

## 2030 Conditions

This section analyzes 2030 traffic conditions in the study area both with and without the full-build West Park Project. This scenario assumes construction of the full West Park Project will be completed by 2030. A plot of the 2016 daily link volumes is contained in Appendix B.

### Modeling Network

The 2030 network for the PS model was developed using 2030 projections from the three regional County models described earlier. The 2030 networks for the PS model both with and without Project are essentially the same. These two networks reflect all existing and anticipated new roadway segments in San Joaquin, Stanislaus and Merced Counties. The future I-5/Oak Flat Road interchange was assumed for the 2030 networks. Additionally, all proposed internal roadway segments serving the full-build development were assumed.

### Proposed Project Description

The full-build West Park Project will be a large-scale, industrial-based master development in Stanislaus County that includes a private rail Inland Port facility. A short-haul freight rail operator will serve the Port facility by hauling single or double stack containers to and from intermodal yards at the Port of Oakland. The site will have approximately 330 acres of airfield runways reserved for use by California Department of Forestry (CDF) and law enforcement regional facility.

The proposed project consists of approximately 290 acres of business park, 30 acres of medical planning area, 20 acres of workforce training area, 170 acres of inland port shipping facilities, 600 acres of industrial distribution sites, 2,000 acres of general industrial, 250 acres of airport industrial and 250 acres of agricultural industrial land uses, a 330-acre airfield, 30 acres of medical planning area, and 20 acres of workforce training facilities. The site will also have 805 acres of infrastructure uses serving the full-build development including water and sewage treatment plants, storm water quality detention basins, circulatory roads, open spaces, drainage conduits, creeks, canals and aqueducts. Additionally, the site may have a 5-acre law enforcement regional facility and 50-acre CDF aviation firefighting facility for the region. Figure 3 shows the West Park Project site plan.

### Proposed Project Trip Generation

Table VI shows trip generation estimates for the full-build West Park Project., based on both ITE and SANDAG trip generation rates. The proposed full-build West Park Project is expected to include up to 37,650 employees that will generate a total of approximately 141,167 daily trips.

**Table VII: Proposed Project Trip Generation**

Land Use	Acres	Floor Area Ratio	Building Area, KSF <sup>1</sup>	Employees Per KSF	Employees	Trip Rate Per Employee <sup>2</sup>	Daily Trips
General Industrial	2,000	0.35	30,500	0.7	21,350	3.34 (130)	71,309
Industrial -- Distribution	600	0.35	9,200	0.3	2,750	3.89 (150)	10,698
Airport Industrial	250	0.10	1,100	0.7	770	3.34 (130)	2,582
Agricultural Industrial	250	0.35	3,800	0.7	2,660	3.34 (130)	8,885
Inland Port Shipping	170	--	--	--	100	3.34 (130)	3,071 <sup>3</sup>
Business Park	290	0.35	4,400	2.0	8,800	4.04 (770)	35,552
Law Enforcement Regional Facility	5	0.25	50	2.0	100	3.34 (130)	334
CDF Aviation Firefighting	50	0.10	200	--	50	3.34 (130)	167
Airfield	330	--	--	--	20	3.34 (130)	67
Medical Planning Area	30	0.25	250	3.0	750	250/acre <sup>4</sup>	7,500
Work Force Training	20	0.20	150	2.0	300	3.34 (130)	1,002
All Infrastructure-Related Uses	805	--	--	--	--	--	--
<b>Total</b>	<b>4,800</b>	<b>--</b>	<b>49,650</b>	<b>--</b>	<b>37,650</b>	<b>--</b>	<b>141,167</b>

**Notes:** <sup>1</sup>KSF = 1,000 square feet

<sup>2</sup>3.34 (130) = Rate based on ITE Trip Generation, 7<sup>th</sup> Edition, Land use category 130

Trips include 1,466 intermodal truck trips serving 3 trains per day plus 134 employee trips.

**Source:** Peter R. Vandermat, DMJM Harris.

Trip rate source: ITE Trip Generation (2003) and San Diego Traffic Generators, SANDAG, April 2002

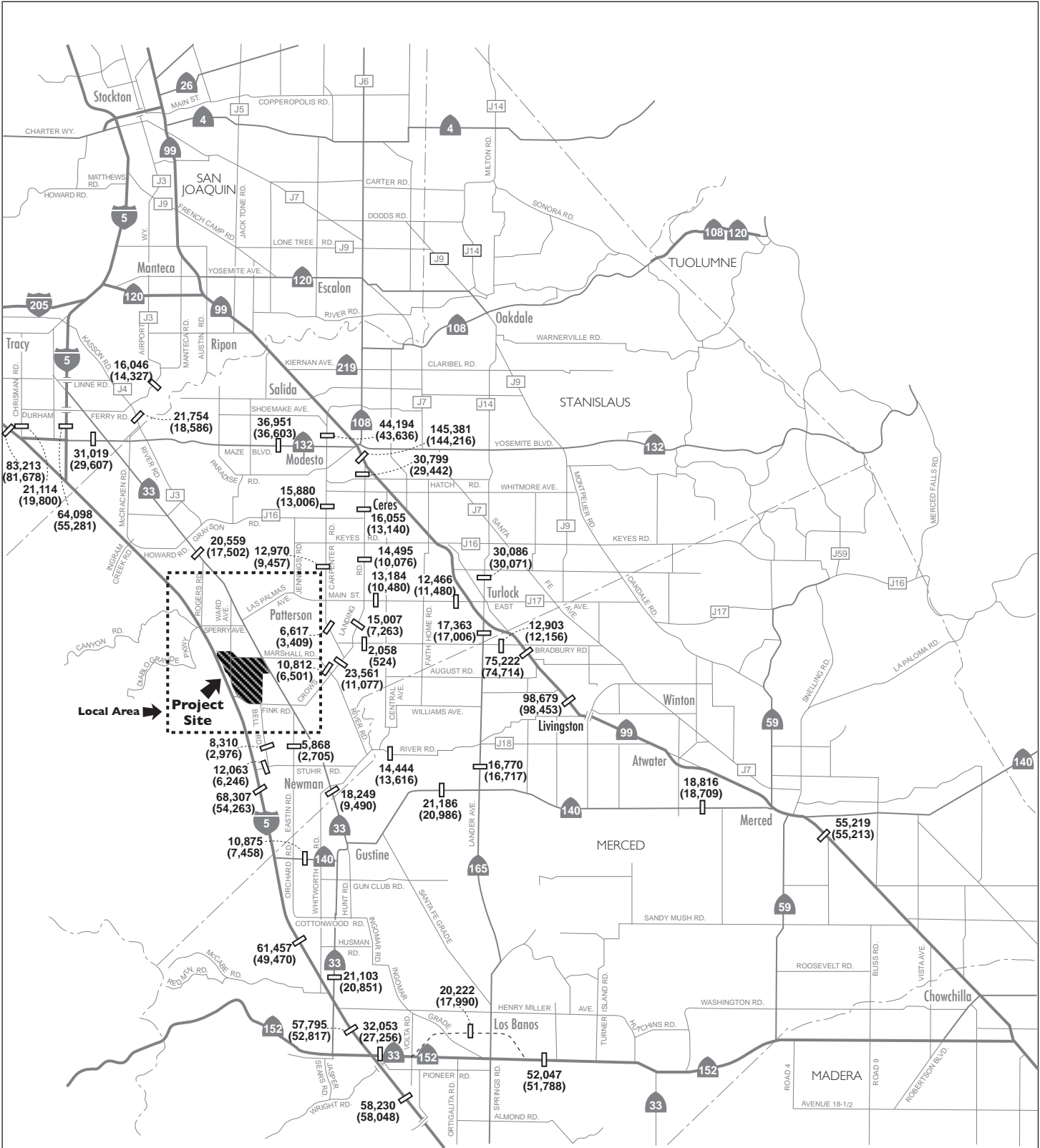
### 2030 Daily Traffic

Figures 8 and 9 compare regional and local daily traffic forecast volumes for 2030 both with and without the full build project. Figure 8 shows that regional traffic volumes on study freeway and roadway segments within the Central Valley are expected to be similar in magnitude for both with and without the full West Park Project.

However, Figure 9 shows a significant difference in daily traffic between 2030 No Project and Plus Project Conditions on roadway segments within and adjacent to the project site. Therefore, traffic generated by the Project is expected to have a strong local influence on local roadway operations with comparatively less regional traffic impacts.

# Preliminary Traffic Circulation Master Plan 2030 Daily Traffic (ADT) Volumes – Regional Area

Figure  
8



LEGEND	
X	2030 With Project ADT
(X)	2030 No Project ADT
---	Future Project Realigned Roadway





## Level of Service Analysis (2030 Conditions)

Under 2030 Conditions without the project, all roadway segments are expected to operate at acceptable levels of service except for the following roadway segments.

### County Facilities

- East Las Palmas Avenue (east of Sycamore Avenue) is expected to operate unacceptably at LOS E. It is recommended to widen the segment between Sycamore Avenue and Ash Avenue from two lanes to four lanes to achieve acceptable operations.
- Rogers Road (north of Sperry Road) is expected to operate unacceptably at LOS F. It is recommended to widen the segment between Sperry Avenue and Donkin Road from two lanes to four lanes to achieve acceptable operations.
- Sperry Avenue (west of Baldwin Road) is expected to operate unacceptably at LOS F. It is recommended to widen the segment between the I-5/Sperry Avenue interchange and Baldwin Road from two lanes to six lanes to achieve acceptable operations.

