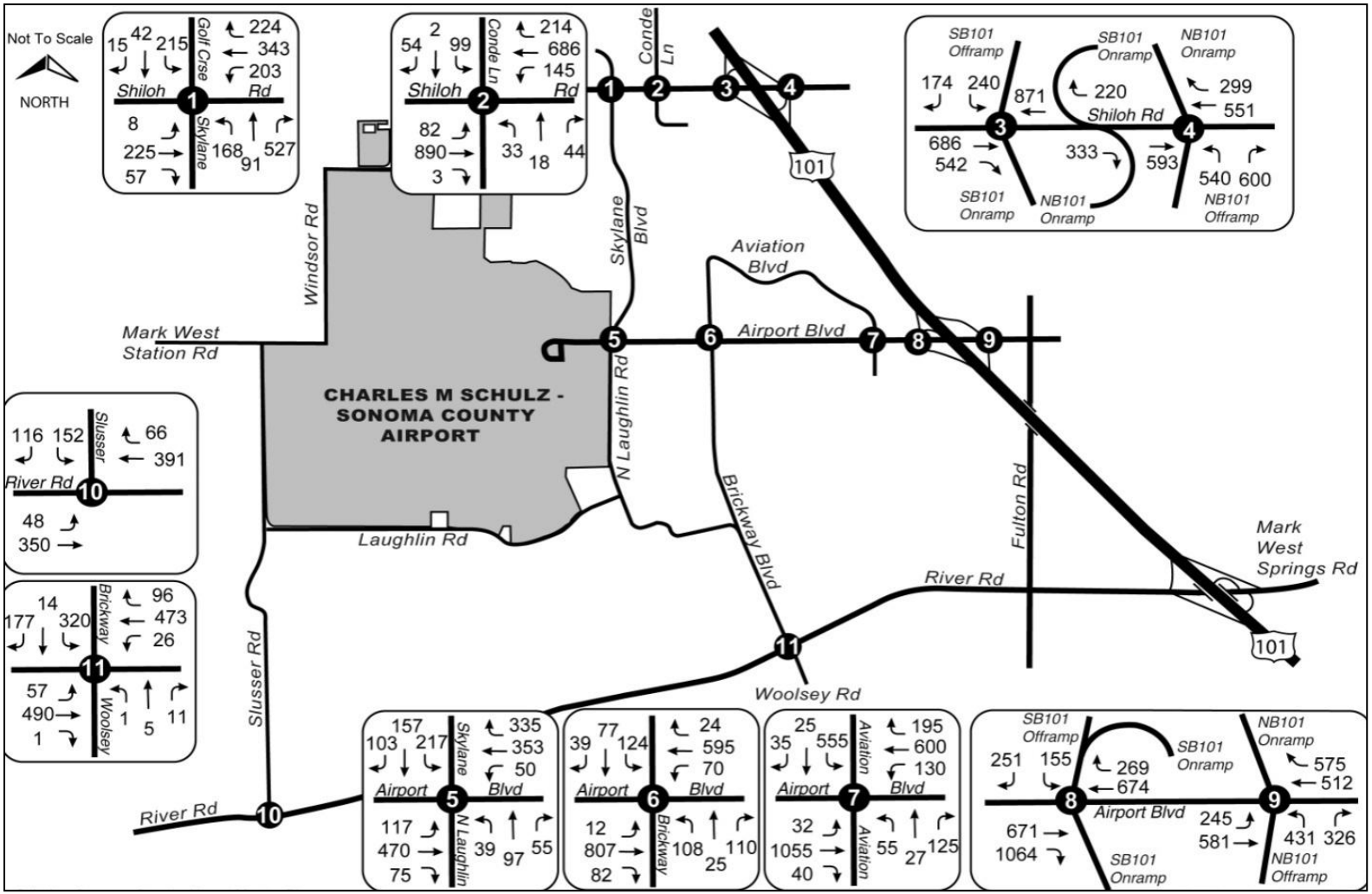
SOURCE: Crane Transportation Group, 2011
PREPARED BY: Crane Transportation Group, 2011

Figure 3.12-24
2030 AM PEAK HOUR VOLUMES WITH PROPOSED PROJECT



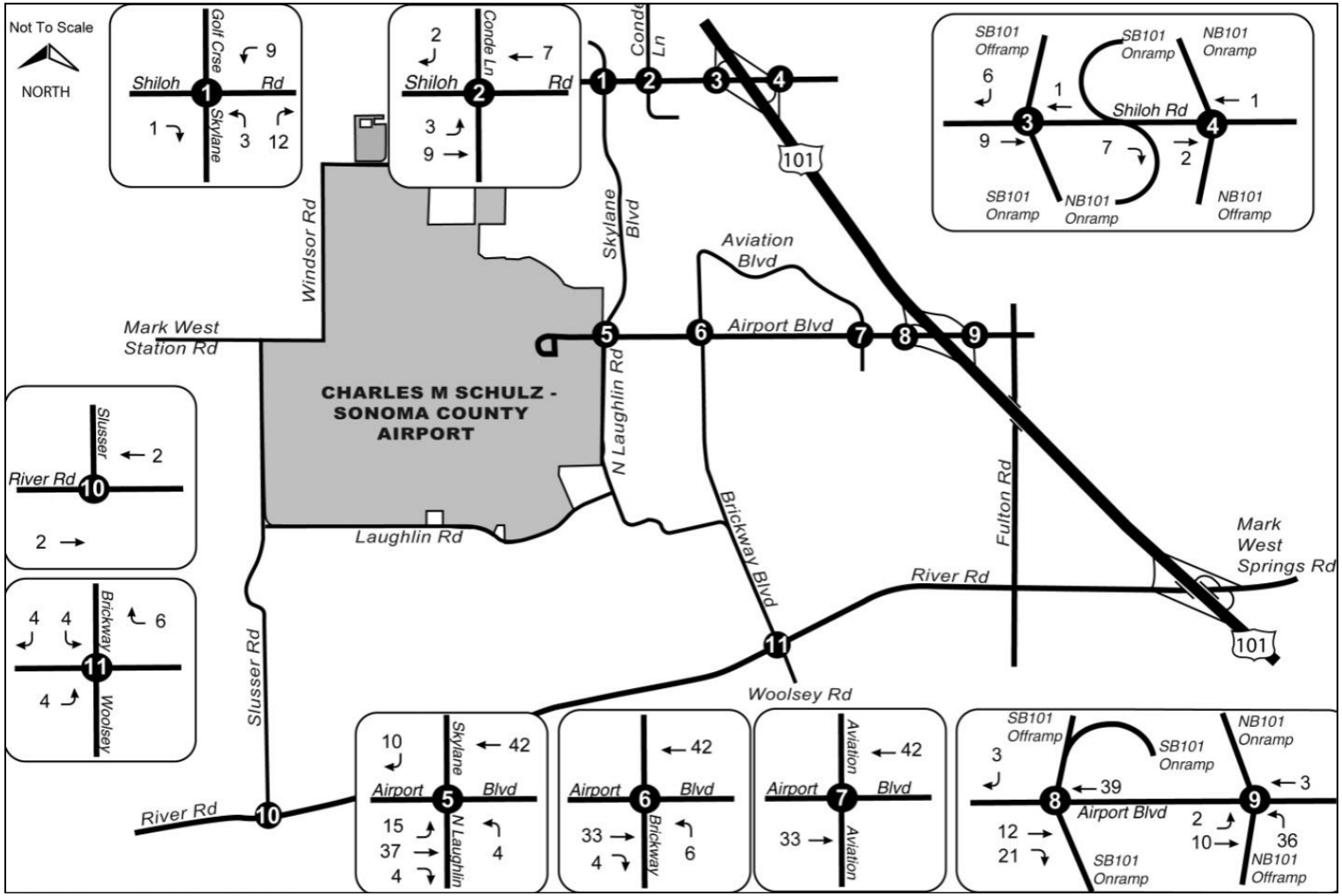
SOURCE: Crane Transportation Group, 2011
PREPARED BY: Crane Transportation Group, 2011

