4.10 TRANSPORTATION

INTRODUCTION

This section addresses the potential transportation impacts resulting from construction and operation of the East Weddell Residential Projects, as well as the individual Sares Regis and Raintree projects that together make up the East Weddell Residential Projects. The transportation information presented in this section is derived from data collected in the field (Existing Conditions traffic counts), as well as from future year travel demand model projections based upon the *City of Sunnyvale General Plan Land Use and Transportation Element*.

ENVIRONMENTAL SETTING

Figure 4.10-1 shows the setting of the project sites within Sunnyvale. The project sites are located in the northwestern and northeastern quadrants of Highway 101/North Fair Oaks Avenue freeway interchange. Primary access to both sites is from the North Fair Oaks Avenue/East Weddell Drive signalized intersection.

MOTOR VEHICLE CIRCULATION

REGIONAL AND LOCAL ROADWAYS

Regional roadway facilities providing access to the project sites include the State Route 237 (SR 237) and Highway 101 freeways, as well as Central and Lawrence Expressways. Roadways providing local access include Fair Oaks Avenue, Wolfe Road, Mathilda Avenue, Maude Avenue, and East Weddell Drive. Descriptions of each roadway facility are presented below.

SR 237 is located northwest of the project sites and provides regional freeway access between Mountain View and Milpitas. It is an east-west freeway with two mixed-flow lanes in each direction west of N. Mathilda Avenue and with two mixed-flow lanes and one high occupancy vehicle (HOV) lane in each direction east of N. Mathilda Avenue. The HOV lanes are restricted to vehicles with two or more persons (carpool, vanpool, and buses) or motorcycles during the morning (5:00 AM to 9:00 AM) and evening (3:00 PM to 7:00 PM) commute periods. Access from SR 237 in the project site vicinity is provided by full interchanges with Mathilda Avenue and Lawrence Expressway and a partial interchange at Fair Oaks Avenue. Near the project sites, SR 237 currently averages approximately 90,000 daily vehicles.

Highway 101 is located south of the project sites and provides regional freeway access north through San Francisco and south through San Jose. Near the project sites, Highway 101 is oriented in an east-west direction with approximately 140,000 existing daily vehicles. The freeway consists of three mixed-flow lanes and one HOV lane in each direction. An interchange with Fair Oaks Avenue provides local access to the project sites.

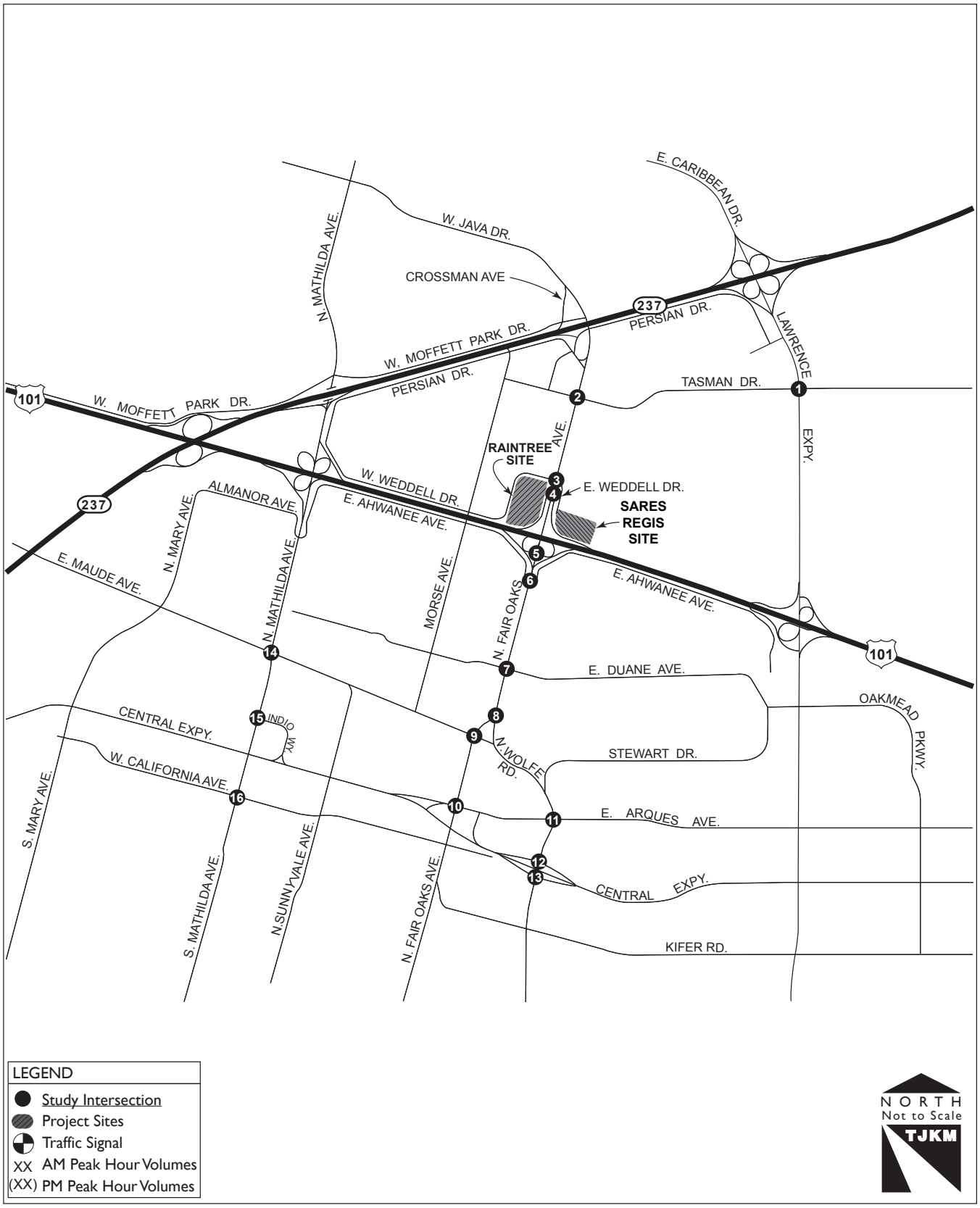

Figure 4.10-1

SOURCE: TJKM 2013

RESIDENTIAL DEVELOPMENTS

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Central Expressway is a four- to five-lane divided expressway serving Sunnyvale and providing a regional connection between Palo Alto and Santa Clara. The five-lane section within the study area includes a westbound auxiliary lane between Arques Avenue and N. Mathilda Avenue. Existing average daily traffic (ADT) on Central Expressway near the project sites is approximately 21,000 vehicles on an average weekday. Local interchanges serving the project sites include East Arques Avenue and North Wolfe Road. County policy permits bicycle travel along the shoulders of Central Expressway.

Lawrence Expressway is an eight-lane divided expressway that includes outside-lane HOV lanes in both directions. This facility serves Sunnyvale and provides a regional connection between Sunnyvale and Saratoga. Local project access to Lawrence Expressway includes the signalized study intersection at Tasman Drive. County policy permits bicycle travel along the shoulders of Lawrence Expressway.

Fair Oaks Avenue is a four- to six-lane, north-south arterial roadway within Sunnyvale that extends from Java Drive in the Moffett Park area southerly to El Camino Real (SR 82). It consists of six lanes north of East Weddell Drive and four lanes between East Weddell Drive and Ahwanee Avenue. South of Ahwanee Avenue, the roadway consists of five lanes (three southbound, two northbound) and then reverts to four lanes south of N. Wolfe Road. Fair Oaks Avenue is currently designated a Class III bikeway (signed route in which bicyclists share the road with other vehicles) between E. Weddell Drive and Tasman Drive. Fair Oaks Avenue also provides access to Central Expressway via an intersection with East Arques Avenue. This road is referred to as North Fair Oaks Avenue north of Highway 101. Fair Oaks Avenue is a City of Sunnyvale-designated route for trucks over three tons in weight along two segments: from Evelyn Avenue to Arques Avenue and between the SR 237 and Highway 101 freeways.

Wolfe Road is a four- to six-lane, north-south arterial roadway that extends from North Fair Oaks Avenue in Sunnyvale southerly to Stevens Creek Boulevard in the Cupertino. Class II on-street bicycle lanes are striped for the entirety of Wolfe Road within the Sunnyvale city limits, except for the section between El Camino Real and Old San Francisco Road that contains no Class II bicycle lanes. Wolfe Road also forms a full access interchange with Central Expressway south of the project sites. This roadway is also a City of Sunnyvale-designated route for trucks over three tons in weight between Evelyn Avenue and Arques Avenue.

Mathilda Avenue is a six- to seven-lane, north-south arterial roadway that provides local connections to the SR 237 and Highway 101 freeways. It is designated as a regional corridor in the City of Sunnyvale Land Use and Transportation Element with acceptable threshold of level of service (LOS) E. Mathilda Avenue connects with Caribbean Drive, which is an extension of Lawrence Expressway. To the south, Mathilda Avenue passes through central Sunnyvale and becomes Sunnyvale-Saratoga Road, providing access to I-280 and SR 85. Mathilda Avenue is a City of Sunnyvale-designated route for trucks over three tons in weight between Sunnyvale-Saratoga Road and Caribbean Drive. The roadway averages approximately 45,000 weekday vehicles south of SR 237.

Maude Avenue is a two- to four-lane, east-west collector roadway from SR 237 in the west to Wolfe Road in the east. Currently, this roadway includes Class II on-street bicycle lanes between the SR 237 northbound ramps and North Pastoria Avenue. Maude Avenue forms a partial interchange with SR 237 that complements the nearby SR 237/Middlefield Road

interchange. Existing ADT on Maude Avenue near the project sites is approximately 15,000 vehicles on an average weekday.

East Weddell Drive is a two-lane, east-west roadway that is classified in the City of Sunnyvale General Plan as a Commercial/Industrial Collector between Mathilda Avenue and North Fair Oaks Avenue. East Weddell Drive provides direct local access for both project sites via existing and proposed driveways.

INTERSECTION LEVEL OF SERVICE

Transportation engineers and planners commonly use a rating system called level of service (LOS) to measure and describe the operational status of intersections or roadway segments on a local street network. Level of service is a semi-quantitative description of an intersection or roadway's operation, ranging from LOS A (indicating free-flow traffic conditions with little or no delay) to LOS F (representing oversaturated conditions with traffic flows exceeding design capacity, resulting in long queues and delays).

STUDY INTERSECTIONS

To better understand current traffic issues for the project sites, 16 study intersections were selected and analyzed based on anticipated motor vehicle project trip distributions established from the City of Sunnyvale travel demand model and in consultation with City staff. The area that includes these intersections is considered the overall "study area" for the proposed projects. All of the study intersections are currently signalized except Intersection 5, as noted below. The study intersections are as follows:

1. Tasman Drive/Lawrence Expressway
2. North Fair Oaks Avenue/Tasman Drive
3. North Fair Oaks Avenue/East Weddell Drive
4. North Fair Oaks Avenue /Highway 101 northbound (NB) ramp intersection
5. North Fair Oaks Avenue/Highway 101 southbound (SB) ramps (2 loops and 2 straight ramps – yield control with no signal)
6. North Fair Oaks Avenue/East Ahwanee Avenue
7. North Fair Oaks Avenue/East Duane Avenue
8. North Fair Oaks Avenue/North Wolfe Road
9. North Fair Oaks Avenue/East Maude Avenue
10. North Fair Oaks Avenue/East Arques Avenue
11. North Wolfe Road/East Arques Avenue
12. North Wolfe Road/Central Expressway Westbound Ramps
13. North Wolfe Road/Central Expressway Eastbound Ramps
14. North Mathilda Avenue/East Maude Avenue
15. North Mathilda Avenue/Indio Way
16. North Mathilda Avenue/West California Avenue

FREEWAY LEVEL OF SERVICE

Transportation engineers and planners similarly use a LOS rating system to measure and describe the operational status of freeway segments.

STUDY FREEWAY SEGMENTS

To better understand current traffic issues for the project sites, two local freeway segments on SR 237 and Highway 101 were selected and analyzed consistent with VTA analysis guidelines and based on anticipated motor vehicle project trip distributions established from the City of Sunnyvale travel demand model and in consultation with City staff. The study freeway segments are as follows:

1. SR 237 between Lawrence Expressway and Highway 101
2. Highway 101 between Lawrence Expressway and Ellis Street

BICYCLE AND PEDESTRIAN FACILITIES AND CIRCULATION

Bicycle facilities are classified in three ways: off-street paths separated from auto traffic (Class I), on-street striped lanes (Class II), and on-street signed routes in which bicycles share the roadway with other vehicles (Class III). **Figure 4.10-2** shows existing bicycle facilities within the study area.

Currently near the project sites, Class II bicycle lanes are provided along the following roadways:

- Borregas Drive from Maude Avenue to Caribbean Drive (including Highway 101 and SR 237 bicycle overcrossings)
- Caribbean Drive from 1st Avenue to SR 237
- De Guigne Drive/Commercial Street from E. Duane Avenue to Central Expressway
- East Arques Avenue from North Wolfe Road to east of Lawrence Expressway
- E. Weddell Drive between the Raintree and Sares Regis Project Sites
- Java Drive/N. Fair Oaks Avenue between Crossman Avenue and Tasman Drive
- Kifer Road from N. Fair Oaks Avenue to Lawrence Expressway
- Moffett Park Drive between Bordeaux Drive and Caribbean Drive
- Morse Avenue between W. Weddell Drive and Persian Drive
- N. Fair Oaks Avenue from Evelyn Avenue to Kifer Road
- N. Sunnyvale Avenue south of Evelyn Avenue
- Oakmead Parkway from E. Duane Avenue to Central Expressway
- Persian Drive from Ross Drive to Lawrence Expressway
- Stewart Drive from North Wolfe Road to East Duane Avenue
- Tasman Drive from N. Fair Oaks Avenue to Morse Avenue
- Central and Lawrence Expressways – Santa Clara County Roads permit bicycles to ride on the existing wide roadway shoulders.

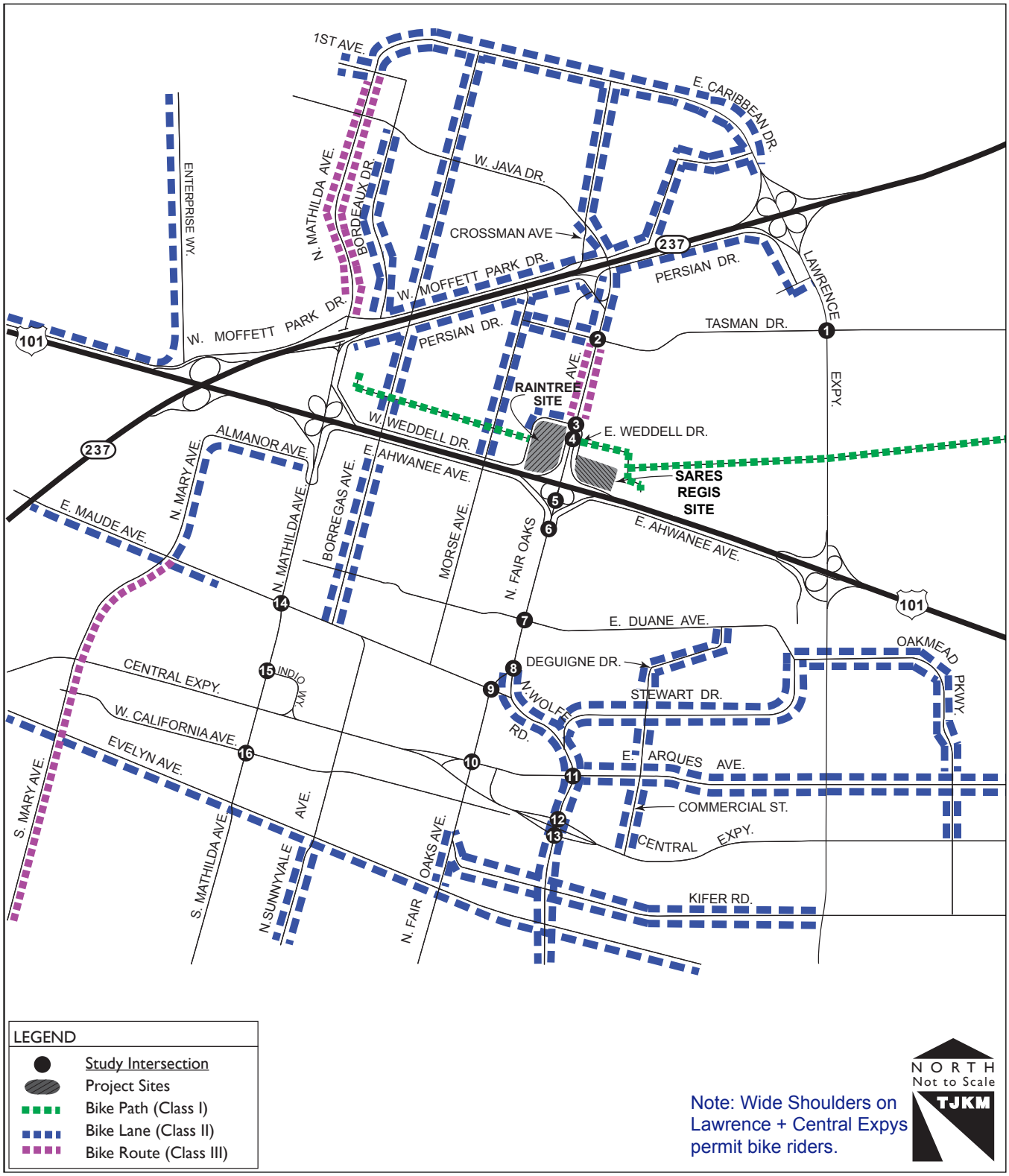

Figure 4.10-2

EXISTING BICYCLE FACILITIES

SOURCE: TJKM 2013

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Class III bicycle routes are currently designated along the following roadways:

- Mathilda Avenue from Moffett Park Drive to 1st Avenue
- N. Fair Oaks Avenue from Weddell Drive to Tasman Drive

There are three significant Class I off-street bicycle paths within the study area. The John W. Christian Greenbelt is a Regional Trail managed by the City of Sunnyvale and is located on the San Francisco Public Utilities Commission (SFPUC) right-of-way (ROW) from Orchard Gardens Park to the Raintree site (west end) and from the Sares Regis project site easterly to the Calabazas Creek Trail, passing through Lakewood Park. Improvements and public access to the greenbelt are currently discontinuous. The greenbelt ROW extends between Raintree Parcels A and B, but no public access or greenbelt improvements are currently provided in this area. A public access pathway is provided in a portion of the ROW north of the Sares Regis site, but there are no other improvements to the greenbelt in this area. Other Class I paths within the study area include the Calabazas Creek Trail to the east of the project sites and the Stevens Creek Trail located just east of downtown Mountain View and west of the project sites.

It should also be noted that Santa Clara Valley Transportation Authority (VTA) has adopted the Santa Clara Countywide Bicycle Plan (CBP). The CBP guides the development of major bicycling facilities by designating Cross County Bicycle Corridors and identifying bicycle projects of countywide or intercity significance. Several of these routes travel through the study area, including routes along Mary Avenue, Maude Avenue, Middlefield Road, Ellis Street, and Manila Drive/Moffett Park Drive.

Pedestrian and bicycle volumes for the AM and PM peak periods were collected at all study intersections in November 2012 and March 2013 and are shown in **Figure 4.10-3**. Based on these volumes, it is noted that most study intersections currently experience low bicycle use during weekday peak hours. It is also noted that for most intersections, pedestrian volumes are also low, with the exception of the North Fair Oaks Avenue/Tasman Drive intersection, which serves existing high-density residential and retail uses in the vicinity. From the collected pedestrian volumes, it appears that pedestrians typically use the existing marked crossings at most intersections.

Pedestrian facilities typically consist of sidewalks, crosswalks, and pedestrian signals at signalized intersections. Adjacent to the project sites, sidewalks are provided on both sides of East Weddell Drive. Most study intersections in the project site vicinity include crosswalks and pedestrian signals on all approaches, including East Weddell Drive at North Fair Oaks Avenue near the project sites.

PUBLIC TRANSIT FACILITIES AND CIRCULATION

The project sites are served by public transportation. The VTA operates multiple transit routes within the study area.

The VTA serves the project sites with one fixed-route bus line (Route 26) along North Fair Oaks Avenue and one light rail transit (LRT) line (Route 902/Mountain View-Winchester Line). Existing VTA bus stops for Route 26 are located just north of the East Weddell Drive/North Fair Oaks Avenue intersection. The Fair Oaks LRT Station is located at the North Fair Oaks Avenue/Tasman

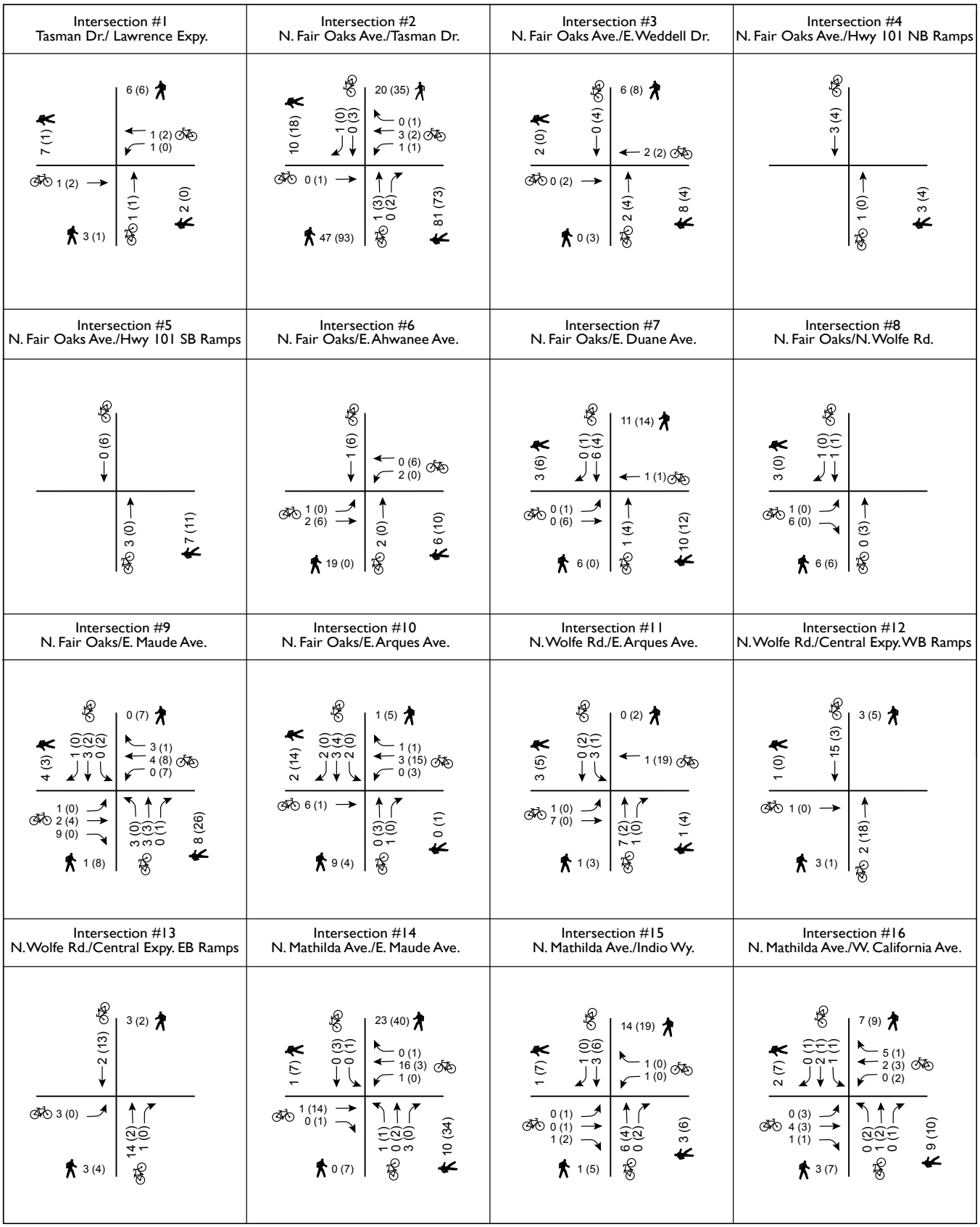

Figure 4.10-3

SOURCE: TJKM 2013

EXISTING PEDESTRIAN AND BICYCLE VOLUMES

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Drive intersection farther north and within approximately ½-mile walking distance of both project sites. **Figure 4.10-4** shows existing public transit and shuttle services within the study area.

Currently, each of the VTA routes' peak load factors are below 1.0, which represents a transit line operating with fully occupied seating.

REGULATORY FRAMEWORK

The study intersections fall within City of Sunnyvale jurisdiction but are subject to different traffic operational standards depending on whether they are monitored as part of the Santa Clara County VTA Congestion Management Program (CMP) or the City of Sunnyvale.

The development and regulation of the project area transportation network involves state, regional, and local jurisdictions. All roads within the project area are under the jurisdiction of state, county, and local agencies. State jurisdiction includes permitting and regulation of the use of state roads, while local jurisdiction includes implementation of state permitting, policies, and regulations, as well as management and regulation of local roads. Applicable state and local laws and regulations related to traffic and transportation issues are discussed below.

CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS)

Caltrans operates and maintains the state highway system within the City of Sunnyvale, which includes freeways, interchanges, and arterial urban state routes. Caltrans approves the planning, design, and construction of improvements for all state-controlled facilities including the Highway 101 freeway and the associated interchanges within city limits. Caltrans LOS standards and traffic impact study requirements are detailed in Guide for the Preparation of Traffic Impact Studies (Caltrans, 2002), which covers the information needed for Caltrans to review the impacts on state highway facilities, including interchange ramp intersections.

SANTA CLARA VALLEY TRANSPORTATION AUTHORITY

CONGESTION MANAGEMENT PROGRAM

The Santa Clara VTA serves two roles in Santa Clara County: (1) as the Congestion Management Agency (CMA), and (2) as primary operator of public transportation. As the County CMA, the VTA is responsible for managing the County blueprint for reducing traffic congestion and improving air quality. The VTA is authorized to set state and federal funding priorities for transportation improvement projects that affect the Santa Clara County CMP transportation network. CMP-designated transportation system components in the county include regional, state, and county-operated roadways, a public transportation network, and a countywide bicycle network. The County CMP roadway network includes all state highways, county expressways, and some principal arterials and intersections, while the transit network includes rail service and selected bus service.

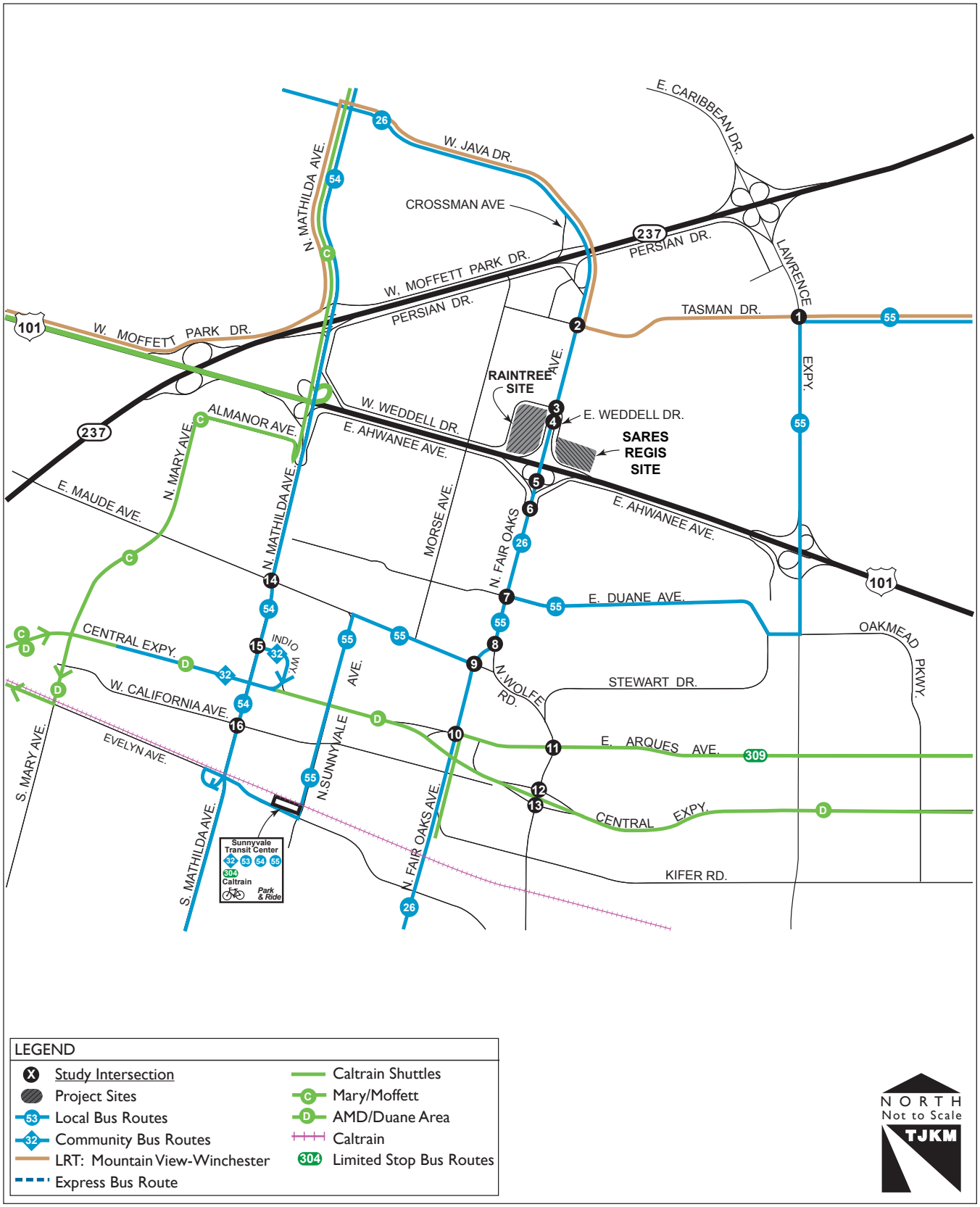

Figure 4.10-4

SOURCE: TJKM 2013

EXISTING TRANSIT AND SHUTTLE SERVICE

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The VTA bicycle network focuses on Cross County Bicycle Corridors, a network of 16 routes identified in the Santa Clara Countywide Bicycle Plan (2008). The Valley Transportation Plan (VTP) 2035, adopted in 2009, is a long-range countywide transportation plan that documents the means by which projects compete for funding and prioritization. VTP 2035 has been prepared consistent with the Bay Area region's Metropolitan Transportation Commission (MTC) Regional Transportation Plan.

The VTA also requires local jurisdictions within Santa Clara County to analyze impacts of new developments or land use policy changes on CMP facilities if they are expected to generate 100 or more new peak hour trips. The VTA developed the Transportation Impact Analysis Guidelines that were adopted by Santa Clara County and all cities to provide local jurisdictions with a uniform program for evaluating the transportation impacts of proposed land use decisions on the designated CMP system (VTA, 2012).

TRANSIT SERVICE PLANNING

In its role as public transportation operator, the VTA is responsible for the development, operation, and maintenance of the bus and light rail transit system within the county, including within Sunnyvale. The VTA operates over 70 bus lines and three light rail lines, in addition to shuttle and paratransit service. The VTA also provides transit service to major regional destinations, as well as to transfer centers in adjoining counties.

The VTA's Short Range Transit Plan (SRTP) is a federally mandated planning document that describes the plans, programs, and goals of the VTA's public transit service. The SRTP has a 10-year planning horizon and is updated annually. It focuses on the characteristics and capital needs of the existing system, and on expansion plans with committed funding. The current plan proposes to (1) keep bus and light rail service at existing levels, (2) expand Community Bus services (neighborhood-based circulator and feeder routes that travel within a limited area), (3) continue to contribute monetarily to CalTrain service (for which VTA is a Joint Power Board member agency), and (4) replace and expand the bus vehicle fleet.

FREEWAY SEGMENTS WITHIN SANTA CLARA COUNTY

According to VTA's 2012 *Transportation Impact Analysis Guidelines*, a freeway segment analysis should be conducted if a proposed project meets one of the following criteria:

- It is expected to add traffic equal to at least 1 percent of a freeway segment's capacity.
- It is adjacent to one of the freeway segment's access or egress points.
- Based on engineering judgment, Lead Agency staff determines that the freeway segment should be included in the analysis.

For mixed-flow lanes, freeway segment capacities are defined as 2,200 vehicles per hour per lane (vphpl) for four-lane freeway segments and 2,300 vphpl for six-lane freeway segments. According to VTA's *2011 CMP Monitoring and Conformance Report,* acceptable operation is LOS E during AM and PM peak hours as defined in the report. A significant impact would occur if added project traffic causes a freeway segment operating acceptably (VTA operational standard of LOS E or better during AM/PM peak hours) to deteriorate to LOS F, or if a project adds traffic representing

more than 1 percent of a freeway segment's mixed-flow lane capacity that is already operating unacceptably at LOS F.

CITY OF SUNNYVALE

Several of the roads in the project site vicinity are under City of Sunnyvale jurisdiction. The City of Sunnyvale Department of Public Works is responsible for operation and maintenance of all roadway, bicycle, and pedestrian facilities within the City's jurisdiction.

According to the City of Sunnyvale Land Use and Transportation Element (LUTE), the LOS traffic operational standard for intersections is LOS D, except for City roadways that are designated as regionally significant and accordingly have a LOS E standard (City of Sunnyvale, 2010). For purposes of this EIR, regionally significant facilities include the study intersections along Mathilda Avenue, the Central Expressway ramp intersections, the Highway 101 freeway interchange ramp intersections, and the Lawrence Expressway/Tasman Drive intersection.

Based on City of Sunnyvale standards, a proposed project would have significant traffic impacts if it would:

- Cause non-regionally significant intersection operations to deteriorate from LOS D or better (acceptable) under no-project conditions to LOS E or F (unacceptable);
- Cause regionally significant intersection operations to deteriorate from LOS E or better (acceptable) under no-project conditions to LOS F (unacceptable); or
- Exacerbate already-unacceptable operations under no-project conditions by increasing average critical delay by more than four (4) seconds and increasing the critical volume-to-capacity (v/c) ratio by 0.01 or more at non-regionally significant intersections operating at LOS E and regionally significant intersections operating at LOS F.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

This section analyzes impacts related to transportation that could result from implementation of the proposed projects. This subsection begins with the criteria of significance, which establish the thresholds for determining whether an impact is significant. The latter part of this subsection presents the transportation impacts that could result from development of the proposed project. Mitigation measures are identified to avoid, minimize or mitigate such impacts, where warranted.