### Turlock Area Facilities

- W. Bradbury Road (west of SR 99) is expected to operate unacceptably at LOS E. It is recommended to widen the segment between SR 165 and SR 99 from two lanes to four lanes to achieve acceptable operations.

### Stanislaus County Facilities

- W. Main Street/Highway J17 (west of S. Carpenter Road) is expected to operate unacceptably at LOS E. It is recommended to widen the segment between Ash Avenue and S. Carpenter Road from two lanes to four lanes to achieve acceptable operations.
- W. Main Street/Highway J17 (between Crows Landing Road and Bystrum Road) is expected to operate unacceptably at LOS D. It is recommended to widen the segment from two lanes to four lanes to achieve acceptable operations.
- River Road (east of E. Marshall Road) is expected to operate unacceptably at LOS E. It is recommended to widen the segment between SR 33 and SR 165 from two lanes to four lanes to achieve acceptable operations.

### Modesto Area Facilities

- Carpenter Road (between Shoemake Avenue and SR 132) is expected to operate unacceptably at LOS F. It is recommended to widen the segment from four lanes to six lanes to achieve acceptable operations.

### San Joaquin County Facilities

- Kasson Road/Highway J4 (south of Durham/Ferry Road/Airport Way) is expected to operate unacceptably at LOS F. It is recommended to widen the segment between Airport Way and County Limit from two lanes to four lanes to achieve acceptable operations.

### State Facilities

- Interstate 5 (north of Sperry Road) is expected to operate unacceptably at LOS D. It is recommended to widen the freeway segment between Sperry Road and Howard Road from four lanes to six lanes to achieve acceptable operations.
- Interstate 5 (between Oak Flat Road and Sperry Road) is expected to operate unacceptably at LOS D. It is recommended to widen the freeway segment from four lanes to six lanes to achieve acceptable operations.
- Interstate 5 (between Fink Road and Oak Flat Road) is expected to operate unacceptably at LOS D. It is recommended to widen the freeway segment from four lanes to six lanes to achieve acceptable operations.
- Interstate 5 (south of W. Stuhr Road) is expected to operate unacceptably at LOS D. It is recommended to widen the freeway segment between W. Stuhr Road and SR 140 from four lanes to six lanes to achieve acceptable operations.
- Interstate 5 (between SR 132 and Ferry Road) is expected to operate unacceptably at LOS D. It is recommended to widen the freeway segment between I-580 and SR 33 from four lanes to six lanes to achieve acceptable operations.
- Interstate 5 (south of SR 152) is expected to operate unacceptably at LOS D. It is recommended to widen the freeway segment south of Henry Miller Avenue from four lanes to six lanes to achieve acceptable operations.
- Interstate 580 (east of Chrisman Road) is expected to operate unacceptably at LOS F. It is recommended to widen the freeway segment north of I-5 from four lanes to eight lanes to achieve acceptable operations.
- State Route 33 (south of Howard Road) is expected to operate unacceptably at LOS F. Within the study area of the West Park Project, it is recommended to widen the segment between Rogers Road and I-5 from two lanes to four lanes to achieve acceptable operations.
- State Route 33 (between Zacharias Road and Eucalyptus Avenue) is expected to operate unacceptably at LOS D. It is recommended to widen the roadway segment between Ward Avenue and Zacharias Road from two lanes to four lanes to achieve acceptable operations.
- State Route 33 (between I-5 and Husman Road) is expected to operate unacceptably at LOS F. It is recommended to widen this roadway segment between I-5 and Howard Road from two lanes to four lanes to achieve acceptable operations.
- State Route 99 (north of State Route 132) is expected to operate unacceptably at LOS F. It is recommended to widen this freeway segment north of SR 132 from six lanes to ten lanes to achieve acceptable operations.
- State Route 99 (south of W. Bradbury) is expected to operate unacceptably at LOS E. It is recommended to widen the freeway segment between W. Bradbury and August Road from four lanes to six lanes to achieve acceptable operations.
- State Route 99 (south of August Road) is expected to operate unacceptably at LOS F. It is recommended to widen the freeway segment between August Road and River Road/Highway J18 from four lanes to eight lanes to achieve acceptable operations.

- State Route 99 (between Crows Landing Road and SR 132) is expected to operate unacceptably at LOS F. It is recommended to widen this freeway segment from six lanes to ten lanes to achieve acceptable operations.
- State Route 132 (west of SR 33) is expected to operate unacceptably at LOS F. It is recommended to widen the segment between I-5 and SR 33 from two lanes to six lanes to achieve acceptable operations.
- State Route 132 (east of Paradise Road) is expected to operate unacceptably at LOS F. It is recommended to widen the segment between I-5 and Dakota Avenue in the City of Modesto from two lanes to six lanes to achieve acceptable operations.
- State Route 140 (west of State Route 99) is expected to operate unacceptably at LOS F. It is recommended to widen the roadway segment between SR 165 and SR 99 from two lanes to four lanes to operate the facility acceptably.
- State Route 140 (west of State Route 165) is expected to operate at LOS F. It is recommended to widen the segment between Jensen Road (west of the City of Gustine) and SR 165 from two lanes to four lanes to achieve acceptable operations.
- State Route 152 (east of State Route 165) is expected to operate at LOS F. Within the study area of the West Park Project, it is recommended to widen the segment between I-5 and SR 59 from four lanes to six lanes to achieve acceptable operations.
- State Route 152 (between I-5 and Volta Road) is expected to operate unacceptably at LOS E. It is recommended to widen the roadway segment from four lanes to six lanes to operate the facility acceptably.
- State Route 165 (north of SR 99) is expected to operate unacceptably at LOS D. It is recommended to widen the roadway segment between SR 99 and Main Street from four lanes to six lanes to operate the facility acceptably.
- State Route 165 (north of State Route 140) is expected to operate at LOS F. It is recommended to widen the segment between the City of Turlock and the City of Los Banos from two lanes to four lanes to achieve acceptable operations.

In addition to the roadway segments discussed above, the following segments are expected to operate at an unacceptable level of service under 2030 Plus Project Conditions.

#### Patterson Area Facilities

- Sycamore Avenue (south of East Las Palmas Avenue) is expected to operate unacceptably at LOS E under 2030 With Project Conditions. It is recommended to widen the segment between East Las Palmas Avenue and W. Marshall Road from two lanes to four lanes to achieve acceptable operations.
- Ward Avenue (north of Elfers Road) is expected to operate unacceptably at LOS E under 2030 With Project Conditions. It is recommended to widen the segment between Oak Flat Road and Sperry Avenue from two lanes to four lanes to achieve acceptable operations.

- S. Carpenter Road (north of Main Street/Highway J17) is expected to operate unacceptably at LOS D under 2030 With Project Conditions. It is recommended to widen the segment between Main Street and SR 132 from two lanes to four lanes to achieve acceptable operations.
- Crows Landing Road (north of W. Main Street/Highway J17) is expected to operate unacceptably at LOS D under 2030 With Project Conditions. It is recommended to widen the segment between W. Main Street/Highway J17 and Grayson Road/Highway J16 from two lanes to four lanes to achieve acceptable operations.

#### Stanislaus County Facilities

- State Route 33 (north of W. Sanches Road) is expected to operate unacceptably at LOS D under 2030 With Project Conditions. It is recommended to widen the roadway segment between SR 152 and SR 140 from two lanes to four lanes to achieve acceptable operations
- Davis Road (north of Fink Road) is expected to operate unacceptably at LOS F under 2030 With Project Conditions. It is recommended to widen the segment between the Delta Mendota Canal crossing and W. Marshall Road from two lanes to four lanes to achieve acceptable operations.
- Project Road A; the first east- west project road that links Bell Road to Ward Avenue will need four lanes to achieve acceptable operations.
- Bell Road (between W. Stuhr Road and Anderson Road) is expected to operate unacceptably at LOS D under 2030 With Project Conditions. It is recommended to widen the segment between W. Ike Crow Road and W. Stuhr Road two lanes to four lanes to achieve acceptable operations.
- Ward Avenue (north of Marshall Road) is expected to operate unacceptably at LOS F under 2030 With Project Conditions. It is recommended to widen the segment between Oak Flat Road and Sperry Avenue from two lanes to four lanes to achieve acceptable operations.
- Fink Road (between SR 33 and I-5) is expected operate unacceptably at LOS E under 2030 With Project Conditions. It is recommended to widen the segment between SR 33 to I-5 from two lanes to four lanes to achieve acceptable operations.
- Oak Flat Road (between W. Ike Crow Road and I-5) is expected to operate unacceptably at LOS F under 2030 With Project Conditions. It is recommended to widen the roadway segment from two lanes to four lanes to achieve acceptable operations.
- W. Marshall Road (east of Ward Avenue) is expected to operate unacceptably at LOS D under 2030 With Project Conditions. It is recommended to widen the segment between Ward Avenue and Sycamore Avenue from two lanes to four lanes to achieve acceptable operations.
- E. Marshall Road (west of Crows Landing Road) is expected to operate unacceptably at LOS D under 2030 With Project Conditions. It is recommended to widen the segment between Sycamore Avenue and Crows Landing Road from two lanes to four lanes to achieve acceptable operations.