Figure 3.12-25
2030 PM PEAK HOUR VOLUMES WITH PROPOSED PROJECT



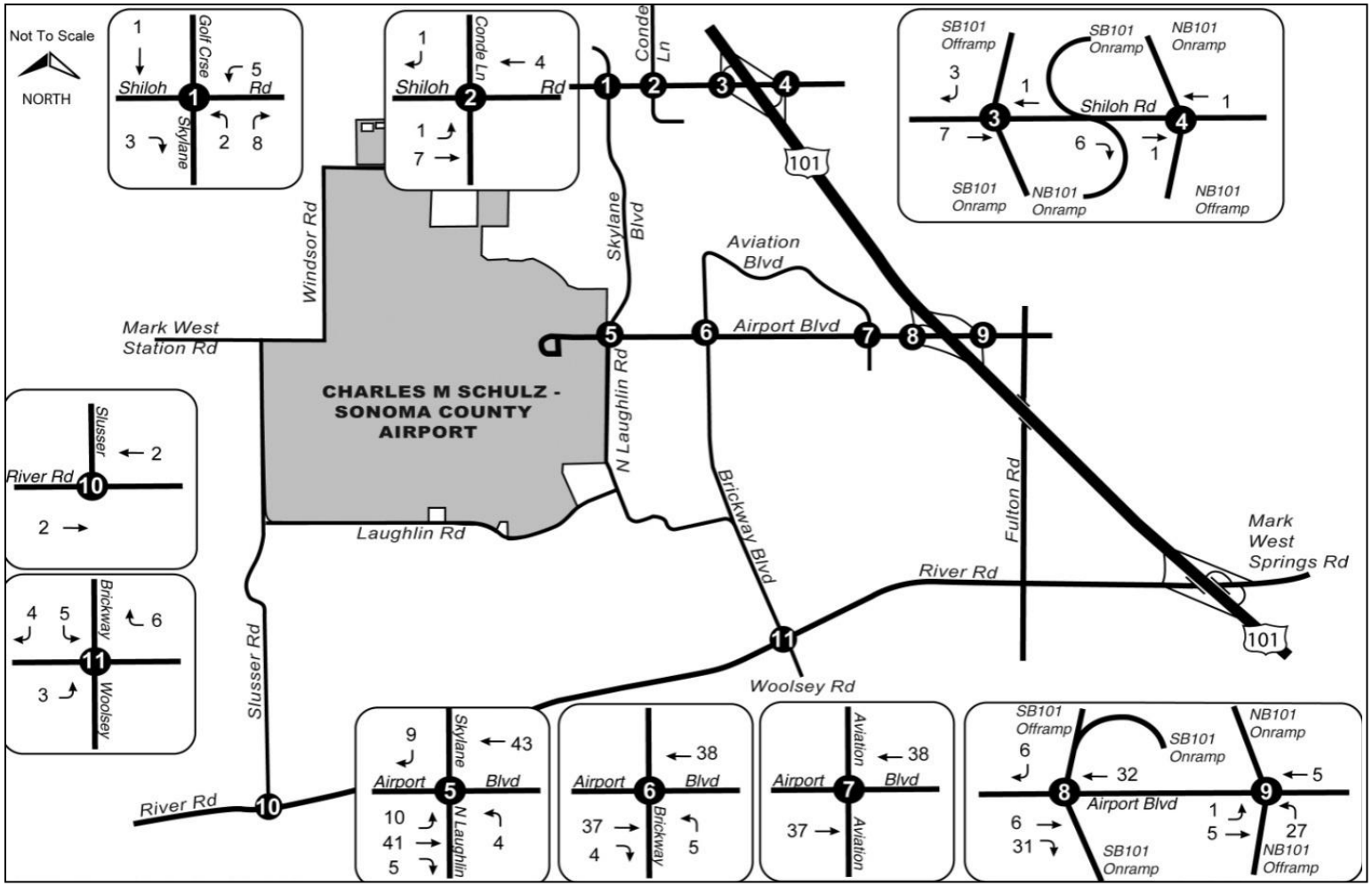
SOURCE: Crane Transportation Group, 2011
PREPARED BY: Crane Transportation Group, 2011