SIGNIFICANCE CRITERIA

For the purposes of this Draft EIR, development of the project sites would present a significant impact related to transportation if the project would:

- Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;

- Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways;
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- Result in inadequate emergency access; or
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

The initial study determined that the proposed East Weddell Residential Projects would not increase air traffic levels within the City of Sunnyvale. Therefore, this issue is not addressed further. (For analysis air traffic safety risks, please refer to Section 4.5, Hazards and Hazardous Materials, of this EIR.)

NO PROJECT CONDITIONS

Existing (Baseline) Conditions

Intersection traffic counts of motor vehicles, bicycles, and pedestrians were collected at the study intersections in November 2012 and March 2013 during typical weekday AM and PM commute peak periods (7:00-9:00 AM and 4:00-6:00 PM). **Figure 4.10-5** shows existing vehicular traffic volumes under Existing (Baseline) Conditions. **Table 4.10-1** shows the results of an intersection LOS analysis for Existing (Baseline) Conditions based on these counts. **Appendix C** includes LOS analysis sheets for all study intersections. Currently, all study intersections are operating within acceptable service levels.

Existing (year 2012) freeway traffic counts of motor vehicles were taken from the 2011 VTA *CMP Monitoring and Conformance Report* for purposes of the required freeway analysis under Existing and Existing plus Project Conditions. **Table 4.10-2** shows the results of a freeway LOS analysis for Existing Conditions based on these counts. The following study area freeway segments are operating unacceptably at LOS F:

- Highway 101 – Lawrence Expressway to Ellis Street, Northbound direction, AM peak hour
- SR 237 – Lawrence Expressway to Highway 101, both directions and both peak hours

BACKGROUND CONDITIONS

The Background Conditions analysis scenario is defined as conditions prior to anticipated completion of the proposed East Weddell Residential Projects in 2015. Traffic volumes under Background Conditions consist of existing traffic volumes multiplied by a 2-year growth factor derived from the City of Sunnyvale travel demand model plus traffic expected to be generated by approved developments in the study area that are not yet built or occupied.

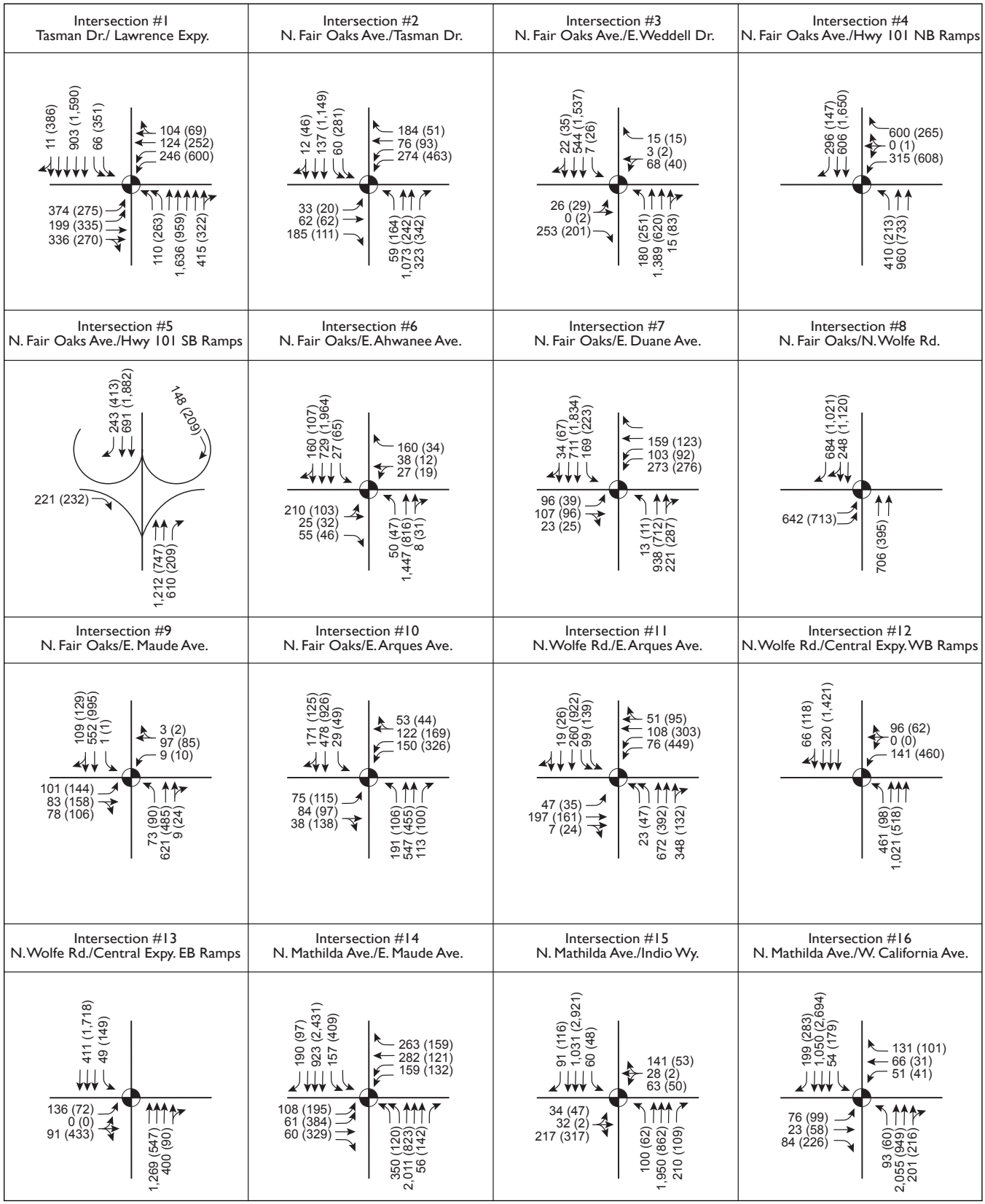

Figure 4.10-5

DEVELOPMENTS EXISTING (BASELINE) CONDITIONS TRAFFIC VOLUMES, LANE GEOMETRY, AND TRAFFIC CONTROLS

SOURCE: TJKM 2013

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Table 4.10-1 Intersection Level of Service: Existing (Baseline) Conditions

	AM Peak Hour		PM Peak Hour	
Intersection	**Delay**	**LOS**	**Delay**	**LOS**
1. Tasman Drive/Lawrence Expressway	47.3	D	59.1	E+
2. North Fair Oaks Avenue/Tasman Drive	23.7	C	28.1	C
3. North Fair Oaks Avenue/East Weddell Drive	17.0	B	20.6	C+
4. North Fair Oaks Avenue/Highway 101 NB Ramps	24.1	C	27.5	C
5. North Fair Oaks Avenue/Highway 101 SB Ramps[a]	-	-	-	-
6. North Fair Oaks Avenue/East Ahwanee Avenue	33.7	C-	10.1	B+
7. North Fair Oaks Avenue/East Duane Avenue	24.8	C	18.2	B-
8. North Fair Oaks Avenue/North Wolfe Road	15.5	B	17.7	B
9. North Fair Oaks Avenue/East Maude Avenue	16.7	B	18.0	B
10. North Fair Oaks Avenue/East Arques Avenue	22.8	C+	27.0	C
11. North Wolfe Road/East Arques Avenue	17.7	B	23.3	C
12. North Wolfe Road/Central Expressway WB Ramps	14.5	B	16.9	B
13. North Wolfe Road/Central Expressway EB Ramps	9.5	A	22.1	C+
14. North Mathilda Avenue/East Maude Avenue	19.8	B-	20.8	C+
15. North Mathilda Avenue/Indio Way	10.4	B+	18.8	B-
16. North Mathilda Avenue/West California Avenue	12.1	B	20.5	C+

Notes: LOS = level of service; N/A = not applicable; NB = northbound; SB = southbound; WB = westbound; EB = eastbound. All study intersections are signalized with exception of Intersection 5. Signalized intersection delay and LOS shown represents averages for overall intersection.
[a] Intersection 5 consists of two free-flow ramps and two yield-controlled ramps and thus is not subject to intersection analysis.
Source: TJKM, 2013; Transportation Research Board, 2000.

Background Traffic Growth

Growth factors were developed from the latest City travel demand model to estimate regional traffic growth in the study area and were applied to all turning movements at the study intersections. Based on the City model and roadway classifications, TJKM applied an annual growth factor of 2 percent during the AM peak hour and 1.75 percent during the PM peak hour for arterials, 2.28 percent during the AM peak hour and 2.34 percent during the PM peak hour for collectors, and 0.5 percent during both AM and PM peak hours for local streets.[1]

[1] TJKM Transportation Consultants is the transportation firm responsible for this EIR transportation analysis.

Table 4.10-2 Freeway Level of Service: Existing (Baseline) Conditions

Freeway Segment	Direction	Capacity (vphpl)	Peak Hour	Existing Conditions (2012) Lanes	Average Speed	Volume	Density (pcpmpl)	LOS
Hwy 101, Lawrence Expressway to Ellis St	NB	6,900	AM	3	32	5,860	**61.0**	**F**
			PM	3	66	5,510	27.8	D
	SB	6,900	AM	3	66	5,850	29.5	D
			PM	3	64	6,620	34.5	D
SR 237, Lawrence Expressway to US 101	EB	4,600	AM	2	35	4,060	**58.0**	**F**
			PM	2	46	4,330	**47.1**	**F**
	WB	6,900	AM	3	19	4,910	**86.1**	**F**
			PM	3	14	4,200	**100.0**	**F**

Notes: NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound
Capacity in vehicles per hour per lane (vphpl).
Average speed in miles per hour (mph).
Volume in vehicles.
Density equal to passenger cars per mile per lane (pcpmpl).
LOS = level of service.
Bold/shading indicates LOS exceeding applicable Caltrans, VTA, and/or Sunnyvale criteria.
Source: CMP Monitoring and Conformance Report, VTA, 2011. Existing year (2012) volumes and other related data were obtained from this report.

Approved and Not Occupied Developments

According to the latest approved development list from City staff, there are several approved and not occupied developments within the study area. Significant approved developments assumed under this analysis scenario include:

- *1240 Crossman:* Expansion of the NETAPP campus (Site 2) using the green building bonus to enable 75.8 percent Floor Area Ratio (FAR) for a total of 525,057 square feet. Two four-story buildings (12 and 14) and a four-level parking garage would be built. Two buildings (10 and 11) would remain.
- *1221 Crossman:* Major Moffett Park Design Review for two new 7-story office buildings totaling 541,214 square feet and one parking structure.
- *1060 Morse Avenue:* 17 townhome units.
- *1101 North Fair Oaks Avenue:* Special Development Permit for a new 97-residential-unit project, rezoning to R4, and green building density bonus.
- *470 Persian Drive:* Redevelopment of an industrial site with 47 residential condominium units.

It should be noted that for the year 2015, no approved and funded transportation network improvements were assumed to be completed prior to proposed project completion. Therefore, TJKM assumed the existing conditions roadway network, traffic controls, and lane geometries for Background Conditions.

Intersection Level of Service

Figure 4.10-6 shows vehicular traffic volumes under Background Conditions. **Table 4.10-3** shows the results of an intersection LOS analysis for Background Conditions. Appendix C includes LOS analysis sheets for all study intersections. Under Background Conditions, all study intersections are expected to remain operating within acceptable service levels.

CUMULATIVE CONDITIONS

The Cumulative Conditions analysis scenario is defined as conditions without completion of the proposed East Weddell Residential Projects in 2023. Traffic volumes under Cumulative Conditions consist of existing traffic volumes multiplied by an annual growth factor derived from the City of Sunnyvale travel demand model plus traffic generated by approved developments in the study area that are not yet built or occupied.

Cumulative Traffic Growth

TJKM used the same annual growth factors developed from the City traffic model as summarized under Background Conditions. These factors were applied to all existing conditions turning movements at the study intersections to estimate regional traffic growth to year 2023.

Approved and Not Occupied Developments

TJKM assumed the same approved developments under this scenario as those identified under Background Conditions. It should be noted that for the year 2023, no approved and funded transportation network improvements were assumed to be completed prior to proposed project completion. Therefore, TJKM assumed the existing conditions roadway network, traffic controls, and lane geometries for Cumulative Conditions.

Intersection Level of Service

Figure 4.10-7 shows vehicular traffic volumes under Cumulative Conditions. **Table 4.10-4** shows the results of an intersection LOS analysis for Cumulative Conditions. Appendix C includes LOS analysis sheets for all study intersections. Most study intersections are expected to continue operating within acceptable LOS thresholds in 2023, with the exception of the following intersection that is expected to operate unacceptably:

- North Fair Oaks Avenue/East Ahwanee Avenue (LOS E, AM peak hour)

APPLICANT PROPOSED SCENARIO

On the Sares Regis site under the Applicant Proposed Scenario, 205 apartment units are proposed to be built, replacing an existing industrial building. On the Raintree site under the Applicant Proposed Scenario, 465 apartment units are proposed to be built and would replace the current use on site, approximately 183,020 square feet of light industrial buildings. Collectively, the East Weddell Residential Projects would consist of 670 apartment units under the Applicant Proposed Scenario.

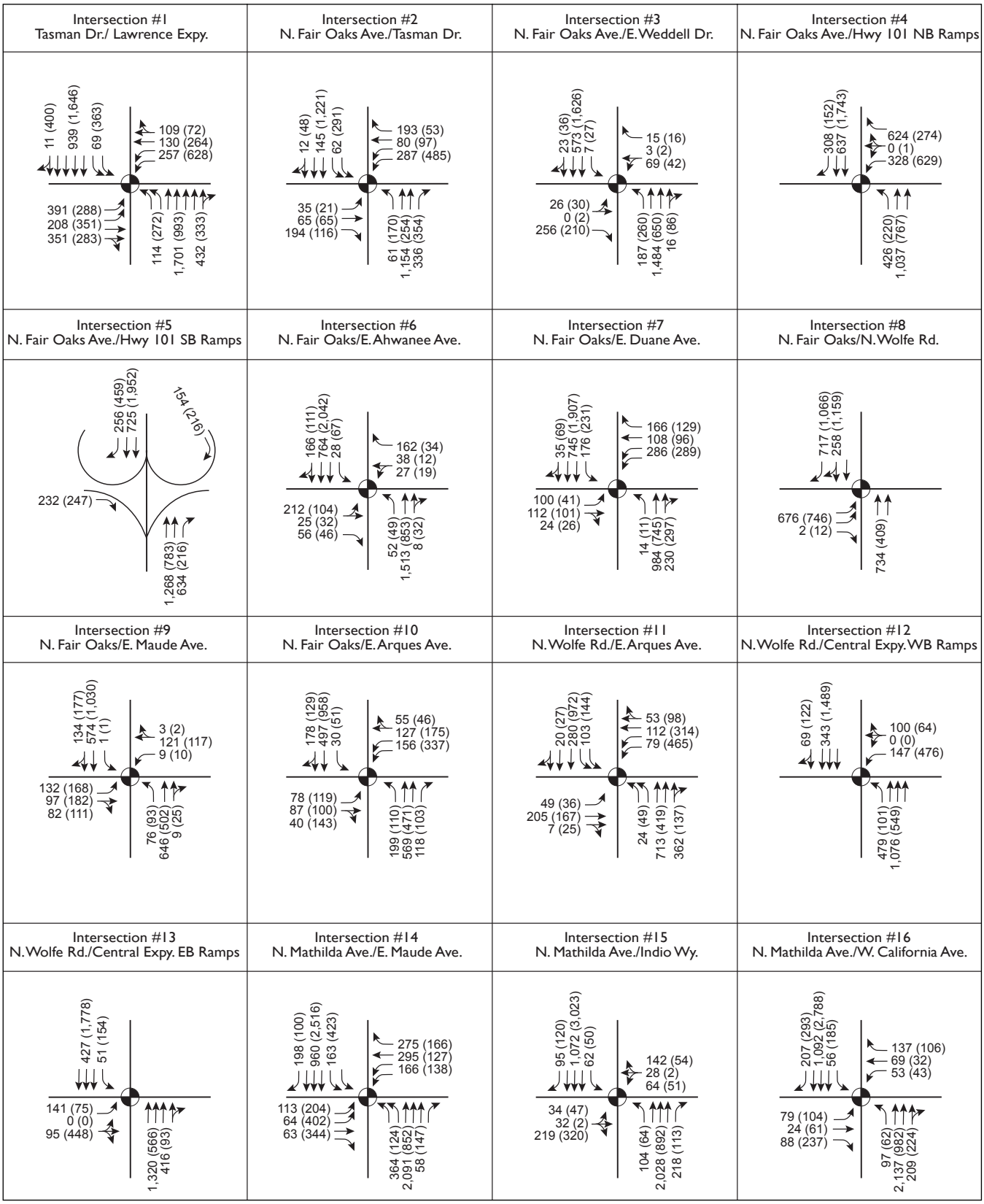

Figure 4.10-6

BACKGROUND NO PROJECT CONDITIONS TRAFFIC VOLUMES, LANE GEOMETRY, AND TRAFFIC CONTROLS

SOURCE: TJKM 2013

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Table 4.10-3 Intersection Level of Service: Background Conditions

	AM Peak Hour		PM Peak Hour	
Intersection	Delay	LOS	Delay	LOS
1. Tasman Drive/Lawrence Expressway	47.3	D	60.0	E+
2. North Fair Oaks Avenue/Tasman Drive	24.2	C	28.6	C
3. North Fair Oaks Avenue/East Weddell Drive	16.7	B	21.3	C+
4. North Fair Oaks Avenue/Highway 101 NB Ramps	24.9	C	31.1	C
5. North Fair Oaks Avenue/Highway 101 SB Ramps[a]	-	-	-	-
6. North Fair Oaks Avenue/East Ahwanee Avenue	37.6	D+	10.1	B+
7. North Fair Oaks Avenue/East Duane Avenue	25.7	C	18.7	B-
8. North Fair Oaks Avenue/North Wolfe Road	17.3	B-	20.7	C+
9. North Fair Oaks Avenue/East Maude Avenue	18.4	B-	19.5	B-
10. North Fair Oaks Avenue/East Arques Avenue	23.0	C	27.4	C
11. North Wolfe Road/East Arques Avenue	17.8	B	23.3	C
12. North Wolfe Road/Central Expressway WB Ramps	14.6	B	14.7	B
13. North Wolfe Road/Central Expressway EB Ramps	9.6	A	22.5	C+
14. North Mathilda Avenue/East Maude Avenue	20.8	C+	21.8	C+
15. North Mathilda Avenue/Indio Way	10.6	B+	20.4	C+
16. North Mathilda Avenue/West California Avenue	12.6	B	29.1	C

[a] Intersection 5 consists of two free-flow ramps and two yield-controlled ramps and thus is not subject to intersection analysis.
Notes: LOS = level of service; N/A = not applicable; NB = northbound; SB = southbound; WB = westbound; EB = eastbound.
All study intersections are signalized with exception of Intersection 5.
Signalized intersection delay and LOS shown represents averages for overall intersection.
Bold/shading indicates LOS exceeding applicable Caltrans, VTA, and/or Sunnyvale criteria.
Source: TJKM, 2013; Transportation Research Board, 2000.

PROJECT TRIP GENERATION (APPLICANT PROPOSED SCENARIO)

Tables 4.10-5, 4.10-6, and **4.10-7** illustrate expected trip generation under the Applicant Proposed Scenario for the Sares Regis project, Raintree project, and combined East Weddell Residential Projects, respectively. It should be noted that based on consultation with City staff, a trip generation discount was applied to account for the existing 183,020 square feet of light industrial buildings currently occupying the Raintree site, given that this industrial use was active at the time of existing traffic counts collected and would be replaced by the proposed Raintree project. The existing industrial building on the Sares Regis site was not active, and thus no discount was applied.

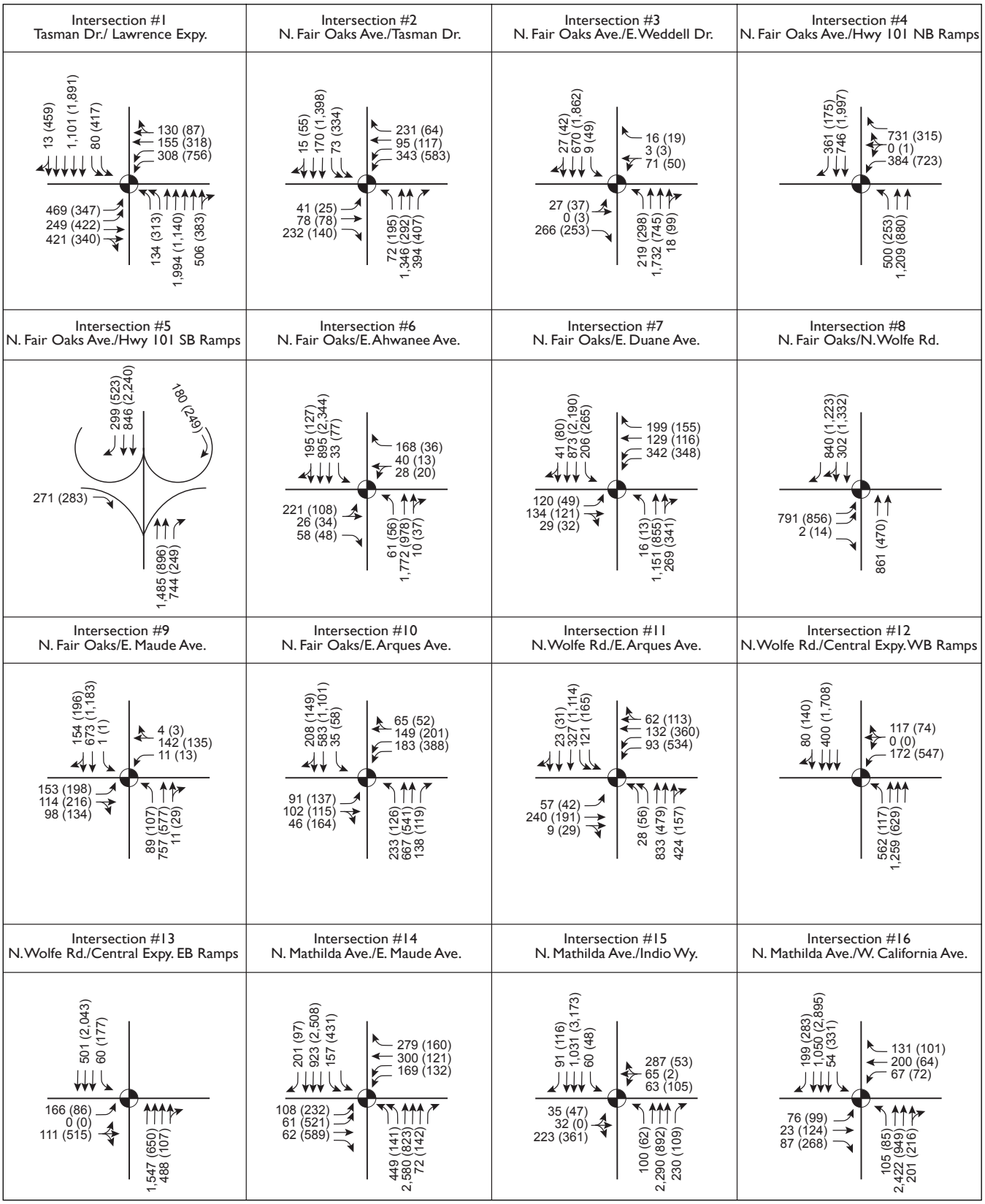

Figure 4.10-7

CUMULATIVE NO PROJECT CONDITIONS TRAFFIC VOLUMES, LANE GEOMETRY, AND TRAFFIC CONTROLS

SOURCE: TJKM 2013

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Table 4.10-4 Intersection Level of Service: Cumulative Conditions

	AM Peak Hour		PM Peak Hour	
Intersection	Delay	LOS	Delay	LOS
1. Tasman Drive/Lawrence Expressway	49.1	D	72.3	E
2. North Fair Oaks Avenue/Tasman Drive	27.1	C	31.9	C
3. North Fair Oaks Avenue/East Weddell Drive	16.5	B	25.9	C
4. North Fair Oaks Avenue/Highway 101 NB Ramps	30.9	C	48.0	D
5. North Fair Oaks Avenue/Highway 101 SB Ramps[a]	-	-	-	-
6. North Fair Oaks Avenue/East Ahwanee Avenue	**60.2**	**E**	10.5	B+
7. North Fair Oaks Avenue/East Duane Avenue	31.9	C	21.5	C+
8. North Fair Oaks Avenue/North Wolfe Road	19.5	B-	23.2	C
9. North Fair Oaks Avenue/East Maude Avenue	19.3	B-	22.0	C+
10. North Fair Oaks Avenue/East Arques Avenue	24.2	C	30.1	C
11. North Wolfe Road/East Arques Avenue	18.2	B-	24.0	C
12. North Wolfe Road/Central Expressway WB Ramps	15.3	B	18.0	B-
13. North Wolfe Road/Central Expressway EB Ramps	10.1	B+	34.6	C-
14. North Mathilda Avenue/East Maude Avenue	28.6	C	33.8	C-
15. North Mathilda Avenue/Indio Way	16.9	B	31.9	C
16. North Mathilda Avenue/West California Avenue	21.7	C+	30.6	C

Notes: LOS = level of service; N/A = not applicable; NB = northbound; SB = southbound; WB = westbound; EB = eastbound.
All study intersections are signalized with exception of Intersection 5.
Signalized intersection delay and LOS shown represents averages for overall intersection.
Bold/shading indicates LOS exceeding applicable Caltrans, VTA, and/or Sunnyvale criteria.
[a] Intersection 5 consists of two free-flow ramps and two yield-controlled ramps and thus is not subject to intersection analysis.
Source: TJKM, 2013; Transportation Research Board, 2000.

Table 4.10-5 Project Trip Generation – Sares Regis Project (Applicant Proposed Scenario)

		Daily		AM Peak					PM Peak				
Land Use (ITE Code)	Size	Rate	Trips	Rate	In: Out %	In	Out	Total	Rate	In: Out %	In	Out	Total
Apartment (220)	205 DU	Eq. A[a]	1,366	Eq. B[a]	20:80	21	83	104	Eq. C[a]	65:35	85	46	131

[a] Apartment Trip Generation Equations:
Equation A: T = 6.06(X) + 123.56; Equation B: T = 0.49(X) + 3.73; Equation C: = T = 0.55(X) + 17.65
Where T = Average Vehicle Trip Ends, X = dwelling units
DU = dwelling units
Source: TJKM, 2013; Institute of Transportation Engineers (ITE), 2012.

Table 4.10-6 Project Trip Generation – Raintree Project (Applicant Proposed Scenario)

		Daily		AM Peak					PM Peak				
Land Use (ITE Code)	**Size**	**Rate**	**Trips**	**Rate**	**In: Out %**	**In**	**Out**	**Total**	**Rate**	**In: Out %**	**In**	**Out**	**Total**
Apartment (220)	465 DU	Eq. A[a]	2,941	Eq. B[a]	20:80	46	185	231	Eq. C[a]	65:35	178	96	274
Discounted Existing Light Industrial Raintree Use (110)	*183.02 KSF*	*6.97*	*-1,276*	*0.92*	*88:12*	*-148*	*-20*	*-168*	*0.97*	*12:88*	*-21*	*-156*	*-177*
Total			**1,665**			**-102**	**165**	**63**			**157**	**-60**	**97**

[a] Apartment (ITE 220) Trip Generation Equations:
Equation A: T = 6.06(X) + 123.56
Equation B: T = 0.49(X) + 3.73
Equation C: = T = 0.55(X) + 17.65
Where T = Average Vehicle Trip Ends, X = dwelling units
DU = dwelling units; KSF = 1,000 square feet
Source: TJKM, 2013; Institute of Transportation Engineers (ITE), 2012.

Table 4.10-7 Project Trip Generation – East Weddell Residential Projects (Applicant Proposal Scenario)

		Daily		AM Peak					PM Peak				
Land Use (ITE Code)	**Size**	**Rate**	**Trips**	**Rate**	**In: Out %**	**In**	**Out**	**Total**	**Rate**	**In: Out %**	**In**	**Out**	**Total**
Sares Regis (220)	205 DU	Eq. A[a]	1,366	Eq. B[a]	20:80	21	83	104	Eq. C[a]	65:3	85	46	131
Raintree (220)	465 DU	Eq. A[a]	2,941	Eq. B[a]	20:80	46	185	231	Eq. C[a]	65:35	178	96	274
Discounted Existing Light Industrial Raintree Use (110)	*183.0 2 KSF*	*6.97*	*-1,276*	*0.92*	*88:12*	*-148*	*-20*	*-168*	*0.97*	*12:88*	*-21*	*-156*	*-177*
Total			**3,031**			**-81**	**248**	**167**			**242**	**-14**	**228**

[a] Apartment (ITE 220) Trip Generation Equations:
Equation A: T = 6.06(X) + 123.56
Equation B: T = 0.49(X) + 3.73
Equation C: = T = 0.55(X) + 17.65
Where T = Average Vehicle Trip Ends, X = dwelling units
DU = dwelling units; KSF = 1,000 square feet
Source: TJKM, 2013; Institute of Transportation Engineers (ITE), 2012.

Under the Applicant Proposed Scenario, estimated project trip generation is expected to be as follows:

- *Sares Regis Project:* 1,366 daily trips, including 104 during AM peak hour and 131 during PM peak hour.
- *Raintree Project:* 1,665 daily trips, including 63 during AM peak hour and 97 during PM peak hour. This includes a trip discount for the existing light industrial use on-site.
- *Combined East Weddell Residential Projects:* 3,031 daily trips, including 167 during AM peak hour and 228 during PM peak hour. This includes a trip discount for the existing light industrial use on the Raintree site.

PROJECT TRIP DISTRIBUTION (APPLICANT PROPOSED SCENARIO)

Figure 4.10-8 shows expected vehicle trip distribution for the East Weddell Residential Projects under the Applicant Proposed Scenario. Distributions were based on those established in the current City of Sunnyvale travel demand model in consultation with City staff.

PROJECT TRIP ASSIGNMENT (APPLICANT PROPOSED SCENARIO)

Figures 4.10-9, 4.10-10, and **4.10-11** show expected vehicle trip assignments for the Sares Regis project, Raintree project, and combined East Weddell Residential Projects, respectively, under the Applicant Proposed Scenario. The assignments are based upon the expected vehicular trip distributions shown in Figure 4.10-8.

BASELINE-PLUS-PROJECT CONDITIONS (APPLICANT PROPOSED SCENARIO) – LEVEL OF SERVICE

Impact TRANSPORTATION-1: The addition of project traffic under Baseline-plus-Project Conditions for the Applicant Proposed Scenario for the Sares Regis project, Raintree project, and combined East Weddell Residential Projects would not cause a significant impact at the study intersections based on LOS significance criteria. (LTS)

Tables 4.10-8, 4.10-9, and **4.10-10** describe intersection LOS results for Baseline-plus-Project Conditions under the Applicant Proposed Scenario for the Sares Regis project, Raintree project, and combined East Weddell Residential Projects, respectively. Appendix C includes LOS analysis sheets for all study intersections.

Under Baseline-plus-Project Conditions (Applicant Proposed Scenario) for all three project scenarios, all study intersections are expected to continue operating at acceptable service levels as under Existing Conditions. Therefore, the proposed project is expected to have a less-than-significant impact with respect to project traffic under Baseline-plus-Project (Applicant Proposed Scenario) Conditions, and no mitigations are required under this scenario.