- W. Ike Crow Road (between Bell Road and SR 33) is expected to operate unacceptably at LOS D under 2030 With Project Conditions. It is recommended to widen the roadway segment from two lanes to four lanes to achieve acceptable operations.
- Crows Landing Road (east of SR 33) is expected to operate unacceptably at LOS E under 2030 With Project Conditions. It is recommended to widen the segment between SR 33 and E. Marshall Road from two lanes to four lanes to achieve acceptable operations.
- Crows Landing Road (north of E. Marshall Road) is expected to operate unacceptably at LOS E under 2030 With Project Conditions. It is recommended to widen the segment between E. Marshall Road and Grayson Road/Highway J16 from two lanes to four lanes to achieve acceptable operations.

#### Modesto Area Facilities

- Carpenter Road (between Grayson Road/Highway J16 and Whitmore Avenue) is expected to operate unacceptably at LOS E under 2030 With Project Conditions. It is recommended to widen the segment between Main Street and SR 132 from two lanes to four lanes to achieve acceptable operations.
- Crows Landing Road (between Hatch Road and SR 99) is expected to operate unacceptably at LOS E. It is recommended to widen the segment between Grayson Road/Highway J16 and SR 99 from four lanes to six lanes to achieve acceptable operations.

#### San Joaquin County Facilities

- Airport Way/Highway J3 (east of Kasson Road/Highway J4) is expected to operate unacceptably at LOS E under 2030 With Project Conditions. It is recommended to widen the segment between Kasson Road/Highway J4 and Manteca Road from two lanes to four lanes to achieve acceptable operations.

#### State Facilities

- Interstate 5 (north of Howard Road) is expected to operate unacceptably at LOS E. It is recommended to widen this freeway segment between Oak Flat Road and I-580, from four lanes to six lanes to achieve acceptable facility operations.
- State Route 33 (south of Sperry Avenue) is expected to operate unacceptably at LOS F. It is recommended to widen the segment between Marshall Road and Sperry Avenue from two lanes to four lanes to achieve acceptable operations.
- SR 33 (south of Elfers Road) is expected to operate unacceptably at LOS F under 2030 With Project Conditions. It is recommended to widen the segment between Elfers Road and W. Marshall Road from two lanes to four lanes to achieve acceptable operations.
- State Route 33 (north of Fink Road) is expected to operate unacceptably at LOS E under 2030 With Project Conditions. It is recommended to widen the segment between West Ike Crow Road and Fink Road from two lanes to four lanes to achieve acceptable operations.
- State Route 33 (north of W. Sanches Road) is expected to operate unacceptably at LOS D. It is recommended to widen the roadway segment between SR 140 and River Road in the City of Newman from two lanes to four lanes to achieve acceptable operations.

Table VII summarizes the results of the roadway segment level of service analysis. The table shows both existing number of lanes and the number of lanes required to operate a roadway facility acceptably under 2030 Conditions.

**Table VIII: Roadway Segment Level of Service – 2030 Conditions**

Roadway Segment	Existing number lanes	2030 no Project Conditions			2030 + Project Conditions		
		ADT	LOS	# of lanes required	ADT	LOS	# of lanes required
<b>Patterson Area Facilities</b>							
Zacharias Road (between Baldwin Road and SR 33)	2	7158	B		7457	B	
Sycamore Avenue (north of E. Las Palmas Avenue)	2	8725	D		11743	D	
Sycamore Avenue (south of E. Las Palmas Avenue)	2	8889	D		13891	E	4
E. Las Palmas Avenue (east of Sycamore Avenue)	2	15512	E	4	16611	F	4
Baldwin Road (north of Sperry Avenue)	2	9649	C		10309	C	
Ward Avenue (north of E. Las Palmas Avenue)	2	5956	B		12015	C	
Sperry Avenue (west of State Route 33)	2	8218	B		10312	C	
Sperry Avenue (west of Ward Avenue)	4	12993	B		17611	C	
Rogers Road (north of Sperry Road)	2	14269	F	4	15675	F	4
Sperry Avenue (west of Baldwin Road)	2	34354	F	6	35985	F	6
Sperry Avenue (west of I-5)	2	7616	B		10371	C	
Ward Avenue (north of Elfers Avenue)	2	4492	A		15560	E	4
Elm Avenue (south of Pomegranate Avenue)	2	1055	A		2022	A	
Sycamore Avenue (north of Marshall Road)	2	8203	D		15288	F	4
S. Carpenter Road (between Crows Landing Road and Highway J17)	2	3409	A		6617	B	
S. Carpenter Road (north of W. Main Street/Highway J17)	2	9457	C		12970	D	4
Crows Landing Road (north of W. Main Street/Highway J17)	2	10076	C		14495	D	4
W. Bradbury Road (between Crows Landing Road and Morgan Road)	2	524	A		2058	A	
<b>Turlock Area Facilities</b>							
Highway J17 (west of SR 99)	2	11408	C		12466	C	
W. Bradbury Road (west of SR 99)	2	12156	E	4	12903	E	4
<b>Los Banos Area Facilities</b>							
SR 152 Bypass	N/A	17990	4	C	20222	4	C

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**Table VIII (Continued): Roadway Segment Level of Service – 2030 Conditions**

Roadway Segment	Existing number lanes	2030 no Project Conditions			2030 + Project Conditions		
		ADT	LOS	# of lanes required	ADT	LOS	# of lanes required
<b>Stanislaus County Facilities</b>							
Ward Avenue (north of Marshall Road)	2	1994	A		18720	F	4
Marshall Road (east of Ward Avenue)	2	636	A		13871	D	4
Ward Avenue (south of Marshall Road)	2	1372	A		6370	B	
Davis Road (north of Oak Flat Road)	2	21	A		16579	F	4
W. Ike Crow Road (north of Oak Flat Road)	2	93	A		13996	D	4
Marshall Road (west of SR 33)	2	537	A		18207	F	4
Marshall Road (between SR 33 and Sycamore Avenue)	2	583	A		11667	C	
Oak Flat Road (west of Ward Avenue)	2	1086	A		17833	F	4
Oak Flat Road (east of Ward Avenue)	N/A	134	A		16831	F	4
Oak Flat Road (between David Road and W. Ike Crow Road)	N/A	152	A		13703	D	4
Bell Road (west of SR 33)	2	3373	A		8025	B	
Ward Avenue (south of Oak Flat Road)	2	420	A		8327	B	
Davis Road (south of Oak Flat Road)	2	0	A		19554	F	4
Ward Avenue (north of Fink Road)	2	442	A		15051	E	4
Project Road A (between Ward Avenue and Davis Road)	N/A	22	A		15796	E	4
Project Road A (east of Davis Road)	N/A	22	A		13628	D	4
Bell Road (north of Project Road A)	2	3016	A		13138	D	4
Bell Road (north of Fink Road)	2	2994	A		18689	F	4
Fink Road (west of Bell Road)	2	1167	A		16160	E	4
Fink Road (between Ward Avenue and I-5)	2	1374	A		14897	D	4
Fink Road (east of Bell Road)	2	1014	A		16024	E	4
West Ike Crow Road (between Bell Road and SR 33)	2	43	A		11380	D	4
Crows Landing Road (east of SR 33)	2	3745	A		15069	E	4
E. Marshall Road (west of Crows Landing Road)	2	6501	C		10812	D	4
Crows Landing Road (north of E. Marshall Road)	2	11077	C		23561	F	4
Crows Landing Road (between Harding Road and Clausen Road)	2	7263	B		15007	E	4
W. Main Street/Highway J17 (west of S. Carpenter Road)	2	15437	E	4	16445	E	4
Highway J17/W. Main Street (between Crows Landing Road and Bystrum Road)	2	10480	C		13184	D	4

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**Table VIII (Continued): Roadway Segment Level of Service – 2030 Conditions**