Figure 3.12-26
2015 AM PEAK HOUR PROPOSED PROJECT INCREMENT VOLUMES



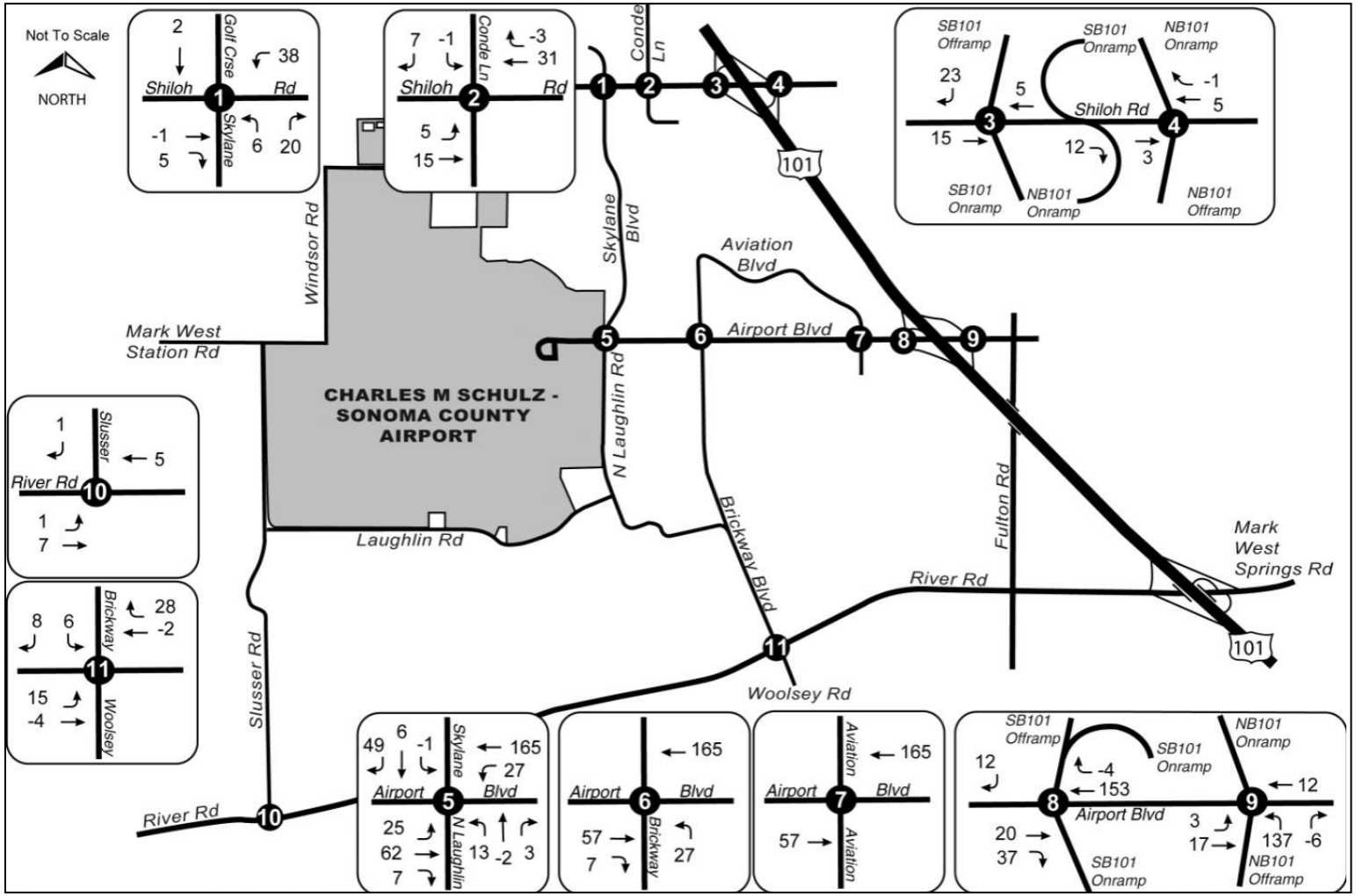
SOURCE: Crane Transportation Group, 2011
PREPARED BY: Crane Transportation Group, 2011

Figure 3.12-27
2015 PM PEAK HOUR PROPOSED PROJECT INCREMENT VOLUMES



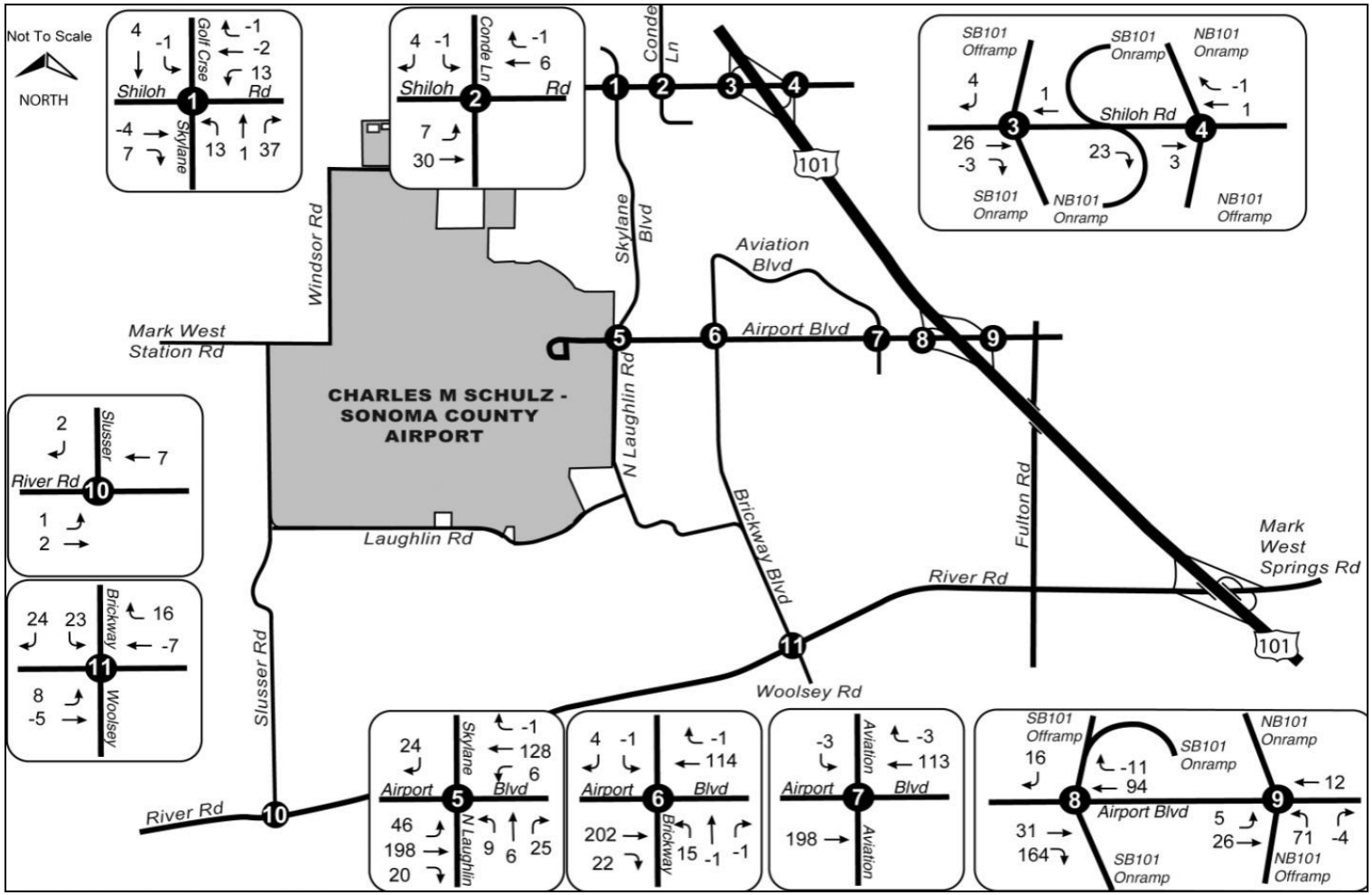
SOURCE: Crane Transportation Group, 2011
PREPARED BY: Crane Transportation Group, 2011