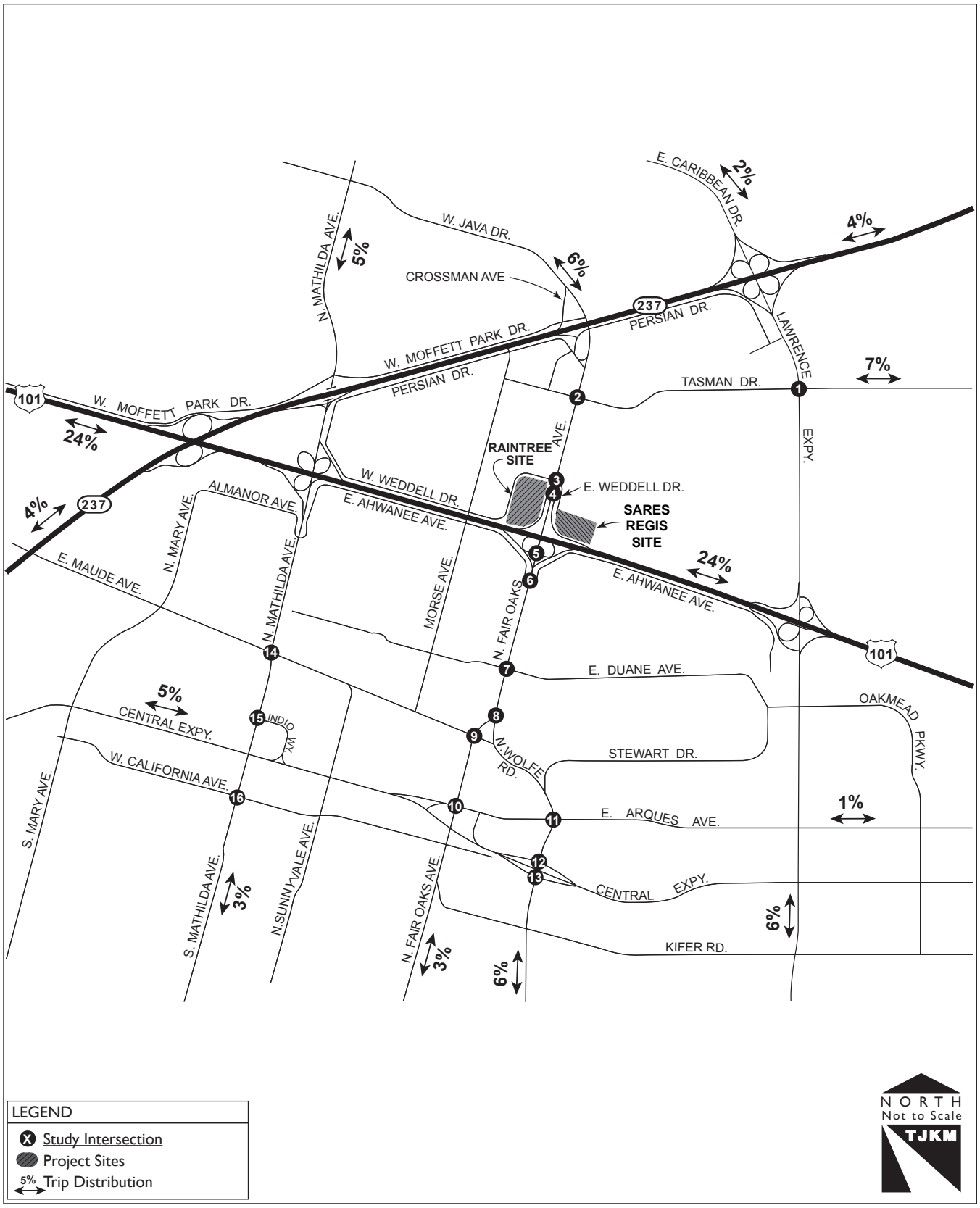

Figure 4.10-8

SOURCE: TJKM 2013

PROJECTS TRIP DISTRIBUTION

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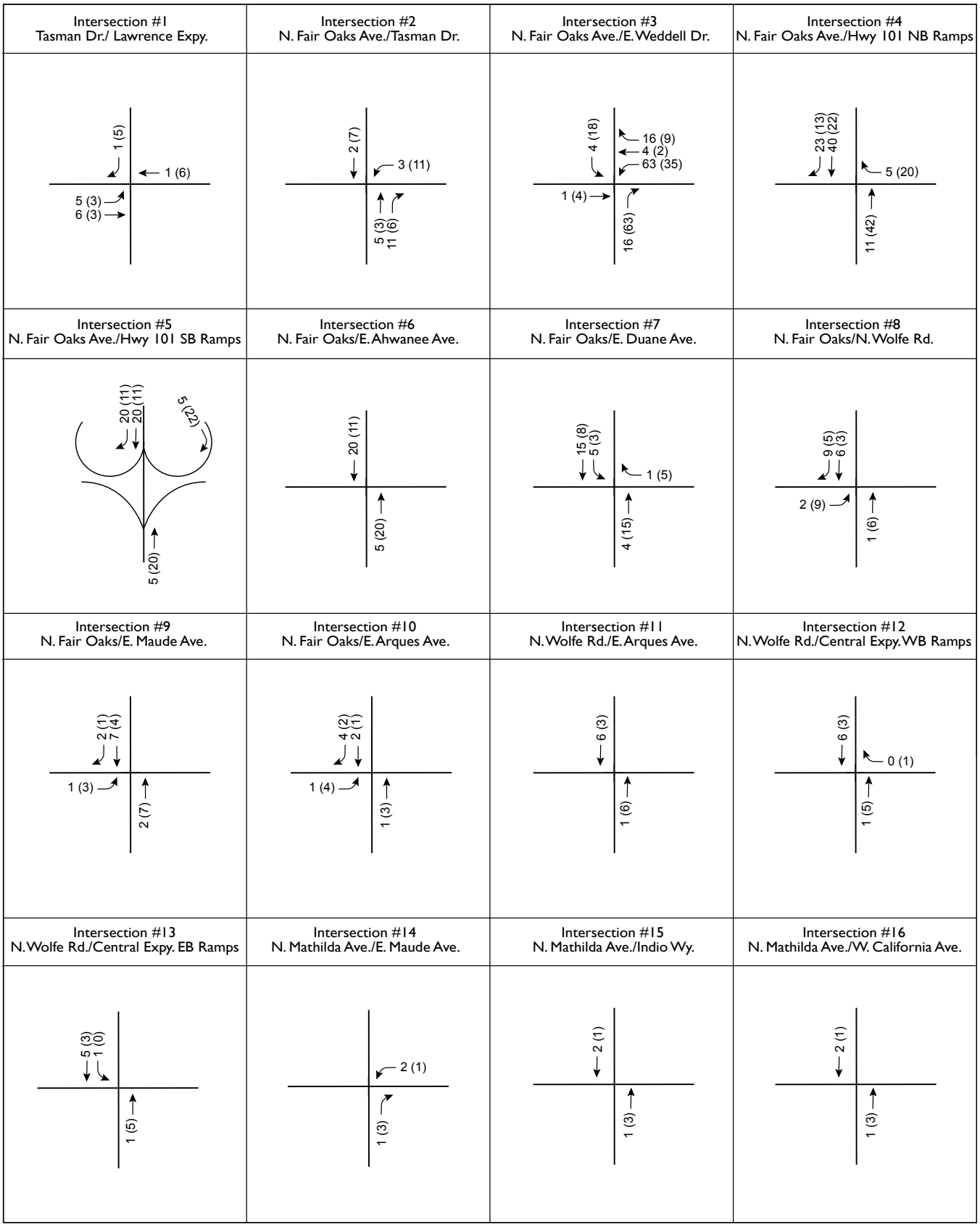

Figure 4.10-9

PROJECT TRIP ASSIGNMENT
(APPLICANT PROPOSED SCENARIO - SARES REGIS)

SOURCE: TJKM 2013

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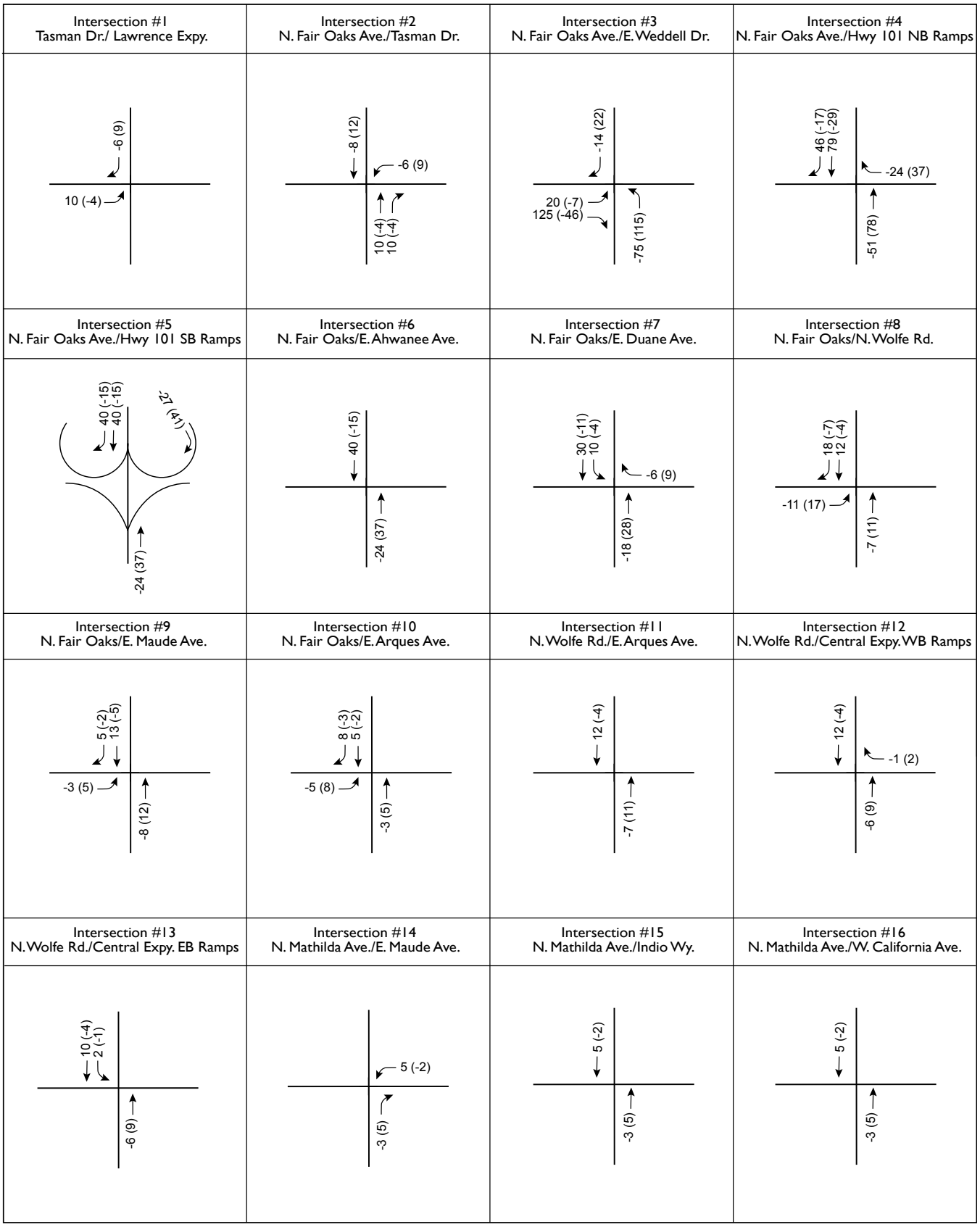

Figure 4.10-10

PROJECT TRIP ASSIGNMENT
(APPLICANT PROPOSED SCENARIO - RAINTREE)

SOURCE: TJKM 2013

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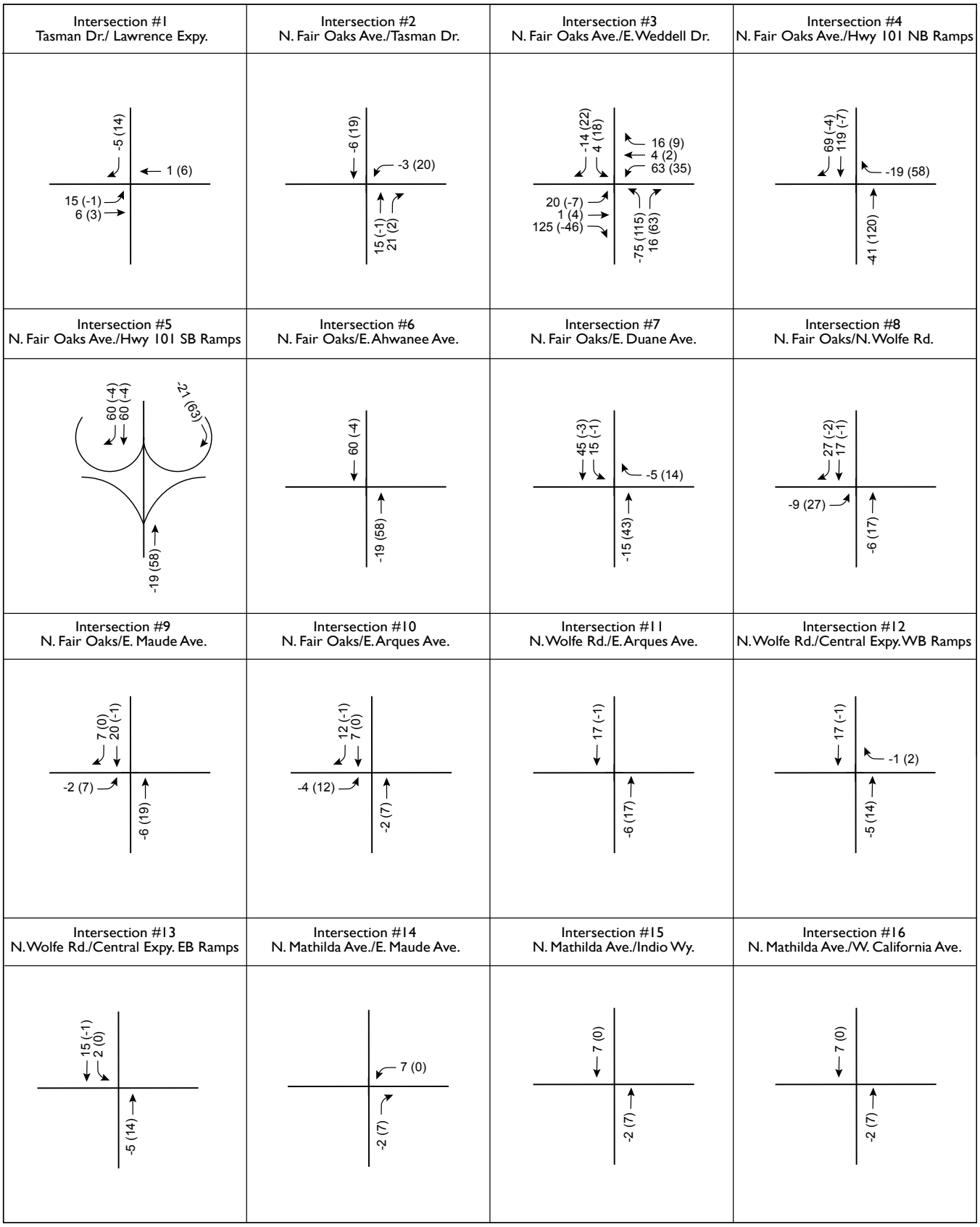

Figure 4.10-11

PROJECT TRIP ASSIGNMENT
(APPLICANT PROPOSED SCENARIO - EAST WEDDELL RESIDENTIAL PROJECTS)

SOURCE: TJKM 2013

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Table 4.10-8 Intersection Level of Service: Baseline-Plus-Project – Sares Regis Project (Applicant Proposed Scenario) Conditions

	Baseline No Project				Baseline-plus-Project			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Intersection	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Tasman Drive/Lawrence Expressway	47.3	D	59.1	E+	47.3	D	59.1	E+
2. North Fair Oaks Avenue/Tasman Drive	23.7	C	28.1	C	23.8	C	28.2	C
3. North Fair Oaks Avenue/East Weddell Drive	17.0	B	20.6	C+	17.3	B	20.9	C+
4. North Fair Oaks Avenue/Highway 101 NB Ramps	24.1	C	27.5	C	24.5	C	28.3	C
5. North Fair Oaks Avenue/Highway 101 SB Ramps[a]	-	-	-	-	-	-	-	-
6. North Fair Oaks Avenue/East Ahwanee Avenue	33.7	C-	10.1	B+	33.8	C-	10.1	B+
7. North Fair Oaks Avenue/East Duane Avenue	24.8	C	18.2	B-	24.9	C	18.3	B-
8. North Fair Oaks Avenue/North Wolfe Road	15.5	B	17.7	B	15.5	B	17.8	B
9. North Fair Oaks Avenue/East Maude Avenue	16.7	B	18.0	B	16.7	B	17.9	B
10. North Fair Oaks Avenue/East Arques Avenue	22.8	C+	27.0	C	22.8	C+	27.0	C
11. North Wolfe Road/East Arques Avenue	17.7	B	23.3	C	17.7	B	23.3	C
12. North Wolfe Road/Central Expressway WB Ramps	14.5	B	16.9	B	14.6	B	16.9	B
13. North Wolfe Road/Central Expressway EB Ramps	9.5	A	22.1	C+	9.5	A	22.1	C+
14. North Mathilda Avenue/East Maude Avenue	19.8	B-	20.8	C+	19.8	B-	20.8	C+
15. North Mathilda Avenue/Indio Way	10.4	B+	18.8	B-	10.4	B+	18.8	B-
16. North Mathilda Avenue/West California Avenue	12.1	B	20.5	C+	12.1	B	20.5	C+

Notes: LOS = level of service; N/A = not applicable; NB = northbound; SB = southbound; WB = westbound; EB = eastbound.
All study intersections are signalized with exception of Intersection 5.
Signalized intersection delay and LOS shown represents averages for overall intersection.
Bold/shading indicates LOS exceeding applicable Caltrans, VTA, and/or Sunnyvale criteria.

[a] Intersection 5 consists of two free-flow ramps and two yield-controlled ramps and thus is not subject to intersection analysis.

Source: TJKM, 2013; Transportation Research Board, 2000.

Table 4.10-9 Intersection Level of Service: Baseline-Plus-Project – Raintree Project (Applicant Proposed Scenario) Conditions

	Baseline No Project				Baseline–plus-Project			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Intersection	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Tasman Drive/Lawrence Expressway	47.3	D	59.1	E+	47.3	D	59.0	E+
2. North Fair Oaks Avenue/Tasman Drive	23.7	C	28.1	C	23.6	C	28.2	C
3. North Fair Oaks Avenue/East Weddell Drive	17.0	B	20.6	C+	19.2	B-	22.0	C+
4. North Fair Oaks Avenue/Highway 101 NB Ramps	24.1	C	27.5	C	24.6	C	27.5	C
5. North Fair Oaks Avenue/Highway 101 SB Ramps[a]	-	-	-	-	-	-	-	-
6. North Fair Oaks Avenue/East Ahwanee Avenue	33.7	C-	10.1	B+	32.6	C-	10.1	B+
7. North Fair Oaks Avenue/East Duane Avenue	24.8	C	18.2	B-	24.8	C	18.2	B-
8. North Fair Oaks Avenue/North Wolfe Road	15.5	B	17.7	B	15.3	B	17.9	B
9. North Fair Oaks Avenue/East Maude Avenue	16.7	B	18.0	B	16.5	B	18.0	B
10. North Fair Oaks Avenue/East Arques Avenue	22.8	C+	27.0	C	22.6	C+	27.1	C
11. North Wolfe Road/East Arques Avenue	17.7	B	23.3	C	17.7	B	23.3	C
12. North Wolfe Road/Central Expressway WB Ramps	14.5	B	16.9	B	14.6	B	17.0	B
13. North Wolfe Road/Central Expressway EB Ramps	9.5	A	22.1	C+	9.6	A	22.1	C+
14. North Mathilda Avenue/East Maude Avenue	19.8	B-	20.8	C+	19.8	B-	20.7	C+
15. North Mathilda Avenue/Indio Way	10.4	B+	18.8	B-	10.4	B+	18.8	B-
16. North Mathilda Avenue/West California Avenue	12.1	B	20.5	C+	12.1	B	20.5	C+

Notes: LOS = level of service; N/A = not applicable; NB = northbound; SB = southbound; WB = westbound; EB = eastbound.
All study intersections are signalized with exception of Intersection 5.
Signalized intersection delay and LOS shown represents averages for overall intersection.
Bold/shading indicates LOS exceeding applicable Caltrans, VTA, and/or Sunnyvale criteria.

[a] Intersection 5 consists of two free-flow ramps and two yield-controlled ramps and thus is not subject to intersection analysis.

Source: TJKM, 2013; Transportation Research Board, 2000.

Table 4.10-10 Intersection Level of Service: Baseline-Plus-Project – East Weddell Residential Projects (Applicant Proposed Scenario) Conditions

	Baseline No Project				Baseline–plus-Project			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Intersection	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Tasman Drive/Lawrence Expressway	47.3	D	59.1	E+	47.3	D	59.1	E+
2. North Fair Oaks Avenue/Tasman Drive	23.7	C	28.1	C	23.7	C	28.3	C
3. North Fair Oaks Avenue/East Weddell Drive	17.0	B	20.6	C+	19.2	B-	22.2	C+
4. North Fair Oaks Avenue/Highway 101 NB Ramps	24.1	C	27.5	C	25.0	C	28.3	C
5. North Fair Oaks Avenue/Highway 101 SB Ramps[a]	-	-	-	-	-	-	-	-
6. North Fair Oaks Avenue/East Ahwanee Avenue	33.7	C-	10.1	B+	32.7	C-	10.1	B+
7. North Fair Oaks Avenue/East Duane Avenue	24.8	C	18.2	B-	24.9	C	18.2	B-
8. North Fair Oaks Avenue/North Wolfe Road	15.5	B	17.7	B	15.3	B	18.0	B-
9. North Fair Oaks Avenue/East Maude Avenue	16.7	B	18.0	B	16.5	B	17.9	B
10. North Fair Oaks Avenue/East Arques Avenue	22.8	C+	27.0	C	22.6	C+	27.1	C
11. North Wolfe Road/East Arques Avenue	17.7	B	23.3	C	17.6	B	23.3	C
12. North Wolfe Road/Central Expressway WB Ramps	14.5	B	16.9	B	14.7	B	17.0	B
13. North Wolfe Road/Central Expressway EB Ramps	9.5	A	22.1	C+	9.5	A	22.1	C+
14. North Mathilda Avenue/East Maude Avenue	19.8	B-	20.8	C+	19.8	B-	20.8	C+
15. North Mathilda Avenue/Indio Way	10.4	B+	18.8	B-	10.4	B+	18.8	B-
16. North Mathilda Avenue/West California Avenue	12.1	B	20.5	C+	12.1	B	20.5	C+

Notes: LOS = level of service; N/A = not applicable; NB = northbound; SB = southbound; WB = westbound; EB = eastbound.
All study intersections are signalized with exception of Intersection 5.
Signalized intersection delay and LOS shown represents averages for overall intersection.
Bold/shading indicates LOS exceeding applicable Caltrans, VTA, and/or Sunnyvale criteria.

[a] Intersection 5 consists of two free-flow ramps and two yield-controlled ramps and thus is not subject to intersection analysis.

Source: TJKM, 2013; Transportation Research Board, 2000.

Mitigation Measure TRANSPORTATION-1: No mitigation measures would be necessary under Baseline-Plus-Project Conditions. (LTS)

- Applies to Sares Regis Applicant Proposed Scenario: ☒
- Applies to Sares Regis Full Buildout Scenario: ☒
- Applies to Raintree Applicant Proposed Scenario: ☒
- Applies to Raintree Full Buildout Scenario: ☒

Impact TRANSPORTATION-2: The addition of project traffic under Baseline-plus-Project Conditions for the Applicant Proposed Scenario for the Sares Regis project, Raintree project, and combined East Weddell Residential Projects would not cause a significant impact at the study freeway segments based on LOS significance criteria. (LTS)

Tables 4.10-11, 4.10-12, and **4.10-13** describe freeway LOS results for Baseline-plus-Project Conditions under the Applicant Proposed Scenario for the Sares Regis project, Raintree project, and combined East Weddell Residential Projects, respectively.

Under Baseline-plus-Project Conditions (Applicant Proposed Scenario) for all three project scenarios, the following study area freeway segments are expected to continue operating unacceptably at LOS F:

- Highway 101 – Lawrence Expressway to Ellis Street, northbound direction, AM peak hour
- SR 237 – Lawrence Expressway to Highway 101, both directions and both peak hours

However, VTA freeway LOS criteria state that a project would have an impact on freeway facilities operating at LOS F only if a project adds vehicle trips representing more than 1 percent of a freeway segment's capacity. Based on the freeway LOS results for Baseline-plus-Project Conditions, all three project scenarios would add vehicle trips at less than 1 percent of segment capacity to study freeway segments currently operating at LOS F. Therefore, the proposed project is expected to have a less-than-significant impact with respect to freeway traffic operations under Baseline-plus-Project (Applicant Proposed Scenario) Conditions, and no mitigations are required under this scenario.

Mitigation Measure TRANSPORTATION-2: No mitigation measures would be necessary under Baseline-Plus-Project Conditions. (LTS)

- Applies to Sares Regis Applicant Proposed Scenario: ☒
- Applies to Sares Regis Full Buildout Scenario: ☒
- Applies to Raintree Applicant Proposed Scenario: ☒
- Applies to Raintree Full Buildout Scenario: ☒

BACKGROUND-PLUS-PROJECT CONDITIONS (APPLICANT PROPOSED SCENARIO) – LEVEL OF SERVICE

Impact TRANSPORTATION-3: The addition of project traffic under Background-plus-Project Conditions for the Applicant Proposed Scenario for the Sares Regis project, Raintree project, and combined East Weddell Residential Projects would not cause a significant impact at the study intersections based on LOS significance criteria. (LTS)

Table 4.10-11 Freeway Level of Service: Baseline-Plus-Project – Sares Regis Project (Applicant Proposed Scenario) Conditions

				Baseline No Project					Baseline Plus Project			
Freeway Segment	Dir.	Cap. (vphpl)	Peak Hour	Lanes	Avg. Speed	Volume	Density (pcpmpl)	LOS	Project Trips	Density (pcpmpl)	LOS	% Impact
Hwy 101, Lawrence Expressway to Ellis St	NB	6,900	AM	3	32	5,860	**61.0**	**F**	5	**61.1**	**F**	0.07
			PM	3	66	5,510	27.8	D	20	27.9	D	0.29
	SB	6,900	AM	3	66	5,850	29.5	D	20	29.6	D	0.29
			PM	3	64	6,620	34.5	D	11	34.5	D	0.16
SR 237, Lawrence Expressway to US 101	EB	4,600	AM	2	35	4,060	**58.0**	**F**	0	**58.0**	**F**	0.00
			PM	2	46	4,330	**47.1**	**F**	2	**47.1**	**F**	0.04
	WB	6,900	AM	3	19	4,910	**86.1**	**F**	0	**86.1**	**F**	0.00
			PM	3	14	4,200	**100.0**	**F**	0	**100.0**	**F**	0.00

Notes: Dir = Direction, NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound.
Cap = capacity in vehicles per hour per lane (vphpl).
Lanes are shown for mixed-flow only since project trips are assumed as added to mixed-flow lanes only.
Average speed in miles per hour (mph).
Volume in vehicles.
Density equal to passenger cars per mile per lane (pcpmpl).
LOS = level of service. **Bold** exceeds VTA freeway standards.
Project trips added to individual mixed-flow freeway segments.
Percent impact on mixed flow lanes determined by dividing the added project trips by the freeway segment's mixed-flow capacity.
Source: CMP Monitoring and Conformance Report, VTA, 2011. Existing year (2012) volumes and other related data were obtained from this report.

Tables 4.10-14, 4.10-15, and 4.10-16 describe intersection LOS results for Background-plus-Project Conditions under the Applicant Proposed Scenario for the Sares Regis project, Raintree project, and combined East Weddell Residential Projects, respectively. Appendix C includes LOS analysis sheets for all study intersections.

Under Background–plus-Project Conditions (Applicant Proposal Scenario) for all three project scenarios, all study intersections are expected to continue operating at acceptable service levels as under Background Conditions. Therefore, the proposed project is expected to have a less-than-significant impact with respect to project traffic under Background-plus-Project (Applicant Proposal Scenario) Conditions, and no mitigations are required under this scenario.

Mitigation Measure TRANSPORTATION-3: No mitigation measures would be necessary under Background-Plus-Project Conditions. (LTS)

- Applies to Sares Regis Applicant Proposed Scenario: ☒
- Applies to Sares Regis Full Buildout Scenario: ☒
- Applies to Raintree Applicant Proposed Scenario: ☒
- Applies to Raintree Full Buildout Scenario: ☒

Table 4.10-12 Freeway Level of Service: Baseline-Plus-Project – Raintree Project (Applicant Proposed Scenario) Conditions

				Baseline No Project					Baseline Plus Project			
Freeway Segment	Dir.	Cap. (vphpl)	Peak Hour	Lanes	Avg. Speed	Volume	Density (pcpmpl)	LOS	Project Trips	Density (pcpmpl)	LOS	% Impact
Hwy 101, Lawrence Expressway to Ellis St	NB	6,900	AM	3	32	5,860	**61.0**	**F**	-24	**60.8**	**F**	-0.35%
			PM	3	66	5,510	27.8	D	40	28.0	D	0.58%
	SB	6,900	AM	3	66	5,850	29.5	D	37	29.7	D	0.54%
			PM	3	64	6,620	34.5	D	-15	34.4	D	-0.22%
SR 237, Lawrence Expressway to US 101	EB	4,600	AM	2	35	4,060	**58.0**	**F**	-2	**58.0**	**F**	-0.04%
			PM	2	46	4,330	**47.1**	**F**	3	**47.1**	**F**	0.07%
	WB	6,900	AM	3	19	4,910	**86.1**	**F**	0	**86.1**	**F**	0.00%
			PM	3	14	4,200	**100.0**	**F**	0	**100.0**	**F**	0.00%

Notes: Dir = Direction, NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound
Cap = capacity in vehicles per hour per lane (vphpl)
Lanes are shown for mixed-flow only since project trips are assumed as added to mixed-flow lanes only.
Average speed in miles per hour (mph).
Volume in vehicles.
Density equal to passenger cars per mile per lane (pcpmpl).
LOS = level of service. **Bold** exceeds VTA freeway standards.
Project trips added to individual mixed-flow freeway segments.
Percent impact on mixed flow lanes determined by dividing the added project trips by the freeway segment's mixed-flow capacity.

Source: CMP Monitoring and Conformance Report, VTA, 2011. Existing year (2012) volumes and other related data were obtained from this report.

CUMULATIVE-PLUS-PROJECT CONDITIONS (APPLICANT PROPOSED SCENARIO) – LEVEL OF SERVICE

Impact TRANSPORTATION-4: The addition of project traffic under Cumulative-plus-Project Conditions for the Applicant Proposed Scenario for the Sares Regis project, Raintree project, and combined East Weddell Residential Projects would not cause a significant impact at the study intersections based on LOS significance criteria. (LTS)

Tables 4.10-17, 4.10-18, and 4.10-19 describe intersection LOS results for Cumulative-plus-Project Conditions under the Applicant Proposed Scenario for the Sares Regis, Raintree, and East Weddell Residential Projects, respectively. Appendix C includes LOS analysis sheets for all study intersections.

Under Cumulative-plus-Project Conditions (Applicant Proposed Scenario) for all three projects, all study intersections are expected to continue operating at acceptable service levels as under Cumulative Conditions, with the exception of the following intersection that is expected to operate unacceptably:

- North Fair Oaks Avenue/East Ahwanee Avenue (LOS E, AM peak hour)

Table 4.10-13 Freeway Level of Service: Baseline-Plus-Project – East Weddell Residential Projects (Applicant Proposed Scenario) Conditions

				Baseline No Project					Baseline Plus Project			
Freeway Segment	**Dir.**	**Cap. (vphpl)**	**Peak Hour**	**Lanes**	**Avg. Speed**	**Volume**	**Density (pcpmpl)**	**LOS**	**Project Trips**	**Density (pcpmpl)**	**LOS**	**% Impact**
Hwy 101, Lawrence Expressway to Ellis St	NB	6,900	AM	3	32	5,860	**61.0**	**F**	-19	**60.8**	**F**	-0.28%
			PM	3	66	5,510	27.8	D	60	28.1	D	0.87%
	SB	6,900	AM	3	66	5,850	29.5	D	58	29.8	D	0.84%
			PM	3	64	6,620	34.5	D	-4	34.5	D	-0.06%
SR 237, Lawrence Expressway to US 101	EB	4,600	AM	2	35	4,060	**58.0**	**F**	-2	**58.0**	**F**	-0.04%
			PM	2	46	4,330	**47.1**	**F**	5	**47.1**	**F**	0.11%
	WB	6,900	AM	3	19	4,910	**86.1**	**F**	0	**86.1**	**F**	0.00%
			PM	3	14	4,200	**100.0**	**F**	0	**100.0**	**F**	0.00%

Notes: Dir = Direction, NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound
Cap = capacity in vehicles per hour per lane (vphpl)
Lanes are shown for mixed-flow only since project trips are assumed as added to mixed-flow lanes only.
Average speed in miles per hour (mph).
Volume in vehicles.
Density equal to passenger cars per mile per lane (pcpmpl).
LOS = level of service. **Bold** exceeds VTA freeway standards.
Project trips added to individual mixed-flow freeway segments.
Percent impact on mixed flow lanes determined by dividing the added project trips by the freeway segment's mixed-flow capacity.
Source: CMP Monitoring and Conformance Report, VTA, 2011. Existing year (2012) volumes and other related data were obtained from this report.

However, the above intersection expected to operate unacceptably does not have an increase in average delay greater than 4 seconds due to the addition of project traffic. Therefore, the proposed project is expected to have a less-than-significant impact with respect to project traffic under Cumulative-plus-Project (Applicant Proposal Scenario) Conditions, and no mitigations are required under this scenario.

Mitigation Measure TRANSPORTATION-4: No mitigation measures would be necessary under Cumulative-Plus-Project Conditions. (LTS)

- Applies to Sares Regis Applicant Proposed Scenario: ☒
- Applies to Sares Regis Full Buildout Scenario: ☒
- Applies to Raintree Applicant Proposed Scenario: ☒
- Applies to Raintree Full Buildout Scenario: ☒

Table 4.10-14 Intersection Level of Service: Background-Plus-Project – Sares Regis Project (Applicant Proposed Scenario) Conditions

	Background No Project				Background–plus-Project			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Intersection	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Tasman Drive/Lawrence Expressway	47.3	D	60.0	E+	47.3	D	60.0	E+
2. North Fair Oaks Avenue/Tasman Drive	24.2	C	28.6	C	24.2	C	28.7	C
3. North Fair Oaks Avenue/East Weddell Drive	16.7	B	21.3	C+	17.1	B	21.5	C+
4. North Fair Oaks Avenue/Highway 101 NB Ramps	24.9	C	31.1	C	25.3	C	32.4	C-
5. North Fair Oaks Avenue/Highway 101 SB Ramps[a]	-	-	-	-	-	-	-	-
6. North Fair Oaks Avenue/East Ahwanee Avenue	37.6	D+	10.1	B+	37.8	D+	10.1	B+
7. North Fair Oaks Avenue/East Duane Avenue	25.7	C	18.7	B-	25.8	C	18.8	B-
8. North Fair Oaks Avenue/North Wolfe Road	17.3	B-	20.7	C+	17.3	B-	20.8	C+
9. North Fair Oaks Avenue/East Maude Avenue	18.4	B-	19.5	B-	18.4	B-	19.4	B-
10. North Fair Oaks Avenue/East Arques Avenue	23.0	C	27.4	C	23.0	C	27.5	C
11. North Wolfe Road/East Arques Avenue	17.8	B	23.3	C	17.7	B	23.3	C
12. North Wolfe Road/Central Expressway WB Ramps	14.6	B	14.7	B	14.7	B	14.6	B
13. North Wolfe Road/Central Expressway EB Ramps	9.6	A	22.5	C+	14.7	B	27.3	C
14. North Mathilda Avenue/East Maude Avenue	20.8	C+	21.8	C+	20.8	C+	21.8	C+
15. North Mathilda Avenue/Indio Way	10.6	B+	20.4	C+	10.6	B+	20.4	C+
16. North Mathilda Avenue/West California Avenue	12.6	B	29.1	C	12.6	B	29.2	C

Notes: LOS = level of service; N/A = not applicable; NB = northbound; SB = southbound; WB = westbound; EB = eastbound.
All study intersections are signalized with exception of Intersection 5.
Signalized intersection delay and LOS shown represents averages for overall intersection.
Bold/shading indicates LOS exceeding applicable Caltrans, VTA, and/or Sunnyvale criteria. The North Mathilda Avenue/Indio Way delay is not expected to increase more than 4 seconds; thus, the impact would be less than significant.