Roadway Segment	Existing number lanes	2030 no Project Conditions			2030 + Project Conditions		
		ADT	LOS	# of lanes required	ADT	LOS	# of lanes required
Bell Road (between W. Stuhr Road and Anderson Road)	2	2976	B		8310	D	4
Eastin Road (between W. Stuhr Road and Anderson Road)	2	2705	B		5868	C	
W. Stuhr Road (east of I-5 between I-5 Interchange and Bell Road)	2	6246	B		12063	C	
River Road (East of E. Marshall Road)	2	13616	E	4	14444	F	4
<b>Modesto Area Facilities</b>							
Carpenter Road (between Highway J16 and Whitmore Avenue)	2	13006	D		15880	E	4
Crows Landing Road (between Highway J16 and Whitmore Avenue)	2 to 4	13140	D		16055	E	4
Crows Landing Road (between Hatch Road and SR 99))	4	29442	D		30799	E	6
Carpenter Road (between Shoemake Avenue and SR 132)	4	43636	F	6	44194	F	6
<b>Tracy Area Facilities</b>							
Chrisman Road (north of SR 132)	4	19800	A		21144	A	
<b>San Joaquin County Facilities</b>							
Kasson Road/Highway J 4 (south of Durham/Ferry Road/Airport Way)	2	18586	F	4	21754	F	4
Airport Way/Highway J 3 (east of Highway J 4)	2	14327	D		16046	E	4
<b>State Facilities</b>							
I- 5 (north of Sperry Road)	4	59584	D	6	73413	F	6
I- 5 (between Oak Flat Road and Sperry Road)	4	53079	D		72867	F	6
I- 5 (between Fink Road and Oak Flat Road)	4	53079	D	6	60309	D	6
I- 5 (south of Fink Road)	4	52369	C		61827	D	6
I- 5 (south of W. Stuhr Road)	4	54263	D	6	68307	E	6
I- 5 (between SR 132 and Ferry Road)	4	55281	D	6	64098	E	6
I- 5 (south of State Route 152)	4	58048	D	6	58230	D	6
I- 5 (between SR 152 and Henry Miller Avenue)	4	52817	D	6	57795	D	6
I- 5 (between Whitworth Road and SR 33)	4	49470	C		61457	D	6
I- 580 (east of Chrisman Road)	4	81678	F	8	83213	F	8
SR 33 (south of Howard Road)	2	17502	F	4	20559	F	4
SR 33 (between Zacharias Road and Eucalyptus Avenue)	2	13808	D	4	18155	F	4

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**Table VIII (Continued): Roadway Segment Level of Service – 2030 Conditions**

Roadway Segment	Existing number lanes	2030 no Project Conditions			2030 + Project Conditions		
		ADT	LOS	# of lanes required	ADT	LOS	# of lanes required
SR 33 (north of Sperry Road)	2	5587	B		12151	C	
SR 33 (south of Elfers Road)	2	9063	C		18093	<b>F</b>	4
SR 33 (north of Fink Road)	2	5031	B		16171	<b>E</b>	4
SR 33 (south of Fink Road)	2	5596	B		15249	<b>E</b>	4
SR 33 (north of W. Sanches Road)	2	9490	C		18249	<b>F</b>	4
SR 33 (between I-5 and Husman Road)	2	20851	<b>F</b>	4	21103	<b>F</b>	4
SR 99 (south of W. Bradbury)	4	74714	<b>F</b>	6	75222	<b>F</b>	6
SR 99 (south of August Road)	4	98453	<b>F</b>	8	98679	<b>F</b>	8
SR 99 (south of SR 140)	4	55213	D		55219	D	
SR 99 (between Crows Landing Road and SR 132))	6	144216	<b>F</b>	10	145381	<b>F</b>	10
SR 132 (west of SR 33)	2	29607	<b>F</b>	6	31019	<b>F</b>	6
SR 132 (east of Paradise Road)	2	36603	<b>F</b>	6 to LOS D	36951	<b>F</b>	6 to LOS D
SR 140 (west of SR 165)	2	20986	<b>F</b>	4	21186	<b>F</b>	4
SR 140 (between Eastin Road and Whitworth Road)	2	7458	B		10875	C	
SR 140 (west of SR 99)	2	18709	<b>F</b>	4	18816	<b>F</b>	4
SR 152 (east of SR 165)	4	51788	<b>F</b>	6 to LOS F	52047	<b>F</b>	6 to LOS F
SR 152 (between I-5 and Volta Road)	4	27256	<b>D</b>	6	32053	<b>E</b>	6 to LOS D
SR 165 (north of W. Harding Road)	2	17006	<b>F</b>	4	17363	<b>F</b>	4
SR 165 (north of SR 99 interchange)	4	30071	<b>E</b>	6	30086	<b>E</b>	6
SR 165 (north of SR 140)	2	16717	<b>F</b>	4	16770	<b>F</b>	4

**Notes:** LOS = Level of Service  
 Bold values indicate unacceptable LOS conditions

## Summary of Needed Improvement Measures

### Triggered Improvements

Anticipated future growth in the Central Valley that includes the West Park project will trigger the need for capacity improvements to the existing study area roadway facilities. This section provides an overview and summary of transportation improvements that are expected to be necessary in the vicinity of the project. These improvements are related to traffic volumes for Existing Conditions, 2016 Conditions, and 2030 Conditions, both with and without the West Park Project.

Figures 10 through 12 show the anticipated lane requirements for regional, local, and project roadway facilities, respectively. The lanes shown in the figures are those that would be required to meet LOS D criteria. Roadway segments with no color-coding imply no changes in the existing number of lanes. However, structural upgrades to the pavement sections may be needed to accommodate truck traffic.

Most of the internal roadways planned for the West Park project site are expected to operate acceptably with two lanes through 2016 plus Phase I project conditions. Four lanes are expected to be required with the full buildout of the West Park project by 2030 for most internal roadways.

### State Highway Lane Requirements

#### Interstate 5 (I-5)

Through the study area, I-5 consists of four lanes. By the completion of the 2030 analysis period, all sections of I-5 from I-580 on the north to south of SR 152 will need widening to six lanes. The section north of Sperry Road qualifies for six lanes by 2016 without the project. The section south of Stuhr Road is triggered under with project conditions in 2016. Between Sperry Road and Fink Road I-5 needs to be widened by 2030 without the project. In 2030 under project conditions the sections north of Howard Road and south of Fink Road are triggered.

#### SR 99

Through the study area, SR 99 consists of four lanes south of Turlock and six lanes north of Turlock. Under Existing Conditions, SR 99 north of Modesto requires eight lanes to operate at an acceptable level of service. Under 2016 No Project Conditions, 2016 Plus Phase I Conditions, 2030 No Project Conditions, and 2030 Plus Project Conditions, SR 99 is expected to require 10 lanes north of Modesto and six lanes south of Modesto to operate at acceptable levels of service.

#### SR 132

Through the study area, most of SR 132 between I-580 and I-5 is currently a four-lane freeway. Under Existing Conditions and all future scenarios, this section of SR 132 currently operates and is expected to continue operating at acceptable levels of service. The entire section of SR 132 west of Modesto needs to be widened to four lanes by 2016.

#### SR 140

The entire length of SR 140 from SR 33 near Gustine to SR 99 in Merced needs to be widened to four lanes; the section near Merced is needed under existing conditions and the remainder is needed by 2016 no project conditions.

### SR 152

SR 152 needs to be widened to six lanes at different times. East of Los Banos it is needed under 2016 no project conditions and west of Los Banos it is needed under 2030 no project conditions.

### SR 165

SR 165 (Lander Avenue) needs to be widened to four lanes under 2016 no project conditions from SR 140 to Bradbury. North of Bradbury it needs to be widened to six lanes under 2030 no project conditions.

### SR 33

Most of SR 33 between SR 152 on the south and I-5 on the north needs to be widened under 2030 no project conditions. Some sections near West Park are triggered earlier under 2016 with project conditions.

### Other Roadways Needing Widening

As noted in Figures 10 through 12 other roadways will need widening in the future. Such roadways include portions of Crows Landing Road, Sycamore Avenue, Rogers Road, Main Street, Bradbury Road, Kasson Road and Airport Way and River Road. Detailed timing of the triggering is shown on the figures.

### **Internal Project Roadway Lane Requirements**

An internal roadway refers to roadway segments that circulate through the West Park Project site and also are adjacent to the site.

Fink Road runs on the south side of the project providing an east-west connection between I-5, SR 33, and the town of Crows Landing. As a two-lane facility, Fink Road is expected to operate at acceptable levels of service under 2016 No Project Conditions, 2016 Plus Phase I Conditions, and 2030 No Project Conditions. Under 2030 Plus Project Conditions, Fink Road between I-5 and SR 33 is expected to require widening to a four-lane facility.

Davis Road between Fink Road and West Marshall Road will provide a north-south connection through the middle of the project area. According to the West Park Conceptual Land Use Plan, Davis Road between Fink Road and the Delta Mendota Canal crossing will utilize an existing alignment. North of the canal, Davis Road will be re-aligned to the northwest and meeting West Marshall Road about one half mile west of the existing intersection. Davis Road is currently a two-lane, undivided roadway and is expected to operate at acceptable LOS under 2016 No Project Conditions, 2016 Plus Phase I Conditions, and 2030 No Project Conditions. Under 2030 Plus Project Conditions, Davis Road between the canal crossing and Marshall Road is expected to require widening to a four-lane facility.

Bell Road north of Fink Road will run on the east side of the project area. Bell Road becomes Naval Road north of Ike Crow Road. Naval Road will continue north for about a mile and curve to the northeast towards SR 33. Bell/Naval Road is currently a two-lane undivided roadway and is expected to operate at acceptable levels of service under 2016 No Project Conditions, 2016 Plus Phase I Conditions, and 2030 No Project Conditions. Under 2030 Plus Project Conditions, Bell Road between Ike Crow Road and Stuhr Road is expected to require widening to a four-lane facility.