Figure 3.12-28
2030 AM PEAK HOUR PROPOSED PROJECT INCREMENT VOLUMES



SOURCE: Crane Transportation Group, 2011
PREPARED BY: Crane Transportation Group, 2011

Figure 3.12-29
2030 PM PEAK HOUR PROPOSED PROJECT INCREMENT VOLUMES



SOURCE: Crane Transportation Group, 2011
PREPARED BY: Crane Transportation Group, 2011

Table 3.12-2114
TRIP DISTRIBUTION FOR THE PROPOSED PROJECT

	AM PEAK HOUR		PM PEAK HOUR	
DIRECTION	**IN**	**OUT**	**IN**	**OUT**
Airport Boulevard to/from the East	64%	59%	68%	67%
Skylane Boulevard to/from the North and the Shiloh Road Corridor	18%	27%	16%	17%
North Laughlin Road and Brickway Boulevard to/from the South and the River Road Corridor	18%	14%	16%	16%

SOURCE: Crane Transportation Group/SCTA Traffic Model Projections, 2010
PREPARED BY: Crane Transportation Group, 2010

~~3.12.6.2~~ Impacts and Mitigation Measures

Impact 3.12.12: Construction Traffic as a Result of Short-Term Project Elements

The construction of the short-term project elements would occur in two phases over a two-year period. Phase I would occur for about 110 working days in 2012 (from about the beginning of June to the end of October). Phase II would occur for about 73 working days in 2013 (from about the middle of April to the end of July). The two phases would have the following construction-related workers and truck trips.

PHASE I

- work force would vary from 10 up to about 60
- maximum delivery truck round trips/day would be 70

PHASE II

- work force would vary from 10 up to 40
- maximum delivery truck round trips/day would be 35

Construction workers generally would work from 7:00 AM to 3:30 PM and would not be traveling during the normal commute periods. Truck deliveries would typically occur between 7:00 AM and 3:00 PM. Therefore, trucks would be on the local roadway system during the AM commute period. Project truck traffic would either use Airport Boulevard or Shiloh Road in order to travel between the Airport and U.S.101.

Airport Boulevard Corridor

The addition of 5 to 9 truck trips per hour in each direction on Airport Boulevard during the AM commute period would only slightly degrade operation at signalized intersections between the U.S.101 interchange and the Airport. All major intersections along Airport Boulevard to and including the reconstructed U.S.101 interchange are programmed for signalization before 2015. However, the Airport Boulevard interchange is programmed to be undergoing reconstruction during the 2012 and 2013 Master Plan construction seasons, and signalization of off-ramp intersections may not be in place by 2012 and/or 2013. The addition of up to 18 AM peak hour trucks through the interchange area during reconstruction could potentially result in significant delays for all drivers. The resultant impact would depend upon the temporary control measures in place at the interchange ramp intersections as well as any shift in regular Airport area commuters to alternate access routes (River Road/Shiloh Road) to avoid the construction. Significant AM peak hour delay impacts could also occur at the *Airport Boulevard/Skylane-North*

Laughlin Road intersection if not signalized by the time of project constructions. This would result in a potentially significant impact.

Shiloh Road Corridor

Shiloh Road may be experiencing some additional background traffic growth during the course of the Airport Boulevard interchange reconstruction in 2012 and 2013. The addition of 5 to 9 project construction truck trips per hour in each direction on Shiloh Road during the AM commute period would only slightly degrade operation at the existing signalized intersections between the U.S.101 interchange and the Airport. All major intersections along Shiloh Road are programmed for signalization before 2015: The U.S.101 southbound off-ramp intersection is scheduled for signalization during the winter of 2011, while the Conde Lane intersection is scheduled for signalization by the end of 2012/early 2013.[13] The addition of up to 18 AM peak hour truck trips through either intersection, if remaining unsignalized, could potentially result in significant delay increases for drivers on the intersection's stop sign controlled approaches. Therefore, the Town of Windsor would not be in favor of allowing Airport construction truck traffic on Shiloh Road through either the Conde Lane at U.S.101 southbound off-ramp intersections until both are signalized.[14]

This would result in a potentially significant impact.

All construction worker parking would take place internal to the Airport (on 5 acres in the north section of the project site and/or on 5 acres in the southwest section of the project site).

A construction traffic management plan has not yet been prepared for the Master Plan. Lack of such a plan could lead to construction worker traffic occurring during peak commute periods

Mitigation Measure 3.12.12

See mitigation measure 3.12.1. The implementation of this mitigation measure ~~The County shall prepare a construction traffic management plan to ensure that construction worker traffic occurs outside normal commute hours (7:00-9:00 AM and 4:00-6:00 PM) and that there are no inbound and no more than 4 outbound construction truck trips during the AM peak traffic period; and no outbound and no more than 4 inbound construction truck trips during the PM peak traffic period. If Airport Master Plan construction truck traffic is routed to Shiloh Road and Skylane Boulevard, it may also be necessary to provide all-way stop control at the *Airport Boulevard/Skylane-North Laughlin Road* intersection until signalization is in place. All-way stop control at this location may also be required to mitigate extended delay on the Skylane Boulevard approach even if construction trucks are using Airport Boulevard for freeway access. No construction truck traffic should use Shiloh Road between Skylane Boulevard and the U.S.101 freeway until the Conde Lane and U.S.101 southbound ramp intersections are signalized. This~~ would reduce the impact to a less-than-significant level.

[13] Mr. Allan Tilton, Town of Windsor Consulting Traffic Engineer, personal conversation, July 18, 2011.
[14] Ibid.

Impact 3.12.132: Intersection Level of Service for 2015

Table 3.12-6 shows that traffic associated with the Proposed Project would produce no significant level of service impacts during the AM peak hour or PM peak hour at any analyzed location. No intersection would have acceptable ~~Base Case~~ year 2015 operation degraded to an unacceptable operation. In addition, at the one intersection with unacceptable ~~Base Case~~ year 2015 operation (River Road/Slusser Road – PM peak hour), the impact due to traffic associated with the Proposed Project would be less than significant (less than a 5-second increase in delay on the stop sign controlled Slusser Road intersection approach with ~~Base Case~~ year 2015 LOS E operation).

Mitigation Measure 3.12.132

No mitigation is warranted.