[a] Intersection 5 consists of two free-flow ramps and two yield-controlled ramps and thus is not subject to intersection analysis.

Source: TJKM, 2013; Transportation Research Board, 2000.

Table 4.10-15 Intersection Level of Service: Background-Plus-Project – Raintree Project (Applicant Proposed Scenario) Conditions

	Background No Project				Background–plus-Project			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Intersection	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Tasman Drive/Lawrence Expressway	47.3	D	60.0	E+	47.3	D	59.1	E+
2. North Fair Oaks Avenue/Tasman Drive	24.2	C	28.6	C	23.9	C	29.0	C
3. North Fair Oaks Avenue/East Weddell Drive	16.7	B	21.3	C+	19.0	B-	23.0	C+
4. North Fair Oaks Avenue/Highway 101 NB Ramps	24.9	C	31.1	C	25.3	C	31.1	C
5. North Fair Oaks Avenue/Highway 101 SB Ramps[a]	-	-	-	-	-	-	-	-
6. North Fair Oaks Avenue/East Ahwanee Avenue	37.6	D+	10.1	B+	36.1	D+	10.1	B+
7. North Fair Oaks Avenue/East Duane Avenue	25.7	C	18.7	B-	25.6	C	18.7	B-
8. North Fair Oaks Avenue/North Wolfe Road	17.3	B-	20.7	C+	17.1	B+	20.9	C+
9. North Fair Oaks Avenue/East Maude Avenue	18.4	B-	19.5	B-	18.2	B-	19.4	B-
10. North Fair Oaks Avenue/East Arques Avenue	23.0	C	27.4	C	22.8	C+	27.5	C
11. North Wolfe Road/East Arques Avenue	17.8	B	23.3	C	17.7	B	23.3	C
12. North Wolfe Road/Central Expressway WB Ramps	14.6	B	14.7	B	14.7	B	14.7	B
13. North Wolfe Road/Central Expressway EB Ramps	9.6	A	22.5	C+	14.8	B	27.3	C
14. North Mathilda Avenue/East Maude Avenue	20.8	C+	21.8	C+	20.8	C+	21.7	C+
15. North Mathilda Avenue/Indio Way	10.6	B+	20.4	C+	10.6	B+	20.4	C+
16. North Mathilda Avenue/West California Avenue	12.6	B	29.1	C	12.6	B	29.1	C

Notes: LOS = level of service; N/A = not applicable; NB = northbound; SB = southbound; WB = westbound; EB = eastbound.
All study intersections are signalized with exception of Intersection 5.
Signalized intersection delay and LOS shown represents averages for overall intersection.
Bold/shading indicates LOS exceeding applicable Caltrans, VTA, and/or Sunnyvale criteria. The North Mathilda Avenue/Indio Way delay is not expected to increase more than 4 seconds; thus, the impact would be less than significant.

[a] Intersection 5 consists of two free-flow ramps and two yield-controlled ramps and thus is not subject to intersection analysis.

Source: TJKM, 2013; Transportation Research Board, 2000.

Table 4.10-16 Intersection Level of Service: Background-Plus-Project – East Weddell Residential Projects (Applicant Proposed Scenario) Conditions

	Background No Project				Background–Plus-Project			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Intersection	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Tasman Drive/Lawrence Expressway	47.3	D	60.0	E+	47.3	D	60.0	E+
2. North Fair Oaks Avenue/Tasman Drive	24.2	C	28.6	C	24.0	C	29.0	C
3. North Fair Oaks Avenue/East Weddell Drive	16.7	B	21.3	C+	19.1	B-	23.1	C
4. North Fair Oaks Avenue/Highway 101 NB Ramps	24.9	C	31.1	C	25.8	C	32.4	C-
5. North Fair Oaks Avenue/Highway 101 SB Ramps[a]	-	-	-	-	-	-	-	-
6. North Fair Oaks Avenue/East Ahwanee Avenue	37.6	D+	10.1	B+	36.4	D+	10.1	B+
7. North Fair Oaks Avenue/East Duane Avenue	25.7	C	18.7	B-	25.7	C	18.7	B-
8. North Fair Oaks Avenue/North Wolfe Road	17.3	B-	20.7	C+	17.1	B	21.0	B-
9. North Fair Oaks Avenue/East Maude Avenue	18.4	B-	19.5	B-	18.1	B-	19.5	B-
10. North Fair Oaks Avenue/East Arques Avenue	23.0	C	27.4	C	22.8	C+	27.5	C
11. North Wolfe Road/East Arques Avenue	17.8	B	23.3	C	17.6	B	23.4	C
12. North Wolfe Road/Central Expressway WB Ramps	14.6	B	14.7	B	14.8	B	14.7	B
13. North Wolfe Road/Central Expressway EB Ramps	9.6	A	22.5	C+	14.8	B	27.4	C
14. North Mathilda Avenue/East Maude Avenue	20.8	C+	21.8	C+	20.8	C+	21.8	C+
15. North Mathilda Avenue/Indio Way	10.6	B+	20.4	C+	10.5	B+	20.4	C+
16. North Mathilda Avenue/West California Avenue	12.6	B	29.1	C	12.6	B	29.1	C

Notes: LOS = level of service; N/A = not applicable; NB = northbound; SB = southbound; WB = westbound; EB = eastbound.
All study intersections are signalized with exception of Intersection 5.
Signalized intersection delay and LOS shown represents averages for overall intersection.
Bold/shading indicates LOS exceeding applicable Caltrans, VTA, and/or Sunnyvale criteria. The North Mathilda Avenue/Indio Way delay is not expected to increase more than 4 seconds; thus, the impact would be less than significant.

[a] Intersection 5 consists of two free-flow ramps and two yield-controlled ramps and thus is not subject to intersection analysis.

Source: TJKM, 2013; Transportation Research Board, 2000.

Table 4.10-17 Intersection Level of Service: Cumulative-Plus-Project – Sares Regis Project (Applicant Proposed Scenario) Conditions

	Cumulative No Project				Cumulative–plus-Project			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Intersection	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Tasman Drive/Lawrence Expressway	49.1	D	72.3	E	49.0	D	72.5	E
2. North Fair Oaks Avenue/Tasman Drive	27.1	C	31.9	C	27.2	C	32.1	C-
3. North Fair Oaks Avenue/East Weddell Drive	16.5	B	25.9	C	16.9	B	26.0	C
4. North Fair Oaks Avenue/Highway 101 NB Ramps	30.9	C	48.0	D	32.1	C-	50.2	D
5. North Fair Oaks Avenue/Highway 101 SB Ramps[a]	-	-	-	-	-	-	-	-
6. North Fair Oaks Avenue/East Ahwanee Avenue	**60.2**	**E**	10.5	B+	**60.4**	**E**	10.5	B+
7. North Fair Oaks Avenue/East Duane Avenue	31.9	C	21.5	C+	32.2	C-	21.6	C+
8. North Fair Oaks Avenue/North Wolfe Road	19.5	B-	23.2	C	19.6	B-	23.4	C
9. North Fair Oaks Avenue/East Maude Avenue	19.3	B-	22.0	C+	19.3	B-	22.1	C+
10. North Fair Oaks Avenue/East Arques Avenue	24.2	C	30.1	C	24.3	C	30.1	C
11. North Wolfe Road/East Arques Avenue	18.2	B-	24.0	C	18.1	B-	24.0	C
12. North Wolfe Road/Central Expressway WB Ramps	15.3	B	18.0	B-	15.3	B	18.0	B-
13. North Wolfe Road/Central Expressway EB Ramps	10.1	B+	34.6	C-	15.4	B	47.4	D
14. North Mathilda Avenue/East Maude Avenue	28.6	C	33.8	C-	28.6	C	33.8	C-
15. North Mathilda Avenue/Indio Way	16.9	B	31.9	C	17.1	B	31.9	C
16. North Mathilda Avenue/West California Avenue	21.7	C+	30.6	C	21.8	C+	30.6	C

Notes: LOS = level of service; N/A = not applicable; NB = northbound; SB = southbound; WB = westbound; EB = eastbound.
All study intersections are signalized with exception of Intersection 5.
Signalized intersection delay and LOS shown represents averages for overall intersection.
Bold/shading indicates LOS exceeding applicable Caltrans, VTA, and/or Sunnyvale criteria. The North Mathilda Avenue/Indio Way delay is not expected to increase more than 4 seconds; thus, the impact would be less than significant.

[a] Intersection 5 consists of two free-flow ramps and two yield-controlled ramps and thus is not subject to intersection analysis.

Source: TJKM, 2013; Transportation Research Board, 2000.

Table 4.10-18 Intersection Level of Service: Cumulative-Plus-Project – Raintree Project (Applicant Proposed Scenario) Conditions

	Cumulative No Project				Cumulative–Plus-Project			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Intersection	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Tasman Drive/Lawrence Expressway	49.1	D	72.3	E	49.0	D	72.2	E
2. North Fair Oaks Avenue/Tasman Drive	27.1	C	31.9	C	26.9	C	32.2	C-
3. North Fair Oaks Avenue/East Weddell Drive	16.5	B	25.9	C	19.1	B-	29.9	C
4. North Fair Oaks Avenue/Highway 101 NB Ramps	30.9	C	48.0	D	32.1	C-	47.8	D
5. North Fair Oaks Avenue/Highway 101 SB Rampsa	-	-	-	-	-	-	-	-
6. North Fair Oaks Avenue/East Ahwanee Avenue	**60.2**	**E**	10.5	B+	**57.7**	**E+**	10.5	B+
7. North Fair Oaks Avenue/East Duane Avenue	31.9	C	21.5	C+	31.7	C	21.5	C+
8. North Fair Oaks Avenue/North Wolfe Road	19.5	B-	23.2	C	19.2	B-	23.5	C
9. North Fair Oaks Avenue/East Maude Avenue	19.3	B-	22.0	C+	19.2	B-	22.1	C+
10. North Fair Oaks Avenue/East Arques Avenue	24.2	C	30.1	C	24.1	C	30.1	C
11. North Wolfe Road/East Arques Avenue	18.2	B-	24.0	C	18.1	B-	24.0	C
12. North Wolfe Road/Central Expressway WB Ramps	15.3	B	18.0	B-	15.4	B	18.0	B-
13. North Wolfe Road/Central Expressway EB Ramps	10.1	B+	34.6	C-	15.4	B	47.3	D
14. North Mathilda Avenue/East Maude Avenue	28.6	C	33.8	C-	28.6	C	33.8	C-
15. North Mathilda Avenue/Indio Way	16.9	B	31.9	C	16.8	B	31.9	C
16. North Mathilda Avenue/West California Avenue	21.7	C+	30.6	C	21.6	C+	30.6	C

Notes: LOS = level of service; N/A = not applicable; NB = northbound; SB = southbound; WB = westbound; EB = eastbound.
All study intersections are signalized with exception of Intersection 5.
Signalized intersection delay and LOS shown represents averages for overall intersection.
Bold/shading indicates LOS exceeding applicable Caltrans, VTA, and/or Sunnyvale criteria. The North Mathilda Avenue/Indio Way delay is not expected to increase more than 4 seconds; thus, the impact would be less than significant.

[a] Intersection 5 consists of two free-flow ramps and two yield-controlled ramps and thus is not subject to intersection analysis.

Source: TJKM, 2013; Transportation Research Board, 2000.

Table 4.10-19 Intersection Level of Service: Cumulative-Plus-Project – East Weddell Residential Projects (Applicant Proposed Scenario) Conditions

	Cumulative No Project				Cumulative–plus-Project			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Intersection	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Tasman Drive/Lawrence Expressway	49.1	D	72.3	E	49.0	D	72.4	E
2. North Fair Oaks Avenue/Tasman Drive	27.1	C	31.9	C	27.0	C	32.4	C-
3. North Fair Oaks Avenue/East Weddell Drive	16.5	B	25.9	C	19.3	B-	29.8	C
4. North Fair Oaks Avenue/Highway 101 NB Ramps	30.9	C	48.0	D	33.4	C-	50.0	D
5. North Fair Oaks Avenue/Highway 101 SB Ramps[a]	-	-	-	-	-	-	-	-
6. North Fair Oaks Avenue/East Ahwanee Avenue	**60.2**	**E**	10.5	B+	**57.9**	**E+**	10.5	B+
7. North Fair Oaks Avenue/East Duane Avenue	31.9	C	21.5	C+	32.0	C-	21.6	C+
8. North Fair Oaks Avenue/North Wolfe Road	19.5	B-	23.2	C	19.3	B-	23.7	C
9. North Fair Oaks Avenue/East Maude Avenue	19.3	B-	22.0	C+	19.1	B-	22.1	C+
10. North Fair Oaks Avenue/East Arques Avenue	24.2	C	30.1	C	24.1	C	30.2	C
11. North Wolfe Road/East Arques Avenue	18.2	B-	24.0	C	18.1	B-	24.0	C
12. North Wolfe Road/Central Expressway WB Ramps	15.3	B	18.0	B-	15.4	B	18.0	B-
13. North Wolfe Road/Central Expressway EB Ramps	10.1	B+	34.6	C-	15.4	B	47.7	D
14. North Mathilda Avenue/East Maude Avenue	28.6	C	33.8	C-	28.6	C	33.8	C-
15. North Mathilda Avenue/Indio Way	16.9	B	31.9	C	16.8	B	31.9	C
16. North Mathilda Avenue/West California Avenue	21.7	C+	30.6	C	21.6	C+	30.6	C

Notes: LOS = level of service; N/A = not applicable; NB = northbound; SB = southbound; WB = westbound; EB = eastbound.
All study intersections are signalized with exception of Intersection 5.
Signalized intersection delay and LOS shown represents averages for overall intersection.
Bold/shading indicates LOS exceeding applicable Caltrans, VTA, and/or Sunnyvale criteria. The North Mathilda Avenue/Indio Way delay is not expected to increase more than 4 seconds; thus, the impact would be less than significant.

[a] Intersection 5 consists of two free-flow ramps and two yield-controlled ramps and thus is not subject to intersection analysis.

Source: TJKM, 2013; Transportation Research Board, 2000.

FULL BUILDOUT SCENARIO

Under the Full Buildout Scenario, up to 259 apartment units would be built on the Sares Regis site. On the Raintree site, 679 apartment units would be built. Collectively, the East Weddell Residential Projects would consist of 938 apartment units under the Full Buildout Scenario.

PROJECT TRIP GENERATION (FULL BUILDOUT SCENARIO)

Tables 4.10-20, 4.10-21, and 4.10-22 illustrate expected trip generation under the Full Buildout Scenario for the Sares Regis project, Raintree project, and combined East Weddell Residential Projects, respectively. It should be noted that based on consultation with City staff, a trip generation discount was applied to account for the existing 183,020 square feet of light industrial buildings currently occupying the Raintree site, given that this industrial use was active at the time of existing traffic counts collected and would be replaced by the residential development under the Full Buildout Scenario. The Sares Regis industrial building was vacant at that time.

Under the Full Buildout Scenario, estimated project trip generation is expected to be as follows:

- *Sares Regis Project:* 1,693 daily trips, including 131 during AM peak hour and 160 during PM peak hour.
- *Raintree Project:* 2,962 daily trips, including 168 during AM peak hour and 214 during PM peak hour. This includes a trip discount for the existing light industrial use on the Raintree site.
- *Combined East Weddell Residential Projects:* 4,655 daily trips, including 299 during AM peak hour and 374 during PM peak hour. This includes a trip discount for the existing light industrial use on the Raintree site.

PROJECT TRIP DISTRIBUTION (FULL BUILDOUT SCENARIO)

Figure 4.10-8 shows expected vehicle trip distribution for the East Weddell Residential Projects under the Full Buildout Scenario. Distributions were based on those established in the current City of Sunnyvale travel demand model in consultation with City staff.

PROJECT TRIP ASSIGNMENT (FULL BUILDOUT SCENARIO)

Figures 4.10-12, 4.10-13, and 4.10-14 show expected vehicle trip assignments for the Sares Regis project, Raintree project, and combined East Weddell Residential Projects, respectively, under the Full Buildout Scenario. The assignments are based upon the expected vehicular trip distributions shown in Figure 4.10-8.

BASELINE-PLUS-PROJECT CONDITIONS (FULL BUILDOUT SCENARIO) – LEVEL OF SERVICE

<u>Impact TRANSPORTATION-5</u>: The addition of project traffic under Baseline-plus-Project Conditions for the Full Buildout Scenario for the Sares Regis project, Raintree project, and combined East Weddell Residential Projects would not cause a significant impact at the study intersections based on LOS significance criteria. (LTS)

Table 4.10-20 Project Trip Generation – Sares Regis Project (Full Buildout Scenario)

		Daily		AM Peak					PM Peak				
Land Use (ITE Code)	Size	Rate	Trips	Rate	In: Out %	In	Out	Total	Rate	In: Out %	In	Out	Total
Apartment (220)	259 DU	Eq. A[a]	1,693	Eq. B[a]	20:80	26	105	131	Eq. C[a]	65:35	104	56	160

[a] Apartment Trip Generation Equations:
Equation A: T = 6.06(X) + 123.56
Equation B: T = 0.49(X) + 3.73
Equation C: = T = 0.55(X) + 17.65
Where T = Average Vehicle Trip Ends, X = dwelling units
DU = dwelling units
Source: TJKM, 2013; Institute of Transportation Engineers (ITE), 2012.

Table 4.10-21 Project Trip Generation – Raintree Project (Full Buildout Scenario)

		Daily		AM Peak					PM Peak				
Land Use (ITE Code)	Size	Rate	Trips	Rate	In: Out %	In	Out	Total	Rate	In: Out %	In	Out	Total
Apartment (220)	679 DU	Eq. A[a]	4,238	Eq. B[a]	20:80	67	269	336	Eq. C[a]	65:35	254	137	391
Discounted Existing Light Industrial Raintree Use (110)	*183.02 KSF*	*6.97*	*-1,276*	*0.92*	*88:12*	*-148*	*-20*	*-168*	*0.97*	*12:88*	*-21*	*-156*	*-177*
Total			**2,962**			**-81**	**249**	**168**			**233**	**-19**	**214**

[a] Apartment (ITE 220) Trip Generation Equations:
Equation A: T = 6.06(X) + 123.56
Equation B: T = 0.49(X) + 3.73
Equation C: = T = 0.55(X) + 17.65
Where T = Average Vehicle Trip Ends, X = dwelling units
DU = dwelling units; KSF = 1,000 square feet
Source: TJKM, 2013; Institute of Transportation Engineers (ITE), 2012.

Tables 4.10-23, 4.10-24, and 4.10-25 describe intersection LOS results for Baseline-plus-Project Conditions under the Full Buildout Scenario for the Sares Regis project, Raintree project, and combined East Weddell Residential Projects, respectively. Appendix C includes LOS analysis sheets for all study intersections.

Under Baseline-plus-Project Conditions (Full Buildout Scenario) for all three project scenarios, all study intersections are expected to continue operating at acceptable service levels as under Existing Conditions. Therefore, the proposed project is expected to have a less-than-significant impact with respect to project traffic under Baseline-plus-Project (Full Buildout Scenario) Conditions, and no mitigations are required under this scenario.

Table 4.10-22 Project Trip Generation – East Weddell Residential Projects (Full Buildout Scenario)

		Daily		AM Peak					PM Peak				
Land Use (ITE Code)	**Size**	**Rate**	**Trips**	**Rate**	**In: Out %**	**In**	**Out**	**Total**	**Rate**	**In: Out %**	**In**	**Out**	**Total**
Sares Regis (220)	259 DU	Eq. A[a]	1,693	Eq. B[a]	20:80	26	105	131	Eq. C[a]	65:35	104	56	160
Raintree (220)	679 DU	Eq. A	4,238	Eq. B	20:80	67	269	336	Eq. C	65:35	254	137	391
Discounted Existing Light Industrial Raintree Use (110)	*183.02 KSF*	*6.97*	*-1,276*	*0.92*	*88:12*	*-148*	*-20*	*-168*	*0.97*	*12:88*	*-21*	*-156*	*-177*
Total			**4,655**			**-55**	**354**	**299**			**337**	**37**	**374**

[a] Apartment (ITE 220) Trip Generation Equations:
Equation A: T = 6.06(X) + 123.56
Equation B: T = 0.49(X) + 3.73
Equation C: = T = 0.55(X) + 17.65
Where T = Average Vehicle Trip Ends, X = dwelling units
DU = dwelling units; KSF = 1,000 square feet
Source: TJKM, 2013; Institute of Transportation Engineers (ITE), 2012.

Mitigation Measure TRANSPORTATION-5: No mitigation measures would be necessary under Baseline Plus Project Conditions. (LTS)

- Applies to Sares Regis Applicant Proposed Scenario: ☒
- Applies to Sares Regis Full Buildout Scenario: ☒
- Applies to Raintree Applicant Proposed Scenario: ☒
- Applies to Raintree Full Buildout Scenario: ☒

Impact TRANSPORTATION-6: The addition of project traffic under Baseline-plus-Project Conditions for the Full Buildout Scenario for the Sares Regis project, Raintree project, and combined East Weddell Residential Projects would not cause a significant impact at the study freeway segments based on LOS significance criteria. (LTS)

Tables 4.10-26, 4.10-27, and **4.10-28** describe freeway LOS results for Baseline-plus-Project Conditions under the Full Buildout Scenario for the Sares Regis project, Raintree project, and combined East Weddell Residential Projects, respectively.

Under Baseline-plus-Project Conditions (Full Buildout Scenario) for all three project scenarios, the following study area freeway segments are expected to continue operating unacceptably at LOS F:

- Highway 101 – Lawrence Expressway to Ellis Street, northbound direction, AM peak hour
- SR 237 – Lawrence Expressway to Highway 101, both directions and both peak hours

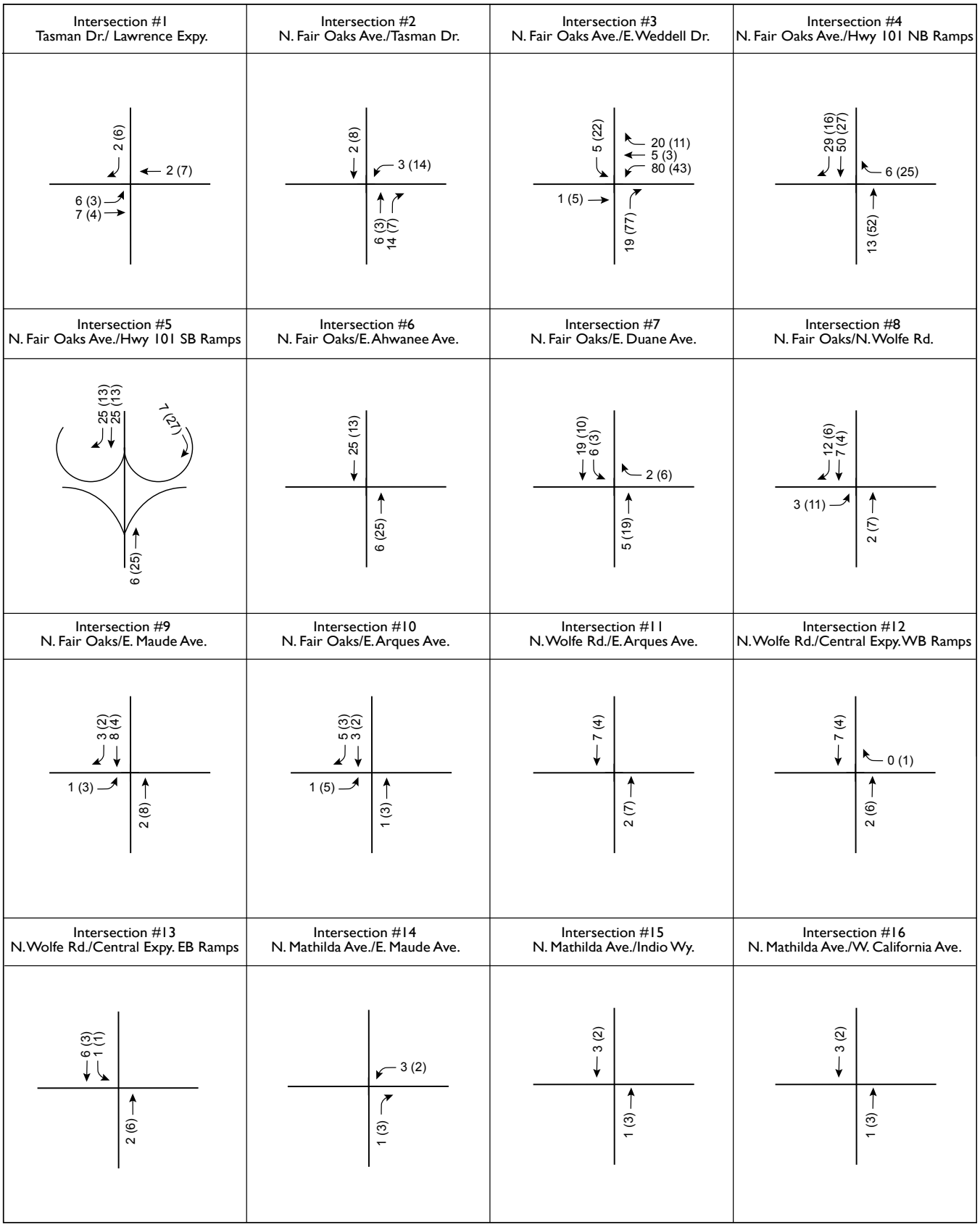

Figure 4.10-12

PROJECT TRIP ASSIGNMENT (FULL BUILDOUT SCENARIO - SARES REGIS)

SOURCE: TJKM 2013

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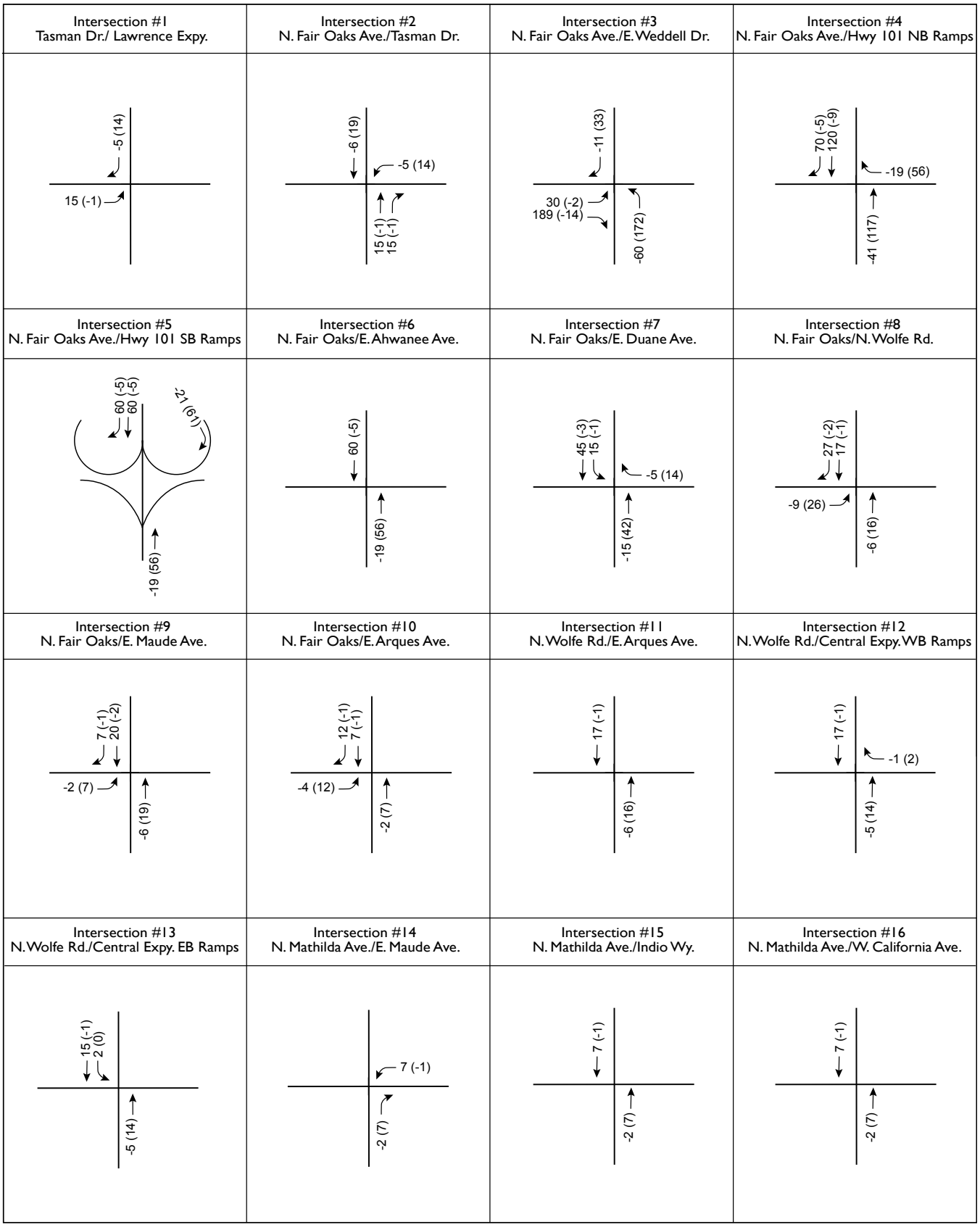

Figure 4.10-13

PROJECT TRIP ASSIGNMENT (FULL BUILDOUT SCENARIO - RAINTREE)

SOURCE: TJKM 2013

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ENVIRONMENTAL PLANNING

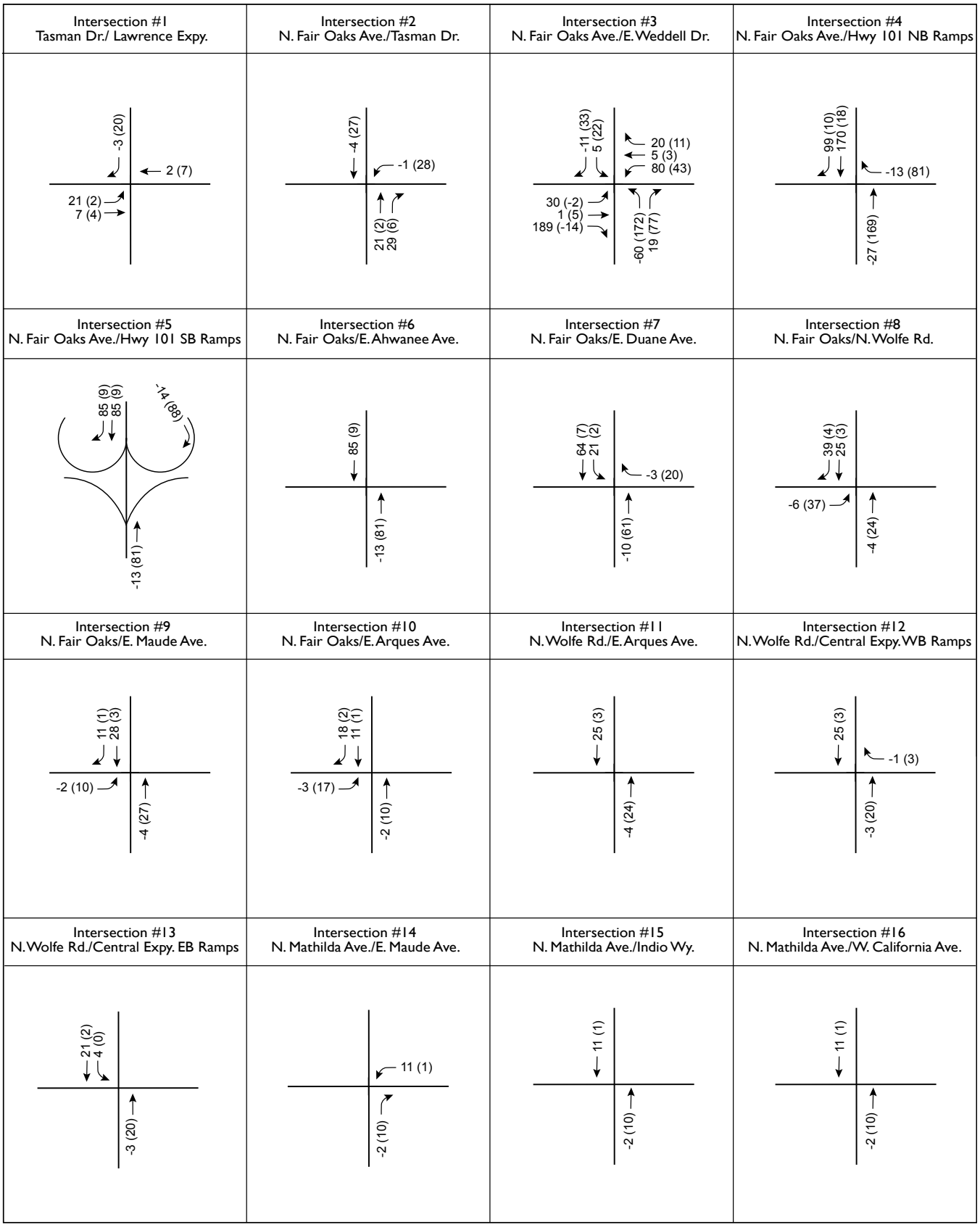

Figure 4.10-14

PROJECT TRIP ASSIGNMENT
(FULL BUILDOUT SCENARIO - EAST WEDDELL RESIDENTIAL PROJECTS)

SOURCE: TJKM 2013

AMY SKEWES~COX
ENVIRONMENTAL PLANNING

Table 4.10-23 Intersection Level of Service: Baseline-Plus-Project – Sares Regis Project (Full Buildout Scenario) Conditions

	Baseline No Project				Baseline-Plus-Project			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Intersection	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Tasman Drive/Lawrence Expressway	47.3	D	59.1	E+	47.3	D	59.1	E+
2. North Fair Oaks Avenue/Tasman Drive	23.7	C	28.1	C	23.8	C	28.2	C
3. North Fair Oaks Avenue/East Weddell Drive	17.0	B	20.6	C+	17.4	B	21.0	C+
4. North Fair Oaks Avenue/Highway 101 NB Ramps	24.1	C	27.5	C	24.6	C	28.4	C
5. North Fair Oaks Avenue/Highway 101 SB Ramps[a]	-	-	-	-	-	-	-	-
6. North Fair Oaks Avenue/East Ahwanee Avenue	33.7	C-	10.1	B+	33.8	C-	10.1	B+
7. North Fair Oaks Avenue/East Duane Avenue	24.8	C	18.2	B-	24.9	C	18.3	B-
8. North Fair Oaks Avenue/North Wolfe Road	15.5	B	17.7	B	15.5	B	17.9	B
9. North Fair Oaks Avenue/East Maude Avenue	16.7	B	18.0	B	16.7	B	17.9	B
10. North Fair Oaks Avenue/East Arques Avenue	22.8	C+	27.0	C	22.8	C+	27.0	C
11. North Wolfe Road/East Arques Avenue	17.7	B	23.3	C	17.7	B	23.3	C
12. North Wolfe Road/Central Expressway WB Ramps	14.5	B	16.9	B	14.6	B	16.9	B
13. North Wolfe Road/Central Expressway EB Ramps	9.5	A	22.1	C+	9.5	A	22.1	C+
14. North Mathilda Avenue/East Maude Avenue	19.8	B-	20.8	C+	19.8	B-	20.7	C+
15. North Mathilda Avenue/Indio Way	10.4	B+	18.8	B-	10.4	B+	18.8	B-
16. North Mathilda Avenue/West California Avenue	12.1	B	20.5	C+	12.1	B	20.5	C+

Notes: LOS = level of service; N/A = not applicable; NB = northbound; SB = southbound; WB = westbound; EB = eastbound.
All study intersections are signalized with exception of Intersection 5.
Signalized intersection delay and LOS shown represents averages for overall intersection.
[a] Intersection 5 consists of two free-flow ramps and two yield-controlled ramps and thus is not subject to intersection analysis.
Source: TJKM, 2013; Transportation Research Board, 2000.