West Ike Crow Road is currently a two-lane road between Bell Road and SR 33. According to the West Park Conceptual Land Use Plan, West Ike Crow Road will be extended westerly into the project site, then curve to the northwest across the existing airport runway, and take then continue north for one mile to West Marshall Road. As a two-lane facility, West Ike Crow Road is expected to operate at acceptable levels of service under 2016 No Project Conditions, 2016 Plus Phase I Conditions, and 2030 No Project Conditions. Under 2030 Plus Project Conditions, all of West Ike Crow Road is expected to require widening to a four-lane facility.

Ward Avenue is a major north-south connection through the west side of the project area. Ward Avenue will be a major connection with the residential areas in Patterson, from which many West Park employees are expected to originate. According to the West Park Conceptual Land Use Plan, Ward Avenue will follow existing alignment into the project and then be re-aligned south of West Marshall Road to run northwest-southeast to meet Fink Road approximately one-half mile east of the existing Ward Avenue/Fink Road intersection. As a two-lane facility, Ward Avenue is expected to have acceptable LOS under 2016 No Project Conditions, 2016 Plus Phase I Conditions, and 2030 No Project Conditions. Under 2030 Plus Project Conditions, Ward Avenue from Sperry Road in Patterson to Oak Flat Road along with the southern section just north of Fink Road is expected to require widening to a four-lane facility, while the section just south of Oak Flat Road it is expected to operate at acceptable levels of service as a two-lane facility.

Oak Flat Road is currently a two-lane roadway west of Ward Avenue. According to the West Park Conceptual Land Use Plan, Oak Flat Road will extend easterly through the project area to the future extended section of West Ike Crow Road. The project sponsors are anticipating the need for a future interchange at I-5 and Oak Flat Road. Oak Flat Road is expected to operate at acceptable levels of service under 2016 No Project Conditions, 2016 Plus Phase I Conditions, and 2030 No Project Conditions. Under 2030 Plus Project Conditions, the entire portion of Oak Flat Road east of I-5 is expected to require widening to a four-lane facility.

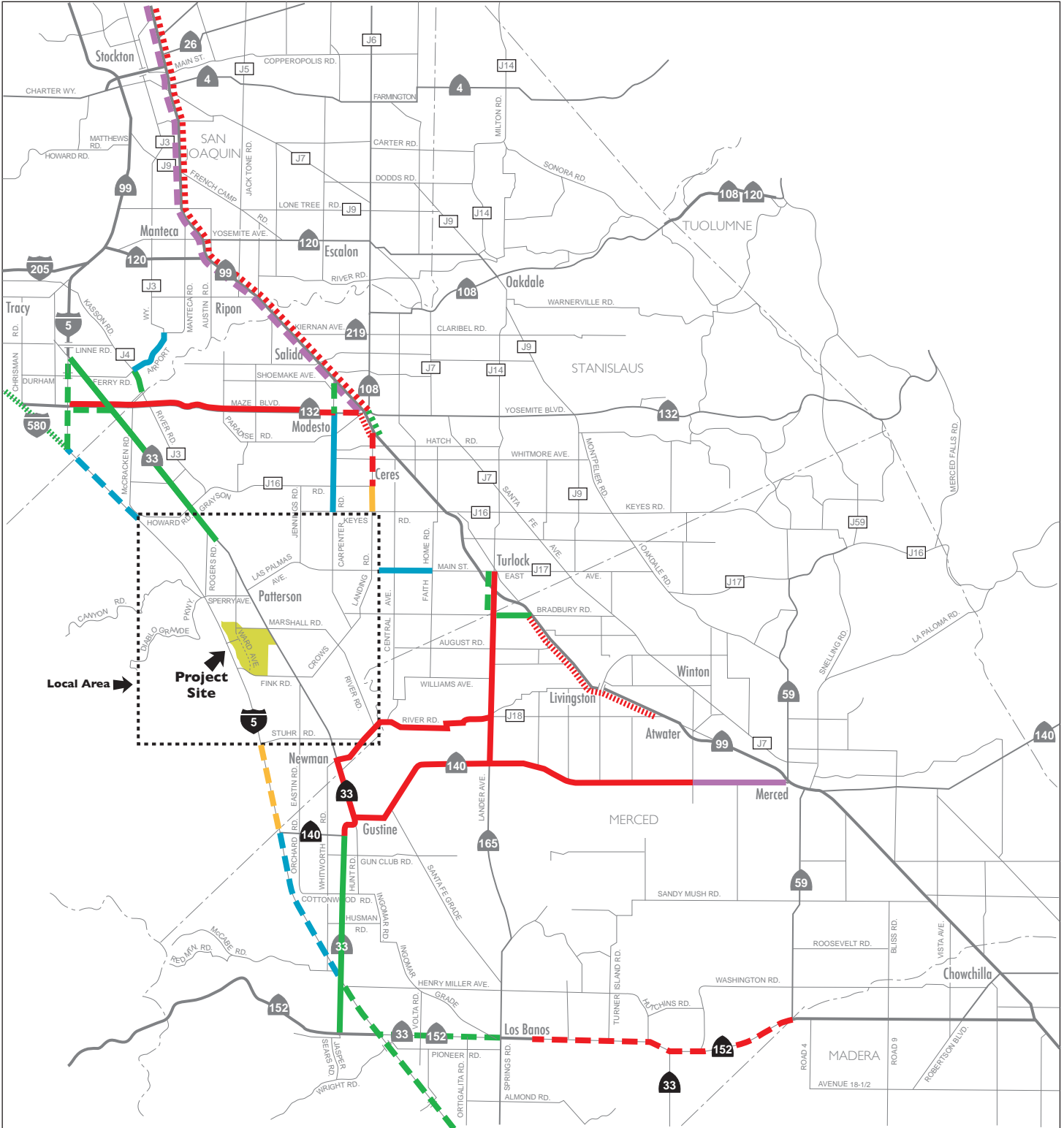
West Marshall Road runs on the north side of the project, providing an east-west connection between Ward Avenue and SR 33. As a two-lane facility, West Marshall Road is expected to operate at acceptable levels of service under 2016 No Project Conditions, 2016 Plus Phase I Conditions, and 2030 No Project Conditions. Under 2030 Plus Project Conditions, West Marshall Road between Ward Avenue and Sycamore Avenue is expected to require widening to a four-lane facility, while the rest of West Marshall Road should operate at acceptable LOS as a two-lane facility. However, as a two-lane roadway it will need to be upgraded substantially to accommodate increased traffic volumes.

### ***San Joaquin River Crossing***

A large amount of the project traffic will travel to and from the Turlock area via east-west roads, primarily West Main Street. Another major segment of project travel is oriented to the Modesto/Ceres area via north-south roads, primarily Carpenter Road and Crows Landing Road. The traffic from Marshall Road, the northern boundary of the project, and Fink Road, the southern boundary of the project converges in the vicinity of the San Joaquin River crossing on Crows Landing Road just north of Marshall Road. The volume levels on and near this bridge in 2016 and 2030, with or without the project, suggest the need to examine the need for improved river crossings. This could be in the form of a widened bridge on Crows Landing Road, a second bridge along the Marshall Road corridor, or other possible solutions.. It is recommended that this examination be conducted in order to determine the most appropriate solution.