Impact 3.12.143: Intersection Signal Warrant Evaluation for 2015

Only the River Road/Slusser Road intersection would be unsignalized by 2015. The Proposed Project would add four vehicles (on River Road) to this intersection during both the AM and PM peak hours (but none on Slusser Road). ~~Base Case~~ Year 2015 volumes at this intersection are on the borderline of meeting peak hour signal warrant criteria levels during the AM peak hour and exceed warrant criteria levels during the PM peak hour. Based upon County of Sonoma Significance Criteria 7, any increase in traffic at an unsignalized intersection already meeting signal warrant criteria levels is considered a significant impact.

Mitigation Measure 3.12.143

See mitigation measure 3.12.3. The implementation of this mitigation measure ~~The County is not planning to signalize this intersection. Therefore, the County shall provide a fair share contribution towards installation of a dedicated right-turn lane on the Slusser Road intersection approach to River Road in order to mitigate the significant impact of the Proposed Project. The installation of the dedicated right-turn lane would result in a LOS of C in both the AM and PM peak hours. This~~ would reduce the impact to a less-than-significant level (see **Figure 3.12-320**).

Impact 3.12.154: U.S. 101 Freeway Operation for 2015

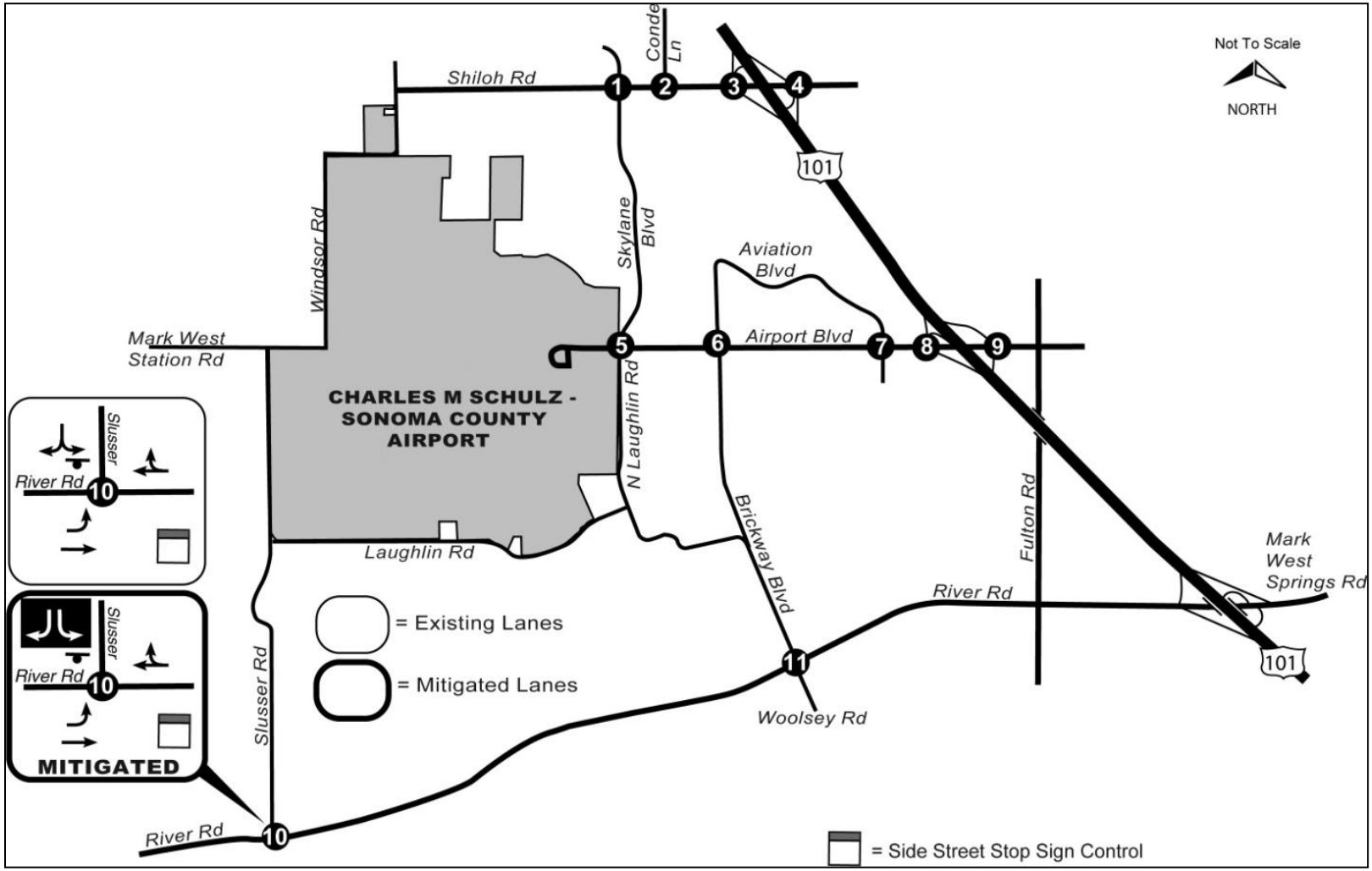
Table 3.12-7 shows that all but one direction of mixed flow travel lanes on the U.S.101 freeway north and south of the Airport Boulevard interchange would be operating at acceptable levels of service during the AM and PM peak traffic hours after the addition of traffic associated with the Proposed Project. The exception is the northbound direction north of the Airport Boulevard interchange during the PM peak hour, where operation would be LOS D. However, the addition of traffic associated with the Proposed Project would produce no change in the v/c ratio for this segment of freeway. Therefore, this would not meet Caltrans criteria for a significant impact. This would be a less-than-significant impact.

Mitigation Measure 3.12.154

No mitigation is warranted.

Figure 3.12-30

2015 INTERSECTION MITIGATION



SOURCE: Crane Transportation Group, 2011
PREPARED BY: Crane Transportation Group, 2011

Impact 3.12.16~~5~~: Impacts to Pedestrian and Bicycle Facilities in 2015

No change in pedestrian or bicycle traffic in the Airport vicinity is anticipated as a result of the increase in based general aviation aircraft or the increase in passengers using the Airport. In general, there are very few, if any, persons who access the Airport in a pedestrian mode or via bicycle. Thus, no change in pedestrian or bicycle activity in the Airport is anticipated as a result of the Proposed Project. This would be a less-than-significant impact.

Mitigation Measure 3.12.16~~5~~

No mitigation is warranted.