Table 4.10-24 Intersection Level of Service: Baseline-Plus-Project Raintree Project (Full Buildout Scenario) Conditions

	Baseline No Project				Baseline-plus-Project			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Intersection	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Tasman Drive/Lawrence Expressway	47.3	D	59.1	E+	47.3	D	59.1	E+
2. North Fair Oaks Avenue/Tasman Drive	23.7	C	28.1	C	23.6	C	28.3	C
3. North Fair Oaks Avenue/East Weddell Drive	17.0	B	20.6	C+	21.0	C+	26.0	C
4. North Fair Oaks Avenue/ Highway 101 NB Ramps	24.1	C	27.5	C	25.0	C	28.2	C
5. North Fair Oaks Avenue/Highway 101 SB Ramps [a]	-	-	-	-	-	-	-	-
6. North Fair Oaks Avenue/East Ahwanee Avenue	33.7	C-	10.1	B+	32.7	C-	10.1	B+
7. North Fair Oaks Avenue/East Duane Avenue	24.8	C	18.2	B-	24.9	C	18.2	B-
8. North Fair Oaks Avenue/North Wolfe Road	15.5	B	17.7	B	15.3	B	18.0	B-
9. North Fair Oaks Avenue/East Maude Avenue	16.7	B	18.0	B	16.5	B	17.9	B
10. North Fair Oaks Avenue/East Arques Avenue	22.8	C+	27.0	C	22.6	C+	27.1	C
11. North Wolfe Road/East Arques Avenue	17.7	B	23.3	C	17.6	B	23.3	C
12. North Wolfe Road/Central Expressway WB Ramps	14.5	B	16.9	B	14.7	B	17.0	B
13. North Wolfe Road/Central Expressway EB Ramps	9.5	A	22.1	C+	9.5	A	22.1	C+
14. North Mathilda Avenue/East Maude Avenue	19.8	B-	20.8	C+	19.8	B-	20.7	C+
15. North Mathilda Avenue/Indio Way	10.4	B+	18.8	B-	10.4	B+	18.8	B-
16. North Mathilda Avenue/West California Avenue	12.1	B	20.5	C+	12.1	B	20.5	C+

Notes: LOS = level of service; N/A = not applicable; NB = northbound; SB = southbound; WB = westbound; EB = eastbound.
All study intersections are signalized with exception of Intersection 5.
Signalized intersection delay and LOS shown represents averages for overall intersection.
[a] Intersection 5 consists of two free-flow ramps and two yield-controlled ramps and thus is not subject to intersection analysis.
Source: TJKM, 2013; Transportation Research Board, 2000.

Table 4.10-25 Intersection Level of Service: Baseline-Plus Project – East Weddell Residential Projects (Full Buildout Scenario) Conditions

	Baseline No Project				Baseline-Plus-Project			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Intersection	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Tasman Drive/Lawrence Expressway	47.3	D	59.1	E+	47.4	D	59.1	E+
2. North Fair Oaks Avenue/Tasman Drive	23.7	C	28.1	C	23.7	C	28.4	C
3. North Fair Oaks Avenue/East Weddell Drive	17.0	B	20.6	C+	20.9	C+	26.0	C
4. North Fair Oaks Avenue/Highway 101 NB Ramps	24.1	C	27.5	C	25.5	C	29.4	C
5. North Fair Oaks Avenue/Highway 101 SB Ramps [a]	-	-	-	-	-	-	-	-
6. North Fair Oaks Avenue/East Ahwanee Avenue	33.7	C-	10.1	B+	32.8	C-	10.0	A
7. North Fair Oaks Avenue/East Duane Avenue	24.8	C	18.2	B-	25.0	C	18.3	B
8. North Fair Oaks Avenue/North Wolfe Road	15.5	B	17.7	B	15.3	B	18.2	B-
9. North Fair Oaks Avenue/East Maude Avenue	16.7	B	18.0	B	16.3	B	17.9	B
10. North Fair Oaks Avenue/East Arques Avenue	22.8	C+	27.0	C	22.5	C+	27.1	C
11. North Wolfe Road/East Arques Avenue	17.7	B	23.3	C	17.6	B	23.2	C
12. North Wolfe Road/Central Expressway WB Ramps	14.5	B	16.9	B	14.7	B	17.0	B
13. North Wolfe Road/Central Expressway EB Ramps	9.5	A	22.1	C+	9.6	A	22.1	C+
14. North Mathilda Avenue/East Maude Avenue	19.8	B-	20.8	C+	19.8	B-	20.8	C+
15. North Mathilda Avenue/Indio Way	10.4	B+	18.8	B-	10.4	B+	18.8	B-
16. North Mathilda Avenue/West California Avenue	12.1	B	20.5	C+	12.1	B	20.5	C+

Notes: LOS = level of service; N/A = not applicable; NB = northbound; SB = southbound; WB = westbound; EB = eastbound.
All study intersections are signalized with exception of Intersection 5.
Signalized intersection delay and LOS shown represents averages for overall intersection.
[a] Intersection 5 consists of two free-flow ramps and two yield-controlled ramps and thus is not subject to intersection analysis.
Source: TJKM, 2013; Transportation Research Board, 2000.

Table 4.10-26 Freeway Level of Service: Baseline-Plus-Project – Sares Regis Project (Full Buildout Scenario) Conditions

				Baseline No Project					Baseline Plus Project			
Freeway Segment	Dir.	Cap. (vphpl)	Peak Hour	Lanes	Avg. Speed	Volume	Density (pcpmpl)	LOS	Project Trips	Density (pcpmpl)	LOS	% Impact
Hwy 101, Lawrence Expressway to Ellis St	NB	6,900	AM	3	32	5,860	61.0	F	6	61.1	F	0.09%
			PM	3	66	5,510	27.8	D	25	28.0	D	0.36%
	SB	6,900	AM	3	66	5,850	29.5	D	25	29.7	D	0.36%
			PM	3	64	6,620	34.5	D	13	34.5	D	0.19%
SR 237, Lawrence Expressway to US 101	EB	4,600	AM	2	35	4,060	58.0	F	1	58.0	F	0.02%
			PM	2	46	4,330	47.1	F	2	47.1	F	0.04%
	WB	6,900	AM	3	19	4,910	86.1	F	0	86.1	F	0.00%
			PM	3	14	4,200	100.0	F	0	100.0	F	0.00%

Notes: Dir = Direction, NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound.
Cap = capacity in vehicles per hour per lane (vphpl).
Lanes are shown for mixed-flow only since project trips are assumed as added to mixed-flow lanes only.
Average speed in miles per hour (mph).
Volume in vehicles.
Density equal to passenger cars per mile per lane (pcpmpl).
LOS = level of service. **Bold** exceeds VTA freeway standards.
Project trips added to individual mixed-flow freeway segments.
Percent impact on mixed flow lanes determined by dividing the added project trips by the freeway segment's mixed-flow capacity.
Source: CMP Monitoring and Conformance Report, VTA, 2011. Existing year (2012) volumes and other related data were obtained from this report.

However, VTA freeway LOS criteria state that a project would have an impact on freeway facilities operating at LOS F only if a project adds vehicle trips representing more than 1 percent of a freeway segment's capacity. Based on the freeway LOS results for Baseline-plus-Project Conditions, all three project scenarios would add vehicle trips at less than 1 percent of segment capacity to study freeway segments currently operating at LOS F. Therefore, the proposed project is expected to have a less-than-significant impact with respect to freeway traffic operations under Baseline-plus-Project (Full Buildout Scenario) Conditions, and no mitigations are required under this scenario.

Mitigation Measure TRANSPORTATION-6: No mitigation measures would be necessary under Baseline-Plus-Project Conditions. (LTS)

- Applies to Sares Regis Applicant Proposed Scenario: ☒
- Applies to Sares Regis Full Buildout Scenario: ☒
- Applies to Raintree Applicant Proposed Scenario: ☒
- Applies to Raintree Full Buildout Scenario: ☒

Table 4.10-27 Freeway Level of Service: Baseline-Plus-Project – Raintree Project (Full Buildout Scenario) Conditions

				Baseline No Project					Baseline Plus Project			
Freeway Segment	Dir.	Cap. (vphpl)	Peak Hour	Lanes	Avg. Speed	Volume	Density (pcpmpl)	LOS	Project Trips	Density (pcpmpl)	LOS	% Impact
Hwy 101, Lawrence Expressway to Ellis St	NB	6,900	AM	3	32	5,860	61.0	F	-19	60.8	F	-0.28%
			PM	3	66	5,510	27.8	D	60	28.1	D	0.87%
	SB	6,900	AM	3	66	5,850	29.5	D	56	29.8	D	0.81%
			PM	3	64	6,620	34.5	D	-5	34.5	D	-0.07%
SR 237, Lawrence Expressway to US 101	EB	4,600	AM	2	35	4,060	58.0	F	-2	58.0	F	-0.04%
			PM	2	46	4,330	47.1	F	5	47.1	F	0.11%
	WB	6,900	AM	3	19	4,910	86.1	F	0	86.1	F	0.00%
			PM	3	14	4,200	100.0	F	0	100.0	F	0.00%

Notes: Dir = Direction, NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound.
Cap = capacity in vehicles per hour per lane (vphpl).
Lanes are shown for mixed-flow only since project trips are assumed as added to mixed-flow lanes only.
Average speed in miles per hour (mph).
Volume in vehicles.
Density equal to passenger cars per mile per lane (pcpmpl).
LOS = level of service. **Bold** exceeds VTA freeway standards.
Project trips added to individual mixed-flow freeway segments.
Percent impact on mixed flow lanes determined by dividing the added project trips by the freeway segment's mixed-flow capacity.

Source: CMP Monitoring and Conformance Report, VTA, 2011. Existing year (2012) volumes and other related data were obtained from this report.

BACKGROUND-PLUS-PROJECT CONDITIONS (FULL BUILDOUT SCENARIO) – LEVEL OF SERVICE

Impact TRANSPORTATION-7: The addition of project traffic under Background-plus-Project Conditions for the Full Buildout Scenario for the Sares Regis project, Raintree project, and combined East Weddell Residential Projects would not cause a significant impact at the study intersections based on LOS significance criteria. (LTS)

Tables 4.10-29, 4.10-30, and 4.10-31 describe intersection LOS results for Background-plus-Project Conditions under the Full Buildout Scenario for the Sares Regis project, Raintree project, and combined East Weddell Residential Projects, respectively. Appendix C includes LOS analysis sheets for all study intersections.

Under Background-plus-Project Conditions (Full Buildout Scenario) for all three projects, all study intersections are expected to continue operating at acceptable service levels as under Background Conditions. Therefore, the proposed project is expected to have a less-than-significant impact with respect to project traffic under Background-plus-Project (Full Buildout Scenario) Conditions, and no mitigations are required under this scenario.

Table 4.10-28 Freeway Level of Service: Baseline-Plus-Project – East Weddell Residential Projects (Full Buildout Scenario) Conditions

				Baseline No Project					Baseline Plus Project			
Freeway Segment	Dir.	Cap. (vphpl)	Peak Hour	Lanes	Avg. Speed	Volume	Density (pcpmpl)	LOS	Project Trips	Density (pcpmpl)	LOS	% Impact
Hwy 101, Lawrence Expressway to Ellis St	NB	6,900	AM	3	32	5,860	61.0	F	-13	60.9	F	-0.19%
			PM	3	66	5,510	27.8	D	85	28.3	D	1.23%
	SB	6,900	AM	3	66	5,850	29.5	D	81	30.0	D	1.17%
			PM	3	64	6,620	34.5	D	9	34.5	D	0.13%
SR 237, Lawrence Expressway to US 101	EB	4,600	AM	2	35	4,060	58.0	F	-1	58.0	F	-0.02%
			PM	2	46	4,330	47.1	F	7	47.1	F	0.15%
	WB	6,900	AM	3	19	4,910	86.1	F	0	86.1	F	0.00%
			PM	3	14	4,200	100.0	F	0	100.0	F	0.00%

Notes: Dir = Direction, NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound.
Cap = capacity in vehicles per hour per lane (vphpl).
Lanes are shown for mixed-flow only since project trips are assumed as added to mixed-flow lanes only.
Average speed in miles per hour (mph).
Volume in vehicles.
Density equal to passenger cars per mile per lane (pcpmpl).
LOS = level of service. **Bold** exceeds VTA freeway standards.
Project trips added to individual mixed-flow freeway segments.
Percent impact on mixed flow lanes determined by dividing the added project trips by the freeway segment's mixed-flow capacity.

Source: CMP Monitoring and Conformance Report, VTA, 2011. Existing year (2012) volumes and other related data were obtained from this report.

Mitigation Measure TRANSPORTATION-7: No mitigation measures would be necessary under Background-Plus-Project Conditions. (LTS)

- Applies to Sares Regis Applicant Proposed Scenario: ☒
- Applies to Sares Regis Full Buildout Scenario: ☒
- Applies to Raintree Applicant Proposed Scenario: ☒
- Applies to Raintree Full Buildout Scenario: ☒

CUMULATIVE-PLUS-PROJECT CONDITIONS (FULL BUILDOUT SCENARIO) – LEVEL OF SERVICE

Impact TRANSPORTATION-8: The addition of project traffic under Cumulative-plus-Project Conditions for the Full Buildout Scenario for the Sares Regis project, Raintree project, and combined East Weddell Residential Projects would not cause a significant impact at the study intersections based on LOS significance criteria. (LTS)

Table 4.10-29 Intersection Level of Service: Background-Plus-Project – Sares Regis Project (Full Buildout Scenario) Conditions

	Background No Project				Background-Plus-Project			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Intersection	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Tasman Drive/Lawrence Expressway	47.3	D	60.0	E+	47.3	D	60.0	E+
2. North Fair Oaks Avenue/Tasman Drive	24.2	C	28.6	C	24.2	C	28.7	C
3. North Fair Oaks Avenue/East Weddell Drive	16.7	B	21.3	C+	17.2	B	21.6	C+
4. North Fair Oaks Avenue/Highway101 NB Ramps	24.9	C	31.1	C	25.4	C	32.6	C-
5. North Fair Oaks Avenue/Highway 101 SB Ramps[a]	-	-	-	-	-	-	-	-
6. North Fair Oaks Avenue/East Ahwanee Avenue	37.6	D+	10.1	B+	37.8	D+	10.1	B+
7. North Fair Oaks Avenue/East Duane Avenue	25.7	C	18.7	B-	25.8	C	18.8	B-
8. North Fair Oaks Avenue/North Wolfe Road	17.3	B-	20.7	C+	17.3	B	20.8	C+
9. North Fair Oaks Avenue/East Maude Avenue	18.4	B-	19.5	B-	18.3	B-	19.4	B-
10. North Fair Oaks Avenue/East Arques Avenue	23.0	C	27.4	C	23.0	C	27.5	C
11. North Wolfe Road/East Arques Avenue	17.8	B	23.3	C	17.7	B	23.3	C
12. North Wolfe Road/Central Expressway WB Ramps	14.6	B	14.7	B	14.7	B	14.6	B
13. North Wolfe Road/Central Expressway EB Ramps	9.6	A	22.5	C+	14.7	B	27.4	C
14. North Mathilda Avenue/East Maude Avenue	20.8	C+	21.8	C+	20.8	C+	21.8	C+
15. North Mathilda Avenue/Indio Way	10.6	B+	20.4	C+	10.6	B+	20.4	C+
16. North Mathilda Avenue/West California Avenue	12.6	B	29.1	C	12.6	B	29.2	C

Notes: LOS = level of service; N/A = not applicable; NB = northbound; SB = southbound; WB = westbound; EB = eastbound.
All study intersections are signalized with exception of Intersection 5.
Signalized intersection delay and LOS shown represents averages for overall intersection.
Bold/shading indicates LOS exceeding applicable Caltrans, VTA, and/or Sunnyvale criteria. The North Mathilda Avenue/Indio Way delay is not expected to increase more than 4 seconds; thus, the impact would be less than significant.

[a] Intersection 5 consists of two free-flow ramps and two yield-controlled ramps and thus is not subject to intersection analysis.

Source: TJKM, 2013; Transportation Research Board, 2000.

Table 4.10-30 Intersection Level of Service: Background–Plus-Project – Raintree Project (Full Buildout Scenario) Conditions

	Background No Project				Background-Plus-Project			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Intersection	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Tasman Drive/Lawrence Expressway	47.3	D	60.0	E+	47.3	D	60.0	E+
2. North Fair Oaks Avenue/Tasman Drive	24.2	C	28.6	C	24.0	C	29.0	C
3. North Fair Oaks Avenue/East Weddell Drive	16.7	B	21.3	C+	20.9	C+	27.7	C
4. North Fair Oaks Avenue/Highway 101 NB Ramps	24.9	C	31.1	C	25.8	C	32.3	C-
5. North Fair Oaks Avenue/Highway 101 SB Ramps[a]	-	-	-	-	-	-	-	-
6. North Fair Oaks Avenue/East Ahwanee Avenue	37.6	D+	10.1	B+	36.4	D+	10.1	B+
7. North Fair Oaks Avenue/East Duane Avenue	25.7	C	18.7	B-	25.7	C	18.7	B-
8. North Fair Oaks Avenue/North Wolfe Road	17.3	B-	20.7	C+	17.1	B	21.0	C+
9. North Fair Oaks Avenue/East Maude Avenue	18.4	B-	19.5	B-	18.1	B-	19.5	B-
10. North Fair Oaks Avenue/East Arques Avenue	23.0	C	27.4	C	22.8	C+	27.5	C
11. North Wolfe Road/East Arques Avenue	17.8	B	23.3	C	17.7	B	23.4	C
12. North Wolfe Road/Central Expressway WB Ramps	14.6	B	14.7	B	14.8	B	14.7	B
13. North Wolfe Road/Central Expressway EB Ramps	9.6	A	22.5	C+	14.8	B	27.4	C
14. North Mathilda Avenue/East Maude Avenue	20.8	C+	21.8	C+	20.8	C+	21.8	C+
15. North Mathilda Avenue/Indio Way	10.6	B+	20.4	C+	10.5	B+	20.4	C+
16. North Mathilda Avenue/West California Avenue	12.6	B	29.1	C	12.6	B	29.1	C

Notes: LOS = level of service; N/A = not applicable; NB = northbound; SB = southbound; WB = westbound; EB = eastbound.
All study intersections are signalized with exception of Intersection 5.
Signalized intersection delay and LOS shown represents averages for overall intersection.
Bold/shading indicates LOS exceeding applicable Caltrans, VTA, and/or Sunnyvale criteria. The North Mathilda Avenue/Indio Way delay is not expected to increase more than 4 seconds; thus, the impact would be less than significant.

[a] Intersection 5 consists of two free-flow ramps and two yield-controlled ramps and thus is not subject to intersection analysis.

Source: TJKM, 2013; Transportation Research Board, 2000.

Table 4.10-31 Intersection Level of Service: Background-Plus-Project – East Weddell Residential Projects (Full Buildout Scenario) Conditions

	Background No Project				Background-Plus-Project			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Intersection	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Tasman Drive/Lawrence Expressway	47.3	D	60.0	E+	47.3	D	60.0	E+
2. North Fair Oaks Avenue/Tasman Drive	24.2	C	28.6	C	24.0	C	29.1	C
3. North Fair Oaks Avenue/East Weddell Drive	16.7	B	21.3	C+	20.8	C+	27.7	C
4. North Fair Oaks Avenue/Highway 101 NB Ramps	24.9	C	31.1	C	26.4	C	34.1	C-
5. North Fair Oaks Avenue/Highway 101 SB Ramps[a]	-	-	-	-	-	-	-	-
6. North Fair Oaks Avenue/East Ahwanee Avenue	37.6	D+	10.1	B+	36.6	D+	10.0	B+
7. North Fair Oaks Avenue/East Duane Avenue	25.7	C	18.7	B-	25.9	C	18.8	B-
8. North Fair Oaks Avenue/North Wolfe Road	17.3	B-	20.7	C+	17.1	B	21.2	C+
9. North Fair Oaks Avenue/East Maude Avenue	18.4	B-	19.5	B-	18.1	B-	19.5	B-
10. North Fair Oaks Avenue/East Arques Avenue	23.0	C	27.4	C	22.8	C+	27.6	C
11. North Wolfe Road/East Arques Avenue	17.8	B	23.3	C	17.6	B	23.3	C
12. North Wolfe Road/Central Expressway WB Ramps	14.6	B	14.7	B	14.9	B	14.6	B
13. North Wolfe Road/Central Expressway EB Ramps	9.6	A	22.5	C+	14.8	B	27.5	C
14. North Mathilda Avenue/East Maude Avenue	20.8	C+	21.8	C+	20.8	C+	21.8	C+
15. North Mathilda Avenue/Indio Way	10.6	B+	20.4	C+	10.5	B+	20.4	C+
16. North Mathilda Avenue/West California Avenue	12.6	B	29.1	C	12.6	B	29.0	C

Notes: LOS = level of service; N/A = not applicable; NB = northbound; SB = southbound; WB = westbound; EB = eastbound.
All study intersections are signalized with exception of Intersection 5.
Signalized intersection delay and LOS shown represents averages for overall intersection.
Bold/shading indicates LOS exceeding applicable Caltrans, VTA, and/or Sunnyvale criteria. The North Mathilda Avenue/Indio Way delay is not expected to increase more than 4 seconds; thus, the impact would be less than significant.

[a] Intersection 5 consists of two free-flow ramps and two yield-controlled ramps and thus is not subject to intersection analysis.

Source: TJKM, 2013; Transportation Research Board, 2000.

Tables 4.10-32, 4.10-33, and 4.10-34 describe intersection LOS results for Cumulative-plus-Project Conditions under the Full Buildout Scenario for the Sares Regis project, Raintree project, and combined East Weddell Residential Projects, respectively. Appendix C includes LOS analysis sheets for all study intersections.

Under Cumulative-plus-Project Conditions (Full Buildout Scenario) for all three projects, all study intersections are expected to continue operating at acceptable service levels as under Cumulative Conditions, with the exception of the following intersection that is expected to continue operating unacceptably:

- North Fair Oaks Avenue/East Ahwanee Avenue (LOS E, AM peak hour)

It should be noted, however, the above intersection expected to operate unacceptably would not have increases in average delay greater than 4 seconds due to the addition of project traffic. Therefore, the proposed project is expected to have a less-than-significant impact with respect to project traffic under Cumulative-plus-Project (Full Buildout Scenario) Conditions, and no mitigations are required under this scenario.

Mitigation Measure TRANSPORTATION-8: No mitigation measures would be necessary under Cumulative-Plus-Project Conditions. (LTS)

- Applies to Sares Regis Applicant Proposed Scenario: ☒
- Applies to Sares Regis Full Buildout Scenario: ☒
- Applies to Raintree Applicant Proposed Scenario: ☒
- Applies to Raintree Full Buildout Scenario: ☒

EMERGENCY VEHICLE ACCESS

Impact TRANSPORTATION-9: The proposed East Weddell Residential Projects could contribute to inadequate emergency vehicle access on East Weddell Drive for both sites. (S)

TJKM conducted a preliminary review of the proposed site plans for both the Sares Regis and Raintree projects to determine whether emergency vehicles (i.e., fire trucks) would have sufficient ROW for access to both residential sites. Both sites would use existing driveway access points from East Weddell Drive.

At the Raintree site, there would be two main driveways, with one on the northern edge of the site that would align with Kiel Court directly across East Weddell Drive, similar to the access for the existing industrial buildings on the site, and the other on the western edge of the site. The northern entry would be the primary access for visitors and other non-residents and would provide access to the northern site garage located on Parcel A. The western entry would provide direct access to the southern site garage located on Parcel B. Both driveways would also function as emergency vehicle access for the site.

Table 4.10-32 Intersection Level of Service: Cumulative-Plus-Project – Sares Regis Project (Full Buildout Scenario) Conditions

	Cumulative No Project				Cumulative-Plus-Project			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Intersection	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Tasman Drive/Lawrence Expressway	49.1	D	72.3	E	49.0	D	72.6	E
2. North Fair Oaks Avenue/Tasman Drive	27.1	C	31.9	C	27.2	C	32.1	C-
3. North Fair Oaks Avenue/East Weddell Drive	16.5	B	25.9	C	17.0	B	26.1	C
4. North Fair Oaks Avenue/Highway 101 NB Ramps	30.9	C	48.0	D	32.4	C-	50.7	D
5. North Fair Oaks Avenue/Highway 101 SB Ramps[a]	-	-	-	-	-	-	-	-
6. North Fair Oaks Avenue/East Ahwanee Avenue	**60.2**	**E**	10.5	B+	**60.5**	**E**	10.5	B+
7. North Fair Oaks Avenue/East Duane Avenue	31.9	C	21.5	C+	32.3	C-	21.6	C+
8. North Fair Oaks Avenue/North Wolfe Road	19.5	B-	23.2	C	19.6	B-	23.4	C
9. North Fair Oaks Avenue/East Maude Avenue	19.3	B-	22.0	C+	19.3	B-	22.1	C+
10. North Fair Oaks Avenue/East Arques Avenue	24.2	C	30.1	C	24.3	C	30.1	C
11. North Wolfe Road/East Arques Avenue	18.2	B-	24.0	C	18.1	B-	24.0	C
12. North Wolfe Road/Central Expressway WB Ramps	15.3	B	18.0	B-	15.3	B	18.0	B-
13. North Wolfe Road/Central Expressway EB Ramps	10.1	B+	34.6	C-	15.4	B	47.6	D
14. North Mathilda Avenue/East Maude Avenue	28.6	C	33.8	C-	28.6	C	33.8	C-
15. North Mathilda Avenue/Indio Way	16.9	B	31.9	C	16.9	B	32.0	C
16. North Mathilda Avenue/West California Avenue	21.7	C+	30.6	C	21.8	C+	30.6	C

Notes: LOS = level of service; N/A = not applicable; NB = northbound; SB = southbound; WB = westbound; EB = eastbound.
All study intersections are signalized with exception of Intersection 5.
Signalized intersection delay and LOS shown represents averages for overall intersection.
Bold/shading indicates LOS exceeding applicable Caltrans, VTA, and/or Sunnyvale criteria. The North Mathilda Avenue/Indio Way delay is not expected to increase more than 4 seconds; thus, the impact would be less than significant.

[a] Intersection 5 consists of two free-flow ramps and two yield-controlled ramps and thus is not subject to intersection analysis.

Source: TJKM, 2013; Transportation Research Board, 2000.

Table 4.10-33 Intersection Level of Service: Cumulative-Plus-Project – Raintree Project (Full Buildout Scenario) Conditions

	Cumulative No Project				Cumulative-Plus-Project			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Intersection	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Tasman Drive/Lawrence Expressway	49.1	D	72.3	E	49.0	D	72.4	E
2. North Fair Oaks Avenue/Tasman Drive	27.1	C	31.9	C	27.0	C	32.4	C-
3. North Fair Oaks Avenue/East Weddell Drive	16.5	B	25.9	C	21.1	C+	41.3	D
4. North Fair Oaks Avenue/Highway 101 NB Ramps	30.9	C	48.0	D	33.4	C-	49.8	D
5. North Fair Oaks Avenue/Highway 101 SB Ramps[a]	-	-	-	-	-	-	-	-
6. North Fair Oaks Avenue/East Ahwanee Avenue	**60.2**	**E**	10.5	B+	**57.9**	**E+**	10.5	B+
7. North Fair Oaks Avenue/East Duane Avenue	31.9	C	21.5	C+	32.0	C-	21.6	C+
8. North Fair Oaks Avenue/North Wolfe Road	19.5	B-	23.2	C	19.3	B	23.7	C
9. North Fair Oaks Avenue/East Maude Avenue	19.3	B-	22.0	C+	19.1	B-	22.1	C+
10. North Fair Oaks Avenue/East Arques Avenue	24.2	C	30.1	C	24.1	C	30.2	C
11. North Wolfe Road/East Arques Avenue	18.2	B-	24.0	C	18.1	B-	24.0	C
12. North Wolfe Road/Central Expressway WB Ramps	15.3	B	18.0	B-	15.4	B	18.0	B-
13. North Wolfe Road/Central Expressway EB Ramps	10.1	B+	34.6	C-	15.4	B	47.6	D
14. North Mathilda Avenue/East Maude Avenue	28.6	C	33.8	C-	28.6	C	33.8	C-
15. North Mathilda Avenue/Indio Way	16.9	B	31.9	C	16.8	B	31.9	C
16. North Mathilda Avenue/West California Avenue	21.7	C+	30.6	C	21.7	C+	30.6	C

Notes: LOS = level of service; N/A = not applicable; NB = northbound; SB = southbound; WB = westbound; EB = eastbound.
All study intersections are signalized with exception of Intersection 5.
Signalized intersection delay and LOS shown represents averages for overall intersection.
Bold/shading indicates LOS exceeding applicable Caltrans, VTA, and/or Sunnyvale criteria. The North Mathilda Avenue/Indio Way delay is not expected to increase more than 4 seconds; thus, the impact would be less than significant.

[a] Intersection 5 consists of two free-flow ramps and two yield-controlled ramps and thus is not subject to intersection analysis.

Source: TJKM, 2013; Transportation Research Board, 2000.

Table 4.10-34 Intersection Level of Service: Cumulative-Plus-Project – East Weddell Residential Projects (Full Buildout Scenario) Conditions

	Cumulative No Project				Cumulative-Plus-Project			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Intersection	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Tasman Drive/Lawrence Expressway	49.1	D	72.3	E	49.0	D	72.8	E
2. North Fair Oaks Avenue/Tasman Drive	27.1	C	31.9	C	27.2	C	32.7	C-
3. North Fair Oaks Avenue/East Weddell Drive	16.5	B	25.9	C	21.1	C+	40.7	D
4. North Fair Oaks Avenue/Highway 101 NB Ramps	30.9	C	48.0	D	35.3	D+	52.5	D-
5. North Fair Oaks Avenue/Highway 101 SB Ramps[a]	-	-	-	-	-	-	-	-
6. North Fair Oaks Avenue/East Ahwanee Avenue	**60.2**	**E**	10.5	B+	**58.2**	**E+**	10.4	B+
7. North Fair Oaks Avenue/East Duane Avenue	31.9	C	21.5	C+	32.5	C-	21.8	C+
8. North Fair Oaks Avenue/North Wolfe Road	19.5	B-	23.2	C	19.3	B	23.9	C
9. North Fair Oaks Avenue/East Maude Avenue	19.3	B-	22.0	C+	19.1	B-	22.1	C+
10. North Fair Oaks Avenue/East Arques Avenue	24.2	C	30.1	C	24.1	C	30.3	C
11. North Wolfe Road/East Arques Avenue	18.2	B-	24.0	C	18.1	B-	24.0	C
12. North Wolfe Road/Central Expressway WB Ramps	15.3	B	18.0	B-	15.5	B	18.0	B-
13. North Wolfe Road/Central Expressway EB Ramps	10.1	B+	34.6	C-	15.5	B	48.0	D
14. North Mathilda Avenue/East Maude Avenue	28.6	C	33.8	C-	28.6	C	33.8	C-
15. North Mathilda Avenue/Indio Way	16.9	B	31.9	C	16.8	B	31.9	C
16. North Mathilda Avenue/West California Avenue	21.7	C+	30.6	C	21.6	C+	30.6	C

Notes: LOS = level of service; N/A = not applicable; NB = northbound; SB = southbound; WB = westbound; EB = eastbound.
All study intersections are signalized with exception of Intersection 5.
Signalized intersection delay and LOS shown represents averages for overall intersection.
Bold/shading indicates LOS exceeding applicable Caltrans, VTA, and/or Sunnyvale criteria. The North Mathilda Avenue/Indio Way delay is not expected to increase more than 4 seconds; thus, the impact would be less than significant.

[a] Intersection 5 consists of two free-flow ramps and two yield-controlled ramps and thus is not subject to intersection analysis.

Source: TJKM, 2013; Transportation Research Board, 2000.

At the Sares Regis site, the primary access would be located at the northwest corner of the site via the existing cul-de-sac on East Weddell Drive that served the previous industrial use. This main driveway would provide direct access to the visitor parking area and residential parking garage. The northern and eastern edges of the site would be designed to provide access for emergency vehicles to the perimeter of the building. An emergency vehicle access (EVA) easement is located between the western end of Lakehaven Drive and the eastern edge of the property. The City secured this easement for purposes of emergency vehicle access as well as bicycle and pedestrian access.