# Preliminary Traffic Circulation Master Plan Triggering Lane Requirements – Regional Area

Figure  
10

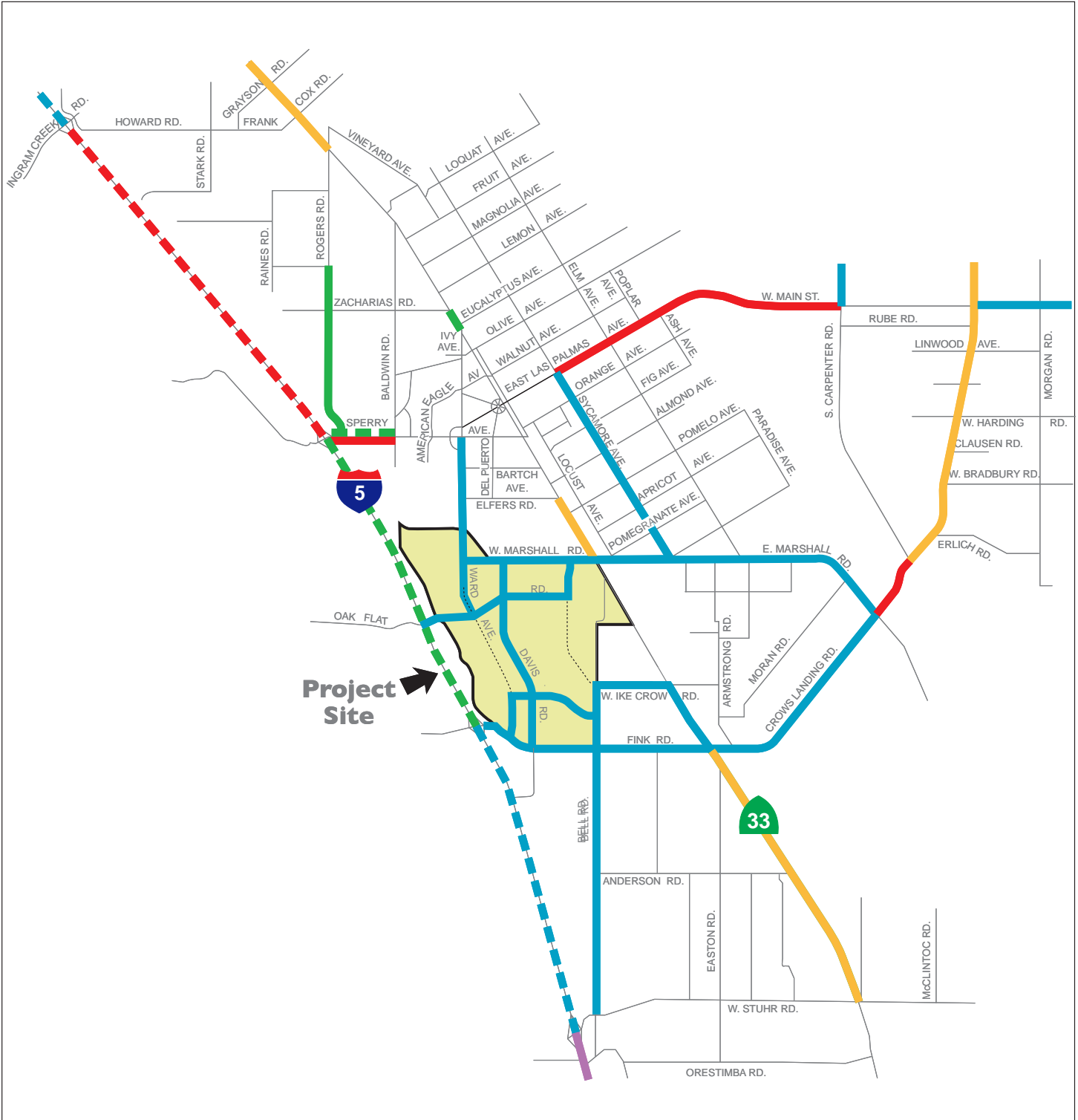


**LEGEND**

- 4 Lanes Required under Existing Conditions
- - - - 8 Lanes Required under Existing Conditions
- 4 Lanes Required under 2016 No Project Conditions
- - - - 6 Lanes Required under 2016 No Project Conditions
- ||||| 8 Lanes Required under 2016 No Project Conditions
- ||||| 10 Lanes Required under 2016 No Project Conditions
- 4 Lanes Required under 2016 With Phase I Project Conditions
- - - - 6 Lanes Required under 2016 With Phase I Project Conditions
- 4 Lanes Required under 2030 No Project Conditions
- - - - 6 Lanes Required under 2030 No Project Conditions
- ||||| 8 Lanes Required under 2030 No Project Conditions
- ||||| 10 Lanes Required under 2030 No Project Conditions
- 4 Lanes Required under 2030 With Project Conditions
- - - - 6 Lanes Required under 2030 With Project Condition

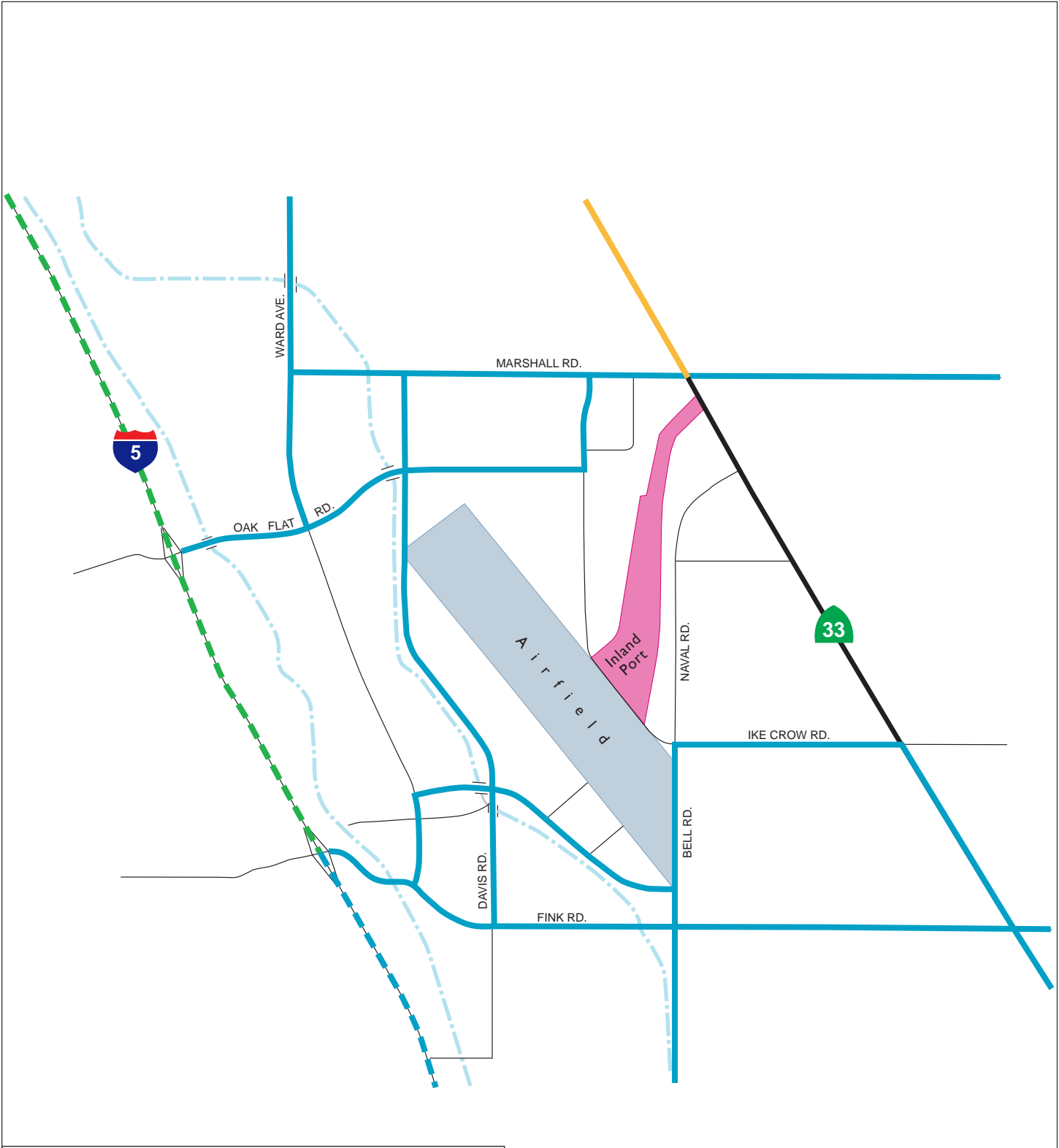


# Preliminary Traffic Circulation Master Plan Triggering Requirements – Local Area



LEGEND	
<span style="color: red;">—</span>	4 Lanes Required under 2016 No Project Conditions
<span style="color: orange;">—</span>	4 Lanes Required under 2016 With Phase I Project Conditions
<span style="color: red;">- - -</span>	6 Lanes Required under 2016 No Project Conditions
<span style="color: purple;">—</span>	6 Lanes Required under 2016 With Phase I Project Conditions
<span style="color: green;">—</span>	4 Lanes Required under 2030 No Project Conditions
<span style="color: green;">- - -</span>	6 Lanes Required under 2030 No Project Conditions
<span style="color: cyan;">—</span>	4 Lanes Required under 2030 With Project Conditions
<span style="color: cyan;">- - -</span>	6 Lanes Required under 2030 With Project Conditions
<span style="color: gray;">- - - - -</span>	Future Project Realigned Roadway





LEGEND	
<span style="color: red;">—</span>	4 Lanes Required under 2016 No Project Conditions
<span style="color: orange;">—</span>	4 Lanes Required under 2016 With Phase I Project Conditions
<span style="color: green;">—</span>	4 Lanes Required under 2030 No Project Conditions
<span style="color: lightblue;">—</span>	6 Lanes Required under 2030 No Project Conditions
<span style="color: darkblue;">—</span>	4 Lanes Required under 2030 With Project Conditions
<span style="color: cyan;">—</span>	6 Lanes Required under 2030 With Project Condition
<span style="color: lightblue;">- - -</span>	Canal



### ***Freeway Interchange Requirements***

This section of the report analyzes and discusses the needs at three existing interchanges and a potential new interchange in the West Park project area. Table IX summarizes the results of the level of service analysis and shows the mitigations needed under each study scenario. It should be noted that an accurate interchange analysis requires the use of a peak hour model, while in this study only a daily model was available. During the environmental stages of this report, more detailed peak hour analyses will be conducted to ascertain exact interchange requirements. Therefore, this preliminary analysis should be understood to be subject to change in the future.

Table IX, on the next page, shows the results of the preliminary analyses.