Impact 3.12.17~~6~~: Construction Traffic Associated with Long-Term Project Elements

Long-term project elements would result in an increase in construction traffic during the period in which construction would occur. These long-term project elements include the development of a new terminal building and other landside facilities on the eastern portion of the Airport. It is likely that most construction traffic associated with these long-term projects would access the Airport via Airport Boulevard. Depending on the timing associated with each long-term project element, it is possible that traffic associated with construction activities (including construction workers, delivery of materials and supplies, etc.) could have an adverse effect on the LOS of intersections along Airport Boulevard. However, the timing of and haul routes for construction of the long-term project elements has not been established. All long-term project elements are still conceptual and dependent upon funding availability. Until the precise scope, design, and timing for each long-term project element is more clearly defined, any attempt to quantify construction-related traffic impacts would be purely speculative. Each long-term project element will be studied in a focused project-level environmental analysis before it is approved or implemented. To reduce any potentially significant impacts related to construction traffic, the following mitigation measure shall be implemented during construction for each long-term project element.

Mitigation Measure 3.12.17~~6~~

See mitigation measure 3.12.6. The implementation of this mitigation measure would ~~As each new long-term project element is proposed for implementation, the County shall implement all feasible mitigation to ensure that construction-related traffic does not adversely affect the LOS at intersections in the Airport vicinity. At a minimum, the County shall prepare and implement a construction traffic management plan that includes measures, such as restrictions on construction worker traffic and construction truck trip traffic during peak traffic hours, sufficient to~~ reduce the impact to adjacent roadways to a less-than-significant level.

Impact 3.12.18~~7~~: Intersection Level of Service for 2030

Table 3.12-9 shows that traffic associated with full implementation of the Proposed Project would produce a significant impact at one Town of Windsor intersection, but at no County of Sonoma intersections. No intersection would have acceptable ~~Base Case~~ year 2030 operation degraded to unacceptable operation. However, the Shiloh Road/Skylane Boulevard intersection in the Town of Windsor would have AM peak hour unacceptable ~~Base Case~~ year 2030 LOS E delay increased from 62.7 up to 68.2 seconds of control delay. Based on Town of Windsor Significance Criteria 2, the addition of any traffic to an intersection with unacceptable ~~Base Case~~ year 2030 operation is a significant impact. However, this impact assumes that all long-term project elements will be implemented. As previously noted, the designs of long-term project elements are conceptual and based on very limited engineering and environmental investigation. The actual environmental impact associated with these long-term elements will

depend on the ultimate design and location of the particular long-term element. Therefore, additional investigation and analysis would be required to fully determine the environmental impacts, if any, associated with long-term project elements and identify appropriate mitigation to reduce any impact to less-than-significant levels.

At the one intersection with unacceptable ~~Base Case~~ year 2030 operation in the County of Sonoma (River Road/Slusser Road – PM peak hour), traffic associated with the Proposed Project would change the level of service from LOS E to LOS F and result in an increase in delay of 2.8 seconds. Based on County of Sonoma Significance Criteria 10, this impact would be less-than-significant as there would be less than a 5-second increase in delay on the stop sign controlled Slusser Road intersection approach.

Mitigation Measure 3.12.18~~7~~

See mitigation measure 3.12.7. The implementation of this mitigation measure ~~As each new long-term project element with the potential to generate traffic is proposed, the County shall comply with Sonoma County Traffic Study Guidelines and, if required, prepare a project-level traffic study to assess the potential traffic impacts associated with that long-term project element. If the traffic study identifies an impact to the *Shiloh Road/ Skylane Boulevard* intersection in Windsor, the County shall provide a fair share contribution to the construction of a dedicated right-turn lane on the eastbound Shiloh Road intersection approach. The construction of a right-turn lane would result in an AM peak hour intersection LOS of D. This~~ would reduce the impact to a less-than-significant level. No mitigation is warranted at any other intersection.

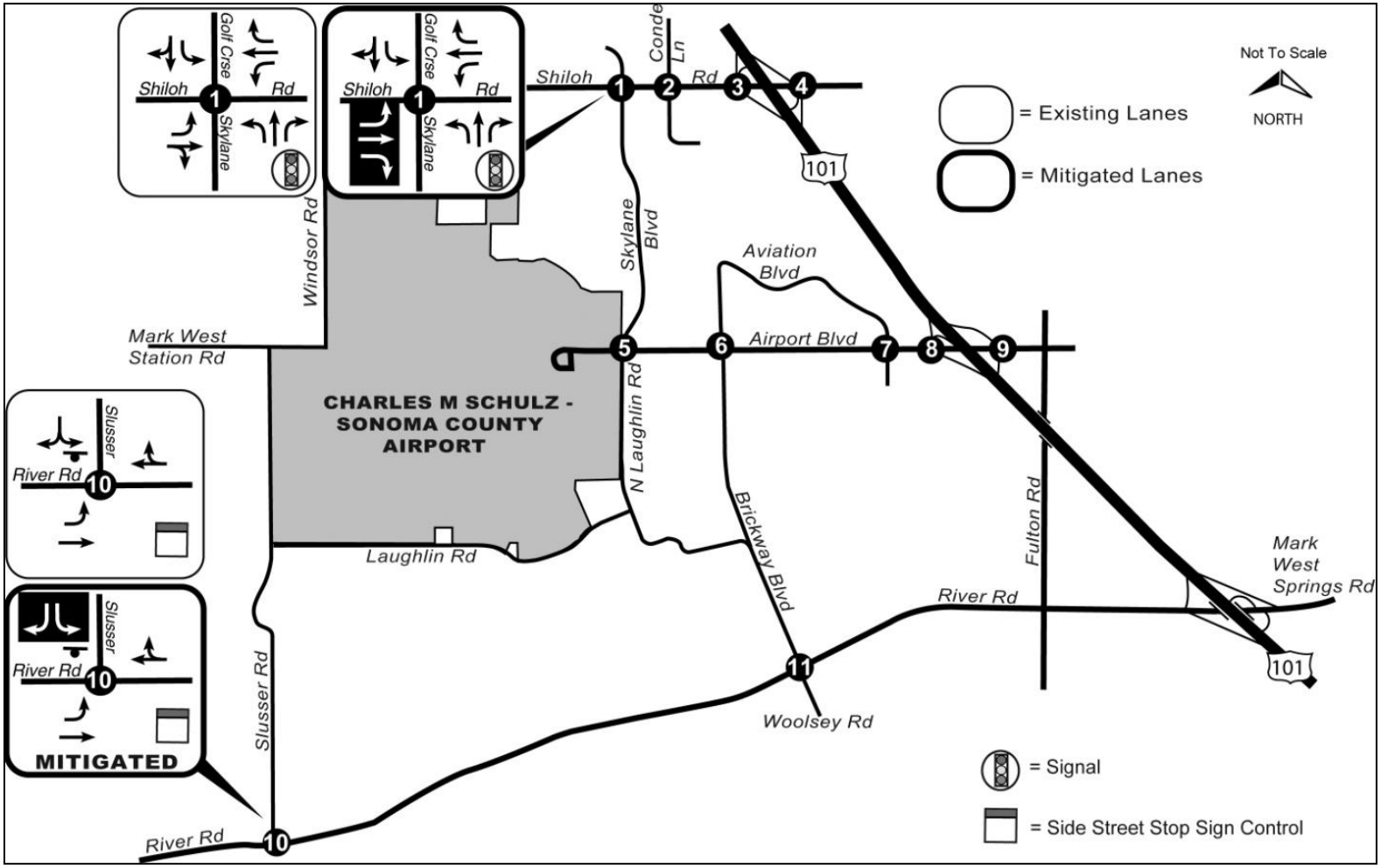
Impact 3.12.19~~8~~: Intersection Signal Warrant Evaluation for 2030