As prescribed by the City of Sunnyvale Department of Public Safety (DPS) Fire Prevention Unit, requirements for fire vehicle access include the following:

- Asphalt, concrete, or other approved driving surface capable of supporting fire apparatus weighing at least 75,000 pounds or as otherwise determined by a City fire code official.
- Minimum clear width of 20 feet per Section 16.52.170 of the Sunnyvale Municipal Code.
- Minimum clear height of 13 feet 6 inches per Section 16.52.170 of the Municipal Code.
- Minimum inside turning radius of 25 to 30 feet depending on width and as determined by the City fire code official.
- Moveable or fold-over bollards where used for limiting roadway access.
- Traffic calming devices and design thereof to be approved by the City fire code official.
- Residential projects with more than 50 dwelling units shall have two separate and approved fire apparatus access roads.

Based on this initial review, the proposed access points at both sites are expected to provide adequate emergency access based on the above criteria. However, it should be noted that these site plans are expected to undergo further refinement during the forthcoming design review process and, in addition, are subject to review and approval by the City Fire Marshal. Provided that final designs of both project sites meet the fire access and circulation standards of the City Fire Marshal, including adequate turning radii for fire trucks and other emergency vehicles, it is expected that impacts of the projects on fire truck and emergency vehicle access would be less than significant.

In addition, TJKM reviewed concerns of the DPS Police Services Bureau about the effect of project traffic on the ability to provide adequate police response. TJKM used the criterion of adequate response time, since peak hour traffic levels have an effect on this criterion. Since no significant traffic impacts are expected to occur with the addition of project traffic under any analysis year (Existing, Background, or Cumulative), it is expected that accordingly, project traffic would not affect police response times within the study area, and no mitigation measures relative to project traffic are required.

Although both project sites would use existing East Weddell Drive driveways for primary access, there is the potential for inadequate emergency access unless the driveways are designed to meet City emergency access standards and are approved by the City Fire Marshal.

> *<u>Mitigation Measure TRANSPORTATION-9</u>: Both project sites shall be designed to incorporate emergency vehicle access that meets City emergency access standards as described in the City of Sunnyvale Department of Public Safety Fire Prevention Unit's*

Requirements for Fire Department Vehicle Access *and is approved by the City Fire Marshal. This mitigation would reduce the impact on emergency access to a less-than-significant level. (LTS)*

- Applies to Sares Regis Applicant Proposed Scenario: ☒
- Applies to Sares Regis Full Buildout Scenario: ☒
- Applies to Raintree Applicant Proposed Scenario: ☒
- Applies to Raintree Full Buildout Scenario: ☒

EFFECTS ON PEDESTRIAN FACILITIES

Impact TRANSPORTATION-10: The proposed East Weddell Residential Projects could conflict with adopted policies, plans, or programs regarding pedestrian facilities, or otherwise decrease the performance or safety of such facilities within the study area. (S)

The proposed East Weddell Residential Projects could conflict with currently adopted VTA and City pedestrian policies, plans, or programs, and with existing or proposed pedestrian facilities in the City of Sunnyvale. Both project sites would use existing sidewalks (located on one side of East Weddell Drive in the vicinity of both sites) and provide enhancements to those facilities. For the Raintree site, new public sidewalk facilities would be provided along the northern and western project frontages, while at the Sares Regis site, the project would tie into existing pedestrian facilities on East Weddell Drive. However, both projects would increase pedestrian activity in the neighborhood and need to improve pedestrian options.

On the Raintree site, the portion within the site that includes San Francisco Public Utilities Commission (SFPUC) ROW is proposed to be converted from paved parking area to a multi-use pathway for public use with pedestrian-friendly amenities including park benches. The pathway would represent a continuation of the multi-use John W. Christian Greenbelt trail from the west. This amenity is expected to have a positive effect on the project's pedestrian mode share and potentially increase general pedestrian activity within the project vicinity. Design and construction of the John W. Christian Greenbelt Trail within SFPUC ROW would require close coordination between the Raintree applicant and SFPUC. Completion of this pathway is subject to SFPUC approval, however.

On the Sares Regis site, there may be enhancements to the existing John W. Christian Greenbelt Trail located along the northern edge of the site, and as a result is expected to have similar positive effects on project and local pedestrian activity. However, these improvements are also subject to SFPUC approval. The Sares Regis site is also anticipated to connect with the future multi-use East Channel Trail along Santa Clara Valley Water District property located northeast of the site. This future trail would ultimately provide a direct pedestrian connection between the Sares Regis site and Santa Clara VTA Fair Oaks light rail transit (LRT) station. Design and construction of the John W. Christian Greenbelt Trail within SFPUC ROW would require close coordination between the Sares Regis applicant and SFPUC.

Currently, there is minimal pedestrian activity in the immediate project site vicinity, as evidenced by collected existing pedestrian volumes.[2] It is expected that both projects would result in a noticeable increase in pedestrian activity, given the higher-density nature of the proposed residential developments and their proximity to the VTA bus and LRT stops within a ½-mile radius. However, there is no known impact that would result from this increased pedestrian activity, and both projects would enhance existing and future local pedestrian amenities, including the John W. Christian Greenbelt Trail. While there may not be any adverse effects on, or substantial conflicts with, pedestrian facilities, it is important that the City be assured of the proposed pedestrian improvements which is why the mitigation measure is recommended below.

> *Mitigation Measure TRANSPORTATION-10: Both project sites shall be designed to integrate improvements with existing pedestrian facilities to accommodate potential increases in pedestrian activity. If the SFPUC does not approve the proposed pedestrian improvements, the site plans for both projects shall be adjusted to maximize pedestrian use near the SFPUC right-of-way, and this shall occur prior to issuance of any building permits. (LTS)*

- Applies to Sares Regis Applicant Proposed Scenario: ☒
- Applies to Sares Regis Full Buildout Scenario: ☒
- Applies to Raintree Applicant Proposed Scenario: ☒
- Applies to Raintree Full Buildout Scenario: ☒

EFFECTS ON BICYCLE FACILITIES

Impact TRANSPORTATION-11: The proposed East Weddell Residential Projects could conflict with adopted policies, plans, or programs regarding bicycle facilities, or otherwise decrease the performance or safety of such facilities within the study area. (S)

The proposed East Weddell Residential Projects could conflict with currently adopted VTA and City bicycle policies, plans, or programs, and with existing or proposed bicycle facilities in the City of Sunnyvale. Both project sites are located near the Class III shared lanes on Fair Oaks Avenue between E. Weddell Drive and Tasman Drive. However, bicycle usage in the area is expected to increase with the projects and bicycle improvements would be warranted.

On the Raintree site, the portion within that includes SFPUC ROW would be converted from paved parking area to a multi-use pathway for public use, which would constitute a Class I bicycle facility. The pathway would represent a continuation of the multi-use John W. Christian Greenbelt trail from the west. This amenity is expected to have a positive effect on the project's bicycle mode share and potentially increase general bicycle activity within the project vicinity. Design and construction of the John W. Christian Greenbelt Trail within SFPUC ROW would require close coordination between the Raintree applicant and SFPUC. Completion of this pathway is subject to SFPUC approval, however.

[2] Pedestrian counts (2012-2013) as detailed in Appendix C.

On the Sares Regis site, there may be enhancements to the existing John W. Christian Greenbelt Trail located along the northern edge of the site, and as a result, the project is expected to have similar positive effects on project and local bicycle activity. However, these improvements would be off-site. The Sares Regis site is also anticipated to connect with the future multi-use East Channel Trail along Santa Clara Valley Water District property located northeast of the site. This future trail would ultimately provide a direction connection for bicycles between the Sares Regis site and VTA's Fair Oaks LRT Station. Design and construction of the John W. Christian Greenbelt Trail within SFPUC ROW would require close coordination between the Raintree applicant and SFPUC. Without the SFPUC ROW improvements, the circulation plan for the Sares Regis site does show bicycle access along the northern and eastern portions of the property (see Figure 3-7) which would allow adequate bicycle circulation on the site.

Currently, there is minimal bicycle activity in the immediate project site vicinity, as evidenced by collected existing bicycle volumes.[3] However, it is expected that both projects would result in a noticeable increase in bicycle activity, given the higher-density nature of the residential developments and their proximity to both existing bicycle facilities and VTA transit stops.

Both projects would provide on-site bicycle parking and storage to accommodate residents and guests. These amenities would encourage resident and visitor travel by bicycle as an alternative to the automobile and have the potential to reduce vehicle trips generated by both projects as estimated under all study scenarios, thereby also reducing project transportation impacts. As a result, there is no known impact that would result from this increased bicycle activity. Also, both projects would enhance existing and future local bicycle amenities, including the John W. Christian Greenbelt Trail. While there may not be any adverse effects on, or substantial conflicts with, bicycle facilities, it is important for the City to be assured of bicycle improvements, which is why the mitigation measure is identified below.

> *Mitigation Measure TRANSPORTATION-11: Both project sites shall be designed to integrate with existing bicycle facilities to accommodate potential increases in bicycle activity. On-site facilities for bicycles shall be consistent with VTA and City of Sunnyvale guidelines for such facilities, including parking and storage on both project sites. If the SFPUC does not approve the proposed bicycle improvements, the site plan for the Raintree site shall be adjusted to maximize bicycle use near the SFPUC right-of-way, and this shall occur prior to issuance of any building permits. (LTS)*

- Applies to Sares Regis Applicant Proposed Scenario: ☒
- Applies to Sares Regis Full Buildout Scenario: ☒
- Applies to Raintree Applicant Proposed Scenario: ☒
- Applies to Raintree Full Buildout Scenario: ☒

EFFECTS ON TRANSIT FACILITIES

Impact TRANSPORTATION-12: The proposed East Weddell Residential Projects would not significantly affect existing transit facilities within the study area. (LTS)

[3] Bicycle counts (2012-2013) as detailed in Appendix C.

The East Weddell Residential Projects would potentially add transit riders to local VTA transit routes. A proposed project is considered to have a significant impact on transit if it conflicts with existing or planned transit facilities, or is expected to generate additional transit trips and would not provide adequate facilities for pedestrian and bicycle access to transit routes and stops.

VTA serves the project sites with one fixed-route bus line (Route 26) along North Fair Oaks Avenue and one light rail transit (LRT) line (Route 902/Mountain View-Winchester Line). Existing VTA bus stops for Route 26 are located just north of the East Weddell Drive/North Fair Oaks Avenue intersection. The Fair Oaks LRT Station is located at the North Fair Oaks Avenue/Tasman Drive intersection farther north and within approximately ½-mile walking distance of both project sites. The Mountain View-Winchester Line provides service between downtown Mountain View and downtown Campbell, serving many employment destinations including the Moffett Park R&D/office area in Sunnyvale, downtown San Jose, and San Jose Airport.

The bus stops and LRT station are accessible from the East Weddell Residential Projects via continuous sidewalks for pedestrians and roadways for bicyclists on a relatively flat terrain amenable to these transportation modes. The proposed projects would provide enhanced pedestrian and bicycle connections to these existing facilities, facilitating access to local transit routes and stops. Therefore, local pedestrian and bicycle facilities are considered adequate to accommodate the additional transit trips generated by these projects. Furthermore, provision of these enhanced pedestrian and bicycle facilities accessing transit would not conflict with existing or planned transit facilities in the vicinity. As a result, there are no known impacts that would occur on these transit lines, even if full VTA transportation demand management (TDM) reductions were shifted to just local public transit lines and not to carpools, bicyclists, pedestrians, or other transit lines. This is because the average commute peak hour load factors on Routes 26 and 902 (LRT) are currently below 1.0 (1.0 = at capacity).

Based on the preceding transit criteria, the site locations, the availability of local transit, enhanced project bicycle and pedestrian access to transit, and the fact that VTA load factors for transit lines in the project vicinity are below 1.0 during peak hours, the impact of the East Weddell Residential Projects on transit service would be less than significant. Any transit trips generated by the proposed project would likely reduce the number of vehicle trips from the site, thus reducing roadway and intersection delay and congestion. Any increase in transit ridership would be seen as a positive effect. Therefore, there would be no adverse effects on transit operations, and the project would not create demands in excess of the levels that could be served by local transit operators.

Mitigation Measure TRANSPORTATION-12: No mitigation measures would be necessary. (LTS)

- Applies to Sares Regis Applicant Proposed Scenario: ☒
- Applies to Sares Regis Full Buildout Scenario: ☒
- Applies to Raintree Applicant Proposed Scenario: ☒
- Applies to Raintree Full Buildout Scenario: ☒

CONSTRUCTION TRAFFIC

Impact TRANSPORTATION-13: Truck traffic expected to be generated by the required demolition of existing buildings and construction of the proposed East Weddell Residential Projects could affect existing weekday peak period traffic operations at the study intersections. (S)

During construction, both the Sares Regis and Raintree projects would involve demolition and excavation of the existing sites. This is expected to generate haul truck traffic during the duration of the construction of both sites. As a result, there may be impacts from the proposed East Weddell Residential Projects as they relate to construction traffic. General recommendations for construction-related mitigations, such as restricting construction truck routes to avoid affecting adjacent neighborhoods and limiting hours of operation when construction trucks would travel to/from the project sites, are discussed below.

The Sares Regis applicant anticipates that project site work over the estimated 24-month construction period would include demolition, grading, infrastructure/utilities, garage construction, building construction, and landscaping. The removal of the existing on-site building would result in off-haul of approximately 840 tons of material, with about 75 percent of that being clean debris (e.g., non-lead, non-asbestos, and non-contaminated material) that could be recycled. Debris removal would result in about 56 truck trips for off-haul, using high-side trucks, for the clean debris. An additional approximately 260 truck trips would be associated with removal of the estimated 4,000 tons of concrete and approximately 90 truck trips (semi-end dump loads) would be associated with the removal of the estimated 1,600 tons of asphalt. Therefore, up to 406 construction truck trips would be generated during the estimated 2-month demolition period. Assuming 52 workdays over two calendar months (construction permitted every day except Sunday), this trip total would result in an average of eight truck trips per day. The daily rate of eight truck trips per day during demolition represents a worst-case construction truck trip generation for the entire 24-month construction period. During the remaining post-demolition construction duration, daily truck trip generation would be fewer than eight trips per day.

The Raintree applicant anticipates that construction would take approximately 24 months with the following stages: demolition, rough grading, precise grading, infrastructure/utilities, building construction, and landscaping. According to the applicant, there would be an estimated 10,000 cubic yards of demolition debris (5,600 cubic yards on Parcel A and 4,400 cubic yards on Parcel B). Recycling potential is estimated to be somewhere between 50 to 80 percent of the demolition debris. Therefore, total off-haul would be approximately 2,000 cubic yards to 5,000 cubic yards of demolition debris and 5,000 cubic yards of export material. This equates to approximately 900 to 1,200 truck trips assuming a capacity of 10 cubic yards per truckload. Assuming a maximum of 1,200 construction truck trips would be generated during the estimated 2-month demolition period (52 workdays), the average would be 23 trips per day. The daily rate of 23 truck trips per day during demolition represents a worst-case construction truck trip generation for the entire 24-month construction period. During the remaining post-demolition construction duration, daily truck trip generation would be fewer than 23 trips per day.

Sunnyvale Municipal Code Section 10.40.020 has established designated truck routes throughout the city. Locally, Mathilda Avenue between Caribbean Drive (north of SR 237) and Sunnyvale-Saratoga Road and Fair Oaks Avenue between the SR 237 and Highway 101 freeways are

officially designated truck traffic routes. The Fair Oaks Avenue segment is directly adjacent to the project sites. In general, TJKM recommends that construction truck traffic be limited to using these segments of Fair Oaks Avenue, Mathilda Avenue, and the SR 237 and Highway 101 freeways. These roadways provide the most direct access for construction trucks traveling to and from the project sites and would generally avoid residential areas.

As shown in the preceding traffic operations analysis, all study intersections near the project site are expected to operate at LOS D or better under Existing-plus-Project Conditions. It should be noted that in the case of Mathilda Avenue, during existing commute peak hours there is often significant congestion at the closely spaced SR 237 ramp terminals. However, construction traffic for both sites, including during the worst-case demolition period, is expected to average no more than 23 truck trips per day. As a result, the amount of vehicle trips expected to be added to the study intersections by the completed projects is greater than the level of construction-generated traffic. This would remain true provided that project truck travel is restricted to outside typical weekday commute peak periods. Therefore, TJKM recommends that truck travel be prohibited from 7:00 to 9:00 AM and from 4:00 to 6:00 PM to limit potential impacts on traffic operations on Fair Oaks Avenue and Mathilda Avenue in the vicinity of the project sites.

> *Mitigation Measure TRANSPORTATION-13: Each project applicant shall prepare a construction truck traffic program for approval by the City of Sunnyvale. The program shall recommend city-designated truck routes and avoids AM and PM commute peak periods (7:00-9:00 AM and 4:00-6:00 PM) in order to avoid impacts on the local roadway system and also to avoid residential neighborhoods. This program shall be integrated into contract specifications. With implementation of this program, each project would result in a less than significant impact. (LTS)*

- Applies to Sares Regis Applicant Proposed Scenario: ☒
- Applies to Sares Regis Full Buildout Scenario: ☒
- Applies to Raintree Applicant Proposed Scenario: ☒
- Applies to Raintree Full Buildout Scenario: ☒

ROADWAY HAZARDS

Impact TRANSPORTATION-14: The proposed projects are not expected to substantially increase hazards due to design features since proposed driveway connections would be substantially similar to existing driveway connections on East Weddell Drive. (LTS)

Both projects would provide driveway connections to East Weddell Drive that are similar to driveway connections provided by the current industrial uses. At the Sares Regis site, the primary driveway access for all vehicles will continue to be from the northwest corner of the site, where the current driveway meets the existing East Weddell Drive cul-de-sac. Given the proposed driveway would effectively use the existing site connection to the roadway, no substantially increased hazards are expected from implementation of the Sares Regis project.

For the Raintree site, two driveways for vehicles are proposed on East Weddell Drive. One would be located on the northern side and aligned with Kiel Court to form a four-way intersection similar to the current alignment for the existing industrial use. A second driveway would be located on the

west side, located a few feet north of the current industrial use driveway location. Lines of sight from both project driveways would be similar to current conditions. Given that the project driveways would provide access to East Weddell Drive at locations similar to current conditions and that sight lines are expected to be similar, no substantially increased hazards are expected from implementation of the Raintree project.

Mitigation Measure TRANSPORTATION-14: No mitigation measures would be necessary. (LTS)

- Applies to Sares Regis Applicant Proposed Scenario: ☒
- Applies to Sares Regis Full Buildout Scenario: ☒
- Applies to Raintree Applicant Proposed Scenario: ☒
- Applies to Raintree Full Buildout Scenario: ☒

REFERENCES

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City of Sunnyvale, 2013, Municipal Code.

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Institute of Transportation Engineers (ITE), 2012, *Trip Generation* (9th Edition).

Santa Clara Valley Transportation Authority (VTA), 2012, *Transportation Impact Analysis Guidelines*.

Santa Clara Valley Transportation Authority (VTA), 2011, *2011 Congestion Management Program Monitoring and Conformance Report.*

Transportation Research Board, 2000, *Highway Capacity Manual*, Washington D.C.

4.11 UTILITIES AND SERVICE SYSTEMS

INTRODUCTION

This section describes potential project impacts on water, wastewater, and solid waste disposal services.

ENVIRONMENTAL SETTING

WATER

Unless otherwise noted, the information in this subsection is adapted from the "Water Supply Report" for the proposed projects prepared by the City of Sunnyvale and included as **Appendix E** of this EIR.

Existing and Projected Water Supply

The City of Sunnyvale has three sources of potable water supply: (1) purchased surface water from the San Francisco Public Utilities Commission (SFPUC), (2) purchased treated surface water from the Santa Clara Valley Water District (SCVWD), and (3) groundwater from seven City-owned and -operated wells. One additional well is on stand-by for emergencies. An additional source of non-potable water comes from the City's Water Pollution Control Plant in the form of recycled water. Appendix E provides more information on each of these water sources.

Table 4.11-1 lists existing and projected water supplies from these sources. As shown in the table, total existing (2010) water supply is approximately 21,465 acre-feet per year (AFY), and the supply is projected to increase to approximately 25,506 acre-feet per year by 2030.

Table 4.11-1 Existing and Projected City of Sunnyvale Water Supplies (Normal Year)

	Water Supply (AFY)				
Source	**2010**	**2015**	**2020**	**2025**	**2030**
San Francisco Public Utilities Commission	8,982	10,003	10,003	10,003	10,003
Santa Clara Valley Water District	9,331	9,570	9,999	11,023	12,728
Groundwater	1,629	1,000	1,000	1,000	1,000
Recycled Water	1,523	1,400	1,525	1,765	1,775
TOTAL	**21,465**	**21,973**	**22,527**	**23,791**	**25,506**

Note: AFY = acre-feet per year.
Source: City of Sunnyvale, "Water Supply Report," July 20, 2013. (See EIR Appendix E.)

Existing and Projected Water Demand

The City of Sunnyvale categorizes its water accounts into five broad customer categories: (1) single-family residential, (2) multi-family residential, (3) commercial (incorporating industrial and institutional), (4) irrigation, and (5) fire services. The commercial sector includes all non-residential accounts that are not classified as irrigation.

Table 4.11-2 shows past, existing, and projected water use by customer category. As shown in the table, existing (2010) water demand is approximately 21,474 AFY. The demand is projected to remain relatively steady through 2020 and then increase over the next 10 to 15 years to 23,731 by 2030 and 2035. The decrease in demand from 2005 to 2010 can be attributed to economic downturn.

As can be seen by comparing Tables 4.11-1 and 4.11-2, water demand is projected to be within the City's total water supply for the foreseeable future (2015 through 2030).

Table 4.11-2 Past, Existing, and Projected Potable Water Demand in Sunnyvale by Customer Type

	Water Demand (AFY)						
Customer Type	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**2035**
Single-Family Residential	8,264	7,023	6,555	6,393	6,341	6,378	6,378
Multi-Family Residential	6,047	8,309	7,755	7,563	7,502	7,545	7,545
Commercial	9,035	4,261	4,507	5,334	6,485	8,100	8,100
Irrigation	642	970	905	883	876	881	881
Other (Firelines)	946	911	850	829	823	827	827
TOTAL	**24,934**	**21,474**	**20,573**	**21,002**	**22,026**	**23,731**	**23,731**

Note: AFY = acre-feet per year.
Source: City of Sunnyvale, "Water Supply Report," July 20, 2013. (See EIR Appendix E.)

Existing Water Facilities in Project Site Vicinity

The City of Sunnyvale owns, operates, and maintains a water supply and distribution system that includes connections with City suppliers and neighboring water utilities. This system includes water transmission and distribution pipelines extending throughout the city.

The Sares Regis site is served by a water main in East Weddell Drive. Existing on-site water facilities consist of a 12-inch water main that extends through the site within a public easement (Kier & Wright, 2013a).

The Raintree site is served by a 10-inch water main in East Weddell Drive. The main loops around the back of the site through a public easement (BKF Engineers, 2013a).

Existing Water Use at the Project Sites

As background for the "Water Supply Report" (see Appendix E), City of Sunnyvale staff reviewed water usage records when both project sites were occupied to determine historical water demand. Based on water usage records within a 12-month period, a total of 186 AFY were used at the two sites combined.

WASTEWATER

Citywide Wastewater Collection and Treatment

Wastewater from Sunnyvale homes and businesses is carried by sanitary sewer lines to the Sunnyvale Water Pollution Control Plant (WPCP), where it is treated before being discharged into local waterways that flow into San Francisco Bay. The WPCP provides wastewater treatment for the area within the Sunnyvale city limits as well as the Rancho Rinconada portion of Cupertino and Moffett Federal Airfield. The amount and quality of this effluent is regulated by the San Francisco Bay Regional Water Quality Control Board (RWQCB), which protects the bay in accordance with the California Water Code and federal Clean Water Act. The WPCP's wastewater treatment process provides both secondary and advanced treatment to produce high-quality effluent that is suitable for discharge into San Francisco Bay under a National Pollutant Discharge Elimination System (NPDES) permit and for recycling for irrigation and other uses (City of Sunnyvale, 2011).

The WPCP is designed to treat an average of 29.5 million gallons of wastewater per day and a peak flow of 40 million gallons per day (mgd). From 2004 to 2007, the average dry weather effluent flow was 14.2 mgd, well within the WPCP's capacity (City of Sunnyvale, 2011).

The Sunnyvale General Plan indicates that Sunnyvale's wastewater collection system has the capacity to convey all sewage and industrial wastes (approximately 55.7 mgd) that will be generated when the city is fully developed in accordance with land use projections. The capacity of the Lawrence collection network, which serves the project sites, is approximately 22.0 mgd. This network is one of five networks in the city that connect to the WPCP (City of Sunnyvale, 2011).

The City's standard for evaluating pipe performance is based on available capacity. If a pipe is operating at 75 percent of available capacity (maximum water depth is 75 percent or greater of the conduit's diameter under dry-weather flow conditions), the pipe requires analysis for determining the best method of relief. If the pipe is estimated to operate at or above 100 percent of its available capacity, creating localized pressure flow conditions, the pipe is deemed to be in immediate need of replacement (City of Sunnyvale, 2008).

Existing Wastewater Facilities in Project Site Vicinity

In the vicinity of both project sites, existing wastewater facilities include two 8-inch sanitary sewer main lines along East Weddell Drive to serve the Raintree site and one 8-inch sanitary sewer main ling along East Weddell Drive to serve the Sares Regis Site. Site "A" of the Raintree site and all of the Sares Regis site will eventually flow to an 8-inch sanitary sewer main located along North Fair Oaks Avenue.(City of Sunnyvale Department of Public Works/Engineering, 2013b).

SOLID WASTE DISPOSAL

In Sunnyvale, solid waste is collected by a private company under an exclusive franchise agreement with the City of Sunnyvale. Waste is hauled to the Sunnyvale Materials Recovery and Transfer Station (SMaRT Station®), where recyclables and yard trimmings are sorted, processed, and marketed. The remaining waste is hauled to Kirby Canyon Landfill in San Jose for disposal under a disposal agreement that expires in 2021, with an option to extend the disposal agreement for up to 10 years (to 2031) if the landfill operator agrees and is able to extend its land lease (City of Sunnyvale, 2008; City of Sunnyvale, 2011; City of Sunnyvale, 2013).

In 2001, the remaining capacity at Kirby Canyon Landfill was approximately 57,272,000 cubic yards. It is estimated that Kirby Canyon Landfill will reach capacity by 2022 (CalRecycle, 2013). The City of Sunnyvale has contracted for an annual allocation quantity at Kirby Canyon that ranges from 140,191 tons of solid waste (2006) to 157,475 tons (2021). During 2012, the City delivered 79,121 tons of solid waste to Kirby Canyon Landfill; this amount was 60 percent of the allocation quantity, leaving approximately 52,295 tons of the allocation quantity (40 percent) unused (City of Sunnyvale, 2013).

An exclusion to the solid waste collection franchise agreement allows licensed construction and demolition contractors having a contract for the construction or demolition work to remove wastes generated during their work using their own vehicles and employees. Under this exclusion, the City does not direct where waste is hauled (City of Sunnyvale, 2008; City of Sunnyvale, 2013).

REGULATORY FRAMEWORK

SUNNYVALE GENERAL PLAN

The Sunnyvale General Plan contains the following relevant goals and policies (City of Sunnyvale, 2011):

GOAL HE-6 – Sustainable Neighborhoods: Maintain sustainable neighborhoods with quality housing, infrastructure and open space that fosters neighborhood character and the health of residents.

Policy HE-6.2: Promote neighborhood vitality by providing adequate community facilities, infrastructure, landscaping and open space, parking, and public health and safety within new and existing neighborhoods.

GOAL EM-1 – Adequate Water Supplies: Acquire and manage water supplies so that existing and future reasonable demands for water, as projected in the 20-year forecast, are reliably met.

Policy EM-1.2: Maximize recycled water use for all approved purposes both within and in areas adjacent to the city, where feasible.

Policy EM-1.3: Provide enough redundancy in the water supply system so that minimum potable water demand and fire suppression requirements can be met under both normal and emergency circumstances.

GOAL EM-2 – Water Conservation: Promote more efficient use of the city's water resources to reduce the demands placed on the city's water supplies.

Policy EM-2.1: Lower overall water demand through the effective use of water conservation programs in the residential, commercial, industrial and landscaping arenas.

GOAL EM-5 – Minimal Pollution and Quantity of Wastewater: Ensure that the quantity and composition of wastewater generated in the city does not exceed the capabilities of the wastewater collection system or and [sic] the water pollution control plant.

Policy EM-5.2: Ensure that wastes discharged to the wastewater collection system can be treated by existing treatment processes of the water pollution control plant.

GOAL EM-14 – Recycling and Source Reduction Programs: Reduce solid waste through recycling, source reduction, education, and special programs.

Policy EM-14.2: Maximize diversion of solid waste from disposal by use of demand management techniques, providing and promoting recycling programs and encouraging private sector recycling.

Policy EM-14.3: Meet or exceed all federal, state, and local laws and regulations concerning solid waste diversion and implementation of recycling and source reduction programs.

GOAL EM-15 – Environmentally-Sound Disposal: Dispose of solid waste in an environmentally sound, dependable and cost-effective manner.

Policy EM-15.1: Assure that the city possesses a minimum of five years of refuse disposal capacity at all times.

SUNNYVALE MUNICIPAL CODE PROVISIONS

Sunnyvale Municipal Code Title 12 (Water and Sewers) establishes requirements for water and sewer connections, sewer use regulations, water conservation, and other water- and wastewater-related requirements. Chapter 12.40 establishes a process for allocating the capacity of the Water Pollution Control Plant (WPCP). In accordance with Chapter 12.16, the City of Sunnyvale levies wastewater charges and fees.

Sunnyvale Municipal Code Section 19.38.030 establishes requirements for recycling and solid waste facilities (e.g., enclosures) in residential projects.

STATE REQUIREMENTS FOR WATER SUPPLY ASSESSMENT

In 2001, the California legislature enacted two laws, Senate Bill 610 (SB 610) and SB 221, each designed to achieve greater coordination between water suppliers and local land use agencies

when considering certain large-scale development proposals. SB 610 requires preparation of a Water Supply Assessment for any development that involves an approval subject to CEQA and that meets the definition of "project" under Water Code Section 10913—i.e., a residential development project of more than 500 housing units or other types of development (e.g., commercial buildings, industrial parks, hotels) expected to use an equivalent amount of water.

Under SB 610, the Water Supply Assessment must describe the proposed project's water demand over a 20-year period, identify the sources of water available to meet that demand, and assess whether those water supplies are or will be sufficient to meet the demand for water associated with the proposed project, in addition to the demand of existing customers and other planned future development. If the assessment concludes that water supplies are or will be insufficient, then the assessment must describe plans (if any) for acquiring additional water supplies, and the measures that are being undertaken to acquire and develop those supplies.

The combined housing unit count for the two projects evaluated in this EIR would exceed 500 housing units. The City of Sunnyvale therefore has prepared a Water Supply Assessment ("Water Supply Report") for the two projects. This assessment is included as Appendix E of this EIR.

STATE INTEGRATED WASTE MANAGEMENT ACT

The California Integrated Waste Management Act of 1989 (Assembly Bill [AB] 939) was enacted to reduce, recycle, and reuse solid waste generated in the state to the maximum extent feasible. Specifically, AB 939 required city and county jurisdictions to plan and implement programs to divert 50 percent of the total waste stream from landfill disposal by the year 2000. AB 939 also requires each city and county to promote source reduction, recycling, and safe disposal or transformation. California cities and counties are required to submit annual reports to the state on their progress toward AB 939 goals. The City of Sunnyvale met the 50-percent diversion goal in 1996 and is now working to maintain or exceed its current (2011) 66-percent diversion rate (City of Sunnyvale, 2013).

In 2011, AB 341 (Chesbro) was signed by Governor Brown and became law. The law made it a policy goal of the state that not less than 75 percent of solid waste generated be source reduced, recycled, or composted by 2020. The bill also added to the Integrated Waste Management Act a requirement that multi-family dwellings (five units or more) arrange for recycling services and allows owners of such dwellings to require tenants to source separate their recyclable materials. In complying with this state requirement, property owners are to arrange for services consistent with local laws or requirements, such as the multi-family recycling collection services provided by the City of Sunnyvale through its franchised waste hauling contractor (City of Sunnyvale, 2013).

ZERO WASTE STRATEGIC PLAN

On April 23, 2013, the Sunnyvale City Council adopted a Zero Waste Strategic Plan and established solid waste diversion goals of:

- 70 percent by 2015
- 75 percent by 2020
- 90 percent by 2030

The plan identifies specific programs, services, and other actions for achieving each goal (City of Sunnyvale, 2013).

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

Water

Appendix G of the CEQA Guidelines provides that a project would have a significant impact on water facilities if it would:

- Require or result in the construction of new water facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; or
- Have insufficient water supplies available to serve the project from existing entitlements and resources, or require new or expanded entitlements.

Wastewater

Appendix G of the CEQA Guidelines provides that a project would have a significant impact on wastewater facilities if it would:

- Exceed wastewater treatment requirements of the applicable RWQCB;
- Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; or
- Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

Solid Waste Disposal

Appendix G of the CEQA Guidelines provides that a project would have a significant impact on solid waste disposal facilities if it would:

- Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs; or
- Not comply with federal, state, or local statutes and regulations related to solid waste.

PROJECT IMPACTS

Water

Impact UTIL-1: The projects would not require or result in the construction of new water facilities or expansion of existing facilities that would have significant environmental effects. (LTS)

The East Weddell Residential Projects would include connections to existing City of Sunnyvale water lines adjoining the project sites and installation of new on-site water systems. Construction of new off-site water facilities or expansion of existing facilities would not be necessary. The following discussion reviews the proposed water line connections for each project under each scenario.

Sares Regis Applicant Proposed Scenario. The Sares Regis project would connect to the existing water line in East Weddell Drive. An emergency water (fire) flow analysis conducted by Kier & Wright Civil Engineers & Surveyors, Inc., a consultant to the project applicant, and reviewed by City of Sunnyvale Department of Public Works staff, concluded that the existing 12-inch water main on the site would be adequate to deliver the minimum required fire flow. Private on-site water systems installed as part of the project would use 6-inch, 8-inch, and 10-inch pipes (Kier & Wright, 2013a). The environmental impacts of installing these on-site pipes are evaluated as part of the analysis of project construction impacts throughout this EIR. Construction of the proposed on-site water system would not have any specific significant environmental impacts requiring mitigation.