**Table IX: Interchange Analysis Overview**

INT ID	Intersection Name Condition/Mitigation Requirement for the Scenario Indicated	Control	2016 No Project		2016 With Phase I		2030 No Project		2030 With Project	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1	Fink Rd/I-5 NB Ramps									
	Existing lane configuration	One-way Stop	2.3 (9.2)	A (A)	2.3 (10.6)	A (B)	2.4 (9.0)	A (A)	30.3 (94.0)	D (F)
	Add 1 WB RT and 1 NB RT	One-way Stop							6.2 (19.0)	A (C)
2	Fink Rd/I-5 SB Ramps									
	Existing lane configuration	One-way Stop	6.3 (9.9)	A (A)	10.2 (14.2)	B (B)	4.6 (9.2)	A (A)	>120 (>120)	F (F)
	Install traffic signal	Signal							31.2	C
3	Sperry Ave/I-5 NB Ramps									
	Existing lane configuration	One-way Stop	3.7 (22.3)	A (C)						
	Proposed lane configuration (add 1 EB LT, 1 NB RT and 1 WB RT) with new signals in place	Signal	7.6	A	5.5	A	15.5	B		
	Proposed improvements (add 1 EB TH, 1 NB RT, and 1 WB TH)	Signal					12.3	B	17.6	B
4	Sperry Ave/I-5 SB Ramps									
	Existing lane configuration	One-way Stop	123.8 (274.3)	F (F)						
	Proposed lane configuration (add 1 SB LT and 2 WB LT) with new signals in place	Signal	13.9	B	14.3	B	19.0	B		
	Proposed improvements (add 1 EB TH)	Signal					15.9	B	19.7	B
5	Oak Flat Rd/I-5 NB Ramps									
	Proposed for 2030 scenarios with one lane in each direction and two-way stop in place	One-way Stop					3.8 (8.9)	A (A)	2.3 (26.6)	A (D)
	Add 1 WB RT	One-way Stop							2.2 (24.6)	A (C)
6	Oak Flat Rd/I-5 SB Ramps									
	Proposed for 2030 scenarios with one lane in each direction and two-way stop in place	One-way Stop					5.8 (9.4)	A (A)	173.6 (207.4)	F (F)
	Add 1 SB LT	One-way Stop							32.1 (37.3)	D (E)
7	Stuhr Road/I-5 NB Ramps									
	Existing lane configuration	One-way Stop	3.4 (11.6)	A (B)	4.6 (13.7)	A (B)	3.6 (12.1)	A (B)	10.8 (27.6)	A (B)
8	Stuhr Road/I-5 SB Ramps									
	Existing lane configuration	One-way Stop	15.2 (24.8)	B (C)	32.8 (81.3)	D (F)	17.9 (31.1)	B (C)	120+ (120+)	F (F)
	Install traffic signal	All-Way			12.9	B			30.0	D

**Notes:** Shows the timeline for mitigations  
LOS= Level of Service  
HCM method used for LOS Calculations  
XX = Overall intersection delay in seconds per vehicle  
(XX) = minor approach  
Bold values indicate unacceptable LOS conditions

#### I-5/Fink Road Interchange

The current I-5/Fink Road interchange consists of a tight-diamond configuration. The Fink Road undercrossing has two lanes, with one-way stop controls at both the I-5 northbound and southbound ramp intersections. This interchange will serve as initial primary interchange for project site access.

This interchange is expected to operate acceptably under 2016 No Project Conditions and 2016 plus Phase I Project Conditions.

Under 2030 No Project Conditions, the interchange is expected to continue operating at an acceptable LOS, assuming that the I-5/Oak Flat Road interchange is built. Under 2030 plus Project Conditions with this new interchange, the intersections of Fink Road and the I-5 ramps are expected to require signalization to achieve acceptable operations. Therefore, improvements at the Fink Road interchange will depend on the timing of the addition of the Oak Flat Road interchange.

It is worth noting that there is a limit for expanding capacity at this interchange. Widening the Fink Road undercrossing will be difficult due to the location of existing underpass support columns. The situation is compounded by the limited space within the interchange vicinity for possible construction detours.

#### Interstate 5/Oak Flat Road Interchange

A potential new interchange to be located at I-5/Oak Flat Road is expected to provide an alternate access to the project site. The interchange is expected to alleviate traffic congestion that may occur at the adjacent I-5/Fink Road and I-5/Sperry Avenue interchanges. Without the I-5/Oak Flat interchange, the I-5/Fink Road will need reconstruction at a significant cost to stakeholders.

The location of this interchange may also be attractive to Diablo Grande bound traffic. This interchange is not planned for 2016 conditions. Under 2030 Plus Project Conditions, the interchange will operate acceptably with two lanes passing under I-5 and traffic signals at its intersections with both northbound and southbound ramps.

#### Interstate 5/Sperry Avenue Interchange

I-5/Sperry Avenue interchange is located approximately five miles north of the project site. It is currently an interchange with a tight-diamond configuration, with two-lane Sperry Avenue passing under I-5 and having one-way stop controls at its intersections with both northbound and southbound ramps. This interchange will play a minor role in providing access to the project site due to its relative longer distance to the project site.

Improvements are planned for I-5/Sperry Avenue interchange. Sperry Avenue approach towards the ramps is planned to have westbound lanes (one through lane and one right-turn lane to go north on I-5) and eastbound lanes (one left-turn lane to go north on I-5 and one through lane). In addition, the ramps will be signalized.

In the absence of the planned improvements, under 2016 No Project Conditions and 2016 With Phase I Project Conditions, the intersection of Sperry Avenue and I-5 southbound ramps will require a conversion to all-way stop control to operate acceptably.

Under 2030 No Project Conditions, the intersection of Sperry Avenue and I-5 southbound ramps will need to be signalized in conjunction with one additional westbound left-turn lane and one additional southbound left-turn lane to operate acceptably at LOS B or better. The intersection of Sperry Avenue and I-5 northbound ramps will also need to be signalized in conjunction with one additional eastbound left-turn lane, one additional northbound right-turn lane, and one additional westbound right-turn lane to operate acceptably at LOS B or better.

In addition to the improvements required for 2030 No Project Conditions, one eastbound and one west bound through lanes are to be added to both intersections of Sperry Avenue with I-5 northbound and southbound ramps to operate the intersections acceptably at LOS B or better under 2030 With Project Conditions.

#### Interstate 5/Stuhr Road Interchange

- I-5/Sperry Avenue interchange is located approximately four miles south of the project site. It is currently an interchange with a tight-diamond configuration, with two-lane Stuhr Road passing over I-5 and having one-way stop controls at its intersections with both northbound and southbound ramps. Bell Road and I-5/Stuhr interchange are important connections to the south. Based on traffic forecasts, the current configuration of the interchange is expected to operate acceptably under Existing Conditions and 2016 No Project Conditions and 2030 No Project Conditions. Under 2016 With Phase I Project Conditions, 2030 No Project Conditions and 2030 With Project Conditions, the intersection of Stuhr Road and I-5 southbound ramps will require a conversion to all-way stop control to operate acceptably. Under 2030 With Project Conditions, a second northbound right-turn lane is recommended at the I-5 northbound ramp intersection to mitigate expected queuing on the northbound off ramp. Subsequent analyses may show the need for traffic signals at the southbound ramp junction.

#### **Truck Generation for Project**

The information below represents the preliminary estimates of West Park daily truck trips based on the proposed land uses. The determination of truck trips consisted of first dividing West Park into four main components: industrial uses, distribution uses, business park, and the inland port. Truck trip generation was calculated for the first three uses using published truck trip generation sources. The amount of truck trips generated by the inland port was determined and an adjustment was made to avoid double counting of truck trips that would use both the intermodal facility and other West Park sites.

The information contained in this description assumes the complete build out of West Park. All results are expressed as one-way daily truck trips. The primary data source for the daily generation rates of truck trips is the *National Cooperative Highway Research Program (NCHRP) Synthesis 298 Truck Trip Generation Data*, conducted by Cambridge Systematics in 2001.

1. Daily Truck Trip Generation for Industrial Uses (General + Airport + Agricultural)  
2,500 acres, 35,400 KSF, 24,780 employees (source TJKM Preliminary Transportation study)  
Daily truck trip generation rate = 0.335 truck trips per employee = 8,301 daily truck trips
2. Daily Truck Trip Generation for Distribution Uses  
600 acres, 9,200 KSF, 2,750 employees  
Daily truck trip generation rate = 0.38 truck trips per KSF = 3,496 daily truck trips

3. Daily Truck Trip Generation for Business Park

290 acres, 4,400 KSF, 8,800 employees

Daily truck trip generation rate = 0.334 truck trips per employee = 2,939 daily truck trips

Subtotal: 8,301 + 3,496 + 2,939 = 14,736 daily truck trips

4. Trip Generation Assumptions for Inland Port

6 inbound trains (to West Park) and 6 outbound trains (to Port of Oakland) per day with 115 containers per train. An average of 1.8 truck trips are required to load or unload each container.

For inbound trains (imports) assume 90 percent of the containers are delivered to destinations within West Park and the remaining 10 percent of the containers are delivered off-site

For outbound trains (exports) assume 90 percent of the containers arrive from locations outside of West Park and the remaining 10 percent originate from sites within West Park

Total daily truck trips associated with inbound trains =  $6 \times 115 \times 1.8 = 1,242$  daily truck trips, but 1,118 of these daily truck trips (90 percent) are already accounted for in Categories 1, 2 and 3 above. The total number of daily truck trips from outside West Park = 124 (the other 10 percent)

Total daily truck trips associated with outbound trains =  $6 \times 115 \times 1.8 = 1,242$  daily truck trips. However, 124 of these daily truck trips (10 percent) are already accounted for in Categories 1, 2 and 3 above. The total number of daily trucks from outside West Park = 1,118 (the other 90 percent)

Grand Total of Daily Truck Trips Associated With West Park =  $14,736 + 124 + 1,118 = 15,978$  truck trips per day. This is about 11.3 percent of all West Park daily traffic generation.