By 2030, only the River Road/Slusser Road intersection would be unsignalized. Build out of the Proposed Project would add 14 vehicles to this intersection during the AM peak hour and 12 vehicles during the PM peak hour. One to two vehicles would be on the Slusser Road approach. ~~Base Case~~ Year 2030 volumes at this intersection would exceed peak hour signal warrant criteria levels during both the AM and PM peak hours. Based on County of Sonoma Significance Criteria 7, any increase in traffic at an unsignalized intersection already meeting signal warrant criteria levels is considered a significant impact. This impact assumes that all long-term project elements will be implemented. However, as previously discussed in Chapter 2, whether individual project elements are implemented will depend on need and available funding. The designs of long-term project elements are conceptual and based on very limited engineering and environmental investigation. The actual environmental impact associated with these long-term elements will depend on the ultimate design and location of the particular long-term element. Moreover, while the County has no plans to improve this intersection at this time, growth unrelated to the Proposed Project may alter those plans in the future. Therefore, additional investigation and analysis would be required to fully determine the environmental impacts, if any, associated with long-term project elements and identify appropriate mitigation to reduce any potentially significant impact to less-than-significant levels.

Mitigation Measure 3.12.19~~8~~

See mitigation measure 3.12.8. The implementation of this mitigation measure ~~As each new long-term project element with the potential to generate traffic is proposed, the County shall comply with Sonoma County Traffic Study Guidelines and, if required, prepare a project-level traffic study to assess the potential traffic impacts associated with that long-term project~~

Figure 3.12-31
2030 INTERSECTION MITIGATION



SOURCE: Crane Transportation Group, 2011
PREPARED BY: Crane Transportation Group, 2011

~~element. If the traffic study identifies an impact to the River Road/Slusser Road intersection, the County shall provide a fair share contribution to the mitigation measure outlined in Mitigation Measure 3.12.4. This would result in LOS D for both the AM and PM peak hours. This~~ would reduce the impact to a less-than-significant level (see **Figure 3.12-3~~2~~1**).

Impact 3.12.2~~0~~9: U.S. 101 Freeway Operation for 2030

Table 3.12-10 shows that the addition of traffic associated with build out of the Proposed Project would not change the ~~Base Case~~ year 2030 level of service for any segment of freeway during any time period. However, traffic associated with the Proposed Project would change the v/c ratio of several freeway segments projected to be operating at ~~Base Case~~ year 2030 LOS D conditions. Southbound U.S. 101 would experience v/c changes from 0.73 to 0.74. For the AM peak hour. northbound U.S. 101 south of Airport Boulevard would experience v/c changes from 0.74 to 0.75 and southbound U.S. 101 south of Airport Boulevard would experience a v/c change from 0.75 to 0.78. Based on Caltrans Significance Criteria 1 and County of Sonoma Significance Criteria 12, this would be a significant impact. This impact assumes full build out of all long-term project elements. However, as previously discussed in Chapter 2, whether individual project elements are implemented will depend on need and available funding. The designs of long-term project elements are conceptual and based on very limited engineering and environmental investigation. The potential environmental impact on U.S. 101 associated with these long-term project elements will depend on the ultimate design and location of the particular long-term element. Therefore, additional investigation and analysis would be required to fully determine the environmental impacts, if any, associated with long-term project elements and identify appropriate mitigation to reduce any potentially significant impact to less-than-significant levels.

Mitigation Measure 3.12.2~~0~~9

See mitigation measure 3.12.9. While there are no feasible capacity measures to mitigate the impact of the Proposed Project on the U.S.101 mainline to a less-than-significant level, as each new long-term project element with the potential to generate traffic is proposed, the County shall comply with Sonoma County Traffic Study Guidelines and, if required, prepare a project-level traffic study to assess the potential traffic impacts associated with that long-term project element. If the traffic study identifies a volume-to-capacity ratio impact, the County shall implement all feasible traffic reduction strategies to minimize the identified impact. These strategies could include providing incentives to the use of public transportation or encourage commute alternatives.

Impact 3.12.21~~10~~: Impacts to Pedestrian Facilities for 2030

Roadways adjacent to the Airport lack sidewalks in many locations. While there is little observed or expected pedestrian traffic along the Laughlin Road, Slusser Road, Mark West Station Road and Windsor Road frontages, there is the possibility of moderate pedestrian levels along Airport Boulevard. The lack of sidewalks along Airport Boulevard adjacent to the Airport may result in a significant pedestrian safety concern. In addition, the lack of pedestrian crossing signals at the Airport Boulevard/North Laughlin Road-Skylane Boulevard intersection (when signalized) may result in a pedestrian safety concern. This impact is considered significant according to Policy 1.07 of the *2010 Sonoma County Bicycle and Pedestrian Plan* which states that impacts to planned or existing pedestrian facilities must be identified and mitigated. Based on County of Sonoma Significance Criteria 14, this would be a significant impact. However, not all long-term project elements have the same potential to affect pedestrian safety. Replacement of the existing passenger terminal does carry the potential to generate additional traffic that could affect pedestrians along streets adjacent to the Airport. The two office buildings also would have

the potential to affect pedestrians. However, the two office buildings are not part of the Proposed Project, and any impacts associated with the construction of these two buildings would be evaluated during the review process for these projects.