Sares Regis Full Buildout Scenario. Water line connections and other improvements are assumed to be the same as under the Applicant Proposed Scenario. The impacts of installing on-site improvements would generally be the same as under the Applicant Proposed Scenario.

Raintree Applicant Proposed Scenario. The Raintree project would connect to the existing 10-inch water main in East Weddell Drive. An emergency water (fire) flow analysis conducted by BKF Engineers, a consultant to the project applicant, and reviewed by City of Sunnyvale Department of Public Works staff concluded that the existing 10-inch water main in East Weddell Drive would be adequate to deliver the minimum required fire flow. As part of the proposed project, the existing on-site public water main would be abandoned and a new private water system would be constructed on-site to serve the project. The private on-site water system would likely consist of an 8-inch to 12-inch water main (BKF Engineers, 2013a). The environmental impacts of installing the on-site water system are evaluated as part of the analysis of project construction impacts throughout this EIR. Construction of the proposed on-site water system would not have any specific significant environmental impacts requiring mitigation.

Raintree Full Buildout Scenario. Water line connections and other improvements are assumed to be the same as under the Applicant Proposed Scenario. The impacts of installing on-site improvements would generally be the same as under the Applicant Proposed Scenario.

Mitigation Measure UTIL-1: The impact would be less than significant, and no mitigation is necessary. (LTS)

- Applies to Sares Regis Applicant Proposed Scenario: ☒
- Applies to Sares Regis Full Buildout Scenario: ☒
- Applies to Raintree Applicant Proposed Scenario: ☒
- Applies to Raintree Full Buildout Scenario: ☒

Impact UTIL-2: Water supplies would be sufficient to serve the projects, and new or expanded water entitlements would not be necessary. (LTS)

To meet the requirements of state law (Senate Bill 610), this EIR evaluates the water supply impacts of the two projects combined. As discussed under "State Requirements for Water Supply Assessment" under "Regulatory Framework" above, the City of Sunnyvale prepared a Water Supply Assessment for the two projects that is included as Appendix E of this EIR. The following discussion is adapted from that analysis.

The project applicants provided estimates of proposed water demand for the Applicant Proposed Scenarios and Full Buildout Scenarios. Estimated water demand for the two Applicant Proposed Scenarios combined is approximately 195.5 AFY. Estimated water demand for the two Full Buildout Scenarios combined is approximately 264 AFY. As noted under "Environmental Setting" above, historical water demand has been 186 AFY at the two sites combined when both sites were occupied. The net increase in water demand resulting from the two Applicant Proposed Scenarios would therefore be approximately 9.5 AFY, and the net increase in water demand resulting from the two Full Buildout Scenarios would be approximately 78 AFY.

The City of Sunnyvale has contracts in place and adequate supplies from the San Francisco Public Utilities Commission (SFPUC), Santa Clara Valley Water District (SCVWD), and groundwater to meet the water demands of the proposed projects under either scenario. Water supplies would be sufficient to serve the projects, and new or expanded water entitlements would not be necessary.

Mitigation Measure UTIL-2: The impact would be less than significant, and no mitigation is necessary. (LTS)

- Applies to Sares Regis Applicant Proposed Scenario: ☒
- Applies to Sares Regis Full Buildout Scenario: ☒
- Applies to Raintree Applicant Proposed Scenario: ☒
- Applies to Raintree Full Buildout Scenario: ☒

Wastewater

Impact UTIL-3: The projects (proposed development on the Sares Regis site and Parcel A of the Raintree site) would require upsizing of the sewer main in North Fair Oaks Avenue immediately northeast of the Raintree site. (S)

The East Weddell Residential Projects would include connections to City of Sunnyvale sewer lines adjoining the project sites. The projects would be expected to have a combined wastewater generation ranging from approximately 113,900 gallons per day (gpd) (under the two Applicant Proposed Scenarios) to 159,460 gpd (under the two Full Buildout Scenarios). Wastewater from the Sares Regis project and Parcel A of the Raintree project would flow into the North Fair Oaks Avenue sewer line, and wastewater from Parcel B of the Raintree project would flow into the East Weddell Avenue sewer line and eventually on to Morse Avenue (City of Sunnyvale Department of Public Works/Engineering 2013a).

Existing collection lines would have adequate capacity to collect this wastewater, except that the existing 8-inch sewer main in North Fair Oaks Avenue immediately northeast of the Raintree site would need to be upsized to a 10-inch main in order to have adequate capacity to handle flows from the Sares Regis project and proposed development on Raintree Parcel A (City of Sunnyvale Department of Public Works/Engineering, 2013b). A sewer analysis conducted by Kier & Wright Civil Engineers & Surveyors, Inc., a consultant to the Sares Regis project applicant, and reviewed by City of Sunnyvale Department of Public Works staff concluded that the existing 8-inch sewer main in North Fair Oaks Avenue would flow at 89 percent capacity under the Applicant Proposed Scenarios and overcapacity under the Full Buildout Scenarios (Kier & Wright, 2013b). A similar analysis conducted by BKF Engineers, a consultant to the Raintree project applicant, and reviewed by City of Sunnyvale Department of Public Works staff concluded that the existing sewer main in East Weddell Drive would have adequate capacity to handle flows from Raintree Parcel B under both the Applicant Proposed Scenario and the Full Buildout Scenario (BKF Engineers, 2013b).

The wastewater treatment provider (the City of Sunnyvale) has adequate capacity to serve the projects' projected demand in addition to the provider's existing commitments. The existing Sunnyvale Water Pollution Control Plant (WPCP) would have adequate capacity to treat the wastewater, and no new or expanded treatment facilities would be needed.

The impact of construction of the upsized sewer main would not be significant for the following reasons: 1) construction would take place within the right-of-way of North Fair Oaks Avenue; 2) construction noise and air emissions would be short term and would not result in significant air quality or noise impacts; 3) traffic impacts would be mitigated by a City-initiated traffic plan to route traffic as needed during construction; 4) potential erosion impacts related to excavation and spoils management would be covered under the project's SWPPP; and 5) no other impacts related to biological, hydrological or other topics would result. Construction of the wastewater facilities would not have any specific significant environmental impacts requiring mitigation.

The following discussion reviews the proposed wastewater collection system and estimated wastewater generation for each project under each scenario.

Sares Regis Applicant Proposed Scenario. The Sares Regis project would connect to the existing sewer line in East Weddell Drive and would also include construction of a new sanitary sewer lift station in the northern portion of the project site; the lift station would connect portions of the project to the existing sewer line in East Weddell Drive (Sares Regis, 2013). Wastewater from the Sares Regis project (along with wastewater from Parcel A of the Raintree project) would eventually flow into the sewer in North Fair Oaks Avenue (City of Sunnyvale Department of Public Works/Engineering, 2013a). The proposed 205 dwelling units would be expected to generate approximately 34,850 gallons of wastewater per day (Kier & Wright, 2013b). The North Fair Oaks

Avenue sewer would need to be upsized to accommodate this wastewater along with wastewater from proposed development on Raintree Parcel A (City of Sunnyvale Department of Public Works/Engineering, 2013b).

Sares Regis Full Buildout Scenario. Sewer line connections and other improvements are assumed to be the same as under the Applicant Proposed Scenario. The anticipated 259 dwelling units would be expected to generate approximately 44,030 gallons of wastewater per day (Kier & Wright, 2013b).

Raintree Applicant Proposed Scenario. Wastewater from Parcel A of the Raintree project would flow into the North Fair Oaks Avenue sewer line, and wastewater from Parcel B would flow into the East Weddell Avenue sewer line and eventually on to Morse Avenue (City of Sunnyvale Department of Public Works/Engineering, 2013a). The proposed 465 dwelling units would be expected to generate approximately 79,050 gallons of wastewater per day (39,780 gallons per day from Parcel A and 39,270 gallons per day from Parcel B) (BKF Engineers, 2013b). The North Fair Oaks Avenue sewer would need to be upsized to accommodate the wastewater from Parcel A along with wastewater from the Sares Regis project (City of Sunnyvale Department of Public Works/Engineering, 2013b).

Raintree Full Buildout Scenario. Sewer line connections are assumed to be the same as under the Applicant Proposed Scenario. The anticipated 679 dwelling units would be expected to generate approximately 115,430 gallons of wastewater per day (59,840 gallons per day from Parcel A and 55,590 gallons per day from Parcel B) (BKF Engineers, 2013b).

> *Mitigation Measure UTIL-3: As part of the proposed projects, the project applicants shall replace the existing 8-inch sewer main in North Fair Oaks Avenue with a 10-inch main, in accordance with City of Sunnyvale Department of Public Works requirements. This measure would reduce the impact to a less-than-significant level. (LTS)*

- Applies to Sares Regis Applicant Proposed Scenario: ☒
- Applies to Sares Regis Full Buildout Scenario: ☒
- Applies to Raintree Applicant Proposed Scenario: ☒
- Applies to Raintree Full Buildout Scenario: ☒

Impact UTIL-4: The projects would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board (RWQCB). (LTS)

Since wastewater treatment capacity would be adequate to serve the two projects under both scenarios (see Impact UTIL-3 above), the projects would not exceed wastewater treatment requirements of the San Francisco Bay RWQCB.

> *Mitigation Measure UTIL-4: The impact would be less than significant, and no mitigation is necessary. (LTS)*

- Applies to Sares Regis Applicant Proposed Scenario: ☒
- Applies to Sares Regis Full Buildout Scenario: ☒

- Applies to Raintree Applicant Proposed Scenario: ☒
- Applies to Raintree Full Buildout Scenario: ☒

Solid Waste Disposal

<u>Impact UTIL-5</u>: The landfill serving the projects would have sufficient capacity to accommodate the projects' solid waste disposal needs. (LTS)

The proposed projects would involve demolition of existing office/industrial buildings and construction of residential buildings on the two project sites. Once in operation, the two projects would receive solid waste collection services from a private company holding a franchise agreement with the City of Sunnyvale.

Solid waste would be generated during both the construction and operational phases of development of both projects. The construction phase would include building demolition, which would generate a substantial amount of debris. Once in operation, the projects would be expected to have a combined solid waste generation ranging from approximately 161 cubic yards per week (under the two Applicant Proposed Scenarios) to 225 cubic yards per week (under the two Full Buildout Scenarios). This range translates to roughly 628 to 1,755 tons per year (assuming 1 cubic yard of residential waste equates to 150 to 300 pounds).

The Kirby Canyon Landfill would have sufficient capacity to accommodate the projects' solid waste disposal needs through 2021, when the disposal agreement expires. The City of Sunnyvale's remaining allocation available at the landfill (approximately 52,295 tons for the year 2012) far exceeds the amount of solid waste that would be generated by the two projects (up to 1,755 tons per year under the two Full Buildout Scenarios).

The following discussion reviews estimated solid waste generation for each project under each scenario. It should be noted that all estimates of solid waste generation during project operations are conservative, in that they do not subtract the solid waste generated by existing buildings and uses on the two sites.

Sares Regis Applicant Proposed Scenario. Construction of the Sares Regis project would require demolition of the existing building on the site. Demolition debris would total approximately 840 tons of material, of which about 75 percent would be clean debris (e.g., non-lead, non-asbestos, and non-contaminated material) that could be recycled. In addition, approximately 4,000 tons of concrete and approximately 1,600 tons of asphalt would be removed; 100 percent of this material would be recycled. Quantities of construction debris have not been estimated.

The proposed 205 dwelling units would be expected to generate approximately 49 cubic yards of waste per week (American Trash Management, 2013).

Sares Regis Full Buildout Scenario. Construction and demolition debris would be similar to that described for the Applicant Proposed Scenario, although the Full Buildout Scenario would generate slightly more construction debris due to the larger size of the development.

The anticipated 259 dwelling units would be expected to generate approximately 62 cubic yards of waste per week (American Trash Management, 2013).

Raintree Applicant Proposed Scenario. Construction of the Raintree project would require demolition of existing buildings on the project site. Demolition debris would total approximately 10,000 cubic yards, of which 50 to 80 percent could be recycled (Raintree Partners, 2013b). Construction of the project would also generate debris. Quantities of construction debris have not been estimated.

The proposed 465 dwelling units would be expected to generate approximately 112 cubic yards of waste per week (Raintree Partners, 2013a).

Raintree Full Buildout Scenario. Construction and demolition debris would be similar to that described for the Applicant Proposed Scenario, although the Full Buildout Scenario would generate slightly more construction debris due to the larger size of the development.

The anticipated 679 dwelling units would be expected to generate approximately 163 cubic yards of waste per week (Raintree Partners, 2013b).

> *Mitigation Measure UTIL-5: The impact would be less than significant, and no mitigation is necessary. (LTS)*

- Applies to Sares Regis Applicant Proposed Scenario: ☒
- Applies to Sares Regis Full Buildout Scenario: ☒
- Applies to Raintree Applicant Proposed Scenario: ☒
- Applies to Raintree Full Buildout Scenario: ☒

Impact UTIL-6: The projects would comply with federal, state, or local statutes and regulations related to solid waste. However, debris from building demolition and construction and materials discarded by residents after the projects are occupied have the potential to create conflicts with the City of Sunnyvale's state-mandated waste diversion goals and the goals of the City's Zero Waste Strategic Plan. (S)

As discussed under Impact UTIL-5 above, both projects under both scenarios would involve building demolition and construction that would generate substantial quantities of waste. As discussed under "Environmental Setting" above, an exclusion to the City's solid waste collection franchise agreement allows construction and demolition contractors to remove wastes generated during their work using their own vehicles and employees. Under this exclusion, the City does not direct where waste is hauled (City of Sunnyvale, 2008). Project-related demolition and construction therefore could interfere with the City's achievement of its goals for waste diversion in accordance with the Integrated Waste Management Act and the City's Zero Waste Strategic Plan.

After they are occupied, the projects have the potential to generate up to 1,755 tons per year of discarded materials, as discussed under Impact UTIL-5 above. Occupancy of the project therefore could also interfere with the City's achievement of its goals for waste diversion in accordance with the Integrated Waste Management Act and the City's Zero Waste Strategic Plan.

> *Mitigation Measure UTIL-6: Each project applicant shall prepare a Waste Management Plan for City approval. The Waste Management Plan shall include provisions for deconstructing existing buildings to facilitate salvaging their reusable components, recycling demolition wastes, reusing or recycling unused construction materials, and ensuring that residents*

participate in the multi-family recycling service provided by the City to the project after it is occupied. The Waste Management Plan shall describe the projected quantities of waste generated during demolition and construction; indicate how much of those materials will be reused, recycled, or otherwise diverted from landfills; and indicate where un-recycled materials will be disposed. The Waste Management Plan shall also describe where and how post-occupancy discarded materials will be stored and moved to collection points and how residents and project staff (e.g., maintenance workers) will be informed and motivated, on an ongoing basis, to handle discarded materials to support the City's diversion goals. Upon completion of each project, each project applicant shall document implementation of the Waste Management Plan by providing the City with a report summarizing the waste type, quantity, disposition (e.g., recycled or landfilled), and the facility used. This measure would reduce the impact to a less-than-significant level. (LTS)

- Applies to Sares Regis Applicant Proposed Scenario: ☒
- Applies to Sares Regis Full Buildout Scenario: ☒
- Applies to Raintree Applicant Proposed Scenario: ☒
- Applies to Raintree Full Buildout Scenario: ☒

CUMULATIVE IMPACTS

Water

For water service, the geographic scope for assessing cumulative impacts is the area within the Sunnyvale city limits, which receives water supplies from the San Francisco Public Utilities Commission (SFPUC), the Santa Clara Valley Water District (SCVWD), and groundwater and is served by a water distribution system operated by the City of Sunnyvale.

The proposed projects, in conjunction with other past, present, and reasonably foreseeable future projects, could result in a cumulative increase in water demand and the need for new or expanded water facilities. As discussed in the above project-specific analysis, however, water demand from the proposed projects would not result in a significant impact on water supply or create the need for new or expanded off-site water facilities. The City of Sunnyvale has concluded that water supplies are adequate to serve the projects combined with other anticipated projects.

Overall, the effect of the proposed projects on water service, in combination with other past, present, and foreseeable projects, would be less than significant. The proposed projects would not result in or contribute to any significant cumulative water service impacts.

Wastewater

For wastewater service, the geographic scope for assessing cumulative impacts is the service area of the City of Sunnyvale sewer system and the Sunnyvale Water Pollution Control Plant (WPCP).

The proposed projects, in conjunction with other past, present, and reasonably foreseeable future projects, could result in a cumulative increase in wastewater generation, resulting in increased demand on wastewater collection and treatment facilities. As discussed in the above project-

specific analysis, however, service demand from the proposed projects would not result in a significant impact on WPCP capacity or create the need for new or expanded wastewater treatment facilities. As discussed under Impact UTIL-3 above, the proposed projects would contribute to capacity problems in the sewer main in North Fair Oaks Avenue, which also serves the existing mobile home park on the east side of North Fair Oaks Avenue. As specified in Mitigation Measure UTIL-3 above, however, the proposed projects would provide for upsizing of this sewer main. With this upsizing, sewer facilities would have adequate capacity to serve the projects combined with existing and other anticipated projects.

Overall, the effect of the proposed projects on wastewater service, in combination with other past, present, and foreseeable projects, would be less than significant with mitigation, and the proposed projects would not result in or contribute to any significant cumulative wastewater service impacts.

Solid Waste Disposal

For solid waste disposal service, the geographic scope for assessing cumulative impacts consists of the service area of the Kirby Canyon Landfill through 2021. The location for disposal of Sunnyvale's waste beyond 2021 has yet to be determined (City of Sunnyvale, 2013).

The proposed projects, in conjunction with past, present, and reasonably foreseeable future projects, could result in a cumulative increase in solid waste and debris. However, comprehensive implementation of state and local waste reduction and diversion requirements and programs has and would continue to reduce the potential for exceeding existing capacities of the landfill, which still has adequate capacity. Mitigation Measure UTIL-6 would ensure that the proposed projects would not create conflicts with the City of Sunnyvale's state-mandated waste diversion goals or the goals of the City's Zero Waste Strategic Plan.

Overall, the effect of the proposed projects on solid waste disposal service, in combination with other past, present, and foreseeable projects, would be less than significant. The proposed projects would not result in or contribute to any significant cumulative solid waste disposal service impacts.

REFERENCES

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4.12 ENERGY

INTRODUCTION

This section describes potential project impacts on energy services.

ENVIRONMENTAL SETTING

Pacific Gas & Electric Company (PG&E) provides gas and electrical services on the project sites and in the vicinity.

At the Sares Regis project site, a 15-foot-wide gas pipeline easement owned by PG&E extends along the eastern edge of the site (see Figure 3-12 in Chapter 3, Project Description, of this EIR). An additional 20-foot-wide PG&E easement is located at the southern edge of the site, and a 10-foot-wide PG&E easement is located near the northern boundary of the site (Kier & Wright, 2013). In addition, the Fair Oaks substation owned by PG&E is located just north of the Sares Regis site, on the north side of the John W. Christian Greenbelt (see Figure 3-2 in Chapter 3, Project Description, of this EIR). PG&E also maintains electric transmission lines immediately east of the Sares Regis site.

At the Raintree project site, PG&E utility lines are located in East Weddell Drive and North Fair Oaks Avenue adjoining the project site.

REGULATORY FRAMEWORK

STATE OF CALIFORNIA ENERGY EFFICIENCY STANDARDS (TITLE 24)

Development on the project sites would be required to comply with State of California energy conservation regulations (Energy Efficiency Standards for Residential and Nonresidential Buildings, Title 24, Part 6, of the California Code of Regulations). These regulations specify the State of California's minimum energy efficiency standards and apply to new construction of residential and nonresidential buildings. The standards regulate energy consumed for heating, cooling, ventilation, water heating, and lighting. Compliance with these standards is verified and enforced through the local building permit process. The City of Sunnyvale reviews development plans prior to project approval to ensure that Title 24 energy conservation and efficiency standards are met and incorporated into project design.

SUNNYVALE GENERAL PLAN

The Sunnyvale General Plan contains the following relevant goal and policies (City of Sunnyvale, 2011):

GOAL HE-6 – Sustainable Neighborhoods: Maintain sustainable neighborhoods with quality housing, infrastructure and open space that fosters neighborhood character and the health of residents.

Policy HE-6.2: Promote neighborhood vitality by providing adequate community facilities, infrastructure, landscaping and open space, parking, and public health and safety within new and existing neighborhoods.

Policy HE-6.6: Encourage use of sustainable and green building design in new and existing housing.

CITY OF SUNNYVALE GREEN BUILDING PROGRAM

The City of Sunnyvale Green Building Program requires projects subject to building permits to meet minimum standards for "green building" (i.e., building that promotes energy efficiency, natural resource conservation, and good indoor air quality). For residential development, the program requires that a project score a minimum of 80 points on the "GreenPoint Rated Checklist" (version 4.2 or later) maintained by Build It Green, a nonprofit organization that promotes energy- and resource-efficient building practices in California. As a voluntary incentive, a multi-family residential project achieving 110 points may increase building height by 5 feet, increase lot coverage by 5 percent, or receive a 5-percent density bonus (City of Sunnyvale, 2013).

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

Based on the CEQA statute and guidelines, the project would have a significant impact on energy services if it would:

- Require or result in the construction of new sources of energy supplies or additional energy infrastructure capacity, the construction of which could cause significant environmental effects; or
- Conflict with applicable energy efficiency policies or standards.

PROJECT IMPACTS

<u>Impact ENERGY-1</u>: The projects would result in increased demands for electricity and natural gas but would not require or result in the construction of new sources of energy supplies or additional energy infrastructure capacity. (LTS)

The proposed projects would involve demolition of existing office/industrial buildings and construction of residential buildings on the two project sites. The two projects would connect to existing PG&E utility lines adjoining the two sites. PG&E has issued "will serve" letters for both projects (PG&E, 2012; PG&E, 2013).

Energy would be consumed during both the construction and operational phases of development of both projects. The construction phase would require energy for the manufacture and transportation of building materials, preparation of the project sites (e.g., grading), and construction of buildings and infrastructure. Once in operation, the projects would consume energy for multiple purposes, including but not limited to building heating and cooling, lighting, appliances, and electronics. In addition, vehicle trips associated with both construction and operation would consume gasoline.

Combined operational energy use for the two projects would range from approximately 49,580 MBtu (under the two Applicant Proposed Scenarios with proposed design elements that exceed Title 24 requirements by 15 percent) to approximately 81,606 MBtu (under the two Full Buildout Scenarios assuming compliance only with minimum Title 24 requirements).[1] This increase in demand would not require or result in the construction of new sources of energy supplies or additional energy infrastructure capacity. The environmental effects of constructing on-site utility connections are evaluated throughout this Draft EIR.

The following discussion reviews proposed utility connections and estimated operational energy use for each project under each scenario. See Impact ENERGY-2 below for discussion of energy-efficient features incorporated into each scenario.

It should be noted that all estimates of project operational energy use are conservative, in that they do not subtract the energy used by existing buildings and uses on the two sites.

Sares Regis Applicant Proposed Scenario. The Sares Regis project would connect to existing utilities within East Weddell Drive.

The proposed 205 dwelling units would be expected to use approximately 15,170 MBtu per year. This estimate incorporates the project proposal that the design would be more than 15 percent more efficient than State of California Title 24 requirements (see discussion under Impact ENERGY-2 below). If only the minimum Title 24 requirements were met, the proposed 205 dwelling units would use approximately 17,835 MBtu per year (Bright Green Strategies, 2013a).

Sares Regis Full Buildout Scenario. Provisions for electricity and natural gas utility connections are assumed to be the same as under the Applicant Proposed Scenario.

The anticipated 259 dwelling units would be expected to use approximately 19,166 MBtu per year. This estimate incorporates the project proposal that the design would be more than 15 percent more efficient than State of California Title 24 requirements (see discussion under Impact ENERGY-2 below). If only the minimum Title 24 requirements were met, the proposed 259 dwelling units would use approximately 22,533 MBtu per year (Bright Green Strategies, 2013a).

Raintree Applicant Proposed Scenario. The Raintree project would connect to existing utilities within East Weddell Drive.

[1] "Btu" stands for British thermal units (Btu), which is a standard measure of energy use (including natural gas, electricity, and other sources). "kBtu" stands for one thousand Btu, and "MBtu" stands for one thousand kBtu. The energy use estimates in this section are based on the assumptions that (1) a typical multi-family residential building that meets minimum Title 24 requirements would use 87 kBtu per square foot per year, and (2) a typical multi-family residential building that is 15 percent more energy-efficient than Title 24 requirements would use 74 kBtu per square foot per year.

The proposed 465 dwelling units would be expected to use approximately 34,410 MBtu per year. This estimate incorporates the project proposal that the design would be more than 15 percent more efficient than State of California Title 24 requirements (see discussion under Impact ENERGY-2 below). If only the minimum Title 24 requirements were met, the proposed 465 dwelling units would use approximately 40,455 MBtu per year (Bright Green Strategies, 2013b).

Raintree Full Buildout Scenario. Provisions for electricity and natural gas utilities are assumed to be the same as under the Applicant Proposed Scenario.

The anticipated 679 dwelling units would be expected to use approximately 50,246 MBtu per year. This estimate incorporates the project proposal that the design would be more than 15 percent more efficient than State of California Title 24 requirements (see discussion under Impact ENERGY-2 below). If only the minimum Title 24 requirements were met, the proposed 679 dwelling units would use approximately 59,073 MBtu per year (Bright Green Strategies, 2013a).

Mitigation Measure ENERGY-1: The impact would be less than significant, and no mitigation is necessary. (LTS)

- Applies to Sares Regis Applicant Proposed Scenario: ☒
- Applies to Sares Regis Full Buildout Scenario: ☒
- Applies to Raintree Applicant Proposed Scenario: ☒
- Applies to Raintree Full Buildout Scenario: ☒

Impact ENERGY-2: The projects would not conflict with applicable energy efficiency policies or standards. (LTS)

Sares Regis Applicant Proposed Scenario. The Sares Regis project would be designed to be more than 15 percent more efficient than State of California Title 24 requirements (Bright Green Strategies, 2013a). The project also proposes to obtain a minimum of 110 points on the GreenPoint Rated Checklist in order to qualify for a 5-percent density bonus in accordance with the City of Sunnyvale Green Building Program.

The project would contain energy-efficient products and systems, including energy-efficient windows, EnergyStar appliances, energy-efficient lighting, and energy-efficient heating, cooling, and air conditioning (HVAC) systems. Other energy-efficient elements would include minimizing duct leakage, installing insulation to high-quality standards, and installing an air barrier to minimize unit air leakage. The proposed project would also contain a number of electric car charging stations, and 12.5 percent of the parking spaces would be prewired for potential electric charging stations.

Sares Regis Full Buildout Scenario. The energy-saving features described above for the Applicant Proposed Scenario are assumed to be incorporated into the Full Buildout Scenario.

Raintree Applicant Proposed Scenario. The Raintree project would be designed to be more than 15 percent more efficient than State of California Title 24 requirements (Bright Green Strategies, 2013b). The project also proposes to meet or exceed City of Sunnyvale Green Building Program standards for scoring on the GreenPoint Rated Checklist for Parcel A. For Parcel B, the project

proposes to obtain a minimum of 110 points on the GreenPoint Rated Checklist in order to qualify for a 5-percent density bonus in accordance with the City of Sunnyvale Green Building Program.

Energy-saving features provided by the project would include energy-efficient windows and doors, energy-efficient appliances, energy-saving insulation, energy-efficient boilers or water heaters, energy-efficient HVAC, and efficient lighting.

Raintree Full Buildout Scenario. The energy-saving features described above for the Applicant Proposed Scenario are assumed to be incorporated into the Full Buildout Scenario.

Mitigation Measure ENERGY-2: The impact would be less than significant, and no mitigation is necessary. (LTS)

- Applies to Sares Regis Applicant Proposed Scenario: ☒
- Applies to Sares Regis Full Buildout Scenario: ☒
- Applies to Raintree Applicant Proposed Scenario: ☒
- Applies to Raintree Full Buildout Scenario: ☒

CUMULATIVE IMPACTS

For electrical and natural gas service, the geographic scope for assessing cumulative impacts is PG&E's northern and central California service area.

Despite annual statewide increases in energy consumption, the net increased energy demand from the projects, combined with other past, present, and reasonably foreseeable future projects, would not result in a significant cumulative impact, for the following reasons:

- Urbanized portions of Sunnyvale, including the project sites, are already served by gas and electricity infrastructure, and the net increased energy demand from reasonably foreseeable projects, relative to the regional service area, would be minimal and would not require expanded or new energy facilities as a direct result of project development. As discussed in the project-specific analysis above, the proposed projects would not result in any significant impacts on energy services. In addition, the projects would be relatively dense housing projects located in an already-developed area close to other development and services; therefore, the proposed projects would realize transportation-related energy savings compared to similar projects in a location at a distance from urban areas.
- The proposed projects and other projects have been and would be required to comply with all standards of Title 24 of the California Code of Regulations.
- PG&E, which provides energy to the project sites and vicinity, produces much of its energy from renewable sources and has plans in place to increase reliance on renewable energy sources. Because many agencies in California have adopted policies seeking increased use of renewable resources (and have established minimum standards for the provision of energy generated by renewable resources), it is expected that PG&E will continue to meet future demand for energy via a gradually increasing reliance on renewable resources, including small-scale sources such as photovoltaic panels and wind turbines, in addition to larger-scale facilities, such as wind farms. Therefore, although the proposed projects and other anticipated projects would be expected to increase the demand for energy-producing facilities, this

increase in demand would likely be met through the development of renewable resources that would have fewer environmental effects than the development of new conventional gas- or coal-fired power plants.

Thus, the East Weddell Residential Projects would not result in or contribute to any significant cumulative energy service impacts.

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5. ALTERNATIVES

The State CEQA Guidelines (Section 15126.6) require that an EIR describe and evaluate the comparative merits of a range of reasonable alternatives to the project, or to the location of the project, that could feasibly attain most of the basic objectives of the project. The Guidelines further require that the discussion focus on alternatives capable of avoiding or substantially lessening any of the significant effects of the project, including the "No Project" Alternative. Furthermore, if the environmentally superior alternative is the "No Project" Alternative, the EIR must also identify an environmentally superior alternative from among the other alternatives.

The project objectives are discussed in Chapter 3, Project Description. This discussion will focus on alternatives that could address potentially significant impacts. Three alternatives are evaluated in this section:

- Alternative 1: No Project
- Alternative 2: R-3 Zoning Alternative
- Alternative 3: Mitigated Alternative

5.1 SUMMARY OF ALTERNATIVES.

ALTERNATIVE 1: NO PROJECT

If the No Project Alternative assumes no change from existing conditions, the approval of the No Project Alternative would eliminate potentially significant (but mitigable) impacts of the proposed project (both Applicant Proposed Scenario and Full Buildout Scenario) as no change from existing conditions would occur. Existing conditions are described in the "Setting" section throughout Chapter 4 of the EIR and will not be discussed in more detail herein.

However, as stated in Section 15126.6 (3) of the CEQA Guidelines, when a project is the revision of an existing land use or regulatory plan, the "no project" alternative will be the continuation of the existing plan, policy, or operation into the future. In this case, the East Weddell Residential projects include a General Plan amendment and rezoning as well as a specific development project. Therefore, the No Project Alternative should also address continuation of the Sares Regis site in its current General Plan designation of "Industrial" and zoning of "Industrial and Service/Planned Development (M-S/PD)"; continuation of Parcel A of the Raintree site in its current General Plan designation of "Industrial to Residential Medium to High Density " and zoning of "Industrial and Service/Industrial-to-Residential/Medium Density Residential/Planned Development (M-S/ITR/R-3/PD)"; and continuation of Parcel B of the Raintree site in its current General Plan designation of "Industrial" and zoning of "Industrial and Service/Place of Assembly (M-S/POA)". Because the exact uses that could be proposed under the existing General Plan and zoning designations cannot be determined, the discussion below will primarily compare the impacts of this No Project Alternative to the proposed project.

ALTERNATIVE 2: R-3 ZONING ALTERNATIVE

Under Alternative 2, the two sites would be zoned as Residential Medium Density (R-3) that would allow 24 units per acre (compared to the R-4 zoning for the Applicant Proposed Scenario and the R-5 zoning for the Full Buildout Scenario). As shown in **Table 5-1** below, up to 407 units would be allowed for the Raintree site (234 units for Parcel A and 173 units for Parcel B); up to 135 units would be allowed for the Sares Regis site. Thus, both sites together would have 542 units which would be128 fewer than what the applicants have proposed under the Applicant Proposed Scenario, and 274 units fewer than what would be allowed under R-4 zoning. The areas of development on each site are assumed to be similar to the Applicant Proposed Scenario.

ALTERNATIVE 3: MITIGATED ALTERNATIVE

Under the Mitigated Alternative, the Sares Regis site would be rezoned to an Office (O) district to allow professional and administrative office use; the Raintree site would have multi-family (R-4) zoning for Parcel A and Parcel B would remain in its existing Industrial and Service/Place of Assembly zoning (M-S/POA) or possibly be rezoned to an Office (O) or Commercial district such as C-1 to allow neighbor-serving retail uses (see **Figure 5-1**). In addition, a thick planting of trees would occur along the south side of Parcel B (see Figure 5-1) as a way to mitigate potential air toxic contaminants per BAAQMD recommendations.

The main factor influencing this alternative was the identification of toxic air contaminants at both project sites due to their proximity to U.S. Highway 101 (Highway 101). The level of diesel particulate matter (DPM) at the Sares Regis site was significant throughout the site, while the level of DPM at the Raintree site was found to be significantly less at Parcel A, the northern parcel. A more detailed discussion of this issue can be found in Section 4.2 of this EIR.

The EIR included mitigation measures for reducing the potentially significant toxic air contaminants but this alternative was developed as a means of eliminating the need for complex air filtration systems for both projects. At the same time, this alternative would help to mitigate potential noise impacts as discussed below in Section 5.3.

5.2 ALTERNATIVES CONSIDERED AND REJECTED

No alternatives were considered but rejected.

5.3 IMPACTS OF ALTERNATIVES

This section summarizes the impacts of each alternative as compared to the proposed project. When impacts are similar to the proposed project, this is called out. A summary comparison of the alternatives to the proposed project is provided in **Table 5-2**.