Although the number of total truck daily trips will not diminish, existing and future export truck trips between the Central Valley and the Port of Oakland will be “intercepted” by the West Park facility significantly reducing truck trip length and removing truck trips from the Altamont Pass and the Bay Area.

**Truck Routes**

The proposed Inland Port facility at the project site is expected to generate substantial truck traffic. Containers shipped from the Port of Oakland will be picked up by trucks at the Inland Port and delivered to on-site tenants, off-site distribution centers and the regional agricultural community. Trucks from area agribusiness will deliver trailers to the hub for transfer by rail to the Port of Oakland.

Figure 13 shows proposed truck routes to the West Park project site. The selection of the routes is based on knowledge of the Central Valley area, as well as current and projected future truck volumes on major roadway segments linking the freeways to the West Park Project site. The selected routes include the following:

- Trucks from the northern and southern areas of the Central Valley may either use I-5 or SR 99 to access the project area.

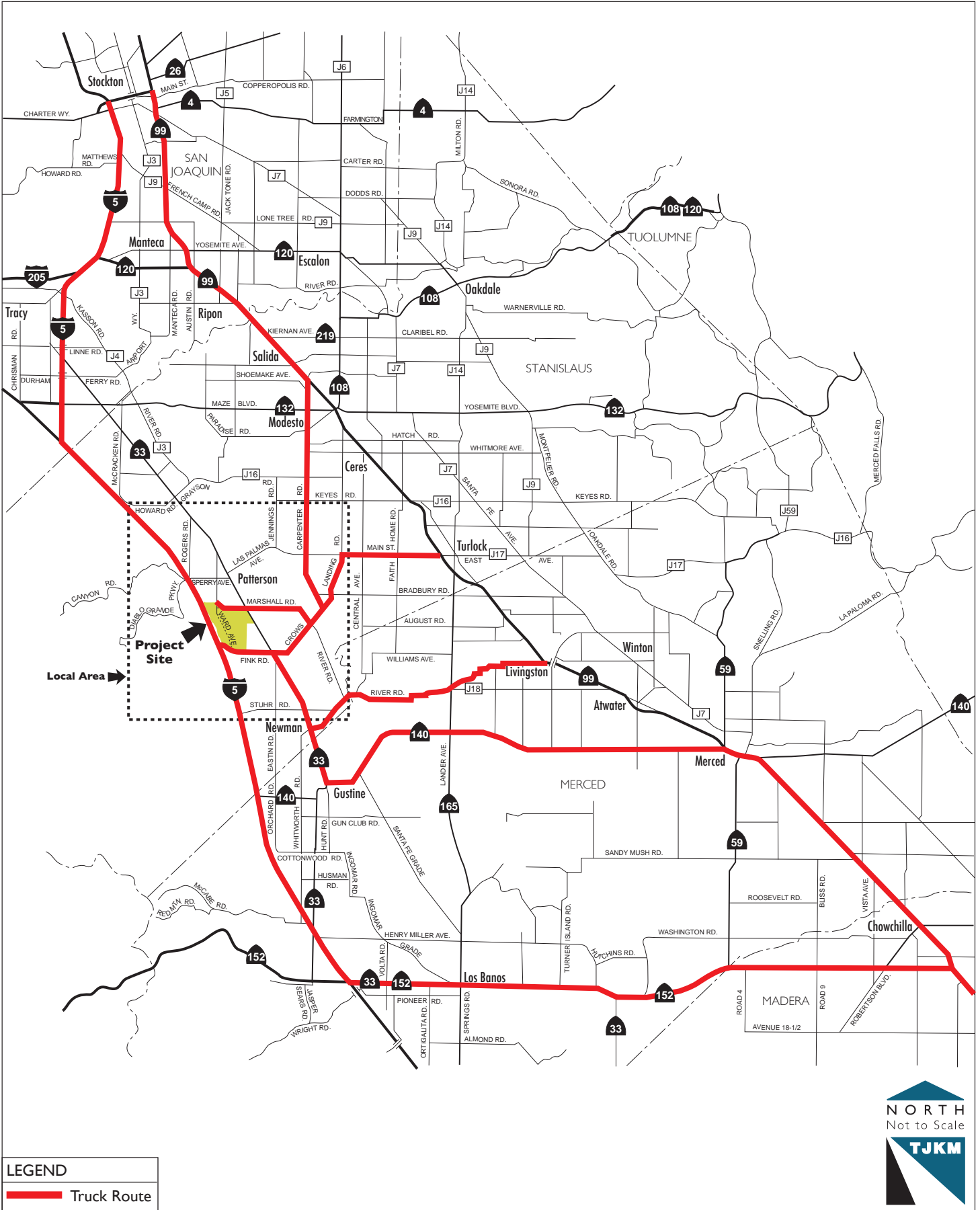
- The I-5 interchanges at Fink Road and Oak Flat Road (future) will provide direct access to the West Park project site.
- Carpenter Road, Crows Landing Road, Fink Road, Marshall Road, Main Street, SR 33, SR 140, SR 152 and Highway J18 are selected roadways that link SR 99 to the West Park project site.

The proposed truck routes have been designed to minimize the impacts of trucks on the City of Patterson. Conditions of approval can be established to ensure that trucks traveling to or from West Park only utilize approved truck routes. Beyond that, upon the construction of the Oak Flat Road interchange, there will be no advantage for I-5 related trucks to use the Sperry Road interchange. In addition, aside from I-5 destinations, nearly all project-related truck traffic will have an east-west orientation that will result in no time or distance advantages for trucks considering the use of Patterson roadways.

Some roadways selected for truck routes may not have sufficient structural cross-section currently to accommodate truck traffic. The required pavement structural upgrades and lane geometry will be addressed in detail in the future Environmental Impact Report (EIR).

# Preliminary Traffic Circulation Master Plan Proposed Truck Routes – Regional Area

Figure  
13



### ***Transportation Demand Management***

Transportation Demand Management (TDM) is a general term referring to strategies that result in more efficient use of transportation resources. The overall goal of TDM is to influence traveler behavior in order to reduce or redistribute travel demand. Strategies can be developed based on such overall TDM objectives as congestion reduction; energy conservation and emission reduction; health and fitness; improving equity; community livability; parking solutions; safety; and transportation affordability.

As part of a congestion reduction objective, TDM strategies have the potential to reduce the number of vehicles using highway facilities while providing a variety of alternative mobility options. Specific congestion reduction strategies include employer commute trip reduction programs (financial incentives, public transit benefits, or parking pricing), flextime scheduling, rideshare programs, parking management, and public transit improvements. Such measures have the potential to reduce drive-alone commuting and encourage use of carpools, vanpools, and other alternative means of travel. The effects of these strategies can positively impact transportation facilities in that they induce changes in trip scheduling, route choice, destination and mode of travel.

As a part of the environmental review of the project, when specific TDM measures are identified, it will be possible to reduce the actual expected vehicular trips on certain roadway segments to reflect the programs and measures.

The specific TDM measures or strategies recommended for the West Park Project are summarized below.

#### **Public Mode Support**

Project linkages to area transit agencies in the Central Valley, including the San Joaquin Regional Transit District (RTD), the Merced County Transit (The Bus) and Stanislaus Regional Transit (StaRT) are particularly encouraged. It is recommended that these agencies continue to integrate their respective transit networks that will provide effective intercity service for the project.

Currently, the San Joaquin RTD provides public transit services in the Stockton Metropolitan Area. The Stockton Metropolitan Area Regional Transit (SMART) provides bus services between the San Joaquin, Bay Area, and Sacramento regions. SMART operates 20 bus trips per day between San Joaquin County (Stockton, Tracy, Lodi, Escalon, Ripon and Manteca) and the Bay Area sub regions of South Bay, East Bay, Sacramento, and Napa.

#### **Employer-Based Support**

Employers at the West Park employment centers will be required to participate in trip reduction programs that encourage employees to change their commute practices. Strategies include incentives for using public transportation, disincentives to solo commuting, and employer management policies that offer employees flexibility in travel mode choices. These may include carpools and vanpools; public and private transit service, including buspools and shuttles; and nonmotorized travel such as bicycling and walking. Alternative work-hour programs such as the compressed workweek, flextime, and telecommuting are other TDM strategies that can be considered. Additionally, parking management strategies such as preferential carpool parking and parking “cash out”, in which employees are encouraged not to drive and park at the employment site via a transit pass or other financial incentive, are other potential vehicle reduction strategies.

A reasonable TDM goal for West Park would be for a minimum of about 15 percent of the 37,650 employees to use alternative means of arriving at work through such means as ridesharing. This would eliminate 11,295 daily trips, or about eight percent of all trips associated with the West Park project. However, this level of trip reduction can only be accomplished with strategies such as those described above. It should be noted that the analyses in this report assume no reduction of trips due to TDM programs.