Mitigation Measure 3.12.2110

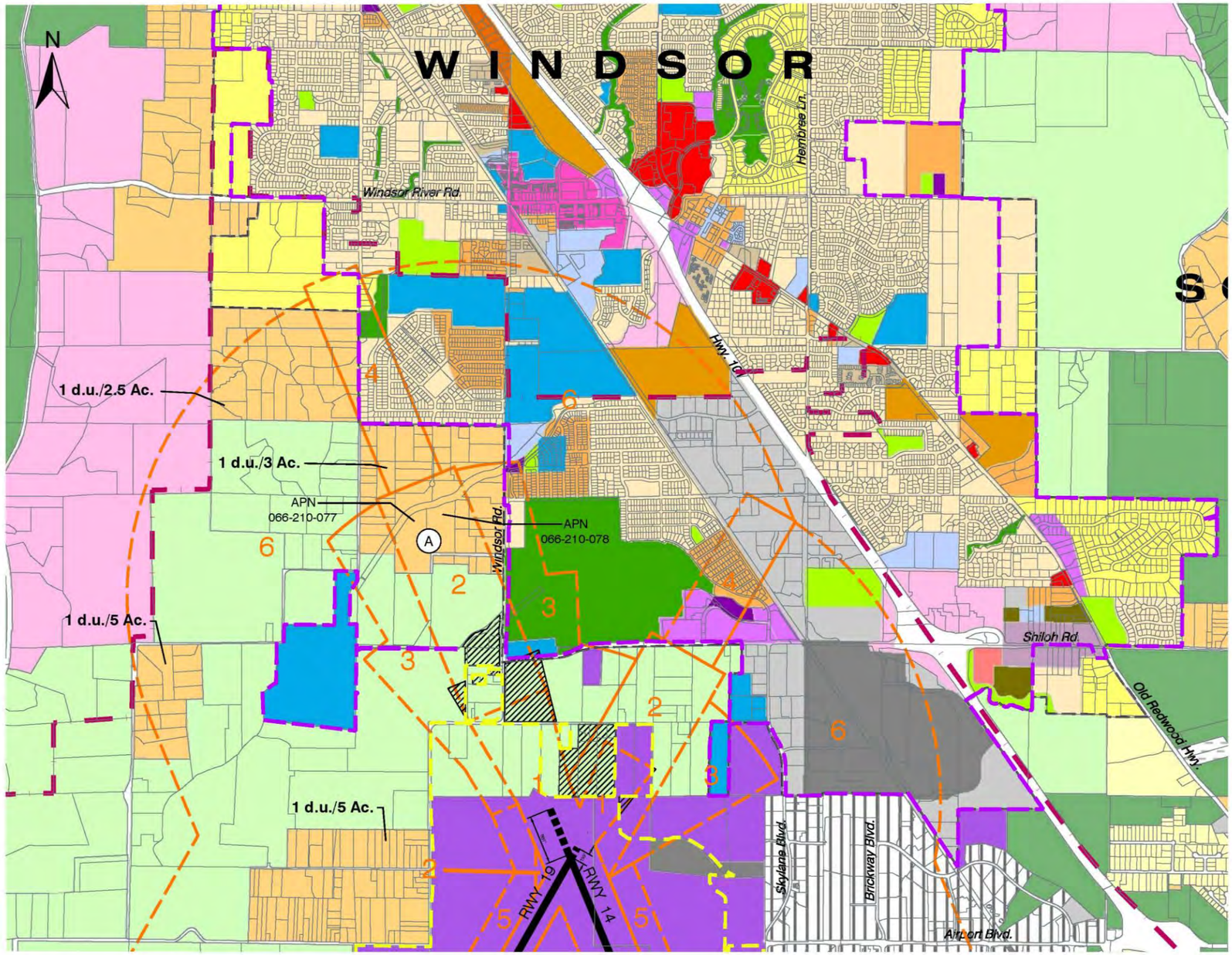
See mitigation measure 3.12.10. The implementation of this mitigation measure would ~~Prior to the issuance of occupancy permits a new terminal building, the County shall provide a fair share contribution for sidewalks on Airport Boulevard where needed between the Airport terminal and the North Laughlin Road-Skylane Boulevard intersection. Implementation of this mitigation measure will~~ reduce the impact to a less than significant level.

Impact 3.12.2211: Impact to Bicycle Facilities for 2030

Class II bike lanes already exist along Airport Boulevard internal to the Airport (ending just west of the Flightline Drive-Ordinance Road intersection). There are no other bicycle lanes in the immediate project vicinity. Based upon surveys at the Airport terminal, there is minimal bicycle traffic to/from the Airport. Class III bike routes are planned along the Airport's Slusser Road, Mark West Station Road and Windsor Road frontages. However, there would only be minimal traffic along any of these routes that is associated with the Proposed Project; therefore, any impact along these roads would be less than significant. Class II bike lanes are planned along Skylane Boulevard between Airport Boulevard and Shiloh Road, where there would be a greater increase in project traffic. There are currently no bicycle facilities along Skylane Boulevard. Project traffic increases along Skylane Boulevard would potentially increase safety concerns for bike riders along this route. This impact is considered significant according to Policy 1.07 of the *2010 Sonoma County Bicycle and Pedestrian Plan* which states that impacts to planned or existing bicycle facilities must be identified and mitigated. Based on County of Sonoma Significance Criteria 14, this would be a significant impact.

Mitigation Measure 3.12.2211

See mitigation measure 3.12.11. The implementation of this mitigation measure ~~Prior to the issuance of occupancy permits for the terminal, the County shall provide a fair share contribution toward provision of Class II bicycle lanes along Skylane Boulevard. This~~ would reduce the impact to a less-than-significant level.



Legend

City of Windsor General Plan

- Compact Residential (12-32 d.u./ac.)
- High Density Residential (12-36 d.u./ac.)
- Medium-High Density Residential (8-12 d.u./ac.)
- Mobile Home Park (8-12 d.u./ac.)
- Village Res. / Medium Density Residential (5-8 d.u./ac.)
- Surrounding Res. / Low-Medium Density Residential (3-6 d.u./ac.)
- Estate Res. / Low Density Residential (0.2-3 d.u./ac.)
- Rural Res. / Very Low Density Residential (0-0.2 d.u./ac.)
- Boulevard Mixed Use
- Regional Mixed Use
- Neighborhood Center / Mixed Use
- Town Center / Mixed Use
- Retail Commercial
- Service Commercial
- Gateway Commercial
- General Business
- Light Industrial
- Heavy Industrial
- Open Space
- Parks
- Cemetery / School / Wastewater Treatment Plant

Sonoma County General Plan

- Diverse Agriculture
- Land Extensive Agriculture
- Land Intensive Agriculture
- Resources and Rural Development
- Rural Residential (see map for density)
- Urban Residential
- Recreation / Visitor-Serving Commercial
- Public / Quasi-Public
- General Commercial
- Limited Commercial
- Limited Commercial Traffic Sensitive
- General Industrial
- Limited Industrial

- Airport Property Boundary
- Proposed Property Acquisition
- City Limits
- Sphere of Influence
- CALUP Referral Area
- Handbook Safety Zones

1 Runway Protection Zone
2 Inner Approach/Departure Zone
3 Inner Turning Zones
4 Outer Approach/departure Zone
5 Sideline Zone
6 Traffic Pattern Zone

0 1,000 2,000 4,000 Feet

Notes

1. Dwelling units per acre (d.u./ac.)
2. For note (A) see discussion in Section 3.9.2

Figure 3.9-4
2002 HANDBOOK SAFETY ZONES

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