Table 5-1 Original Applicant Proposed Scenario vs. R-3 Alternative

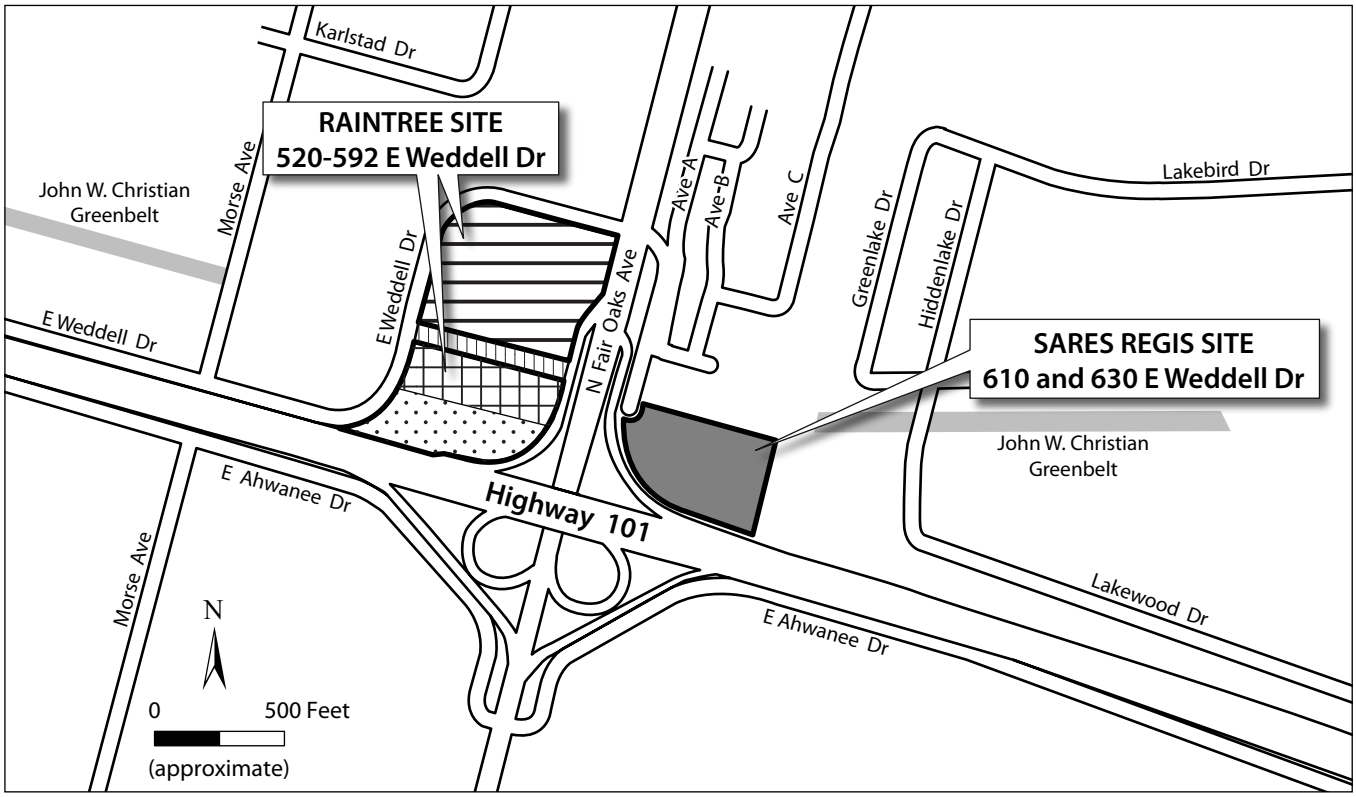
Sites	Zoning	Du/Ac	Acres	Zoning Maximum Units	Up to 5% DB Green	Up to 35% DB Affordable	Total Allowable	Applicant Proposed
Applicant Proposed Scenario								
Raintree Parcel A (North)	R-4/PD	36.3	6.93	251	13	88	352	234
Raintree Parcel B (South)	R-4/PD	36.3	5.11	185	9	65	259	231
Sares Regis	R-4/PD	36.3	4.04	146	7	52	205	205
Total			**16.08**	**582**	**29**	**205**	**816**	**670**
R-3 Alternative								
Raintree Parcel A (North)	R-3/PD	24.2	6.93	167	8	59	234	234
Raintree Parcel B (South)	R-3/PD	24.2	5.11	123	6	44	173	231
Sares Regis	R-3/PD	24.2	4.04	97	4	34	135	205
Total			**16.08**	**387**	**18**	**137**	**542**	**670**
Difference from Applicant Proposed Scenario				*-195*	*-11*	*-68*	*-274*	*NA*

Note: du/ac = dwelling units per acre; DB = density bonus.
Source: A. Skewes-Cox and City of Sunnyvale, 2013.

ALTERNATIVE 1: NO PROJECT

If the No Project Alternative assumes no change from existing conditions, the approval of the No Project Alternative would eliminate potentially significant (but mitigable) impacts of the proposed project (both Applicant Proposed Scenario and Full Buildout Scenario) as no change from existing conditions would occur. Existing conditions are described in the "Setting" section throughout Chapter 4 of the EIR and will not be discussed in more detail herein. This includes avoiding the proposed removal of existing protected trees on the two sites.

However, as stated in Section 15126.6 (3) of the CEQA Guidelines, when a project is the revision of an existing land use or regulatory plan, the "no project" alternative will be the continuation of the existing plan, policy or operation into the future. In this case, the East Weddell Residential projects include a General Plan amendment and rezoning as well as a specific development project. Therefore, the No Project Alternative should also address continuation of the Sares Regis site in its current General Plan designation of "Industrial" and zoning of "Industrial and Service/Planned Development (M-S/PD)"; continuation of Parcel A of the Raintree site in its current General Plan designation of "Industrial to Residential Medium to High Density " and zoning of "Industrial and



Area of Tree Planting of Redwoods or Other Trees Recommended by BAAQMD for Reducing Toxic Air Contaminants

Multi-Family Residential Uses

SFPUC Right-of-Way to be Landscaped for John W. Christian Greenbelt

Acreage to be Used for Non-Sensitive Uses as Commercial or Industrial Uses

Sares Regis Site to be zoned as Office (O)

Figure 5-1

MITIGATED ALTERNATIVE

SOURCE: Amy Skewes-Cox, 2013

AMY SKEWES~COX
ENVIRONMENTAL PLANNING

Table 5-2 Comparison of Impacts of Project Alternatives (After Mitigation)

Environmental Issue Area	PP Proposed Project	ALT 1 No Project	ALT 2 R-3 Alternative	ALT 3 Mitigated Alternative
Aesthetics	LTS	LTS-	LTS-	LTS-
Air Quality	LTS	LTS	LTS-	LTS-
Biological Resources	LTS	LTS-	LTS	LTS
Greenhouse Gas Emissions	LTS	LTS/NA	LTS	LTS
Hazards and Hazardous Materials	LTS	LTS-	LTS-	LTS-
Land Use and Planning	LTS	LTS	LTS-	LTS-
Noise	LTS	LTS	LTS-	LTS-
Public Services	LTS	LTS-	LTS-	LTS-
Recreation	LTS	LTS-	LTS-	LTS-
Transportation	LTS	LTS-	LTS-	LTS-
Utilities & Service Systems	LTS	LTS	LTS-	LTS-
Energy	LTS	LTS	LTS-	LTS

Notes: PP = Proposed Project
ALT 1 = No Project Alternative
ALT 2 = R-3 Alternative
ALT 3 = Mitigated Alternative
+ = Greater adverse impact than proposed project
- = Lesser adverse impact than proposed project
The No Project Alternative assumes no change from existing General Plan and zoning designations but assumes uses allowed under these designations.
Source: A. Skewes-Cox, 2013.

Service/Industrial-to-Residential/Medium Density Residential/Planned Development (M-S/ITR/R-3/PD)"; and continuation of Parcel B of the Raintree site in its current General Plan designation of "Industrial" and zoning of "Industrial and Service/Place of Assembly (M-S/POA)". Because the exact uses that could be proposed under the existing General Plan and zoning designations cannot be determined, the discussion below will primarily compare the impacts of this No Project Alternative to the proposed project.

Aesthetics

Aesthetic impacts could be similar to the proposed project for Parcel A of the Raintree site in terms of visual compatibility with surroundings, and light and glare, as residential uses could occur on Parcel A. Aesthetics impacts for Parcel B of the Raintree site and the entire Sares Regis site would depend on the designs of the projects submitted. Given the continuation of industrial zoning at these two locations, new buildings would likely be one or two stories in height as compared to the proposed project's three- to four-story buildings. With the lower building heights, light and glare

impacts would be slightly reduced with the No Project Alternative as compared to the proposed project.

Air Quality

The No Project Alternative assumes that the project sites would be left in their current General Plan and zoning designations but land uses allowed by those designations could occur. That includes industrial uses for the Sares Regis site and Parcel B of the Raintree site, and residential uses for Parcel A of the Raintree site. Without knowing the types of new industries that could be located at the two sites, it is difficult to determine if increased air emissions could be generated that may impact nearby residential uses to the north, east, and west. It is possible that emissions greater than those identified for the project could result. Residences within Parcel A of the Raintree site could be affected even more significantly than identified for the proposed project. Industrial uses would be affected less than the project residences from the emissions associated with Highway 101 because workers are not considered sensitive receptors and are exposed to such emissions for shorter periods than residents. Thus, the No Project Alternative may have some increased air emissions impacts and possibly some decreased air emission impacts.

Biological Resources

Existing conditions on the site would remain under the No Project Alternative, which includes retention of the trees to be removed as part of the proposed project and avoidance of the possible loss of nesting birds that could be disrupted under the proposed project.

Greenhouse Gas Emissions

Greenhouse gas (GHG) emissions from future land uses at the two sites would largely depend on the type of land uses and intensity of use. Residential uses at Parcel A of the Raintree site would generate similar GHG to those of the proposed project. However, for Parcel B and the Sares Regis site, the GHG impacts could be highly variable. Without knowing the types of new industries that could be located at the two sites, it is difficult to determine if increased GHG emissions could be generated. It is possible that emissions greater or lower than those identified for the project could result, and it would be highly dependent on the uses proposed.

Hazards and Hazardous Materials

Impact HAZARDS-1, related to arsenic and vanadium concentrations in the soil, would apply to the no project condition, as future residents/ workers at the Raintree site may potentially be exposed to contaminated soils. Human health impacts would be expected to be lower for the Sares Regis site and Parcel B of the Raintree site than for the proposed project, however, as site workers are expected to be exposed for less time than future residents could be, with a corresponding reduction in health effects. If residential uses occur on Parcel A of the Raintree site, human health impacts would be similar to the proposed project for this part of the site. Standard risk assessment models assume workers may be exposed to contaminants for 40 hours a week over a 30-year career, while residents may be exposed continuously, seven days per week, over a 70-year lifetime. In addition, workers are considered to be reasonably healthy adults, while residents may

include children, the elderly, and the infirm, who may be more susceptible to health effects from hazardous materials. Impacts HAZARDS-2, regarding hazardous materials releases during construction, and Impact HAZARDS-3, regarding lead, asbestos, and other hazards in building materials, could apply, as construction and demolition could take place. No other significant impacts related to hazards would apply to the No Project alternative.

Land Use and Planning

If no General Plan amendment or rezoning took place, land use policy conflicts could occur, depending on the types of land uses to develop at the sites and mitigation measures would be needed that would be similar to the proposed project. Industrial uses at Parcel B of the Raintree site and at the Sares Regis site could result in land use conflicts with nearby residential uses in terms of noise, air quality, and other impacts. Residential uses at Parcel A of the Raintree site would be compatible with existing residential uses to the north and west of the site. Overall, land use impacts would be similar to the proposed project.

Noise

If existing General Plan and zoning designations remain, there could be similar noise impacts with new development at the project sites. However, residential development would be restricted to the northern parcel of the Raintree parcel and noise impacts to non-residential uses may not be significant since those uses would be closer to Highway 101. Noise impacts to residential uses on Parcel A of the Raintree site may be lessened by the distance from the highway. However, if noise-producing businesses locate on Parcel B, noise impacts could occur for residential uses on Parcel A. The same would occur if noise-generating land uses located on the Sares Regis site and impacted existing residential uses to the north and east of the Sares Regis site. Thus, overall, noise impacts could be similar to the proposed project for the Raintree site and Sares Regis site.

SMC Section 19.42.030 (Noise or Sound Level) states that operational noise is permitted up to 75dBA at any point of the property line; however if the adjacent property is residentially zoned, there is a limit of 50dBA during nighttime (10:00 pm – 7:00 am) and 60dBA during daytime hours. Raintree Parcel B does not share a property line with residentially zoned property. Sares Regis site shares the northern and eastern property lines with residentially zoned property

Public Services

Impacts of this alternative would be expected to be comparable to those of the projects because this alternative would not create a need for new or physically altered fire stations or police facilities. Unlike the proposed projects, the No Project Alternative includes limited residential use on Parcel A of the Raintree site, and therefore would create limited project-specific or cumulative demands for school services.

Recreation

Compared to the proposed projects, the No Project Alternative would have less impact on recreational facilities because it includes only limited residential development on Parcel A of the

Raintree site, and therefore would not create any substantial demand for recreational facilities. It also does not include proposed recreational development that could have environmental impacts.

Transportation

With the No Project Alternative and the retention of the existing land use designations, trip generation would depend on the exact uses proposed. However, in comparison to the proposed project, industrial uses would be expected to generate fewer peak hour trips. Residential uses on Parcel A of the Raintree site would generate a similar number of trips per unit, but the density of the residential uses would be reduced which would reduce overall trip generation.

Utilities and Service Systems

Impacts of this alternative would be comparable to those of the projects because the alternative (1) would not be expected to require the construction of new water treatment facilities or expansion of existing facilities, (2) would not be expected to require new or expanded water entitlements, (3) would not be expected to require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, (4) would not be expected to exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board, (5) would not be expected to exceed landfill capacity, and (6) would not be expected to conflict with federal, state, or local statutes and regulations related to solid waste. Similar to the proposed projects, the No Project Alternative could require mitigation that addresses (1) the need for sewer upsizing in North Fair Oaks Avenue, and (2) building demolition and construction debris and recycling by project occupants.

Energy

Impacts of this alternative would be comparable to those of the projects because the alternative (1) would not be expected to require or result in the construction of new sources of energy supplies or additional energy infrastructure capacity, and (2) would not conflict with applicable energy efficiency policies or standards. However, the exact energy demands would vary by type of industrial uses that could occur on the sites.

Ability to Meet Project Objectives

The No Project Alternative would not meet many of the project objectives. It would depend on future uses that may be located at the sites but residential development would be significantly restricted.

ALTERNATIVE 2: R-3 ZONING ALTERNATIVE

Under Alternative 2, the two sites would be zoned as Residential Medium Density (R-3) that would allow 24 units per acre (compared to the R-4 zoning for the Applicant Proposed Scenario and the R-5 zoning for the Full Buildout Scenario). As shown in Table 5-1, up 407 units would be allowed for the Raintree site (234 units for Parcel A and 173 units for Parcel B); up to 135 units would be allowed for the Sares Regis site. Thus, both sites together would have 542 units which would

be128 fewer than what the applicants have proposed under the Applicant Proposed Scenario, and 274 units fewer than what would be allowed under R-4 zoning. The areas of development on each site are assumed to be similar to the Applicant Proposed Scenario.

Aesthetics

With the R-3 zoning, building intensity would be slightly reduced. Thus, building heights would be expected to be lower than those shown for the Applicant Proposed Scenario and the Full Buildout Scenario, and would be more compatible with nearby residential uses for both the Sares Regis and Raintree sites. With lower building heights, nighttime glare from interior spaces would be slightly reduced; however, this impact would not be significant. Design compatibility with the neighborhood would depend on the proposed specific design of future buildings.

Air Quality

Air quality impacts assuming the R-3 Zoning Alternative would be similar to those described for the proposed project. However, this alternative proposes fewer sensitive receptors that would be subject to TAC emissions from Highway 101. As with the proposed project, off-site air quality impacts in the form of fugitive dust and TAC emissions resulting from the construction of the projects would be significant and require Mitigation Measures AIR-2, AIR-5, and AIR-6. Operational air quality impacts from project-generated traffic would also be slightly less as compared to the proposed project assuming a reduction in project generated traffic.

Biological Resources

Potential impacts on biological resources under the R-3 Zoning Alternative would be similar to the proposed project. Many of the existing trees would be removed and there is a possibility that nesting birds could be disrupted. Although the density and number of residents would increase on the site under this alternative, the actual areas of development on each site are assumed to be similar to the Applicant Proposed Scenario, so the net acreage available to provide replacement plantings for trees removed to accommodate development would remain unchanged. The degree to which existing trees can be avoided and protected would depend on the final layout of structures, parking, roadways, and other improvements. Mitigation would still be required to ensure compliance with the City's Tree Preservation Ordinance, and no new significant impacts are anticipated under the R-3 Zoning Alternative.

Greenhouse Gas Emissions

GHG impacts of the R-3 Zoning Alternative would be similar to those described for the proposed project. As with the proposed project, construction would generate new GHG emissions. Operation of the project is anticipated to generate lower GHG emissions overall and similar emissions on a per capita basis.

Hazards and Hazardous Materials

Under the R-3 Zoning Alternative, impacts related to hazards would be similar to those for the proposed project, though the potential magnitude of one of the impacts would be reduced. Under this alternative, Impact HAZARDS-1 would apply, though the number of future residents exposed to arsenic and vanadium in soils would be fewer. Construction activities and demolition would take place at the Raintree site, so Impacts HAZARDS-2 and Impact HAZARDS-3 would apply. No other significant impacts related to hazards would apply to the Alternative with R-3 zoning.

Land Use and Planning

Land use impacts of the R-3 Zoning Alternative would be similar to the proposed project given the proposed residential uses for both sites. However, the R-3 density may be more compatible with nearby residential uses. Potential conflicts with General Plan policies may be slightly reduced given the lower residential density as compared to the proposed projects.

Noise

Noise and vibration impacts assuming the R-3 Zoning Alternative would be similar to those described for the proposed project. However, this alternative proposes fewer sensitive receptors that would be subjected to noise and vibration impacts. Off-site noise impacts resulting from the construction of the projects would be correspondingly less as compared to the proposed project as fewer residential units would be constructed. Operational noise impacts from project-generated traffic would also be slightly less as compared to the proposed project assuming a reduction in project-generated traffic volumes.

Public Services

Impacts of this alternative would be comparable to those of the projects because this alternative would not create a need for new or physically altered fire stations or police facilities. Compared to the proposed projects, this alternative would include fewer dwelling units and therefore would impose fewer project-specific and cumulative demands on school services.

Recreation

Compared to the proposed projects, this alternative would have less impact on recreational facilities because it would include less residential development on the project sites and therefore would create less demand for recreational facilities.

Transportation

Under the R-3 Alternative, up to 407 apartments would be built on the Raintree site (234 on Parcel A and 173 on Parcel B), and up to 135 apartments would be built on the Sares Regis site. By comparison, the Applicant Proposed Scenario would build 465 apartments on the Raintree site and 205 on the Sares Regis site, while under the Full Build Scenario 679 apartments would be built on the Raintree site and 259 apartments on the Sares Regis site. Since the number of apartments that

could be built under R-3 zoning would be less than the number that would be built under both the Applicant Proposed and Full Build Scenarios, the R-3 alternative would accordingly generate fewer vehicle trips than those two scenarios (approximately 2,256 daily trips, including 105 during the AM peak hour and 156 during the PM peak hour for combined East Weddell Residential projects). As a result, the R-3 alternative is expected to have fewer transportation impacts, and the project-related transportation mitigations identified in this EIR are expected to be more than sufficient to mitigate any impacts due to the R-3 Zoning Alternative.

Utilities and Service Systems

Impacts of this alternative would be comparable to those of the projects because the alternative (1) would not require the construction of new water treatment facilities or expansion of existing facilities, (2) would not require new or expanded water entitlements, (3) would not require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, (4) would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board, (5) would not exceed landfill capacity, and (6) would not conflict with federal, state, or local statutes and regulations related to solid waste. In general, the reduced number of dwelling units under this alternative would reduce demand for utilities and service systems, compared to the projects. Similar to the proposed projects, however, this alternative could require mitigation that addresses (1) the need for sewer upsizing in North Fair Oaks Avenue, and (2) building demolition and construction debris and recycling by project occupants.

Energy

Impacts of this alternative would be comparable to those of the projects because the alternative (1) would not require or result in the construction of new sources of energy supplies or additional energy infrastructure capacity, and (2) would not conflict with applicable energy efficiency policies or standards. Energy demand would be reduced due to the reduced project size compared to the proposed projects.

Ability to Meet Project Objectives

The R-3 Zoning Alternative would meet all of the project objectives for both the Sares Regis and the Raintree sites. However, the economic viability of providing the affordable units for the R-3 Alternative may be slightly reduced due to the lower density of the overall project as compared to both the Applicant Proposed Scenario and the Full Buildout Scenario.

ALTERNATIVE 3: MITIGATED ALTERNATIVE

Under the Mitigated Alternative, the Sares Regis site would be rezoned to an Office (O) district to allow professional and administrative office use; the Raintree site would have multi-family (R4) zoning for Parcel A, and Parcel B would remain in its existing Industrial and Service/Place of Assembly zoning (M-S/POA) or possibly be rezoned to an Office (O) or Commercial district such as C-1 to allow neighbor-serving retail uses (see Figure 5-1). In addition, a thick planting of trees would occur along the south side of Parcel B (see Figure 5-1) as a way to mitigate potential air toxic contaminants per BAAQMD recommendations.

Aesthetics

The Mitigated Alternative may have similar visual impacts for the residential uses that could occur on Parcel A of the Raintree site. With more intense tree plantings on the south end of Parcel B, visual impacts would be reduced. Future office, industrial, or commercial uses on the northern portion of Parcel B would not be expected to have significant visual impacts as the area of development would be constrained, and "visually enclosed" by residential uses on the north and tree plantings on the south (see Figure 5-1). However, visual compatibility would depend on the actual design of new buildings. For the Sares Regis site, office uses could have similar visual impacts in terms of the contrasting scale with the nearby mobile home park, depending on the ultimate height of new office uses in this location. Visual impacts would be expected to be mitigated by the City's design review process and integration of new landscaping into any project plans.

Air Quality

The Mitigated Alternative assumes office zoning at the Sares Regis site, and a reduced residential development at the north end of the Raintree site. Air quality impacts assuming the Mitigated Alternative would be reduced from those described for the proposed project. The location of the sensitive receptors with respect to Highway 101 would be superior to that of the location of the sensitive receptors proposed by the project. As a result, TAC exposure at the project site caused by Highway 101 traffic would not be significant. As with the proposed project, off-site air quality impacts in the form of fugitive dust and TAC emissions resulting from the construction of the projects would be significant and require Mitigation Measures AIR-2, AIR-5, and AIR-6. Operational air quality impacts from project-generated traffic would be slightly less as compared to the proposed project assuming a reduction in project generated traffic. Off-site air quality impacts, assuming the operation of office land use on the Sares Regis site, would not likely be significant. This is based on the assumption that new sources of TACs or significant air pollutant emissions are not included in the project or are properly permitted by BAAQMD (e.g., diesel generators).

Biological Resources

Potential impacts on biological resources under the Mitigated Alternative would be similar to the proposed project. Many of the existing trees would be removed and there is a possibility that nesting birds could be disrupted. The degree to which existing trees can be avoided and protected would depend on the final layout of structures, parking, roadways, and other improvements. Mitigation would still be required to ensure compliance with the City's Tree Preservation Ordinance, and no new significant impacts are anticipated under the Mitigated Alternative.

Greenhouse Gas Emissions

The Mitigated Alternative assumes office zoning at the Sares Regis site, and a reduced residential development at the north end of the Raintree site. GHG emissions associated with non-residential development could be similar, lower, or higher depending on the intensity of the non-residential development. As a result, GHG emissions from operation of this alternative could have potentially significant GHG emissions. Mitigation measures may be necessary to reduce GHG emissions per

capita for non-residential land uses. These could include implementation of TDM programs and incorporation of low energy elements in the non-residential projects.

Hazards and Hazardous Materials

Under the Mitigated Alternative, impacts related to hazards would be similar to those for the proposed project, though the potential magnitude of the impacts would be reduced. Soils in the northern portion of the Raintree site that would be developed for residential use under this scenario contain potentially hazardous concentrations of vanadium and arsenic (Treadwell & Rollo, 2012), so Impact HAZARDS-1 would apply, though the number of future residents exposed to those contaminants would be fewer. Construction activities and demolition would take place at the Raintree and Sares Regis site, so Impacts HAZARDS-2 and Impact HAZARDS-3 would apply. No other significant impacts related to hazards would apply to the Mitigated Alternative.

Land Use and Planning

The Mitigated Alternative would have residential uses on Parcel A of the Raintree site which would be compatible with recently-constructed residential uses north and west of the site. Potential General Plan policy conflicts related to air toxins would be reduced due to no residential uses on the Sares Regis site, and only limited residential uses on the north end of the Raintree site.

Noise

The Mitigated Alternative assumes office zoning at the Sares Regis site, and a reduced residential development at the north end of the Raintree site. It is assumed that the noise and vibration impacts of the Mitigated Alternative would be similar to those described for the proposed project, but to a lesser degree. As an example, this alternative proposes fewer sensitive receptors at the Raintree site, and the location of the sensitive receptors with respect to Highway 101 would be superior to that of the location of the sensitive receptors proposed by the project. Lower levels of noise would be expected at receptors proposed at the Raintree site due to increased distance from Highway 101. Office land uses at the Sares Regis site could be designed to provide a compatible interior noise environment by incorporating building sound insulation treatments into the design of the project to provide acceptable noise levels indoors. Off-site noise impacts resulting from the construction of the two projects would be less as compared to the proposed project because there would be less construction occurring on the two sites. Operational noise impacts from project-generated traffic would also be slightly less as compared to the proposed project assuming a corresponding reduction in project generated traffic volumes. Off-site noise impacts assuming the operation of office land uses on the Sares Regis site would not likely be significant assuming that substantial noise-generating mechanical equipment would not be necessary to support the proposed use (e.g., cooling towers, diesel generators).

Public Services

Impacts of this alternative would be comparable to those of the projects because this alternative would not create a need for new or physically altered fire stations or police facilities. Compared to

the proposed project, this alternative would include fewer dwelling units and therefore would impose fewer project-specific and cumulative demands on school services.

Recreation

Compared to the proposed projects, this alternative would have less impact on recreational facilities because it would include less residential development on the project sites and therefore would create less demand for recreational facilities.

Transportation

Under the Mitigated Alternative, up to 352 apartments would be built on the Raintree site. On the Sares Regis site, the current 62,442-square foot industrial use would be converted to office use. Accordingly, the combined sites would be expected to generate approximately 1,670 daily vehicle trips, including 105 during the AM peak hour and 127 during the PM peak hour. Since this level of vehicle trips would be less than that expected from the Applicant Proposed Scenario, Full Build Scenario, and R-3 zoning alternative, the Mitigated Alternative is expected to have the least transportation impacts of all alternatives. As a result, the project-related transportation mitigations identified in this EIR are expected to be more than sufficient to mitigate any impacts due to the Mitigated Alternative.

Utilities and Service Systems

Impacts of this alternative would be comparable to those of the projects because the alternative (1) would not require the construction of new water treatment facilities or expansion of existing facilities, (2) would not require new or expanded water entitlements, (3) would not require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, (4) would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board, (5) would not exceed landfill capacity, and (6) would not conflict with federal, state, or local statutes and regulations related to solid waste. In general, the reduced amount of new development under this alternative would reduce demand for utilities and service systems, compared to the projects. Similar to the proposed projects, however, this alternative could require mitigation that addresses (1) the need for sewer upsizing in North Fair Oaks Avenue, and (2) building demolition and construction debris and recycling by project occupants.

Energy

Impacts of this alternative would be comparable to those of the projects because the alternative (1) would not require or result in the construction of new sources of energy supplies or additional energy infrastructure capacity, and (2) would not conflict with applicable energy efficiency policies or standards.

Ability to Meet Project Objectives

The Mitigated Alternative would meet some but not all of the identified project objectives. Rather than both sites being developed entirely with residential uses, residences would only be

constructed on the north end of the Raintree site. Thus, any objective related to creating residential uses only would not be met. The objectives related to providing affordable housing would also only partially be met due to limited residential units on the Raintree site. These units are assumed to include some degree of affordable housing.

5.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The CEQA Guidelines require that the "environmentally superior alternative" be identified. If the environmentally superior alternative is the No Project Alternative, the EIR must also identify an environmentally superior alternative from among the other alternatives.

For this project, the No Project Alternative that assumes development under the existing General Plan and zoning designations would not necessarily be the environmentally superior alternative because it is not known what future industrial uses could develop at either site, and such uses could have their own environmental impacts (e.g., air, noise, etc.) on nearby residential uses to the north and east of the Sares Regis site, and to the north and west of the Raintree site. The existing protected trees to be removed under the proposed project would be retained under the No Project Alternative, and mitigation recommended to replace protected trees and avoid bird nests from disturbance or removal when in active use would not be required.

The Mitigated Alternative would be considered the environmentally superior alternative because of the following:

- It would expose fewer residents to toxic air contaminants associated with highway use;
- Residents would be located on the north end of the Raintree site where toxic air contaminants would be reduced;
- Residential uses on Parcel A of the Raintree site would be compatible with nearby residences to the north and west of the Raintree site;
- Additional heavy tree plantings on the south side of Parcel B of the Raintree site would reduce overall level of toxic air contaminants which would benefit not only future residential uses on Parcel A but would also benefit existing residential uses to the north and west of the Raintree site;
- Office/non-residential uses on the Sares Regis site and north portion of Parcel B of the Raintree site would be appropriate due to the higher levels of toxic air contaminants and the shorter exposure time of office workers as compared to residents;
- Office uses on the Sares Regis site would have fewer potential conflicts with nearby residential uses, as compared to industrial uses.
- Office or industrial uses on a portion of Parcel B could be compatible with the proposed residential uses on Parcel A but would also result in reduced exposure time of workers, as compared to the residential uses of the proposed project.

However, the Mitigated Alternative would not meet some of the objectives of the proposed project as discussed above.

6. CEQA CONSIDERATIONS

6.1 SIGNIFICANT IRREVERSIBLE EFFECTS

CEQA states that impacts associated with a proposed project may be considered to be significant and irreversible for the following reasons:

- Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible, since a large commitment of such resources makes the removal or non-use thereafter unlikely;
- Primary impacts and, particularly, secondary impacts (such as a highway improvement that provides access to a previously inaccessible area) generally commit future generations to similar uses; and
- Irreversible damage can result from environmental accidents associated with the project.

This project would include the demolition of 15 buildings on the Raintree site and one building on the Sares Regis site. A total of eight new residential buildings would be constructed on the Raintree site and one new building would be constructed on the Sares Regis site. The structures are permanent buildings; therefore, their installation would constitute an irreversible use of these lands, as it is unlikely that the buildings would be removed for many years. The proposed project would irretrievably commit materials to the construction and maintenance of the new buildings. In addition, the construction and operation of the proposed project would result in the use of energy, including fossil fuels. The project is not expected to result in any activities likely to result in accidents that could lead to irreversible environmental damage.

6.2 SIGNIFICANT UNAVOIDABLE IMPACTS

All potential impacts identified for the project could be mitigated to a less-than-significant level.

6.3 GROWTH INDUCEMENT

The proposed project would be located in an urbanized portion of the City of Sunnyvale. The project site is surrounded by an existing highway, a major arterial, and existing residential development. No wastewater or water lines that would cross undeveloped lands would be required for the project. No major road improvements would be required. While this area of Sunnyvale has been undergoing a transition from industrial to residential use, the proposed projects are not expected to result in further growth inducement for the reasons stated above. Land uses in the vicinity would continue to be regulated by adopted zoning.

6.4 CUMULATIVE IMPACTS

Cumulative impacts have been addressed in Chapter 4 for each topic covered in this EIR. **Table 6-1** below shows the projects that are proposed or approved that are within a ½-mile of the Sares Regis and Raintree sites. Overall, no significant cumulative impacts are expected and no additional mitigation measures would be required beyond those already recommended for the project.

Table 6-1 List of Development Projects Pending or Approved

			Planning Permit				
Project Type	**Address**	**Description**	**File No.**	**Type**	**Status**	**Status Date**	**Notes**
Industrial	1152 Bordeaux	Major Moffett Park Design Review application for the demolition of several structures over several parcels and the construction of nine office buildings with 1.9 million square feet of office space, amenities building, on-site parking, and parking structure.	2012-7854	SDP, GPA, RZ, ER	Pending Review	11/5/2012	Pending, not yet approved
Industrial	1221 Crossman	Major Moffett Park Design Review for two new 7-story office buildings and one parking structure.	2013-7063	PR	Approved	8/26/2013	Approved, but not yet constructed
Industrial	1240 Crossman	Major Moffett Park Design Review for expansion of the NETAPP campus (Site 2) utilizing the green building bonus to enable 75.8% floor area ration (FAR) for a total of 525,057 square feet. Two 4-story buildings (12 & 14) and a four-level parking garage would be built. Two buildings (10 & 11) to remain.	2011-7759	PM, SDP	Pending Review	10/19/2011	Pending, not yet approved
Residential	1060 Morse Ave.	Special Development Permit for redevelopment of an industrial site with 17 townhouse units.	2011-7296	SDP, ER, TM	Approved	7/25/2011	Under construction
Residential	1101 N Fair Oaks Ave.	Special Development Permit for a new 97 residential unit project and rezone to R-4 and a green building density bonus.	2012-7450	SDP, RZ	Approved	10/16/2012	Approved, but not yet constructed
Residential	470 Persian Dr.	Special Development Permit for redevelopment of an industrial site with 47 residential condominium units.	2012-7879	SDP, PM	Approved	6/10/2013	Approved, but not yet constructed
Residential	435 Toyama Dr.	Special Development for redevelopment of an industrial site with 18 townhouse units.	2012-7522	SDP, TM	Pending Review	6/12/2013	Pending, not yet approved

Note: First three industrial projects are just outside a ½-mile distance from project site. Residential projects are within ½-mile.
Source: City of Sunnyvale, 2013.

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